



**CALL NO. 116**

**CONTRACT ID. 264400**

**JEFFERSON COUNTY**

**FED/STATE PROJECT NUMBER HSIP 8797(002)**

**DESCRIPTION ALGONQUIN PARKWAY (KY 2054)**

**WORK TYPE ASPHALT PAVEMENT & ROADWAY REHAB**

**PRIMARY COMPLETION DATE 7/26/2026**

**LETTING DATE: January 29,2026**

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN STANDARD TIME January 29,2026. Bids will be publicly announced at 10:00 AM EASTERN STANDARD TIME.

**NO PLANS ASSOCIATED WITH THIS PROJECT.**

**DBE CERTIFICATION REQUIRED - 0%**

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

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**PART I**

**SCOPE OF WORK**

ADMINISTRATIVE DISTRICT - 05

CONTRACT ID - 264400  
HSIP 8797(002)  
COUNTY - JEFFERSON  
PCN - 264400  
HSIP 8797(002)

ALGONQUIN PARKWAY (KY 2054) (MP 0.000) FROM THE INTERSECTION OF 40TH STREET PROCEEDING EAST TO THE INTERSECTION OF WINKLER AVENUE (MP 3.299), A DISTANCE OF 03.30 MILES.ASPHALT PAVEMENT & ROADWAY REHAB SYP NO. 05-09048.00.  
GEOGRAPHIC COORDINATES LATITUDE 38:13:24.00 LONGITUDE 85:47:35.00  
ADT 9,000

COMPLETION DATE(S):	
COMPLETED BY 06/28/2026	MILESTONE DATE (SEE SN FOR COMPLETION DATE)
COMPLETED BY 07/26/2026	APPLIES TO ENTIRE PROJECT



## **CONTRACT NOTES**

### **INSURANCE**

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

### **PROPOSAL ADDENDA**

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

### **BID SUBMITTAL**

Bidder must use the Department's electronic bidding software. The Bidder must download the bid file located on the Bid Express website ([www.bidx.com](http://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](mailto: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](http://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 state agency certifies that it is in compliance with the provisions of KRS 45A.150, "Access to contractor's books, documents, papers, records, or other evidence directly pertinent to the contract." The Contractor, as defined in KRS 45A.030, agrees that the contracting agency, the

Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this agreement for the purpose of financial audit or program review. The Contractor also recognizes that any books, documents, papers, records, or other evidence, received during a financial audit or program review shall be subject to the Kentucky Open Records Act, KRS 61.870 to 61.884. Records and other prequalification information confidentially disclosed as part of the bid process shall not be deemed as directly pertinent to the agreement and shall be exempt from disclosure as provided in KRS 61.878(1)(c).

### **BOYCOTT PROVISIONS**

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

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

### **LOBBYING PROHIBITIONS**

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

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

Revised: 1/1/2025

## **FEDERAL CONTRACT NOTES**

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

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

### **CIVIL RIGHTS ACT OF 1964**

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

### **NOTICE TO ALL BIDDERS**

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

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

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

### **SECOND TIER SUBCONTRACTS**

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

### **DISADVANTAGED BUSINESS ENTERPRISE PROGRAM**

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

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

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

### **DBE GOAL**

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

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

### **OBLIGATION OF CONTRACTORS**

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

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

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

### **CERTIFICATION OF CONTRACT GOAL**

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

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

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

### **DBE PARTICIPATION PLAN**

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

The DBE Participation Plan shall include the following:

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

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

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

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

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

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

**CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS**

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

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

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

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



### **FAILURE TO MEET GOOD FAITH REQUIREMENT**

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

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

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

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

### **SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT**

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

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

### **PROMPT PAYMENT**

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

### **CONTRACTOR REPORTING**

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

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

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

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

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

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

### **DEFAULT OR DECERTIFICATION OF THE DBE**

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

### **PROHIBITION ON TELECOMMUNICATIONS EQUIPMENT OR SERVICES**

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

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

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

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

SECTION 7 is expanded by the following new Article:

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

Pursuant to Title 46CFR Part 381, the Contractor agrees

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

### **SURFACING AREAS**

The Department estimates the mainline surfacing width to be 40-66 feet.

The Department estimates the total mainline area to be surfaced to be 77,823-84,364 square yards.

The Department estimates the shoulder width to be 0 feet on each side.

The Department estimates the total shoulder area to be surfaced to be 0 square yards.

The Department estimates 28 sideroads that may require some amount of resurfacing at their intersection with KY 2054.

The Department estimates the sideroads that may require some amount of resurfacing to have an area of 8,436 square yards.

### **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.

### **INCIDENTAL SURFACING**

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

### **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**

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### **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.

### **STATIONING**

The Contractor is advised that the planned locations of work were established from the intersection of KY 2054 (Algonquin Pkwy.) and S 40<sup>th</sup> St., which corresponds to Milepoint 0.000 along KY 2054. **NOTE:** The existing mile marker signs may not correspond to the proposed work locations.

### **LIDAR**

Some survey information was obtained from a licensed Professional Surveyor while some came from available KYTC Aerial LIDAR data. Design elements 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 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.

General Notes & Description of Work  
Page 2 of 3

**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. Furnish all materials, labor, equipment, and incidentals for the following work:

**Asphalt Resurfacing and Striping/Markings.** The limits of the corridor are to be resurfaced and the striping/markings plan detailed in these plans is to be constructed. Additional activities expected include asphalt milling and texturing, constructing leveling & wedging at locations identified by the Engineer, constructing asphalt material for tack, and constructing temporary striping and markings for MOT during construction.

**Concrete Pavement Restoration.** A portion of the corridor (from the intersection with 16<sup>th</sup> St. to approximately 300' west of the intersection with 13<sup>th</sup> St.) currently has asphalt pavement atop existing concrete pavement. Two pavement cores were collected and indicated an asphalt layer varying around 2.5" to 4" atop concrete pavement varying around 8" to 9".



Figure 1: Core taken from EB driving lane underneath the railroad overpass.

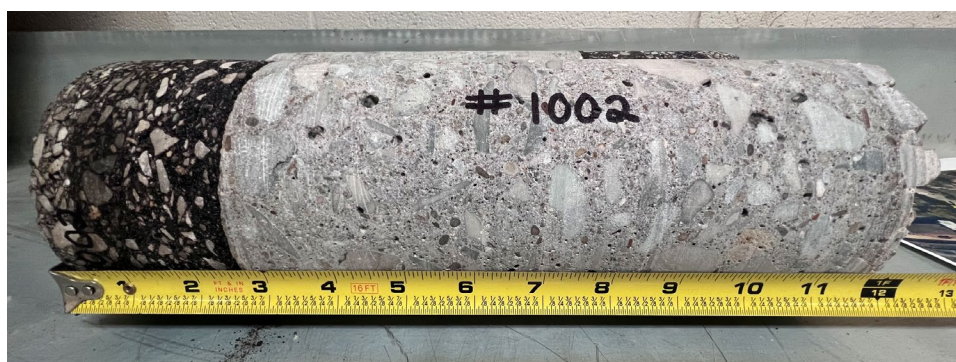


Figure 2: Core taken from WB driving lane adjacent retaining wall and steps for 1517 Algonquin Pkwy.

This work involves the removal of the asphalt pavement from the area identified in the plans and then a variation of restoration activities to be determined by the Engineer at the time of construction. There are two potential outcomes anticipated and this project includes bid items and estimated quantities for both despite not all bid items being expected to be used and quantities will vary.

## General Notes & Description of Work

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One potential outcome is that after asphalt removal the concrete pavement is found in suitable condition to be patched, diamond grinded for rideability, and the joints be resawed and resealed. This outcome would result in the currently covered concrete pavement becoming the final riding surface in the area and the adjacent asphalt surface would need to be resurfaced and smoothly transitioned into the concrete surface (much like an Edge Key). Additionally, pavement striping and markings on the concrete pavement would need to be Durable Type 1 Tape instead of Thermoplastic like the other areas with a final surface of asphalt.

The other potential outcome is that after asphalt removal the concrete pavement is not found in suitable condition to become the final riding surface even if it were patched and rehabilitated. This outcome would result in efforts of concrete patching before lift(s) of leveling & wedging then the final asphalt surface were constructed.

Again, bid items and quantities for both of these outcomes are included in these plans despite the uncertainty that they will be necessary. The Engineer will make the determination on activities to be performed following the removal of the asphalt from the identified area. The Contractor is to provide the Engineer a minimum of 5 days' notice to when the asphalt removal work will take place to ensure the evaluation and determination of necessary restoration activities supports continuous construction activities.

Refer to the Asphalt Pavement Milling and Concrete Pavement Restoration Detail Sheet, the Special Note for Full Depth Concrete Pavement Repair, and the applicable Summaries for details and location information.

**Island Removals.** Work involves the removal of identified concrete and asphalt islands and the construction of new pavement. Refer to the Special Note for Concrete Island Removal, Pavement Summary, and the Island Removal Detail Sheets for details and location information.

**Traffic Signals.** The existing signal arrangements for KY 2054 at 35<sup>th</sup> St., KY 1934, Beech St., Cypress St., US 31W, Dixie Hwy., and 16<sup>th</sup> St. are to be replaced. Remove Signal Equipment involves the removal of the existing controller cabinets, steel strain poles, all signal heads, signal cable, and other signal items the Engineer identifies. Installation for each intersection includes a new controller cabinet and control equipment, new steel strain poles with pole bases, new pedestrian signal pedestals (if specified), new signal heads, radar detection equipment, lighting fixture brackets and luminaires, and the necessary messenger wire and signal cable. All new signal heads are to have reflective backplates and LED indications. Refer to the Signal Plans for design details, quantities, and more information.

**Sidewalk.** In the corners of the intersections planned for new traffic signals, concrete sidewalk is specified for construction to provide access from the existing sidewalk to the proposed signal poles for access to the pedestrian push button equipment. Refer to the Special Note for Sidewalk Ramps & Detectable Warnings, Sidewalk Summary, and the Signal Detail Sheets for details and location information.

**Removal of Existing Signing Assemblies and Installation of Proposed Signing.** A quantity of "Remove Sign" has been included for removal of existing signs along the corridor, as identified in the Remove Sign Summary. An estimated quantity of new signing and sign post is included on the Signing Summary. The Contractor and Engineer will work with the District Traffic Section to determine the final signing layout and sign types prior to installation of the proposed signing. Refer to the Special Note for Signing and the Special Note for Signage for more details concerning the procedures for determining and staking the final layout and installation of the signing.

### Special Note for Staking

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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. For the asphalt removal and concrete pavement restoration area regardless of pavement outcome, use the profile of the exposed concrete pavement surface to transition the adjacent asphalt pavement sections to provide a smooth profile transition between pavement surfaces. After the concrete patch work has been completed and if the determination has been made that the final riding surface material is to be asphalt, work with the Engineer to determine the leveling and wedging lift thickness the contractor is to use in establishing the proposed pavement surface profile through the improvement area. Ensure positive drainage to existing curb inlets upon completion of the work.
3. 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 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 4 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.
4. Produce and furnish to the Engineer "As Built" information for the traffic signal pole, pedestrian pedestal, signal control cabinet improvements and the work in the asphalt removal and concrete pavement restoration area. Information to be provided as a 3D CAD file with breaklines and point labels. For the signal infrastructure improvements, location and final elevation data of these improvements should be included. For the asphalt removal and concrete pavement restoration area, as built information will consist of a record of the final pavement elevation every 50 feet along the crown, each proposed lane line, and the edges of pavement.
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

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### 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

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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 stream.

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.

Erosion Control  
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#### **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 Tree, Stump, and Brush Removal

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### 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) Site Preparation; (2) Maintaining and controlling traffic; (3) Temporary erosion control and temporary pollution control; (4) Cutting, trimming, and/or removing trees, stumps, and/or brush as specified or directed by the Project Engineer; (5) Treating all cut stumps required by Project Engineer to prevent re-sprouting; (5) Clean up and disposal of waste; (6) Final dressing and seeding and protection; and (7) 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.** The Contractor shall maintain and control traffic in accordance with the Traffic Control Plan.
- B. Seeding and Protection.** Use applicable Seed Mixture as specified per Section 212.03.03.
- C. Erosion Control.** See the Special Note for Erosion Control.

### III. CONSTRUCTION METHODS

- A. Maintain and Control Traffic.** The Contractor shall maintain and control traffic in accordance with the Traffic Control Plan.
- B. Cutting and/or Removing Trees and/or Stumps.** The Contractor shall cut and/or remove the trees and/or stumps as indicated in the Proposal, or as directed by the Engineer. Cut trees as close to the ground as possible; three inches (3") or less from ground line. All tree stumps within the mowing zone shall be removed via mechanical grinding, or other methods approved by the Engineer, to a minimum depth of four inches (4") below the surrounding grade line. For trees that are cut but will not be required to have their stump removed, treat the stump, within one hour of cutting, with the herbicide solution specified below.

Replace and level any and all soil disturbed during the tree, stump, and/or brush removal operations. Leave the soil in a condition suitable for seeding that is level with the surrounding soil grade, with no holes or indentions to catch water or present unsafe mowing conditions. This work will be incidental to the bid items "Remove Trees or Stumps."

NOTE: Tree cutting restrictions apply. See the Special Note for Tree Removal for details on the restrictions.

- C. **Removal of Tree, Stump, and Brush Debris.** The Contractor will remove all debris and biomass from the cutting and/or removal of trees, stumps, and/or brush from the work site and dispose of such off the right-of-way in accordance with local, state, and federal solid waste laws and regulations. Cleanup and remove all existing downed trees and brush located within the designated areas. At the discretion of the Project Engineer, the contractor may be permitted to chip and blow biomass onto non-mowing zones. Chips shall not be blown onto areas that would potentially restrict the flow of water in drainage ditches. All un-chipped biomass must be removed from roadway right-of-ways.

The Contractor shall keep the work zone free of accumulated waste material and debris at all times. Remove and dispose of all tree, stump, and brush chips off the right-of-way. Remove and dispose of all debris and waste material off the right-of-way as work is completed and at the end of each workday. Remove desirable wood pieces from the right-of-way at the end of each workday. Stockpile trees and brush off the right-of-way. At the discretion of the Project Engineer, the Contractor may be permitted to stockpile trees and brush at approved locations along the right-of-way.

The Contractor shall immediately correct any disturbance to all drainage features and structures caused by the Contractor’s work.

- D. **Stump Treatment.** Within one hour of cutting, the Contractor shall apply a stump treatment mix consisting of fifty percent (50%) Glyphosate (EPA Reg. No. 524-579) with water and add twelve (12) ounces of Imazapyr (EPA Reg. No. 241-431), as specified, per gallon of solution. The addition of a non-ionic surfactant 5% (v/v) shall be added to the solution to increase uptake of the herbicide solution into the root system. Generic formulations are not acceptable. Mix the herbicide solution in the presence of the Inspector. Include a color indicator in the herbicide solution to mark the treated stumps. Spray or paint the herbicide solution onto all cut stumps within one hour after cutting. Apply the herbicide solution in a manner to avoid drift onto surrounding vegetative ground cover. Stumps in the mowing zone, designated for mechanical grinding treatment, need not receive the herbicide treatment.

Provide herbicide material for the treatment of cut stumps meeting the following criteria:

a. **Glyphosate**

Active ingredient: **(Glyphosate)**  
\*Glyphosate, N-(phosphonomethyl)glycine, in the form of its  
potassium salt.....48.7%  
Inert ingredients .....51.3%  
Total .....100.0%  
\* Contains 660 grams per liter or 5.5 pounds per U.S. gallon of the active ingredient  
glyphosate, in the form of its potassium salt. Equivalent to 540 grams per liter or 4.5  
pounds per U.S. gallon of the acid, glyphosate.  
EPA Reg. No. 524-579

**b. Imazapyr**

Active ingredient: (**Imazapyr**)  
\*Isopropylamine salt of Imazapyr 2-[4,5-dihydro-4-methyl-4-(1methylethyl)-5oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid) 26.7%  
Inert ingredients ..... 73.3%  
Total ..... 100%  
\* Equivalent to 21.8 percent 2-[4,5-dihydro-4-methyl-4-(1methylethyl)-5oxo-1H-imidazolyl]-3-pyridinecarboxylic acid or 2 pounds acid per gallon.  
EPA Reg. No. 241-431

KRS 217B requires that any individual who applies pesticides to Kentucky Highway Right-of-Way areas must be certified as a Pesticide Applicator under Category 6 guidelines. Comply with all current laws and regulations established by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and by KRS 217B that regulate the handling, use, and application of pesticides.

- E. Property Damage.** The Contractor will be responsible for all damage to public and/or private property resulting from his/her work.
- F. Coordination with Utility Companies.** NOTICE: Utility locations shown in the plans are approximate and have not been specifically located by the Department. Locate all underground, above ground and overhead utilities prior to beginning construction. The Contractor shall have the responsibility 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 Utility Owner while they relocate their facilities. The Contractor shall be responsible for repairing all utility damage that occurs as a result of his/her operations.
- G. Right-of-Way Limits.** The exact limits of the Right-of-Way have not been established by the Department. The Contractor shall limit his/her activities to the obvious Right-of-Way, permanent or temporary easements, and any work areas secured by consent and release of the adjacent property owners. The Contractor shall be responsible for all encroachments onto private lands.
- H. Clean Up, Disposal of Waste.** Clean up and dispose of all removed debris by the end of each workday, 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 clean up or disposal of waste and debris from the project. See the Special Provision for Waste and Borrow Sites.
- I. Final Dressing, Seeding and Protection.** Apply final dressing, class A to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas with the appropriate Seed Mixture as specified in Section 212.03.03.
- J. Erosion Control.** See the Special Note for Erosion Control.

Tree, Stump, & Brush Removal  
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#### 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 the project bid items.
- C. Remove Trees or Stumps.** The Department will measure the quantity as EACH tree and/or stump removed. Trees and/or stumps to be measured under this bid item are only those trees and/or stumps indicated on the Plans or in the Proposal, or as directed by the Engineer.
- D. Stump Treatment.** The Department will NOT measure for payment the operation of Stump Treatment. This activity shall be incidental to the bid item "Remove Trees or Stumps".
- E. Clean Up, Disposal of Waste.** The Department will NOT measure for payment the operations of Clean Up and Disposal of Waste. These activities shall be incidental to the project bid items.
- F. Final Dressing, Seeding and Protection.** The Department will NOT measure for payment the operations of Final Dressing. 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 the Traffic Control Plan.
- B. Remove Trees or Stumps.** The Department will make payment for the completed and accepted quantities of EACH tree and/or stump removed. The Department will consider payment at the contract unit price as full compensation for furnishing all materials, equipment, labor, other expenses, and all incidentals necessary to complete the work of removing the trees and/or stumps.
- C. Erosion Control.** See the Special Note for Erosion Control.

### Special Note for Signage

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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:

- 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.
- 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

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### 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.

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

Signing  
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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 on existing concrete, such as a sidewalk, concrete median, etc., or installations on existing asphalt, such as flush medians, Type I steel posts shall be mounted on a Type D Surface Mount. For Type D Surface Mounts use only Kleen Break Model 425 by Xcessories Squared of Auburn, IL. If the Surface Mount is to be installed on sufficiently cured concrete, use part number XKBSM42520-G. If the Surface Mount is to be installed on asphalt surface, use part numbers XKB42520-G and AXT225-36-G. Prior to installation, the Contractor shall submit to the Engineer shop drawings of the Type D Surface Mount(s). Install the Type D Surface Mount(s) according to all the applicable requirements of the manufacturer (see shop drawings). 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, 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)

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

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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 their installation and reinstall as instructed. 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.

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 pole and attaching the new, Department-provided sheet sign to the new pole 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

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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 pre-existing 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 NOT utilize the bid item REMOVE AND RELOCATE SIGN ASSEMBLY for removing and relocating such a sign assembly. Instead, the Department will require the Contractor 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.

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- 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.
- I. 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.
- 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

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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.

#### 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 and Reflective Sign Post Panels 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.
- H. 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.
- I. Remove & Relocate Sheet Signs.** The Department will measure sheet signs removed from an existing installation and reinstalled as Each sheet sign removed and reinstalled as indicated in the contract documents, or as directed by the Engineer.
- J. 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

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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.

- K. 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.
- L. 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, Final Dressing and Seeding and Protection.

## **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 and any Reflective Sign Post Panels, 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.
- 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: Kleen Break Model 425 for Surface Mount Concrete Installations 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.

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- 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



### **Special Note for Radar Presence Detection Devices**

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#### **INSTALL RADAR PRESENCE DETECTOR TYPE A**

*Install Radar Presence Detector Type A* shall consist of installation of a pole mounted radar presence sensor, sensor mounting bracket, sensor cables, interface boxes, lead-in cable, connectors (furnished by the Contractor), and controller interface assembly. The Install Radar Presence Detector Type A bid item shall include all labor required to provide a functional detection system. Radar Presence Detector Type A shall be installed and wired in accordance with the manufacturer's instructions. After the detector is installed and before the detector is powered on, the Contractor shall coordinate with District Traffic Division's representatives to schedule a time to perform the detector setup. The Contractor shall double check to verify that all wiring is correctly installed and connected before scheduling the setup work. Representatives from KYTC and/or the manufacturer or sales representative will assist with setup and calibration. The Contractor shall provide a bucket truck and operators at this time for final aiming of the sensors. The Contractor shall provide individuals capable of operating the setup software and learning the setup process so that future installations may be completed without assistance from others.

## **SPECIAL NOTE FOR FULL DEPTH CONCRETE PAVEMENT REPAIR**

This Special Note applies to full depth repairs of concrete pavement. Section references herein are to the Department's Standard Specifications for Road and Bridge Construction, current edition.

**1.0 DESCRIPTION.** Remove and replace concrete pavement. Comply with the applicable Standard Drawings and the Standard Specifications except as specifically superseded herein.

### **2.1 MATERIALS AND EQUIPMENT.**

**2.2 JPC Pavement.** Test concrete materials according to section 601.03.03. Conform to 501, 502, and 601 except that the concrete must achieve 3000 psi in accordance with Section 4.4 of this note. The Engineer may allow pavement to be opened to traffic at less than 3,000 psi subject to the deductions described in Section 4.4 of this note.

**2.2 Dowel Bars and Sleeves.** Conform to Section 811.

**2.3 Tie Bars.** Conform to Section 811. Use epoxy coated tie bars in longitudinal and transverse joints.

**2.4 Grout Adhesives and Epoxy Resin Systems.** Conform to Section 826.

**2.5 Dense Graded Aggregate (DGA).** Conform to Section 805.

**2.6 Geotextile Fabric.** Conform to Section 843.

**2.7 Drills.** Drill holes using a gang drill, capable of drilling a minimum of four simultaneously. Misalignment of holes shall not exceed 1/4 inch in the vertical or oblique plane.

**2.8 Hammers.** Only use chisel point hammers weighing less than 40 pounds to remove deteriorated concrete.

### **3.1 CONSTRUCTION.**

**3.2 Removal of Existing Pavement.** Remove existing pavement to the extent the Contract specifies or as the Engineer directs. The minimum length of patches measured along centerline is 3 feet on each side of an existing joint.

When working with pavements with non-skewed transverse joints, if it is necessary to remove existing pavement closer than 6 feet to a transverse joint, remove the pavement 3 feet beyond that joint.

When working with pavements with skewed transverse joints, if it is necessary to remove existing pavement closer than 3 feet to a transverse joint, remove the pavement 3 feet beyond that joint.

Details of configurations of pavement and joints for various situations are depicted in the drawings herein.

When small areas of removal and replacement are performed at bridge ends, maintain or reconstruct existing expansion joints at their existing location. When the Engineer determines extensive full width removal and replacement is required, construct new expansion joints at the locations shown on Standard Drawing No. RPN-010.

In the removal operation, make a full depth saw cut longitudinally along the centerline joint and shoulder joint and transversely along the area marked for removal. To prevent damage to the subbase, do not allow the saw to penetrate more than 1/2" into the

subbase. The Engineer may direct or approve additional cuts within the removal area for ease of removal of the damaged slab and to prevent damage to adjacent pavement to remain in place. Do not overcut beyond the limits of the removal area. Prevent saw slurry from entering existing joints and cracks. To avoid pumping and erosion beneath the slab, do not allow traffic on sawed pavement for more than 48 hours before beginning removal procedures, unless directed by the Engineer.

Lift out the deteriorated concrete vertically with lift pins. If approved by the Engineer, use other methods that do not damage the base, shoulder, or sides of pavement that is to be left in place. If any damage does occur, repair as the Engineer directs and use an acceptable alternative method for the removal process. Do not damage the pavement base during these operations.

**3.3 Pavement Replacement.** Do not damage the pavement base during these operations.

**3.3.1 Preparation of Base.** Compact the new and existing aggregate base to the Engineer's satisfaction. The Engineer will accept compaction by either visual inspection or by nuclear gauge. At bridge ends, treat existing base and subgrade as the Contract specifies. During compaction, wet the base as the Engineer directs. Compact areas not accessible to compaction equipment by hand tamping.

**3.3.2 Underdrains.** Construct, or repair damage to, pavement edge drains according to Section 704. If underdrains are placed omitting areas to be patched, construct additional lateral drains as necessary to provide outlets for the installed underdrain until performing the pavement replacement and completing the underdrain system. Provide drainage for any undercut or base repair areas.

**3.3.3 Pavement Replacement.** Using load transfer assemblies for dowel joints drill into the existing slab according to the details shown herein and on the Standard Drawings.

Use plain epoxy coated dowels of the size specified on the standard drawings based on the pavement thickness for contraction and expansion joints.

Drill holes for dowel bars and tie bars into the face of the existing slab, at a diameter as specified in the following. Drill the dowel bar holes and tie bar holes to a depth equal to 1/2 the length of the bars. Anchor tie bars into the existing pavement using an epoxy resin. Anchor dowel bars into the existing pavement using either an epoxy resin or an adhesive grout. For tie bars and dowel bars where an epoxy resin is to be used drill the holes 1/8 inch larger than the bar diameter. For dowel bars where an adhesive grout product is to be used, drill holes 1/4 inch larger than the bar diameter. Use a clear or opaque grout retention disk in both grout and epoxy applications. Operate the equipment to prevent damage to the pavement being drilled. Obtain the Engineer's approval of the drilling procedure. Install load transfer assemblies according to the Standard Drawings and Standard Specifications.

When indicated herein or in the Standard Drawings, use 1 inch deformed tie bars, 18 inches long on 30-inch centers and starting and ending 20 inches inside the edges of the repair area in the longitudinal joint. Use 1 inch deformed tie bars, or plain epoxy coated dowel bars sized in accordance with the Standard Drawings, 18 inches long beginning 12 inches inside of each edge and on 12-inch centers in transverse construction joints.

Install the dowels and tie bars according to Section 511 unless contradicted here. Ensure the holes are dry and free of dust and debris. Use a nozzle to insert the grout or epoxy starting at the back of the drilled hole to allow for full coating of the dowel or tie bar. After placement, use a bond breaker on the section of the dowel bar that is protruding from the hole.

Mix, place, finish, and cure concrete according to Section 501 with the exception that the Department will allow truck mixing, 2-bag mixers, and hand finishing.

When required, use a form on the side of the slab at longitudinal joints. When the adjacent traffic lane is not closed to traffic or the drop-off is not protected,

temporarily fill the space between the form and the adjacent pavement with DGA. After placing the slab, remove the DGA and form. Fill the hole with concrete and thoroughly consolidate by rodding, spading, and sufficient vibration to form a dense homogeneous mass. Use a form on the side of the slab adjacent to shoulders. Excavate and backfill as shown on Section F'-F'.

For patches less than 25 feet in length, use a bond breaker and do not install tie bars at the longitudinal joint. Bond breakers should not exceed 1/8 inch in thickness, e.g. tar paper.

When resurfacing is required, a float finish is satisfactory. Otherwise, broom finish or, when the adjacent surface has a grooved finish, texture the surface according to Subsection 501.03.13 H). Finish the surface, including joints, to meet a surface tolerance of 1/8 inch in 10 feet that will be verified by straightedge. Cure the pavement and apply curing membranes according to 501.03.15.

Keep all pavement surfaces adjacent to this operation reasonably clean of excess grout and other materials at all times. Maintain all original longitudinal joints. Place transverse joints according to the details shown herein and on the Standard Drawings.

4.1 MEASUREMENT.

4.2 DGA. The Department will measure the quantity used to stabilize the existing base or to replace unsuitable material in tons. The Department will not measure removal of existing base material or underlying material for payment and will consider incidental to DGA. The quantity of DGA used for the drop-off protection shall be incidental to this work and will not be measured for payment.

4.3 Full Depth Patching. The Department will measure according to 501.04.01. The Department will not measure removal of the existing concrete pavement nor the dowels, or tie bars for payment and will consider them incidental to Full Depth Patching.

Full Depth Patching will be paid according to section 5.0 below and according to the following payment schedule based on the compressive strength. The cylinders for payment will be tested two hours prior the scheduled opening of traffic.

3000 psi and up	100% payment
2750 to 3000 psi	75% payment and approval from the Engineer to open to traffic*
2500 to 2750 psi	50% payment and approval from the Engineer to open to traffic*
2250 to 2500 psi	25% payment and approval from the Engineer to open to traffic*
Below 2250 psi	10% payment and no potential to open to traffic. Maintain traffic closure until concrete reaches a minimum of 2250 psi.

\*If the Engineer approves opening to traffic, the Engineer will evaluate the concrete at 28 days (or sooner) to determine if the removal and replacement of the concrete is necessary due to pavement distress induced by the early opening (i.e. noticeable cracking). If required by the Engineer, remove and replace those slabs showing distress at no cost to the Department.

4.4 Underdrains. The Department will measure the quantity according to Subsection 704.04. The Department will not measure lateral drains for payment and will consider them incidental to the Underdrains.

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

Code	Pay Item	Pay Unit
00001	DGA Base	Ton
01000	Perforated Pipe, 4-inch	Linear Foot
20177ED	Full Depth Patching	Square Foot

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

## **SPECIAL NOTE FOR SAW, CLEAN, AND RESEAL JPC PAVEMENT JOINTS**

Except as provided herein, conform to all requirements of the latest version of the Kentucky Transportation Cabinet's Standard Specifications for Road and Bridge Construction. The contractor shall resaw, clean and seal joints and random cracks in JPC pavement as directed by the Engineer. All joints and cracks shall be sealed using hot applied modified crack sealant.

The transverse and longitudinal joints in JPC pavements shall be re-sawed and cleaned to the minimum width required to expose clean and intact vertical faces of the joint. Saw and clean out existing old sealant and slurry debris to a minimum 1 ½ inches in depth.

After re-sawing joints and removing existing old sealant, clean sidewalls of joints by water blasting with minimum 3,000 pounds per square inch (psi). Sandblast joint sidewall then blow out any residual dust and debris using an air compressor with a minimum rating of 125 psi/100 cfm and equipped with a water filter. If any moisture remains after use of compressed air, utilize a heat lance to dry joints. The heat lance shall be a LAB Model B or approved equal, capable of producing air temperatures up to 2,500 degrees Fahrenheit.

Clean joints before resealing according to the requirements for new seals. Fill joints with hot-poured elastic joint sealer from the bottom to the top of the cleaned joint with a recess of no more than ¼ inch and no less than 1/8 inch from the pavement surface. Use a Random Crack Saw to cut random cracks to a ¾ inch depth. Clean with above air and heat lance process. Shoulder joints shall be sealed in the same manner as above on JPC roadways with JPC shoulders. In cases where the JPC roadway has been constructed with asphalt shoulders, the asphalt shoulder pavement shall be sawed or routed adjacent to the JPC roadway to at least ½ inch to ¾ inch wide and at least 1 inch deep to remove existing sealant and/or debris and to remove any unsound pavement. If old sealant residual has remained after the rout process, the sidewalls shall be sand blasted.

Heat lance as specified shall be used for final cleaning. Sealant placed in the shoulder joint shall be struck down with the use of a 3-4 inch disk attachment not to exceed an over band 3 inches wide and less than 1/8 inch thick in height above the surrounding pavement. All slurry and debris from the work must be removed prior to opening to traffic.

Payment for work as described in this note will be per linear foot as SAW-CLEAN-RESEAL TVERSE JOINT, SAW-CLEAN-RESEAL LONGIT JOINT, and SAW-CLEAN-RESEAL RANDOM CRACKS.

SPECIAL NOTE FOR CONSTRUCTING  
INLAID PAVEMENT MARKERS

I. DESCRIPTION

Except as provided herein, perform all work in accordance with the Department's Standard and Supplemental Specifications and applicable Standard and Sepia Drawings, current editions. Article references are to the Standard Specifications. This work shall consist of:

- (1) Maintain and Control Traffic; and (2) Furnish and install Inlaid Pavement Markers (IPMs) in recessed grooves; and (3) Any other work as specified by these notes and the Contract.

II. MATERIALS

The Department will sample all materials in accordance with the Department's Sampling Manual. 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 unless otherwise specified in these Notes.

- A. **Maintain and Control Traffic.** See the Traffic Control Plan.
- B. **Markers.** Provide reflective lenses with depth control breakaway positioning tabs. Before furnishing the markers, provide to the Engineer the manufacturer’s current recommendations for adhesives and installation procedures. Use one brand and design throughout the project. Use markers meeting the specifications in the table below.

SPECIFICATIONS FOR HOUSING AND REFLECTOR	
Material:	Polycarbonate Plastic
Weight:	Housing 2.00 oz.
	Reflector 2.00oz.
Housing Size:	5.00" x 3.00" x 0.70" high
Specific Intensity of Reflectivity at 0.2° Observation Angle	
White:	3.0 at 0°entrance angle
	1.2 at 20°entrance angle
Yellow:	60% of white values
Red:	25% of white values

- C. **Adhesives.** Use adhesives that conform to the manufacturer’s recommendations.

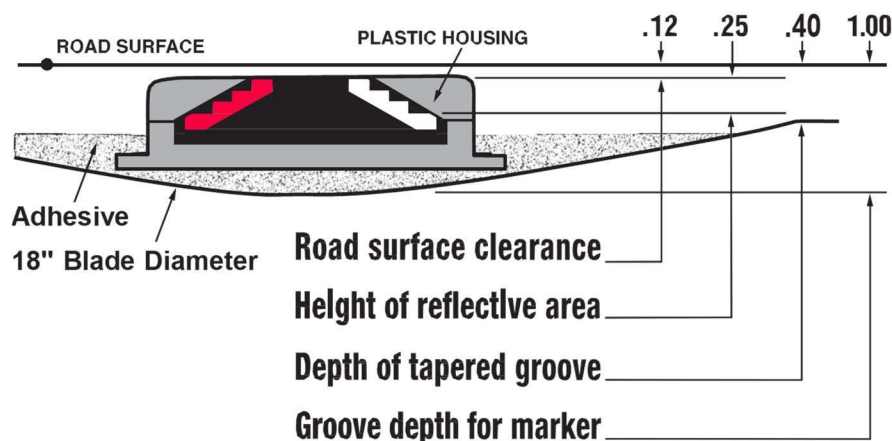
Pavement Markers  
Page 2 of 4

### III. CONSTRUCTION

**A. Maintain and Control Traffic.** See the Traffic Control Plan.

**B. Installation.** Install IPMs in recessed grooves in the pavement according to the manufacturer's recommendations. Cut installation grooves using diamond blades on saws that accurately control groove dimensions. Remove all dirt, grease, oil, loose or unsound layers, and any other material from the marker area which would reduce the bond of the adhesive. Maintain pavement surfaces in a clean condition until placing markers.

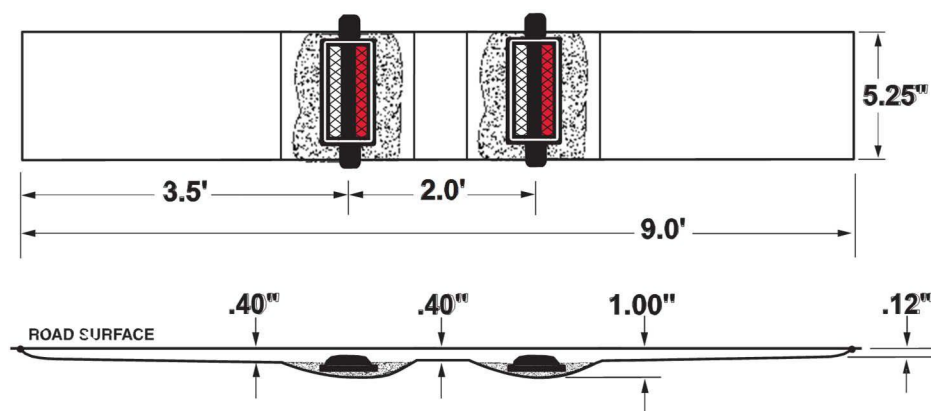
Prepare the pavement surfaces, and install the markers in the recessed groove according to the drawing below. Ensure that the adhesive bed area is equal to the bottom area of the marker, and apply adhesive in sufficient quantity to force excess out around the entire perimeter of the marker. Use materials, equipment, and construction procedures that ensure proper adhesion of the markers to the pavement surface according to the manufacturer's recommendations. Remove all excess adhesive from in front of the reflective faces. If any adhesive or foreign matter cannot be removed from the reflective faces, or if any marker fails to properly adhere to the pavement surface, remove and replace the marker at no additional cost to the Department.



**C. IPM Location and Spacing.** Install the markers in the pattern for high reflectivity with two (2) IPMs per groove. Locate and space markers as shown in the current Standard Drawings or Sepias. Do not install markers on bridge decks. Do not install a marker on top of a pavement joint or crack. Offset the recessed groove a minimum of 2 inches from any longitudinal pavement joint or crack and at least one inch from the painted stripe, ensuring that the finished line of markers is straight with minimal lateral deviation. Give preference to maintaining the 2-inch offset between recessed groove and joint as opposed to keeping the line of markers straight.

## Pavement Markers

### Page 3 of 4



Place inlaid markers as much in line with existing pavement striping as possible. Place markers installed along an edge line or channelizing line so that the near edge of the plastic housing is no more than one inch from the near edge of the line. Place markers installed along a lane line between and in line with the dashes. Do not place markers over the lines except where the lines deviate visibly from their correct alignment, and then only after obtaining the Engineer's prior approval of the location.

If conflicts between recessed groove placement in relation to pavement joint and striping cannot be resolved, obtain the Engineer's approval to eliminate the marker or revise the alignment.

- D. Disposal of Waste.** Dispose of all removed markers, pavement debris, and other waste at sites off the right of way obtained by the Contractor at no additional cost to the Department.
- E. Restoration.** Be responsible for all damage to public and/or private property resulting from the work. Restore all damaged features in like kind materials and design at no additional cost to the Department.
- F. On-Site Inspection.** Make a thorough inspection of the site prior to submitting a bid and be thoroughly familiar with existing conditions so that the work can be expeditiously performed after a contract is awarded. The Department will consider submission of a bid as evidence of this inspection having been made and will not honor any claims for money or grant Contract time extensions resulting from site conditions.



Pavement Markers  
Page 4 of 4

- G. 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. MEASUREMENT**

- A. Maintain and Control Traffic.** See the Traffic Control Plan.
- B. Inlaid Pavement Markers.** The Department shall measure as Each. One (1) installation of “INLAID PAVEMENT MARKER” will consist of grooving the pavement, removing cuttings and debris, preheating pavement to remove moisture, adhesives, and installation of two (2) markers with all lenses in accordance with this note.

**Note: Each pay item of Inlaid Pavement Marker will require two markers.**

#### **V. PAYMENT**

- A. Maintain and Control Traffic.** See the Traffic Control Plan.
- B. Inlaid Pavement Markers.** The Department will make payment for the completed and accepted quantities of completely installed “INLAID PAVEMENT MARKERS” at the Contract unit price, Each. Accept payment as full compensation for all labor, equipment, materials, and incidentals necessary to accomplish this work to the satisfaction of the Engineer. A system of one (1) groove and two (2) markers shall be paid as one “INLAID PAVEMENT MARKER”.

### **SPECIAL NOTE FOR SIGNING AND PAVEMENT MARKING MODIFICATIONS**

This Proposal includes signing and striping plans for the roadway reconfiguration of KY 2054 (Algonquin Pkwy.) that shall be implemented following construction of the final surface. However, the Department reserves the right to make changes to the project's striping and signing plans. The Contractor shall notify the Engineer a minimum of 4 weeks (28 calendar days) prior to signing and resurfacing activities to coordinate any Department requested plan revisions, ensuring the modifications can be performed during final surfacing. As the Contractor is responsible for implementing the signing and pavement marking changes, it is highly recommended all questions are addressed to the Department prior to construction. Any incorrect markings or sign installations will be removed and replaced with the proper markings or signing at the Contractor's expense and in a manner approved by the Engineer.

## Special Note for Completion Date & Liquidated Damages

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### I. COMPLETION DATE

The ultimate fixed completion date for this project will be July 26, 2026 though this project will have a milestone completion date of June 28, 2026 for completion of paving activities.

Liquidated Damages for failure to achieve the milestone and/or 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 any and all lane closures that are in place beyond the time frame(s) noted in the Traffic Control Plan and approved by the Engineer.

All construction must be completed in accordance with any and all applicable weather limitations listed in the Standard Specifications. As such, the Contractor is advised to select a starting date based on a favorable weather forecast.

NOTE: At the sole discretion of the Engineer, all, or part, of these Liquidated Damages may be waived due to unforeseen circumstances, such as unexpected weather.

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.

## **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

**SPECIAL NOTE FOR ELECTRONIC DELIVERY MANAGEMENT SYSTEM (e-Ticketing) ASPHALT**

This Special Note will apply when indicated on the plans or in the proposal. Section references herein are to the Department’s Standard Specifications for Road and Bridge Construction current edition.

**1.0 DESCRIPTION.** Incorporate an e-Ticketing Delivery Software for weighed asphalt material delivered to the project to report loads and provide daily running totals of weighed asphalt material for pay items and incidental work during the construction processes from the point of measurement and loading to the point of incorporation to the project.

**2.0 MATERIALS AND EQUIPMENT.** Contractor shall supply material data in JavaScript Object Notation (JSON) documents to the KYTC e-Ticketing Delivery Software (KYTC e-Ticketing Portal) via Application Programming Interface (API) or direct connection. Test and verify that ticket data can be shared from the original source no fewer than 30 days prior to material placement activities. An e-Ticketing Delivery Software supplier can provide a qualified representative for on-site technical assistance during the initial setup, pre-construction verifications, and data management and processing as needed during the Project to maintain material data delivery capabilities. Virtual meetings may be hosted in lieu of on-site meetings when deemed appropriate by the Engineer.

Provide e-Ticketing Delivery Software that will meet the following:

- 1. The e-Ticketing Delivery Software shall be fully integrated with the Contractor’s Load Read-Out scale system at the material source location.
- 2. The e-Ticketing Delivery Software shall provide real-time delivery to KYTC e-Ticketing Portal.
- 3. Transmit any updates to the ticket data within 5 minutes of a change.

**3.0 CONSTRUCTION.** Provide the Engineer with the manufacturer’s specifications and all required documentation for data access at the pre-construction conference.

**A. Construction Requirements**

- 1. Install and operate software in accordance with the manufacturer’s specifications.
- 2. Verify that all pertinent information is provided by the software within the requirements of this Special Note.

**B. Data Deliverables**

Provide to the Engineer a means in which to gather report summaries by way of iOS apps, web pages, or any other method at the disposal of the Engineer. The Engineer may request data at any time during the project.

**1. Asphalt Material**

**a. Real-time Continuous Data Items**

Provide the Engineer access to JSON documents capable of being transmitted through the KYTC’s e-Ticketing Portal that displays the following information in real-time with a web-based system compatible with iOS and Windows environments.

- Each Truck
  - Supplier Name
  - Supplier Address
  - Supplier Phone
  - Plant location
  - Date
  - Time at source
  - Project Location

- Contract ID#
- Carrier Name
- Unique Truck ID
- Description of Material
- Mix Design Number
- Gross, Tare and Net Weight
- Weighmaster

**4.0 MEASUREMENT.** The Department will not measure the electronic delivery management system.

**5.0 PAYMENT.** The Department will not measure this work for payment and will consider all items contained in this note to be incidental to the asphalt mixtures on the project, as applicable.

May 5, 2025

## SPECIAL NOTE FOR EXPERIMENTAL KYCT AND FIELD RUT TESTING

### June 2025 Update

#### 1.0 General

**1.1 Description.** The KYCT (Kentucky Method for Cracking Test) and the IDEAL-RT/IDT-HT test results will help determine if the mixture is susceptible to cracking and rutting. During the experimental phase, data will be gathered and analyzed by the Department to determine the durability and stability of the bituminous mixes. Additionally, the data will help the Department to create future performance-based specifications which will include the KYCT and field rutting test methods.

#### 2.0 Equipment

**2.1 KYCT Testing Equipment.** The Department will require a Marshall Test Press with digital recording capabilities. Other CT testing equipment may be used for testing with prior approval by the Department.

**2.2 Water Baths.** One or more water baths will be required that can maintain a temperature of 77° +/- 1.8° F with a digital thermometer showing the water bath temperature. Also, one water bath shall have the ability to suspend gyratory specimen fully submerged in water in accordance with AASHTO T-166, current edition.

**2.3 Field Rutting Tests.** If the contractor elects to perform the IDEAL-RT test, in conformance with ASTM D8360-22, the acquisition of the "Option A" or "Option B" test fixture is required. If the IDT-HT is desired, the test press utilized for the KYTC is sufficient. The Department shall approve all test configurations at their discretion.

**2.4 Gyratory Molds.** Gyratory molds will be required to assist in the production of gyratory specimens in accordance with AASHTO T-312, current edition.

**2.5 Ovens.** Adequate (minimum of two ovens) will be required to accommodate the additional molds and asphalt mixture necessary to perform the acceptance testing as outlined in Section 402 of the Kentucky Standard Specifications for Road and Bridge Construction, current edition.

**2.6 Department Equipment.** The Department will provide gyratory molds, PINE 850 Test Press with digital recordation, and CT testing equipment to assist during this experimental phase so data can be gathered.

#### 3.0 Testing Requirements

**3.1 Acceptance Testing.** Perform all acceptance testing and aggregate gradation as according with Section 402 and Section 403 of the Kentucky Standard Specifications for Road and Bridge Construction, current edition.

**3.2 KYCT Testing.** Perform crack resistance analysis (KYCT) in accordance with the current Kentucky Method for KYCT Index Testing during the plant production of all surface mixtures. Conform to KYTC Specifications for Mix Design approvals. All production testing is currently informational.

**3.2.1 KYCT Frequency.** Obtain an adequate sample of hot mix asphalt to ensure the acceptance testing, gradation, and KYCT gyratory samples can be fabricated and is representative of the bituminous mixture. Acceptance specimens shall be fabricated first, then after the specified amount of oven conditioning, fabricate the KYCT samples with the gyratory compactor in accordance with Section 2.4 of this Special Note. Analysis of the KYCT specimens will be required one per subplot produced from the same asphalt material and at the same time as the acceptance specimen is sampled and tested.

**3.2.2 Number of Specimens and Conditioning.** Fabricate specimens in accordance with the Kentucky Method for KYCT Index Testing. Contrary to the method, for field specimens, fabricate three replicates for cracking resistance analyses and three replicates for rutting resistance analyses. The specimens shall be compacted at the temperature in accordance with KM 64-411.

Contrary to the Kentucky Method, plant produced bituminous material shall be short-term conditioned immediately after sampling for two hours uncovered in the oven at compaction temperature in accordance with KM 64-411.

While the fabricated specimens are allowed to cool in air (fan is permissible) for 30 minutes +/- 5 minutes, find the bulk specific gravity of each specimen according to AASHTO T166. Next, condition the replicates in a 77 °F water bath for 30 minutes +/- 5 minutes. To ensure confidence and reliability of the test results provided by KYCT testing and Field Rut testing, reheating of the asphalt mixture is prohibited.

**3.2.3 Long Term Aging CT's.** For long-term aging and cracking resistance considerations in mix design, mix and condition 3 specimens uncovered for 20 hours at compaction temperature in accordance with KM 64-411. Perform KYCT testing in accordance with KM 64-450 and record the results on the Long-Term KYCT tab of the latest version of the MixPack.

**3.2.4 Record Times.** For each subplot, record the time required between drying aggregates in the plant to KYCT specimen fabrication. The production time may vary due to the time that the bituminous material is held in the silo. Record the preconditioning time when the time exceeds the one-hour specimen cool down time as required in accordance with The Kentucky Method for KYCT Index Testing. The preconditioning time may exceed an hour if the technician is unable to complete the test on the same day or within the specified times as outlined in The Kentucky Method for KYCT Index Testing. The production time and the preconditioning time shall be recorded on the AMAW.

**3.2.5 File Name.** As according to section 7.12 of The Kentucky Method for KYCT Index Testing, save the filename with the following format: "CID\_Aproved Mix Number\_Lot Number\_Sublot Number\_Date"

**3.3 Field Rut Testing.** Perform the rut resistance analysis (IDEAL-RT or IDT-HT) in accordance with ASTM D8360-22 or ALDOT458, respectively. Contrary to ASTM D8360 & ALDOT458, precondition the test specimens in a water bath or forced draft oven at 50 °C +/- 1 °C for 60 +/- 5 min before completing the test.

**3.3.1 Field Rut Testing Frequency.** Perform one test per lot of mixture produced. The plant produced bituminous material sampled for the field rut test does not have to be obtained at the same time as the acceptance and KYCT sample. If the field rut test sample is not obtained at the same time as the KYCT sample, determine the Maximum Specific Gravity of the KYCT sample in accordance with AASHTO T-209 coinciding with the test specimens.

**3.3.2 Number of Specimens and Conditioning.** Fabricate in accordance with the Kentucky Method for KYCT Index Testing. Contrary to the method, for field specimens, fabricate three



replicates for rutting resistance analyses. The specimens shall be compacted at the temperature in accordance with KM 64-411. Contrary to the Kentucky Method, plant produced bituminous material shall be short-term conditioned immediately after sampling for two hours uncovered in the oven at compaction temperature in accordance with KM 64-411.

**3.3.3 Record Times.** Record the production time as according to section 3.2.3 in this special note. Also record the time that the specimens were fabricated. All times shall be recorded on the AMAW.

**3.3.4 File Name.** Record all field rut data in the latest version of the AMAW.

#### **4.0 Data**

Submit the AMAW and all test data that was obtained for acceptance, gradation, KYCT, and field rut testing within five working days once all testing has been completed for a lot to Central Materials Lab and the District Materials Engineer. Also, any data and or comments that the asphalt contractor or district personnel deem informational during this experimental phase, shall also be submitted to the Central Materials Lab and the District Materials Engineer. Any questions or comments regarding any item in this Special Note can be directed to the Central Office, Division of Materials, Asphalt Branch.

#### **5.0 Payment**

Any additional labor and testing equipment that is required to fabricate and test the KYCT and field rut specimens shall be considered incidental to the asphalt surface line item. The Department will perform the testing for the KYCT and field rut specimens if a producer does not possess the proper equipment.

June 12<sup>th</sup>, 2025

## **SPECIAL NOTE FOR RECYCLED ASPHALT PAVEMENT (RAP) STOCKPILE MANAGEMENT**

### **I. GENERAL**

The use of reclaimed asphalt pavement (RAP) from Department projects or other approved sources in hot mix asphalt (HMA) or warm mix asphalt (WMA) shall be subject to stockpile management and handling of material as described in this section.

The Department approves RAP on a stockpile basis, following the process set forth in this method. The contractor's responsibilities in the process are as follows:

- To obtain the Department's approval of all RAP prior to its use on a Department project and to deliver test data and samples as required
- To monitor and preserve the quality and uniformity of the approved material during storage and handling, adding no unapproved material to the existing stockpile
- To comply with the Department's requirements regarding replenishment of approved stockpiles

The Department will approve RAP based on its composition and variability in gradation and asphalt content, and on visual inspections of the stockpile, which the Department may conduct at its discretion. The Department may withdraw approval of a stockpile if the requirements of this specification are not followed in good faith.

The Maximum Percentage Allowed in a mix design will be based on these criteria and on the category of RAP source, as defined in this document.

### **II. APPROVAL PROCESS**

Qualified asphalt producers (listed in List of Approved Materials-Asphalt Mixing Plants) may submit requests for RAP stockpile approval to the Asphalt Branch, Division of Materials, in the Annual Certification for Previously Approved Asphalt Mixing Plants and Related Equipment. The requester shall provide test results as prescribed in Part IID. The Division of Materials may, at their discretion, collect samples or inspect a RAP stockpile consistent with Section IIE.

Upon completion of the review of testing results and, if applicable, visual inspection, the Division of Materials, Asphalt Branch will approve or disapprove the material by letter and will assign a Stockpile Identification Number for each approved RAP stockpile. Note: The contractor's average gradation and asphalt content, as listed in the approval letter, shall be the gradation used in subsequent mix designs. The approval letter will state the applicable limits on the use of the material in mix designs and will summarize the Department's findings, listing the average gradation and asphalt content from the contractor's tests and the corresponding values found by the Department. Where the Maximum Percentage Allowed is low due to variability, the contractor may elect to improve the uniformity of the material by further processing and may again sample, test, and request approval for the material.

No material shall be added to a stockpile after it has been approved, except as provided in Parts V, VI, and VII below.

#### **IIA. RAP Quality Management Plan**

For a contractor to receive approval to use RAP on any department project, a RAP Quality Management Plan must first be approved by the department. The RAP Quality Management Plan shall be submitted to the

Division of Materials annually for approval as part of the Contractor's Quality Control Plan/Checklist. The Quality Management Plan is required to demonstrate how the Contractor will provide consistency and quality of material utilized in all asphalt mixes produced for use on Department projects. The Quality Management Plan shall include:

- Unprocessed RAP Stockpiles
  - Designation of stockpile(s) as single or multiple source
  - Designation of stockpile(s) as classified or unclassified
  - Designation of stockpile(s) as captive or continuously replenishing
  - Plan for how stockpile(s) is built (layers, slope, etc.)
  - Plan to minimize stockpile(s) contamination
- Processing and Crushing
  - Equipment used to feed screener or crusher
  - Excavation process based on equipment type
- Processing Millings
  - Single Project or Source
    - Screening, Fractionation, or Crushing plan
  - Multiple Source
    - Process to achieve uniform material from stockpile
    - Screening, Fractionation, or Crushing plan
- Processed RAP Stockpiles
  - Minimization of segregation
  - Minimization of moisture

## **IIB. RAP Stockpile Placement**

All processed RAP stockpiles shall be placed on a sloped, paved surface. The requirement for a paved surface may be waived by the Cabinet if the Contractor's RAP Quality Management Plan demonstrates effective material handling that will minimize deleterious material from beneath the processed stockpile entering the plant. *No processed stockpile will be placed directly on grass or dirt.*

## **IIC. Stockpile Identification Signs**

RAP stockpiles shall be identified with posted signs displaying the gradation of material in the stockpile (course, intermediate, or fine). These signs shall be made of weatherproof material and shall be highly visible. Numerals shall be easily readable from outside the stockpile area. If a stockpile exists in two or more parts, each part must have its own sign.

## **IID. Standard Approval Procedure**

The Contractor shall obtain random samples representative of the entire stockpile and shall have each sample tested for gradation and asphalt content according to KM 64-426, KM 64-427, and AASHTO T308. The material samples must be in its final condition after all crushing and screening. At least one sample shall be obtained for each 1,000 tons of processed RAP, with a minimum of five samples per stockpile. Sampling shall be performed according to the method prescribed for asphalt mix aggregates in the Department's Materials Field Testing and Sampling Manual and KM 64-601. The minimum sampling size (after quartering) for tests of RAP samples is 1,500 g. except for samples containing particles more than one inch in diameter, for which the minimum is 2,000 g.

To request approval of a RAP stockpile, submit the following documents to the Division of Materials. It is the requester's responsibility to correctly address, label, and deliver these submittals:

- Submit request for approval at beginning of the paving season as part of the Annual Certification for Previously Approved Asphalt Mixing Plants and Related Equipment.
- If requesting approval after paving season begins, submit memo, including stockpile portion of the inspection list for Annual Certification for Previously Approved Asphalt Mixing Plants and Related Equipment, to Division of Materials.
- Reports of the tests prescribed above using the Stockpile <INSERT NAME> document.
- A drawing of the plant site showing the location of the stockpile to be approved *and all other stockpiles on the premises*

**Mail, deliver or email the request form**, with test reports and site drawing, to:

Kentucky Transportation Cabinet  
Division of Materials  
ATTN: Asphalt Branch Manager  
1227 Wilkinson Boulevard  
Frankfort, Kentucky 40601  
  
Robert.Semones@ky.gov

**III. Tests and inspections by the Department**

The Department shall have the right to observe the collection of samples, or to perform the sampling and testing as a verification of contractor submittal. As a condition of approval, the Department may at any time inspect and sample RAP stockpiles for which approval has been requested and may perform additional quality control tests to determine the consistency and quality of the material.

The approval letter issued by the Department will include any results of verification testing performed by the Cabinet. The approved contractor results should be used by mix design technicians in the design calculations.

**III. RAP STOCKPILE TIERED MANAGEMENT AND EFFECTIVE BINDER CONTENT**

The stockpile management and approval requirements will be tiered based on the maximum cold feed percentages as defined in this section and Table 1. below.

Table 1. Tiered Testing Requirements

Mix Type	0-≤12%	12-≤20%	20-≤35%
Surface	Tier 1	Tier 2	Tier 3
Base	Tier 1	Tier 2	Tier 3

**NOTE: All asphalt mixes and binder selection will be subject to Section 409 of the current Standard Specifications.**

The following requirements will apply based on the percentage of RAP in the mix.

Tier 1

Tier 1 mixes (less than or equal to 12% RAP) will be subject to the requirements of sections IIA, IIB, and IIC.

Tier 2

Tier 2 mixes (12% to less than 20% RAP) will be subject to the requirements of Section II in its entirety and Table 2 requirements.

Tier 3

Tier 3 Asphalt Base mixes with 20% to less than 35% RAP, Tier 3 Asphalt Surface mixes with 20% to less than 30% RAP will be subject to Section II in its entirety and Table 2 requirements.

**IV. MAXIMUM PERCENTAGE OF RAP ALLOWED**

The Maximum Percent of RAP allowed in mix designs shall be the lowest percentage determined by the gradation and asphalt content of the RAP, as established under the criteria below, and requirements listed in Section III.

Limits according to range in gradation and bitumen content

The Maximum Percent of RAP Allowed, based on gradation and asphalt content, shall be determined by the Department using the standard deviation of these values. This standard deviation will be calculated using data provided by the contractor from at least five samples. While the contractor is required to provide the data from these tested samples, the Department retains the discretion to perform its own sampling and testing to support or verify its findings. An apparent outlier shall not be considered in determining these ranges. Where one result appears to be unrepresentative of the whole, two or more additional samples shall be tested. The outlying value of all tests shall then be excluded from the range. The maximum percentage of RAP allowable shall be the lowest percentage determined according to Table 2 below.

**Table 2. Maximum Percent RAP According to Variability in Test Results**

	Standard Deviation as calculated above:		
Surface			
% asphalt content	< 0.4	< 0.5	
% passing No. 200 sieve	< 1.25	< 1.5	
% passing Median Sieve	< 4.0	< 5.0	
	Allowable RAP Cold Feed %		
	Tier 3 - 20%-30%	Tier 2 - 12%-20%	Tier 1 - 0%-12%
Base			
% asphalt content	< 0.5	< 0.75	
% passing No. 200 sieve	< 1.5	< 2.25	
% passing Median sieve	< 5.0	< 7.0	
	Allowable RAP Cold Feed %		
	Tier 3 - 20%-35%	Tier 2 - 12%-20%	Tier 1 - 0%-12%

**NOTE: These allowances notwithstanding, the Contractor is required to maintain the mixture within the Mixture Control Tolerances of Kentucky Method 443.**

The percentage allowable in mix designs shall be limited to meet the design criteria for viscosity established in the Standard Specifications.

## **V. GENERAL STOCKPILE REQUIREMENTS AND REPLENISHMENT**

### **V.A. Single Pavement Source**

**Early approval of material from a single pavement source.** When a new stockpile is to consist entirely of millings removed from a single existing pavement, the stockpile may be approved based on samples taken during the milling and processing operations, prior to completion of milling. The initial stockpile may be approved as either a new stockpile or a new stockpile in continual replenishment status.

For continual replenishment status, samples shall be taken from the processed stockpile after it reaches 1,000 tons. A total of five initial samples, plus one additional sample for every 1,000 tons, is required. As prescribed in Part II above, the contractor shall test all samples and deliver the test results, together with a letter request for approval in Continual Replenishment status, to the address indicated. The stockpile shall be subject to initial approval as prescribed above in Part II. Once approved, it may be replenished without further approvals as provided in Part VII below.

### **V.B. Heterogeneous or contaminated material**

Asphalt pavement millings containing traffic detection loops, raised pavement markers, or other debris must be separated and excluded before stockpiling RAP for approval for use in KYTC asphaltic concrete mixtures.

No material other than RAP from an approved stockpile shall be included in mixtures for State projects. The following materials are specifically excluded:

- Material contaminated with foreign matter such as liquids, soil, concrete, or debris
- Plant waste, especially waste containing abnormal concentrations of bitumen, drum build-up, or material from spills or plant clean-up operations

The following materials shall not be added to or placed in proximity to an approved stockpile but may be accumulated in a separate stockpile and submitted for approval according to Part III:

- Production mixtures returned to the plant for any reason.
- Mis-proportioned mixtures, especially those generated at start-up.

## **VI. REPLENISHMENT OF STOCKPILES**

An approved RAP stockpile may be replenished with Department approval, provided the replenishment material meets all necessary requirements for approval and maintains uniformity in gradation and asphalt content as outlined in this document.

### **VI.A. Procedure and approval criteria**

The procedure for requesting approval of a stockpile replenishment, that is not in continual replenishment status, shall be the same as for approval of an original stockpile, and the material for the replenishment shall meet all criteria for approval as a new stockpile. RAP proposed for replenishment shall be sampled and tested by the Contractor for gradation and asphalt cement as prescribed in Section II above. The Laboratory shall

review these results and provide approval for use in Department asphalt mix designs, according to Table 2 above.

**VI.B. Effect of replenishment on existing approved mix designs**

Replenishment of a stockpile may render certain mix designs invalid, depending on the percent RAP allowed in the design and on the difference in average properties between the old and new stockpiles. A replenished stockpile may be used as the RAP ingredient in an existing approved design provided that:

1. The Maximum Percent Allowed for the replenishment stockpile equals or exceeds the percent RAP called for in the mix design. In no case may the Maximum Percent Allowed be exceeded.

However, if a mix design calls for up to 5.0 percent more than the Maximum Percent Allowed for the replenishment, the *design* may be adjusted, with approval, to use the lower percent allowed, provided that the production mixture continues to meet all acceptance criteria. For example, a design which calls for 20 percent RAP may be adjusted and produced with 15 percent if it continues to meet for acceptance.

**VII. CONTINUAL REPLENISHMENT WITHOUT RE-APPROVAL**

At the request of the contractor, a previously approved stockpile may be placed in Continual Replenishment Status and may be replenished any number of times without re-approval provided that:

1. Replenishment is within six months of the last stockpile addition.
2. The contractor shall continue to monitor and test the materials added to the stockpile and shall forward these results to the Division of Materials for every 1,000 tons of RAP added to the stockpile.
3. The contractor must certify that replenishment materials are free of contaminants.
4. The Department shall be notified by letter to the Director of the Division of Materials that the stockpile is being replenished on a continual basis.
5. The RAP Maximum Percent Allowed for continual replenishment shall be limited by Sections III and IV.

**Note: Upon request, one 20-pound sample bag of RAP for each Continual Replenishment Stockpile shall be submitted to the Division of Materials for petrographic analysis every 12 months.**

The Department may inspect, sample, and test such stockpiles at its discretion and may, upon determining that the stockpile is unsuitable, withdraw approval of the material and all mix designs which include it. Approval of the stockpile may be withdrawn at any time based upon extreme or erratic ingredient proportions, unsuitable ingredients, or poor performance, as determined by the Division of Materials, Asphalt Branch. The Department will conduct periodic comparison testing on the opposite quarters of samples submitted by the Contractor for special replenishment approval category. The approval of the stockpile may be withdrawn if

erroneous information was found on the contractor's testing and/or improper sampling procedures were involved after a thorough investigation.

### **VIII. DEPLETION OF STOCKPILE AND EXPIRATION OF APPROVAL**

When a stockpile has been fully depleted, the Contractor may replenish it within 24 months after the date of depletion; a depleted stockpile not replenished after 24 months will be removed from the approved list and may not be replenished.

Approval of a stockpile may be withdrawn if, in the finding of the Division of Materials, Asphalt Branch, the total amount of material used in new mixtures equals the total tonnage of the original stockpile plus all approved replenishments. Six years from the original approval of a stockpile or from its most recent replenishment, a stockpile shall be presumed to be depleted, and its approval shall expire. This shall apply to all stockpiles, regardless of status or history of use.

### **IX. RECORDS**

The Contractor shall maintain records at the plant site on all RAP stockpiles. These records shall be available for inspection by representatives of the Department and shall include the following:

- All test results.
- The Department's approval letter for each stockpile and replenishment, together with the Contractor's requests for approval and all data submitted therewith.
- A current drawing of all stockpile locations at the plant site, including unapproved stockpiles, showing stockpile numbers of all stockpiles approved for State work.

### **X. RELOCATION OF STOCKPILE**

If material from an approved RAP stockpile is to be moved to another location, the contractor shall seek approval from the Department prior to its further use on State projects. A letter request shall be submitted to the Division of Materials indicating the current stockpile location, the total quantity of material to be moved, and the amount, if any, to remain in the current location. The Division of Materials will issue an approval letter applicable to the new location.

June 18, 2025



## **COORDINATION OF WORK WITH OTHER CONTRACTS**

Be advised, there may be an active project(s) adjacent to or within this project. The Engineer will coordinate the work of the Contractors. See Section 105.06.

1-3193 Coordination Contracts  
01/02/2012

**SPECIAL NOTE FOR  
ASPHALT MILLING AND TEXTURING  
AND MILLING CONCRETE PAVEMENT**

Begin paving operations within **48 hours** 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.

For the concrete pavement restoration work, if the concrete pavement is to become the final riding surface a transition of the adjacent asphalt resurfacing will need to be constructed into the concrete pavement. The milling of the concrete pavement to construct this transition will be measured and paid for using the item "Milling Concrete Pavement". Measurement and payment will be at the unit price per ton. The Department estimates the unit weight of the concrete to be 112.5 lbs/sy per inch of depth.

Mill as close to the existing curbs as possible without damaging the curbs with the typical machine milling equipment.

A vacuum truck will be required and in operation during all milling operations.

The contractor shall ensure that all concrete slurry associated with construction is collected, managed, and disposed of appropriately. The waste material shall be disposed of at a permitted disposal facility, in accordance with the Kentucky Standard Specifications for Road and Bridge Construction and the Environmental Performance Standards outlined in 401 KAR 47:030, or managed as a material for beneficial reuse. Any fines or remediation related to improper disposal shall be the sole responsibility of the contractor.

Disposal of concrete slurry will not be paid separately and shall be considered incidental to other bid items.

### **SPECIAL NOTE FOR CONCRETE ISLAND REMOVAL**

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Remove existing concrete islands as shown on the drawings, listed in the summary, or as directed by the Engineer. Saw cut the existing pavement, asphalt surface, base, DGA and PCC pavement (if present). Excavate to an approximate depth of 8 inches below the bottom of the existing adjacent pavement level. Remove and dispose of all materials 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. Do not damage existing culvert pipes and any existing underground utilities. Repair or restore any damaged items at no additional cost to the Department.

Backfill the excavated area with Class 3 Asphalt Base 1.00D PG64-22, in 4 inch maximum courses, up to the existing pavement surface. Compact the asphalt base to the compaction required in Section 403. Seal the asphalt base with leveling and wedging. Perform all concrete island removal operations in such a manner that removal and replacement are completed on the same day. Do this work as one of the Contractor's first operations in order to allow further compaction by traffic. Do not mill or place new asphalt surface over the repaired areas until a minimum of 14 calendar days have elapsed after placement of the final course of asphalt base. After the 14 calendar day waiting period, and/or when the Engineer determines the repair areas have sufficiently stabilized, begin milling and/or resurfacing operations. Prior to milling and/or constructing the new asphalt surface, level and wedge any settlement of the repair areas.

The bidder must draw his or her own conclusions as to the conditions to be encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation of the materials encountered that are not in accord with the classification shown.

Accept payment at the Contract unit price per square yard for Remove Concrete Island as full compensation for all labor, materials, equipment, and incidentals for removing concrete island and disposing of the materials, furnishing and placing asphalt base, and all other items necessary to complete the work according to these notes to the satisfaction of the Engineer. Leveling and wedging any settlement areas or other locations identified by the Engineer will be paid at the unit price per ton.

### **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

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### GENERAL

Unless otherwise stated in the contract, or as directed by or with prior approval from the Engineer, construct Sidewalk, 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 Warnings listed as Phase XI on the [Kentucky Product Evaluation List](http://www.ktc.uky.edu/kytc/kypel/allevvaluations.php) (<http://www.ktc.uky.edu/kytc/kypel/allevvaluations.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 and 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 AND SIDEWALK RAMPS** – The Department will measure Sidewalk and 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 or 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

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### 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.

The following notes also apply:

1. The Contractor shall notify KYTC District 5 Public Information Officer, Louisville Metro Department of Transportation, TARC, local officials (police, emergency management), and Jefferson County Public Schools a minimum of 14 days in advance of beginning any traffic control.
2. Any temporary traffic control items, devices, materials, and incidentals shall remain the property of the Contractor if no longer needed.
3. The Contractor shall completely cover any signs, either existing, permanent, or temporary, which do not properly apply to the current traffic phasing and shall maintain the covering until the signs are applicable or are removed.
4. In general, all traffic control devices shall be placed starting and proceeding in the direction of the flow of traffic and removed starting and proceeding in the direction opposite the flow of traffic.
5. Engineer and the Contractor should review the signing before traffic is allowed to use any lane closures or detours. All signing should be approved by the Engineer before work can begin.
6. Contractor should erect signage to provide notification of construction activities at least 14 days prior to the start of construction.
7. If traffic should be stopped due to construction operations and an emergency vehicle on an official emergency run arrives at the site, the Contractor shall make the provisions for the passage of that vehicle as quickly as possible.
8. Contractor must obtain Project Engineer approval for any pavement marking removal methods other than water blasting. KYTC District 5 Branch Manager and District Traffic Engineer may be consulted if necessary.
9. For temporary conditions, drop-offs greater than four inches may be protected with plastic drums, vertical panels, or barricades for short distances during daylight hours while work is being done in the drop-off zone.
10. Contractor to maintain service of existing traffic signals during construction of the proposed signals whenever possible.
11. This project is a significant project, so a qualified Work Zone Traffic Control Supervisor (WZTCS) is to be designated as the Project Traffic Control Coordinator (PTC) in accordance with Section 112.02.13 (a) of the Department's Standard Specifications.
12. Drums shall be used in MOT areas for lane drop tapers and lane shifts. 48" cones may be used in lieu of barrels in MOT areas where traffic is fully in its temporary location. Drums and cones shall be incidental to Maintain and Control Traffic.
13. See bid proposal for completion date and liquidated damages.
14. The Contractor should remove all pavement markings and raised pavement markers that do not conform to the traffic operation in use. In areas where the markings will conform to the final marking scheme or for

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- other reasons will not be removed, markings shall be of a permanent type. All temporary markings which must be subsequently removed from the final pavement shall be an approved material.
15. The Contractor's vehicles shall always move with and not against the flow of traffic. Vehicles should enter and leave work areas in a manner which will not be hazardous to or interfere with normal traffic. Vehicles should not park or stop within work areas designated by the Engineer.
  16. The Contractor shall exercise extreme caution to ensure that proper signing and traffic control devices are installed to prevent motorists from traveling in any closed lanes. The Contractor shall be responsible for the maintenance of all existing and temporary signing and use reasonable care in the relocation and placement of signs. Any sign damaged by the Contractor's negligence, vandalism, theft, or accident shall be replaced at the Contractor's expense. The signing should be kept clean and in good repair for the life of the project. The relocation of signs for the maintenance of traffic during construction, including mounting hardware and post, shall be incidental to Maintain and Control Traffic.
  17. The Contractor should provide a minimum of two portable changeable message signs in advance or on the project at locations determined by the Engineer. The locations designated may vary as the work progresses. The message required to be provided should be designated by the Engineer. The signs shall be in operation at all times. In the event of damage or mechanical/electrical failure, the Contractor should immediately repair or replace the sign. Portable changeable message signs shall remain the property of the Contractor after construction is complete.
  18. The Contractor shall have a qualified work zone supervisor on site. Item is incidental. Traffic control plans, certified by the Contractor's work zone supervisor, shall be submitted to the Engineer for review 5 days prior to commencement of any on-site work.
  19. Coordination
    - The Contractor is expected to work closely with KYTC, Louisville Metro Department of Transportation, and TARC on the timing and status of construction.
    - If construction interferes with transit operations or obstructs an existing bus stop, the Contractor should notify TARC a minimum of 48 hours in advance of the work to coordinate work and make provision acceptable to TARC to provide an alternative temporary location. Any proposed adjustments to existing or new transit facilities should be coordinated through both Louisville Metro Department of Transportation and TARC prior to installation.
  20. Local access
    - Pedestrian access should be maintained to all existing businesses, residences, and TARC stops. The Contractor should provide Americans with Disabilities Act (ADA)-compliant temporary walk surfaces to business entrances and TARC stops during sidewalk construction or other operations that would otherwise inhibit access.
    - The Contractor should provide measures that establish and maintain temporary pedestrian access routes through the work zones in compliance with the most current ADA accessibility guidelines and the public right of way accessibility guidelines. The various devices and/or features should be installed in a uniform manner to provide consistent, accessible routes for able-bodied and disabled pedestrians through the work zone.
    - The Contractor shall follow the current edition of the federal MUTCD Part 6 standards and guidance for pedestrian and worker safety and TTC devices. When existing pedestrian facilities are disrupted, closed, or relocated in a construction zone, the temporary pedestrian accommodation facilities should be detectable and should include accessibility features consistent with the features present in the existing pedestrian facility. Temporarily installed or relocated crosswalks should include temporary ADA accessible curb ramps, including detachable warning devices (truncated domes) to access sidewalks.

PROJECT PHASING & CONSTRUCTION PROCEDURES

At locations with three or more lanes, maintain one lane of traffic in each direction at all times during construction. At locations with two lanes, maintain alternating one-way traffic during construction and provide a minimum clear lane width of 9 feet. At locations with one lane, such as a channelized turn lane, a partial lane closure is permitted during construction, as long as a minimum clear lane width of 10 feet is maintained. NOTE: During any lane closure or partial 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.

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.

Unless otherwise approved by the Engineer, no lane closures will be allowed during the following times:

Thanksgiving Holiday	3 pm Wednesday, November 26, 2025 – 8 pm Sunday, November 30, 2025
Christmas Holiday	7 am Wednesday, December 24, 2025 – 8 pm Thursday, December 25, 2025
New Year’s Day Holiday	7 am Wednesday, December 31, 2025 – 8 pm Thursday, January 1, 2026
Easter Weekend	3 pm Friday, April 3, 2026 – 8 pm Sunday, April 5, 2026
Thunder Over Louisville	8 pm Friday, April 17, 2026 – 7 am Sunday, April 19, 2026
Kentucky Derby Week	7 am Tuesday, April 28, 2026 – 7 am Sunday, May 3, 2026
Memorial Day Weekend	3 pm Friday, May 22, 2026 – 8 pm Monday, May 25, 2026
Independence Day Weekend	3 pm Thursday, July 2, 2026 – 8 pm Sunday, July 5, 2026
Labor Day Weekend	3 pm Friday, September 4, 2026 – 8 pm Monday, September 7, 2026

At the discretion of the Engineer, additional days and hours may be specified when lane closures will not be allowed.

This project is located through a residential area. No work except asphalt paving, placement of striping/markings, and construction of proposed signing shall be conducted between 7 P.M. and 6 A.M., unless otherwise approved by the Engineer. Additionally, do NOT erect lane closures during the following days and/or hours:

Normal Workday Rush Hours

Monday-Friday 7:00 AM – 9:00 AM, and 3:00 PM – 7:00 PM, daily

The above work hour-work type and lane closure restrictions are not to apply to the concrete pavement restoration work. For this work, lane closures will be permitted where traffic is maintained in a single driving lane that supports alternating one-way traffic. Alternating one-way traffic is to be maintained by flaggers when workers are present and by use of the traffic signal at 16<sup>th</sup> St. and a temporary 2-phase signal east of the work area when workers are not present. Once the Contractor and Engineer have identified the limits and extent of the full-depth repair and restoration work, all work shall be completed and all traffic control devices removed within a maximum of 16 calendar days. In addition to the requirements of Section 108.09, the Department will assess Liquidated Damages in the amount of \$1000 per day for each day, or fraction of a day, if the 16 calendar days is exceeded. At the sole discretion of the Engineer, all, or part, of these Liquidated Damages may be waived due to unforeseen circumstances, such as unexpected weather. Demolition work associated with the repair and restoration activities is not to be conducted between 7 P.M. and 6 A.M.



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The Department will provide public notification regarding lane closures. The Contractor shall submit proposed lane closure days and times to the Engineer at least 14 calendar days in advance for 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.

#### **TEMPORARY SIGNAL 2 PHASE**

A Temporary Signal 2 Phase has been included in the project for possible use in the area of the concrete pavement restoration activities. This device may be useful for other areas. The Contractor and the Engineer should work together to determine the best use of this device. Each Temporary Signal 2 Phase consists of two portable temporary signals, one placed at each end of the work zone, that work together to manage traffic through the work zone. If used, the Department will measure the Temporary Signal 2 Phase only once for payment, regardless of how many times each pair of temporary signals are set, reset, removed, and/or relocated during the duration of the project. The Department will not measure for payment any replacements of the Temporary Signal 2 Phase if it becomes damaged or non-functioning, nor if the Engineer directs that it be replaced due to poor condition or visibility. The Contractor shall retain possession of the Temporary Signal 2 Phase upon completion of construction.

#### **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 prohibited periods. Except for the concrete pavement restoration area, do not leave lane closures in place during non-working hours, unless otherwise approved by the Engineer. Contrary to Section 112.04.17, long-term lane closures will not be measured for payment, but shall be incidental to Maintain and Control Traffic.

#### **TRUCK MOUNTED ATTENUATORS**

If traffic lanes are closed without the use of temporary barrier wall, use Truck Mounted Attenuators. Furnish and install Truck Mounted Attenuators in advance of work areas when workers will be within 20 feet from traffic. If there is less than 500 feet between work sites, only a single TMA will be required. The TMAs shall be located at the individual work sites and shall be moved as the work zone moves within the project limits. All details of the TMA installations are to follow manufacture recommendations and approved by the Engineer. Truck Mounted Attenuators shall be incidental to Maintain and Control Traffic.

#### **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

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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.

## **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 not measure barricades used in lieu of barrels and cones for channelization or delineation but shall be incidental to Maintain and Control Traffic according to Section 112.04.01.

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### **TEMPORARY ENTRANCES**

The Engineer will not require the Contractor to provide continuous access to farms, single family, duplex, or triplex residential properties during working hours; however, provide reasonable egress and ingress to each such property when actual operations are not in progress at that location. Limit the time during which a farm or residential entrance is blocked to the minimum length of time required for actual operations, not extended for the Contractor's convenience, and in no case exceeding six (6) hours. Notify all residents twenty-four hours in advance of any driveway or entrance closings and make any accommodations necessary to meet the access needs of disabled residents.

Except as allowed by the Phasing as specified above, maintain direct access to all side streets and roads, schools, churches, commercial properties, and apartments or apartment complexes of four or more units 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:

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.

### **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 1½". Place Warning signs (MUTCD W8-11 or W8-9A) in advance of and at 1500' intervals throughout the drop-off area. Dual post the signs on both sides of the traveled way. Wedge all transverse transitions between resurfaced and un-resurfaced areas which traffic may cross with asphalt mixture for leveling and wedging. Remove the wedges prior to placement of the final surface course.

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Protect pavement edges that traffic is not expected to cross, except accidentally, as follows:

Less than 2" - No protection required.

2" to 4" - 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, panels, and barricades. Wedge the drop-off with DGA or asphalt mixture for leveling and wedging with a 1:1 or flatter slope in daylight hours, or 3:1 or flatter slope during nighttime hours, when work is not active in the drop-off area.

Greater than 4" - Protect drop-offs greater than 4 inches within 10 feet of traffic by placing drums, vertical panels, or barricades every 25 feet. The Engineer will not allow the use of cones in lieu of drums, vertical panels, or barricades for drop-offs greater than 4". Place Type III Barricades directly in front of the drop-off facing oncoming traffic in both directions of travel. Provide warning signs as shown on the Standard Drawings or as directed by the Engineer

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

## **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)

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## **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

Standard Abbreviations

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

<u>Word</u>	<u>Abbrev</u>	<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 I75 CLOSED/ DETOUR EXIT 30
Center	CNTR	CNTR LANE CLOSED/ MERGE LEFT
Commercial	COMM	OVRSZ COMM VEH/ USE I275
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 I64 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 I64 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 I75/ 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 I75 CLOSED/ DETOUR EXIT 50
Oversized	OVRSZ	OVRSZ COMM VEH/ USE I275 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 I75/ USE ALT RTE
Shoulder	SHLDR	SHLDR CLOSED NEXT 5 MI
Slippery	SLIP	SLIP COND POSSIBLE/ SLOW SPD
Southbound	S-BND	S-BND I75 CLOSED/ DETOUR EXIT 50
Speed	SPD	SLIP COND POSSIBLE/ SLOW SPD

**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 I275 NEXT RIGHT
Westbound	W-BND	W-BND I64 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>	<u>Intended Word</u>	<u>Word Erroneously Given</u>
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.

<u>Reason/Problem</u>	<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



Typical Messages (cont.)

Reason/Problem	Action
FOG XX MILES	PASS TO RIGHT
FREEWAY CLOSED	PREPARE TO STOP
FRESH OIL	REDUCE SPEED
HAZMAT SPILL	SLOW
ICE	SLOW DOWN
INCIDENT AHEAD	STAY IN LANE
LANES (NARROW, SHIFT, MERGE, ETC.)	STOP AHEAD
LEFT LANE CLOSED	STOP XX MILES
LEFT LANE NARROWS	TUNE RADIO 1610 AM
LEFT 2 LANES CLOSED	USE NN ROAD
LEFT SHOULDER CLOSED	USE CENTER LANE
LOOSE GRAVEL	USE DETOUR ROUTE
MEDIAN WORK XX MILES	USE LEFT TURN LANE
MOVING WORK ZONE, WORKERS IN ROADWAY	USE NEXT EXIT
NEXT EXIT CLOSED	USE RIGHT LANE
NO OVERSIZED LOADS	WATCH FOR FLAGGER
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	





KENTUCKY TRANSPORTATION CABINET

Department of Highways


DIVISION OF RIGHT OF WAY & UTILITIES

RIGHT OF WAY CERTIFICATION

TC 62-226

Rev. 01/2016

Page 1 of 1

<input checked="" type="checkbox"/>	Original	<input type="checkbox"/>	Re-Certification	RIGHT OF WAY CERTIFICATION	
ITEM #		COUNTY		PROJECT # (STATE)	PROJECT # (FEDERAL)
5-9048.00		Jefferson		FD52 056 2054 000-004	HSIP 8797(002)
PROJECT DESCRIPTION					
Roadway reconfiguration and intersection improvements along Algonquin Parkway from MP 0.000 to MP 3.299					
<input checked="" type="checkbox"/>	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.					
<input type="checkbox"/>	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.					
<input type="checkbox"/>	Condition # 2 (Additional Right of Way Required with Exception)				
The right of way has not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Some parcels may be pending in court and on other parcels full legal possession has not been obtained, but right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish all improvements. Just Compensation has been paid or deposited with the court for most parcels. Just Compensation for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract					
<input type="checkbox"/>	Condition # 3 (Additional Right of Way Required with Exception)				
The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. All remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary right of way will not be fully acquired, and/or some occupants will not be relocated, and/or the just compensation will not be paid or deposited with the court for some parcels until after bid letting. KYTC will fully meet all the requirements outlined in 23 CFR 635.309(c)(3) and 49 CFR 24.102(j) and will expedite completion of all acquisitions, relocations, and full payments after bid letting and prior to AWARD of the construction contract or force account construction.					
Total Number of Parcels on Project		0	EXCEPTION (S) Parcel #	ANTICIPATED DATE OF POSSESSION WITH EXPLANATION	
Number of Parcels That Have Been Acquired					
Signed Deed					
Condemnation					
Signed ROE					
Notes/ Comments (Use Additional Sheet if necessary)					
LPA RW Project Manager			Right of Way Supervisor		
Printed Name			Printed Name		
Signature			Signature		Tom Boykin
Date			Date		
Right of Way Director			FHWA		
Printed Name			Printed Name		
Signature			Signature		No Signature Required as per FHWA-KYTC Current Stewardship Agreement
Date		Digitally signed by Kelly Divine Date: 2025.08.04 10:12:43 -05'00'	Date		

UTILITIES AND RAIL CERTIFICATION NOTE

Jefferson County - HSIP 8797(002)  
FD52 056 2054 000-004  
Roadway and Intersection Safety Improvements  
along KY 2054 (Algonquin Pkwy.)  
Item No. 5-9048.00

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 guaranteed.***

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.

UTILITIES AND RAIL CERTIFICATION NOTE

Jefferson County - HSIP 8797(002)  
FD52 056 2054 000-004  
Roadway and Intersection Safety Improvements  
along KY 2054 (Algonquin Pkwy.)  
Item No. 5-9048.00

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

There are no known utility relocations within the project limits. If an unknown utility is encountered, the contractor will be responsible for arranging an on-site meeting with the utility owner/representative(s) and the Engineer to discuss potential impacts and solutions to either avoid the utility or relocate the utility. Depending on the solution selected, the Engineer will determine whether or not additional contract time is appropriate.

\*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

None

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

None

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

None

RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

☒ No Rail Involvement    ☐ Rail Involved    ☐ Rail Adjacent

UTILITIES AND RAIL CERTIFICATION NOTE

Jefferson County - HSIP 8797(002)  
FD52 056 2054 000-004  
Roadway and Intersection Safety Improvements  
along KY 2054 (Algonquin Pkwy.)  
Item No. 5-9048.00

AREA UTILITIES CONTACT LIST

<u>Utility Company/Agency</u>	<u>Contact Name</u>	<u>Contact Information</u>
1. AT&T	SCOTT ROCHE	502.348.4528 SR8832@ATT.COM
2. Charter	KEVIN MERCER	502.357.4724 KEVIN.MERCER@CHARTER.COM
3. Crown Castle Fiber	LISA CLARK	810.223.3780 LISA.CLARK@CROWNCastle.COM
4. Verizon	JEFFREY TUCKER	502.593.5585 JEFFREY.TUCKER@VERIZON.COM
5. Lumen Technologies Inc.	TIM SEWELL	502.389.4812 TIM.SEWELL@LUMEN.COM
6. LG&E-KU	CAROLINE JUSTICE	502.627.3708 CAROLINE.JUSTICE@LGE-KU.COM
7. Louisville Water Company	PAT HOWARD	502.569.3600 PHOWARD@LWCKY.COM
8. Louisville MSD	BRANDON FLAHERTY	502.540.6000 BRANDON.FLAHERTY@LOUISVILLEMSD.ORG
9. Louisville Metro Traffic	STACY KEITH	502.574.3780 STACY.KEITH@LOUISVILLEKY.GOV

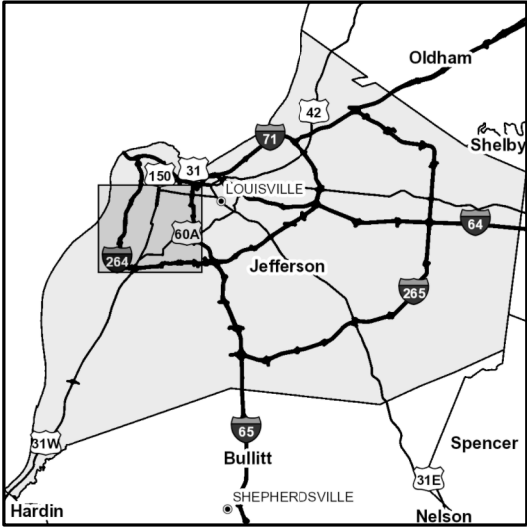
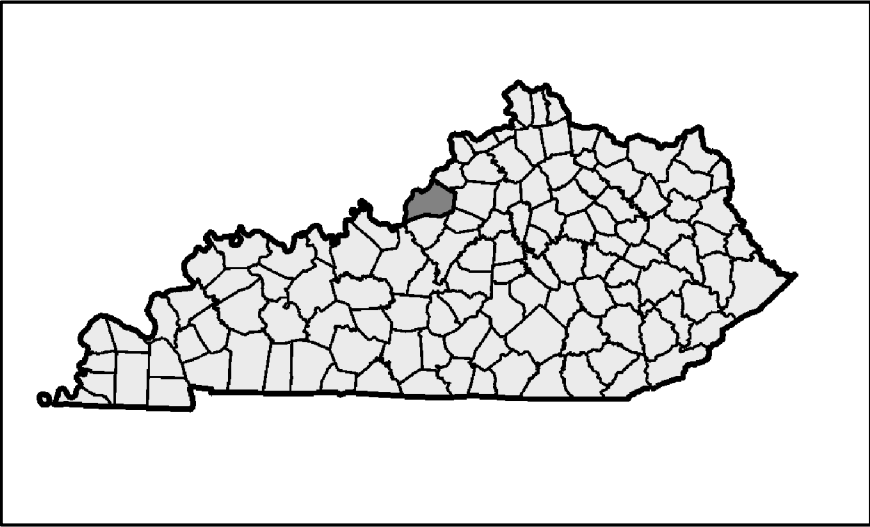
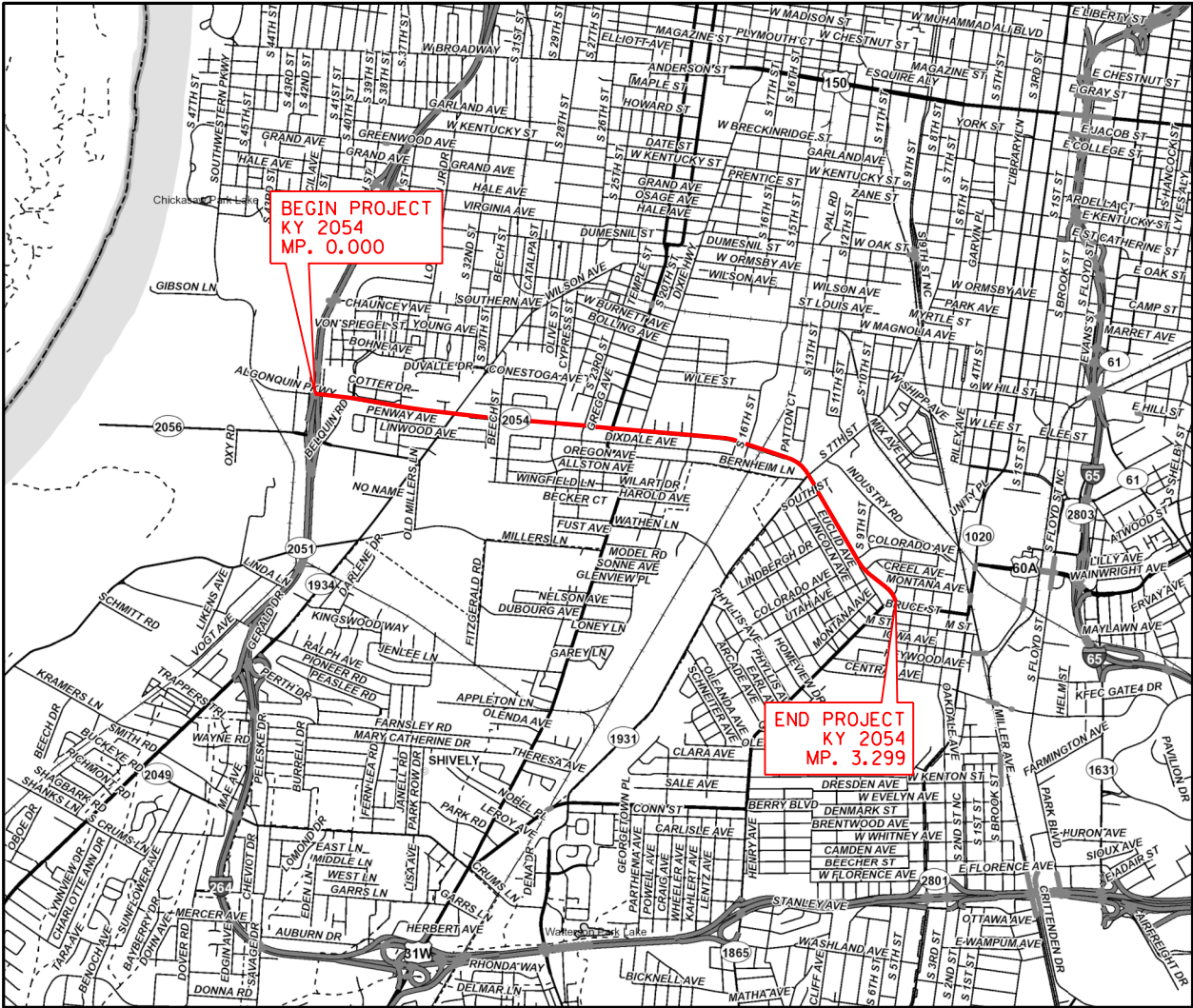
**NOTE: The Utilities Contact List is provided as informational only, and may not be a complete list of all Utility Companies with facilities in the project area.**

Commonwealth of Kentucky  
DEPARTMENT OF HIGHWAYS

COUNTY OF	ITEM NO.
JEFFERSON	5-9048.00

PLANS OF  
PROPOSED PROJECT

ROADWAY RECONFIGURATION  
KY 2054 (ALGONQUIN PARKWAY)





GENERAL SUMMARY

COUNTY OF	PROJECT NO.
JEFFERSON	5-9048.00

ITEM	DESCRIPTION	UNIT	TOTAL PROJECT
1	DGA BASE	TON	298
① 190	LEVELING & WEDGING PG64-22	TON	639
① 356	ASPHALT MATERIAL FOR TACK	TON	42.5
① 388	CL3 ASPH SURF 0.38B PG64-22	TON	6,386
1875	STANDARD HEADER CURB	LF	44
② 1919	STANDARD BARRIER MEDIAN TYPE 3	SQYD	325
① 1920	STANDARD BARRIER MEDIAN TYPE 3 MOD	SQYD	325
③ 2016	REMOVE CONCRETE ISLAND	SQYD	646
② 2115	SAW-CLEAN-RESEAL TVERSE JOINT	LF	2,275
② 2116	SAW-CLEAN-RESEAL LONGIT JOINT	LF	3,295
2460	REMOVE TREES OR STUMPS	EACH	1
2562	TEMPORARY SIGNS	SQFT	500
2568	MOBILIZATION	LS	1
2569	DEMOBILIZATION	LS	1
2650	MAINTAIN & CONTROL TRAFFIC	LS	1
2671	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	2
2676	MOBILIZATION FOR MILL & TEXT	LS	1
②④ 2677	ASPHALT PAVE MILLING & TEXTURING	TON	6,920
2705	SILT TRAP TYPE C	EACH	11
2708	CLEAN SILT TRAP TYPE C	EACH	11
2720	SIDEWALK-4 IN CONCRETE	SQYD	124
2775	ARROW PANEL	EACH	2
4720	BRACKET 4 FT	EACH	8
4722	BRACKET 8 FT	EACH	12
4724	BRACKET 12 FT	EACH	8
4780	FUSED CONNECTOR KIT	EACH	25
4820	TRENCHING AND BACKFILLING	LF	255
4832	WIRE-NO. 12	LF	13,410
4844	CABLE-NO.14/5C	LF	4,420
4845	CABLE-NO.14/7C	LF	13,040
4885	MESSENGER-10800 LB	LF	2,055
4886	MESSENGER-15400 LB	LF	410
4932	INSTALL STEEL STRAIN POLE	EACH	28
4933	TEMP SIGNAL 2 PHASE	EACH	1
6406	SBM ALUM SHEET SIGNS .080 IN	SQFT	614.33
6410	STEEL POST TYPE 1	LF	1,157
6472	INSTALL SPAN MOUNTED SIGN	EACH	1

- ① INCLUDES QUANTITY FROM POTENTIAL OUTCOME OF ASPHALT RESURFACING FOLLOWING SOME ACTIVITIES IN THE CONCRETE RESTORATION WORK.
- ② INCLUDES QUANTITY FROM POTENTIAL OUTCOME OF THE CONCRETE BECOMING THE FINAL RIDING SURFACE AFTER THE CONCRETE RESTORATION WORK.
- ③ REFER TO THE SPECIAL NOTE FOR CONCRETE ISLAND REMOVAL FOR DETAILS ON THIS WORK.
- ④ QUANTITY INCLUDES AN ADDITIONAL 24 TONS TO ESTIMATE THE ASPHALT TRAFFIC ISLAND REMOVAL .



GENERAL SUMMARY

COUNTY OF	PROJECT NO.
JEFFERSON	5-9048.00

ITEM	DESCRIPTION	UNIT	TOTAL PROJECT
	6511 PAVE STRIPING-TEMP PAINT-6 IN	LF	4,355
①	6542 PAVE STRIPING-THERMO-6 IN W	LF	38,914
①	6543 PAVE STRIPING-THERMO-6 IN Y	LF	38,429
	6546 PAVE STRIPING-THERMO-12 IN W	LF	85
②	6556 PAVE STRIPING-DUR TY 1-6 IN W	LF	4,282
②	6557 PAVE STRIPING-DUR TY 1-6 IN Y	LF	3,711
①	6565 PAVE MARKING-THERMO X-WALK-6IN	LF	3,422
①	6568 PAVE MARKING-THERMO STOP BAR-24IN	LF	1,115
①	6569 PAVE MARKING-THERMO CROSS-HATCH	SQFT	3,833
①	6574 PAVE MARKING-THERMO CURV ARROW	EACH	110
①	6575 PAVE MARKING-THERMO COMB ARROW	EACH	6
	6576 PAVE MARKING-THERMO ONLY	EACH	1
	6610 INLAID PAVEMENT MARKER-MW	EACH	75
	6611 INLAID PAVEMENT MARKER-MY	EACH	18
	6612 INLAID PAVEMENT MARKER-BY	EACH	559
	10020NS FUEL ADJUSTMENT	DOLL	11,001
	10030NS ASPHALT ADJUSTMENT	DOLL	27,631
	20093NS835 INSTALL PEDESTRIAN HEAD-LED	EACH	56
	20177ED FULL DEPTH PATCHING	SQFT	11,641
	20188NS835 INSTALL LED SIGNAL-3 SECTION	EACH	68
	20266NS835 INSTALL LED SIGNAL- 4 SECTION	EACH	6
	20390NS835 INSTALL COORDINATING UNIT	EACH	7
①	20782NS714 PAVE MARKING-THERMO BIKE (SYMBOL)	EACH	112
	20782NS714 PAVE MARKING-THERMO BIKE (WORD)	EACH	1
	20997ED REMOVE TRAFFIC ISLAND	SQYD	215
	21373ND REMOVE SIGN	EACH	38
①	21417ES717 PAVE MARK THERMO CONE CAP-SOLID YELLOW	SQFT	254
	21722EN MILLING CONCRETE PAVEMENT	TON	65
	21743NN INSTALL PEDESTRIAN DETECTOR	EACH	56
	21813NN REMOVE AND RELOCATE SHEET SIGNS	EACH	26
	22520EN PAVE MARKING-THERMO YIELD BAR-36 IN	LF	31
	22692NS714 PAVEMENT MARKING-THERMO LETTERS	EACH	12
	23157EN TRAFFIC SIGNAL POLE BASE	CUYD	114.5
	23158ES505 DETECTABLE WARNINGS	SQFT	114
	23222EC INSTALL SIGNAL PEDESTAL	EACH	5
②	23253ES717 PAVE MARK TY 1 TAPE CROSS HATCH	SQFT	1,977
	23261EC PAVE MARKING-THERMO X-WALK-24IN	LF	107
②	23267ES717 PAVE MARK TY 1 TAPE-BIKE	EACH	2
②	23267ES717 PAVE MARK TY 1 TAPE-BIKE (BIKE LANE ARROW)	EACH	2
②	23269ES717 PAVE MARK TY 1 TAPE-COMBO ARROW	EACH	2
②	23270ES717 PAVE MARK TY 1 TAPE-CURV ARROW	EACH	2
	23928EC PAVE MARK-THERMO "BUS" 8 FT	EACH	1

GENERAL SUMMARY

COUNTY OF	PROJECT NO.
JEFFERSON	5-9048.00

ITEM	DESCRIPTION	UNIT	TOTAL PROJECT
⑤ 23974EC	BIKE PATH	SQYD	544
① 24386EC	PAVE MARKING THERMO BIKE LANE ARROW	EACH	112
24528ED	TETHER WIRE	LF	2,465
24589ED	LED LUMINAIRE	EACH	28
24631EC	BARCODE SIGN INVENTORY	EACH	130
24679ED	PAVE MARKING THERMO CHEVRON	SQFT	126
24900EC	PVC CONDUIT-1 1/4 IN-SCHEDULE 80	LF	174
24901EC	PVC CONDUIT-2-IN-SCHEDULE 80	LF	505
24908EC	INSTALL SIGNAL CONTROLLER TY-ATC	EACH	7
24955ED	REMOVE SIGNAL EQUIPMENT	EACH	7
26119EC	INSTALL RADAR PRESENCE DETECTOR TYPE A	EACH	29
② 26186ES717	PAVE MARK TY 1 TAPE CONE CAP-SOLID Y	SQFT	40
26192EC	PAVE MARKING-THERMO SHARED LANE MARKING	EACH	2

- ⑤ FOR PAYMENT OF THE GREEN BIKE LANE MARKING. PRODUCT TO BE PPG'S MMAX EXTENDED SEASON MARKINGS. SEE PRODUCT DATA SHEET ELSEWHERE IN PROPOSAL FOR MATERIAL AND APPLICATION GUIDANCE.

**Milling & Surfacing Summary**  
**Jefferson County**  
**KY 2054 (Algonquin Pkwy.)**

Milepoint		Length (LF)	Avg Width (FT)	Area (SQYD)	Avg Depth (IN)	Quantity (TON)
Begin	End					
0.000	0.069	364	66	2,672	1.25	184
0.069	0.098	153	54	919	1.25	63
0.098	0.632	2,820	42	13,158	1.25	905
0.632	0.662	158	54	950	1.25	65
0.662	0.675	69	60	458	1.25	31
0.675	0.734	312	65	2,250	1.25	155
0.734	0.752	95	53	560	1.25	38
0.752	0.770	95	50	528	1.25	36
0.770	0.815	238	49	1,294	1.25	89
0.815	1.650	4,409	42	20,574	1.25	1,414
1.650	2.162	2,703	40	12,015	1.25	826
2.162	2.385	1,177	50	6,541	1.25	450
2.385	2.451	348	40	1,549	1.25	106
2.451	2.474	121	44	594	1.25	41
2.474	2.526	275	48	1,464	1.25	101
2.526	2.554	148	50	821	1.25	56
2.554	2.578	127	45	634	1.25	44
2.578	3.211	3,342	40	14,854	1.25	1,021
3.211	3.299	465	49	2,530	1.25	174
					<b>Sub-Total</b>	<b>5,805</b>
					<b>Additional Milling &amp; Surfacing at Sideroads (Estimated at 10%)</b>	<b>581</b>
					<b>Total</b>	<b>6,386</b>

Notes:

1) Leveling & Wedging estimated at 10% of the Asphalt Surface quantity. The Engineer will determine the actual locations and lift thickness at the time of construction.

2) The quantity of Asphalt Material for Tack was estimated based on 120% of the milling & resurfacing area to account for use in leveling & wedging and final surfacing.

3) The section of the corridor between MP 2.162 and MP 2.385 is included in this summary despite the possibility this section will remain as a concrete final surface instead of being resurfaced with asphalt. Refer to the Description of Work, Special Notes, other summaries, and the plan sheets for more specifics on this work.

SIDEWALK, SIDEWALK RAMP, AND DETECTABLE WARNING SUMMARY  
JEFFERSON COUNTY  
KY 2054 (ALGONQUIN PKWY.)

INTERSECTION	CORNER OF INTERSECTION	SIDEWALK  SQYD	TYPE	SIDEWALK RAMP AREA		DETECTABLE WARNING QUANTITY		NOTES
				NEW SQYD	RETROFIT SQYD	NEW SQFT	RETROFIT SQFT	
Cane Run Rd. / Wilson Ave.	SW	16						Includes 28 LF of Standard Header Curb
	NW	7						
	NE	6						
Cypress St.	NW	3	1	3		10		
	NE	2	2		2	8		
	SE	5						
22nd St.	SW		3		29	48		
	SE		3		35	48		
	NE	7						Includes 16 LF of Standard Header Curb
Dixie Hwy.	SE	7						
	NE	2						
TOTAL		55		3	66	114	0	

Viaduct Milling & Concrete Pavement Restoration Summary  
Jefferson County  
KY 2054 (Algonquin Pkwy.)

Milepoint		Length (LF)	Avg Width (FT)	Area (SQYD)	Asph. Pave. Mill & Text		Concrete Milling		DGA Base [Est. 4"/SQFT Patching] (TON)	Full-Depth Conc. Patching (SQFT)	Saw-Clean-Reseal Transverse Joint (LF)	Saw-Clean-Reseal Longitudinal Joint (LF)
					Avg Depth (IN)	Quantity (TON)	Avg Depth (IN)	Quantity (TON)				
2.177	2.207	158	54	950	0.00	0	0.63	33	0	0	0	0
2.177	2.385	1,098	53	6,467	1.50	534	0.00	0	298	11,641	2,275	3,295
2.352	2.385	174	46	891	0.00	0	0.63	31	0	0	0	0
Totals						534		65	298	11,641	2,275	3,295

Notes:

- 1) The depth of asphalt overlay at the ends of the restoration area is estimated at 1.25". Actual lengths of the Edge Key's are to remain within the limits identified in these plans but can be determined at the time of construction.
- 2) A quantity of asphalt milling within the restoration area is included in the corridor-wide milling and surfacing summary. An additional quantity is included in this summary to estimate the additional depth of asphalt that exists atop the concrete pavement.
- 3) The quantity of Full-Depth Concrete Patching is estimated at 20% of the total area identified for asphalt milling for concrete restoration. Actual locations and quantities of patching are to be determined by the Engineer at the time of construction. Refer to the Special Note for Full-Depth Concrete Pavement Repair for details on this item of work.
- 4) The quantity of joint rehabilitation (longitudinal and transverse) in the concrete pavement area is estimated by the assumption that the covered concrete pavement is in slabs sectioned by the lane lines and at a length of 25'. Refer to the Special Note for Saw, Clean, and Reseal JPC Pavement Joints for details on these items of work.

[illegible]

5-9048.00				Sign Summary			Jefferson County			KY 2054 (Algonquin Pkwy.)									
SIGN LOCATION		Approx. Mile Offset (ft)	Facing Traffic Traveling	MUTCD Code	Sign Description	Sign Text / Remarks	Sign Dimensions (in x in)	SHEETING		SBM Alum Sheet Signs 0.080 IN (SQ FT)	SBM Alum Sheet Signs 0.125 IN (SQ FT)	Installation Type	Bracing Req'd	# of Sign Posts	Estimated Length of 2" Post (ft)	Estimated Length of 2-1/2" Post (ft)	2-1/4" Stiffener Req'd (incdntl to post)	TOTAL Estimated Sign Post Length (LF)	Barcode Sign Inv. (EACH)
Side of Road	Approx. Point							Text/ Symbol Color	Background Color										
RT	40	0.013	EB	M3-2	East	2054	24 x 12	Black	White	2.00		Stnd w/ Soil Plate		1	15			15	1
				M1-5a	State Route Sign (3 or 4 digit)		30 x 24	Black	White	5.00									1
RT	40	0.053	EB	D10-1	Mile Marker (1 digit)	0	10 x 18	White	Green	1.25		Stnd w/ Soil Plate		1	13			13	1
				D10-1	Mile Marker (1 digit)	0	10 x 18	White	Green	1.25									1
LT	40	0.073	WB	R3-1	No Right Turn		36 x 36	Red & Black	White	9.00		Stnd w/ Soil Plate		1	13			13	1
LT	40	0.073	WB	R3-2	No Left Turn		36 x 36	Red & Black	White	9.00		Stnd w/ Soil Plate		1	13			13	1
RT	40	0.079	EB	R3-17	Bike Lane		24 x 18	White & Black	Black	3.00		Stnd w/ Soil Plate		1	12			12	1
RT	28	0.103	EB	R2-1	Speed Limit XX	35	30 x 36	Black	White	7.50		Stnd w/ Soil Plate		1	13			13	1
RT	28	0.126	EB	R3-9b	Two-Way Left Turn ONLY		24 x 36	Black	White	6.00		Stnd w/ Soil Plate		1	13			13	1
LT	28	0.139	WB	R2-1	Speed Limit XX	35	30 x 36	Black	White	7.50		Stnd w/ Soil Plate		1	13			13	1
RT	28	0.313	EB	R2-1	Speed Limit XX	35	30 x 36	Black	White	7.50		Stnd w/ Soil Plate		1	13			13	1
LT	28	0.397	WB	R3-9b	Two-Way Left Turn ONLY		24 x 36	Black	White	6.00		Stnd w/ Soil Plate		1	13			13	1
LT	28	0.416	WB	R2-1	Speed Limit XX	35	30 x 36	Black	White	7.50		Stnd w/ Soil Plate		1	13			13	1
LT	28	0.438	WB	R3-17	Bike Lane		24 x 18	White & Black	Black	3.00		Stnd w/ Soil Plate		1	12			12	1
RT	28	0.462	EB	R3-17	Bike Lane		24 x 18	White & Black	Black	3.00		Stnd w/ Soil Plate		1	12			12	1
RT	28	0.516	EB	R3-9b	Two-Way Left Turn ONLY		24 x 36	Black	White	6.00		Stnd w/ Soil Plate		1	13			13	1
RT	28	0.571	EB	R2-1	Speed Limit XX	35	30 x 36	Black	White	7.50		Stnd w/ Soil Plate		1	13			13	1
LT	28	0.609	WB	R3-9b	Two-Way Left Turn ONLY		24 x 36	Black	White	6.00		Stnd w/ Soil Plate		1	13			13	1
				M2-1	Junction		21 x 15	Black	White	2.19		Stnd w/ Soil Plate		1	13			13	1
RT	28	0.624	EB	M1-5a	State Route Sign (3 or 4 digit)	1934	30 x 24	Black	White	5.00		Stnd w/ Soil Plate		1	13			13	1
LT	28	0.653	WB	R2-1	Speed Limit XX	35	30 x 36	Black	White	7.50		Stnd w/ Soil Plate		1	13			13	1
RT	28	0.659	EB	R4-4	Begin Right Turn Lane Yield to Bikes		36 x 30	Black	White	7.50		Stnd w/ Soil Plate		1	13			13	1
LT	40	0.686	WB	M3-4	West	2054	24 x 12	Black	White	2.00		Stnd w/ Soil Plate		1	15			15	1
				M1-5a	State Route Sign (3 or 4 digit)		30 x 24	Black	White	5.00									1
RT	38	0.680	EB	R3-17	Bike Lane		24 x 18	White & Black	Black	3.00		Stnd w/ Soil Plate		1	13			13	1
				M1-5a	State Route Sign (3 or 4 digit)	1934	30 x 24	Black	White	5.00									1
RT	40	0.703	EB	M6-1R	Right Arrow		21 x 15	Black	White	2.19		Stnd w/ Soil Plate		1	13			13	1
				R1-2	Yield		36 x 36 x 36	White	Red	3.90		Stnd w/ Soil Plate		1	13			13	1
				M3-2	East		24 x 12	Black	White	2.00		Stnd w/ Soil Plate		1	13			13	1
RT	28	0.736	EB	M1-5a	State Route Sign (3 or 4 digit)	2054	30 x 24	Black	White	5.00		Stnd w/ Soil Plate		1	15			15	1
LT	40	0.737	WB	R3-17	Bike Lane		24 x 18	White & Black	Black	3.00		Stnd w/ Soil Plate		1	13			13	1
				M1-5a	State Route Sign (3 or 4 digit)	1934	30 x 24	Black	White	5.00									1
RT	28	0.763	EB	M6-1L	Left Arrow		21 x 15	Black	White	2.19		Stnd w/ Soil Plate		1	13			13	1
				R2-1	Speed Limit XX	35	30 x 36	Black	White	7.50		Stnd w/ Soil Plate		1	13			13	1
LT	28	0.820	WB	M2-1	Junction		21 x 15	Black	White	2.19		Stnd w/ Soil Plate		1	13			13	1
				M1-5a	State Route Sign (3 or 4 digit)	1934	30 x 24	Black	White	5.00		Stnd w/ Soil Plate		1	12			13	1
RT	28	0.843	EB	R3-9b	Two-Way Left Turn ONLY		24 x 36	Black	White	6.00		Stnd w/ Soil Plate		1	13			13	1
LT	28	0.892	WB	R3-9b	Two-Way Left Turn ONLY		24 x 36	Black	White	6.00		Stnd w/ Soil Plate		1	13			13	1
LT	28	0.919	WB	R2-1	Speed Limit XX	35	30 x 36	Black	White	7.50		Stnd w/ Soil Plate		1	13			13	1
LT	28	0.942	WB	R3-17	Bike Lane		24 x 18	White & Black	Black	3.00		Stnd w/ Soil Plate		1	12			12	1
RT	28	0.959	EB	R3-17	Bike Lane		24 x 18	White & Black	Black	3.00		Stnd w/ Soil Plate		1	12			12	1
RT	28	0.996	EB	R3-9b	Two-Way Left Turn ONLY		24 x 36	Black	White	6.00		Stnd w/ Soil Plate		1	15			15	1
				D10-1	Mile Marker (1 digit)	1	10 x 18	White	Green	1.25		Stnd w/ Soil Plate		1	15			15	1
RT	28		WB	D10-1	Mile Marker (1 digit)	1	10 x 18	White	Green	1.25		Stnd w/ Soil Plate		1	15			15	1

SIGN LOCATION				MUTCD Code	Sign Description	Sign Text / Remarks	Sign Dimensions (in x in)	SHEETING			SBM Alum Sheet Signs 0.080 IN (SQ FT)	SBM Alum Sheet Signs 0.125 IN (SQ FT)	Installation Type	Bracing Req'd	# of Sign Posts	Estimated Length of 2" Post (ft)	Estimated Length of 2-1/2" Post (ft)	2-1/4" Stiffener Req'd (includntl to post)	TOTAL Estimated Sign Post Length (LF)	Barcode Sign Inv. (EACH)
Side of Road	Approx Offset (ft)	Approx. Mile Point	Facing Traffic Traveling					Text/ Symbol Color	Background Color	Sheeting Type										
RT	28	1.042	EB	R2-1	Speed Limit XX	35	30 x 36	Black	White	XI	7.50		Stnd w/ Soil Plate		1	13			13	1
LT	28	1.161	WB	R3-9b	Two-Way Left Turn ONLY		24 x 36	Black	White	XI	6.00		Stnd w/ Soil Plate		1	13			13	1
LT	28	1.189	WB	R2-1	Speed Limit XX	35	30 x 36	Black	White	XI	7.50		Stnd w/ Soil Plate		1	13			13	1
LT	28	1.212	WB	R3-17	Bike Lane		24 x 18	White & Black	Black	XI	3.00		Stnd w/ Soil Plate		1	12			12	1
RT	28	1.230	EB	R3-17	Bike Lane		24 x 18	White & Black	Black	XI	3.00		Stnd w/ Soil Plate		1	12			12	1
RT	28	1.269	EB	R2-1	Speed Limit XX	35	30 x 36	Black	White	XI	7.50		Stnd w/ Soil Plate		1	13			13	1
RT	28	1.305	EB	R3-9b	Two-Way Left Turn ONLY		24 x 36	Black	White	XI	6.00		Stnd w/ Soil Plate		1	13			13	1
				M2-1	Junction		21 x 15	Black	White	XI	2.19				1	13			13	1
RT	28	1.409	EB	M1-4a	US Route Sign (3 digit)	31W	30 x 24	Black	White	XI	5.00				1	13			13	1
				M1-4	US Route Sign (1 or 2 digit)	60	24 x 24	Black	White	XI	4.00				1	13			13	1
LT	28	1.417	WB	R3-9b	Two-Way Left Turn ONLY		24 x 36	Black	White	XI	6.00		Stnd w/ Soil Plate		1	13			13	1
LT	28	1.455	WB	R2-1	Speed Limit XX	35	30 x 36	Black	White	XI	7.50		Stnd w/ Soil Plate		1	13			13	1
				M3-4	West		24 x 12	Black	White	XI	2.00				1	15			15	1
LT	28	1.490	WB	M1-5a	State Route Sign (3 or 4 digit)	205-4	30 x 24	Black	White	XI	5.00		Stnd w/ Soil Plate		1	15			15	1
				R3-17	Bike Lane		24 x 18	White & Black	Black	XI	3.00				1	13			13	1
RT	28	1.493	EB	M1-4a	US Route Sign (3 digit)	31W	30 x 24	Black	White	XI	5.00				1	13			13	1
				M1-4	US Route Sign (1 or 2 digit)	60	24 x 24	Black	White	XI	4.00		Stnd w/ Soil Plate		1	13			13	1
				M6-4	Horizontal Double Arrow		21 x 15	Black	White	XI	2.19				1	13			13	1
LT	28	1.514	WB	M1-4a	US Route Sign (3 digit)	31W	30 x 24	Black	White	XI	5.00				1	13			13	1
				M1-4	US Route Sign (1 or 2 digit)	60	24 x 24	Black	White	XI	4.00		Stnd w/ Soil Plate		1	13			13	1
				M6-4	Horizontal Double Arrow		21 x 15	Black	White	XI	2.19				1	13			13	1
				M3-2	East		24 x 12	Black	White	XI	2.00				1	15			15	1
RT	27	1.515	EB	M1-5a	State Route Sign (3 or 4 digit)	205-4	30 x 24	Black	White	XI	5.00		Stnd w/ Soil Plate		1	15			15	1
				R3-17	Bike Lane		24 x 18	White & Black	Black	XI	3.00				1	13			13	1
RT	28	1.546	EB	R2-1	Speed Limit XX	35	30 x 36	Black	White	XI	7.50		Stnd w/ Soil Plate		1	13			13	1
				M2-1	Junction		21 x 15	Black	White	XI	2.19				1	13			13	1
LT	28	1.596	WB	M1-4a	US Route Sign (3 digit)	31W	30 x 24	Black	White	XI	5.00		Stnd w/ Soil Plate		1	13			13	1
				M1-4	US Route Sign (1 or 2 digit)	60	24 x 24	Black	White	XI	4.00				1	13			13	1
LT	28	1.628	WB	R3-17	Bike Lane		24 x 18	White & Black	Black	XI	3.00		Stnd w/ Soil Plate		1	12			12	1
RT	28	1.668	EB	R3-17	Bike Lane		24 x 18	White & Black	Black	XI	3.00		Stnd w/ Soil Plate		1	12			12	1
RT	27	1.738	EB	R3-9b	Two-Way Left Turn ONLY		24 x 36	Black	White	XI	6.00		Stnd w/ Soil Plate		1	13			13	1
LT	27	1.760	WB	R2-1	Speed Limit XX	35	30 x 36	Black	White	XI	7.50		Stnd w/ Soil Plate		1	13			13	1
RT	27	1.795	EB	R2-1	Speed Limit XX	35	30 x 36	Black	White	XI	7.50		Stnd w/ Soil Plate		1	13			13	1
LT	27	1.988	WB	R2-1	Speed Limit XX	35	30 x 36	Black	White	XI	7.50		Stnd w/ Soil Plate		1	13			13	1
RT	27	2.000	EB	D10-1	Mile Marker (1 digit)	2	10 x 18	White	Green	XI	1.25		Stnd w/ Soil Plate		1	13			13	1
				D10-1	Mile Marker (1 digit)	2	10 x 18	White	Green	XI	1.25				1	13			13	1
RT	27	2.046	EB	R2-1	Speed Limit XX	35	30 x 36	Black	White	XI	7.50		Stnd w/ Soil Plate		1	13			13	1
LT	27	2.079	WB	R3-9b	Two-Way Left Turn ONLY		24 x 36	Black	White	XI	6.00		Stnd w/ Soil Plate		1	13			13	1
LT	27	2.154	WB	R3-17	Bike Lane		24 x 18	White & Black	Black	XI	3.00		Stnd w/ Soil Plate		1	12			12	1
OVHD	0	2.165	WB	R3-2	No Left Turn		36 x 36	Red & Black	White	XI	9.00				1	12			12	1
RT	30	2.179	EB	R3-17	Bike Lane		24 x 18	White & Black	Black	XI	3.00		Stnd w/ Soil Plate		1	12			12	1
LT	30	2.210	WB	R2-1	Speed Limit XX	35	30 x 36	Black	White	XI	7.50		Stnd w/ Soil Plate		1	13			13	1
RT	30	2.308	EB	R2-1	Speed Limit XX	35	30 x 36	Black	White	XI	7.50		Stnd w/ Soil Plate		1	13			13	1
RT	30	2.335	EB	R3-9b	Two-Way Left Turn ONLY		24 x 36	Black	White	XI	6.00		Stnd w/ Soil Plate		1	13			13	1
				M2-1	Junction		21 x 15	Black	White	XI	2.19				1	13			13	1
RT	27	2.414	EB	M1-5a	State Route Sign (3 or 4 digit)	1931	30 x 24	Black	White	XI	5.00		Stnd w/ Soil Plate		1	13			13	1
LT	27	2.418	WB	R3-9b	Two-Way Left Turn ONLY		24 x 36	Black	White	XI	6.00		Stnd w/ Soil Plate		1	13			13	1



5-9048.00				Sign Summary			Jefferson County			KY 2054 (Algonquin Pkwy.)									
SIGN LOCATION				MUTCD Code	Sign Description	Sign Text / Remarks	Sign Dimensions (in x in)	SHEETING		SBM Alum Sheet Signs 0.080 IN (SQ FT)	SBM Alum Sheet Signs 0.125 IN (SQ FT)	Installation Type	Bracing Req'd	# of Sign Posts	Estimated Length of 2" Post (ft)	Estimated Length of 2-1/2" Post (ft)	2-1/4" Stiffener Req'd (includntl to post)	TOTAL Estimated Sign Post Length (LF)	Barcode Sign Inv. (EACH)
Side of Road	Approx. Offset (ft)	Approx. Mile Point	Facing Traffic Traveling					Text/ Symbol Color	Background Color										
RT	27	2.454	EB	R4-4	Begin Right Turn Lane Yield to Bikes		36 x 30	Black	White	7.50		Strnd w/ Soil Plate		1	13			13	1
LT	30	2.460	WB	R2-1	Speed Limit XX	35	30 x 36	Black	White	7.50		Strnd w/ Soil Plate		1	13			13	1
				M3-4	West		24 x 12	Black	White	2.00								1	
LT	30	2.494	WB	M1-5a	State Route Sign (3 or 4 digit)	2054	30 x 24	Black	White	5.00		Strnd w/ Soil Plate		1	15			15	1
				R3-17	Bike Lane		24 x 18	White & Black	Black	3.00								1	
RT	37	2.505	EB	M1-5a	State Route Sign (3 or 4 digit)	1931	30 x 24	Black	White	5.00		Strnd w/ Soil Plate		1	13			13	1
				M6-1R	Right Arrow		21 x 15	Black	White	2.19								1	
LT	36	2.530	WB	M1-5a	State Route Sign (3 or 4 digit)	1931	30 x 24	Black	White	5.00		Strnd w/ Soil Plate		1	13			13	1
				M6-1L	Left Arrow		21 x 15	Black	White	2.19								1	
RT	27	2.535	EB	M3-2	East		24 x 12	Black	White	2.00								1	1
				M1-5a	State Route Sign (3 or 4 digit)	2054	30 x 24	Black	White	5.00								1	
				R3-17	Bike Lane		24 x 18	White & Black	Black	3.00		Strnd w/ Soil Plate		1	13			13	1
RT	27	2.570	EB	R2-1	Speed Limit XX	35	30 x 36	Black	White	7.50		Strnd w/ Soil Plate		1	13			13	1
LT	27	2.576	WB	R4-4	Begin Right Turn Lane Yield to Bikes		36 x 30	Black	White	7.50		Strnd w/ Soil Plate		1	13			13	1
RT	27	2.602	EB	R3-9b	Two-Way Left Turn ONLY Junction		24 x 36	Black	White	6.00		Strnd w/ Soil Plate		1	13			13	1
				M2-1			21 x 15	Black	White	2.19		Strnd w/ Soil Plate		1	13			13	1
LT	27	2.609	WB	M1-5a	State Route Sign (3 or 4 digit)	1931	30 x 24	Black	White	5.00		Strnd w/ Soil Plate		1	13			13	1
LT	27	2.700	WB	R2-1	Speed Limit XX	35	30 x 36	Black	White	7.50		Strnd w/ Soil Plate		1	13			13	1
LT	27	2.877	WB	R3-9b	Two-Way Left Turn ONLY		24 x 36	Black	White	6.00		Strnd w/ Soil Plate		1	13			13	1
RT	27	2.877	EB	R2-1	Speed Limit XX	35	30 x 36	Black	White	7.50		Strnd w/ Soil Plate		1	13			13	1
LT	27	2.955	WB	R2-1	Speed Limit XX	35	30 x 36	Black	White	7.50		Strnd w/ Soil Plate		1	13			13	1
RT	27	3.000	WB	D10-1	Mile Marker (1 digit)	3	10 x 18	White	Green	1.25		Strnd w/ Soil Plate		1	13			13	1
				D10-1	Mile Marker (2 digit)	3	10 x 18	White	Green	1.25							1		
RT	27	3.031	EB	R3-9b	Two-Way Left Turn ONLY		24 x 36	Black	White	6.00		Strnd w/ Soil Plate		1	13			13	1
RT	27	3.107	EB	R2-1	Speed Limit XX	35	30 x 36	Black	White	7.50		Strnd w/ Soil Plate		1	13			13	1
RT	27	3.154	EB	M2-1	Junction		21 x 15	Black	White	2.19		Strnd w/ Soil Plate		1	13			13	1
				M1-4a	US Route Sign (3 digit)	60A	30 x 24	Black	White	5.00		Strnd w/ Soil Plate		1	13			13	1
RT	27	3.176	EB	R3-17	Bike Lane		24 x 18	White & Black	Black	3.00		Strnd w/ Soil Plate		1	12			12	1
				R3-17bP	ENDS		24 x 9	Black	White	1.50								1	1
LT	28	3.197	WB	R3-9b	Two-Way Left Turn ONLY		24 x 36	Black	White	6.00		Strnd w/ Soil Plate		1	13			13	1
RT	27	3.204	EB	W3-3	Signal Ahead		36 x 36	Red, Green & Black	Yellow	9.00		Strnd w/ Soil Plate		1	15			15	1
LT	31	3.233	WB	R3-17	Bike Lane		24 x 18	White & Black	Black	3.00		Strnd w/ Soil Plate		1	12			12	1
				M3-4	West		24 x 12	Black	White	2.00								1	1
LT	36	3.254	WB	M1-5a	State Route Sign (3 or 4 digit)	2054	30 x 24	Black	White	5.00		Strnd w/ Soil Plate		1	16			16	1
				R2-1	Speed Limit XX	35	30 x 36	Black	White	7.50								1	1
RT	32	3.276	EB	M1-4a	US Route Sign (3 digit)	60A	30 x 24	Black	White	5.00		Strnd w/ Soil Plate		1	13			13	1
				M6-4	Horizontal Double Arrow		21 x 15	Black	White	2.19								1	1
LT	28		Algonquin Slip Lane	R1-2	Yield		36 x 36 x 36	White	Red	3.90		Strnd w/ Soil Plate		1	13			13	1
LT	52		Algonquin Slip Lane	R1-2	Yield		36 x 36 x 36	White	Red	3.90		Strnd w/ Soil Plate		1	13			13	1

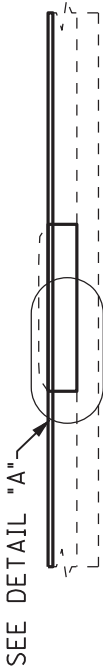
Summary of Items			
Steel Post - Type 1	1,157	LF	
GMSS Type D	0	EACH	
GMSS Type D (Surface Mount)	0	EACH	
Class A Concrete for Signs	0	CU YD	

Summary of Items			
SBM Alum Sheet Signs 0.080 INCH	614.33	SQ FT	
SBM Alum Sheet Signs 0.125 INCH	0.00	SQ FT	
Barcode Sign Inventory	130	EACH	

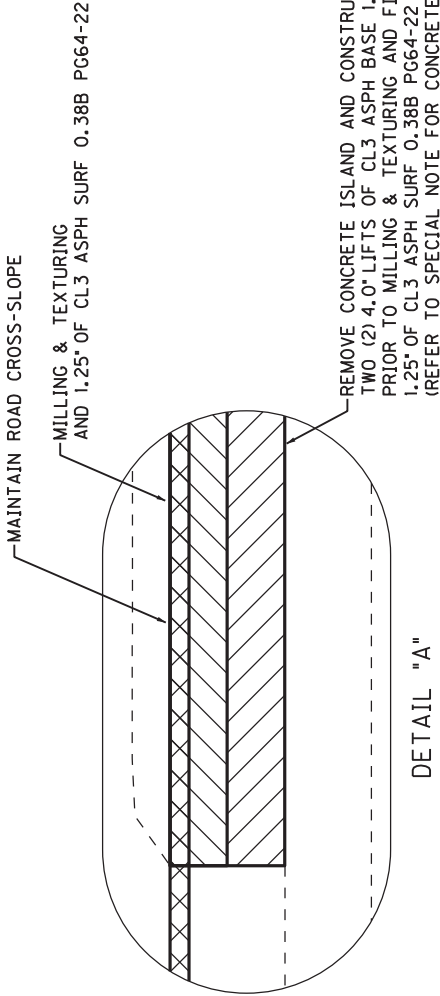
# CONCRETE ISLAND REMOVAL DETAIL



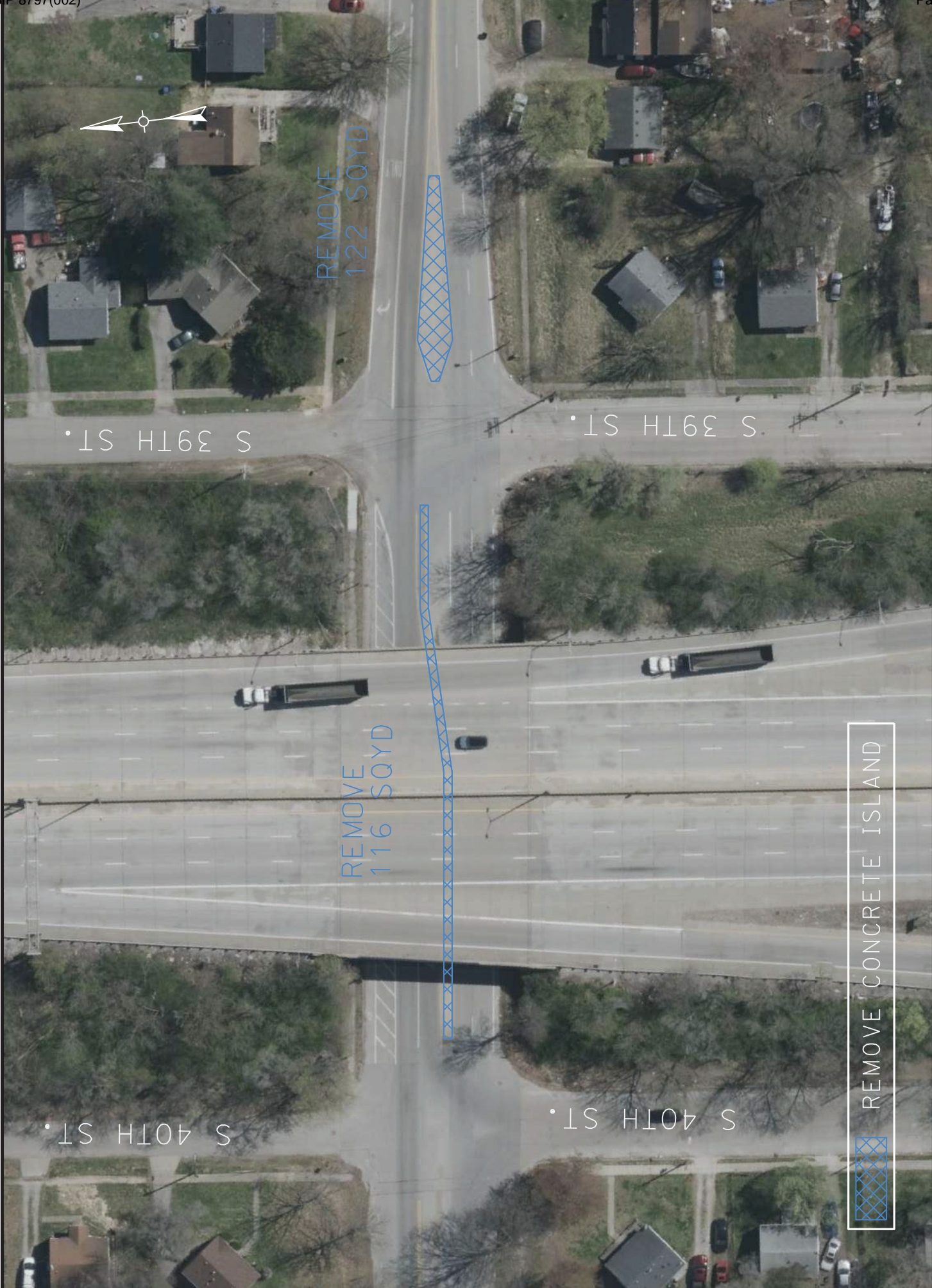
EXISTING SECTION



PROPOSED SECTION



COUNTY	ITEM NO.	SHEET NO.
JEFFERSON	5-9048.00	ROI





COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS

TEAM KENTUCKY  
Infrastructure

OpenRoads Designer v10.12.03.2  
FILE NAME: C:\TMP\PMSE\00141657\STRIPINGSHEETS\_ALGONQUINPKWY.DGN

DRAWING TITLE: ISLAND REMOVAL  
40TH AND 39TH ST.

SCALE: 1"=60'

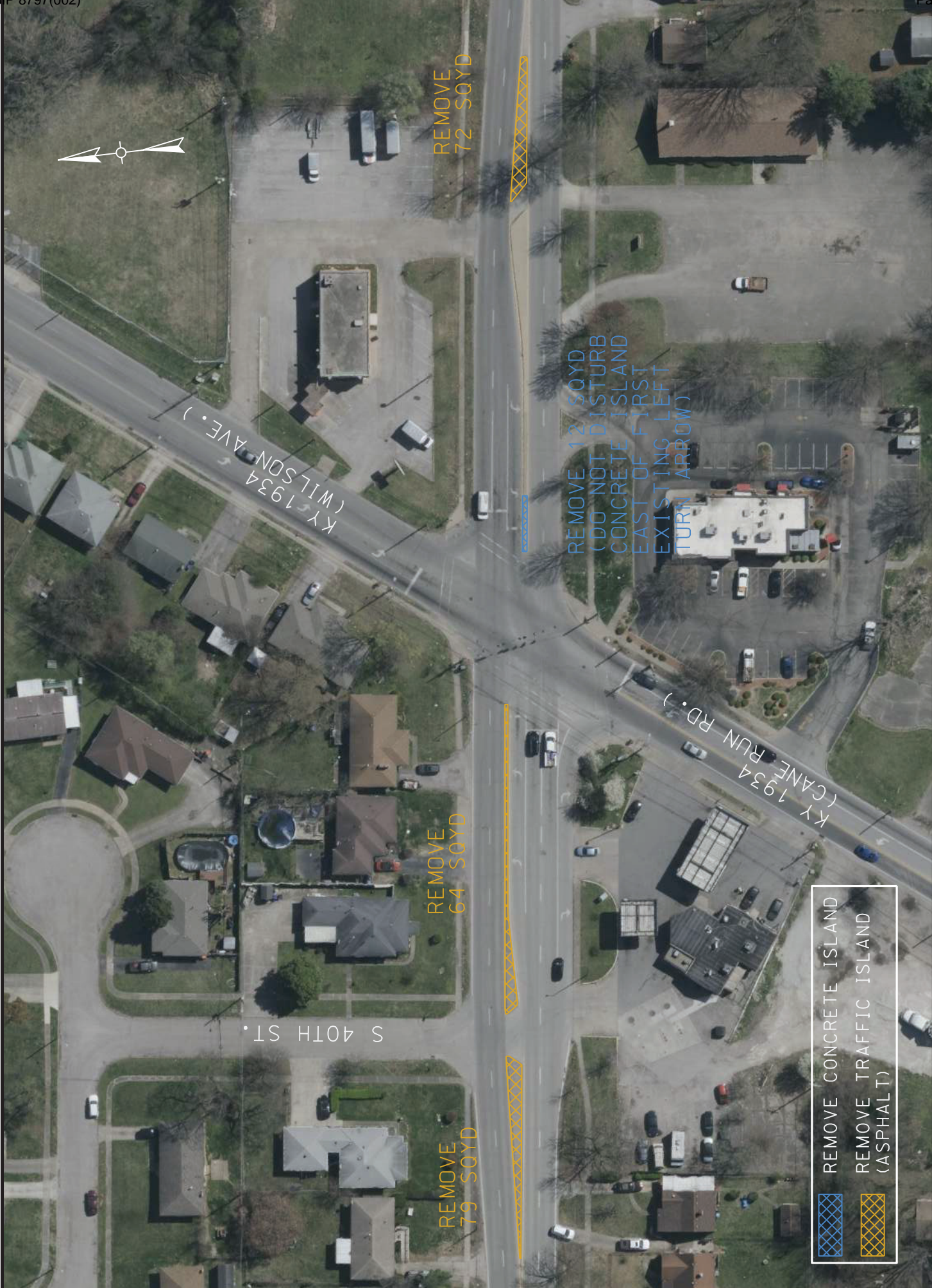
ITEM NO.  
5-9048.00

COUNTY OF  
JEFFERSON

SHEET NO.  
R02

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- REMOVE CONCRETE ISLAND
- REMOVE TRAFFIC ISLAND (ASPHALT)

**COMMONWEALTH OF KENTUCKY**  
DEPARTMENT OF HIGHWAYS

**TEAM KENTUCKY**  
CONSTRUCTION

**DRAWING TITLE:** ISLAND REMOVAL  
KY 1934  
(WILSON AVE. AND CANE RUN RD.)

**SCALE:** 1"=80'

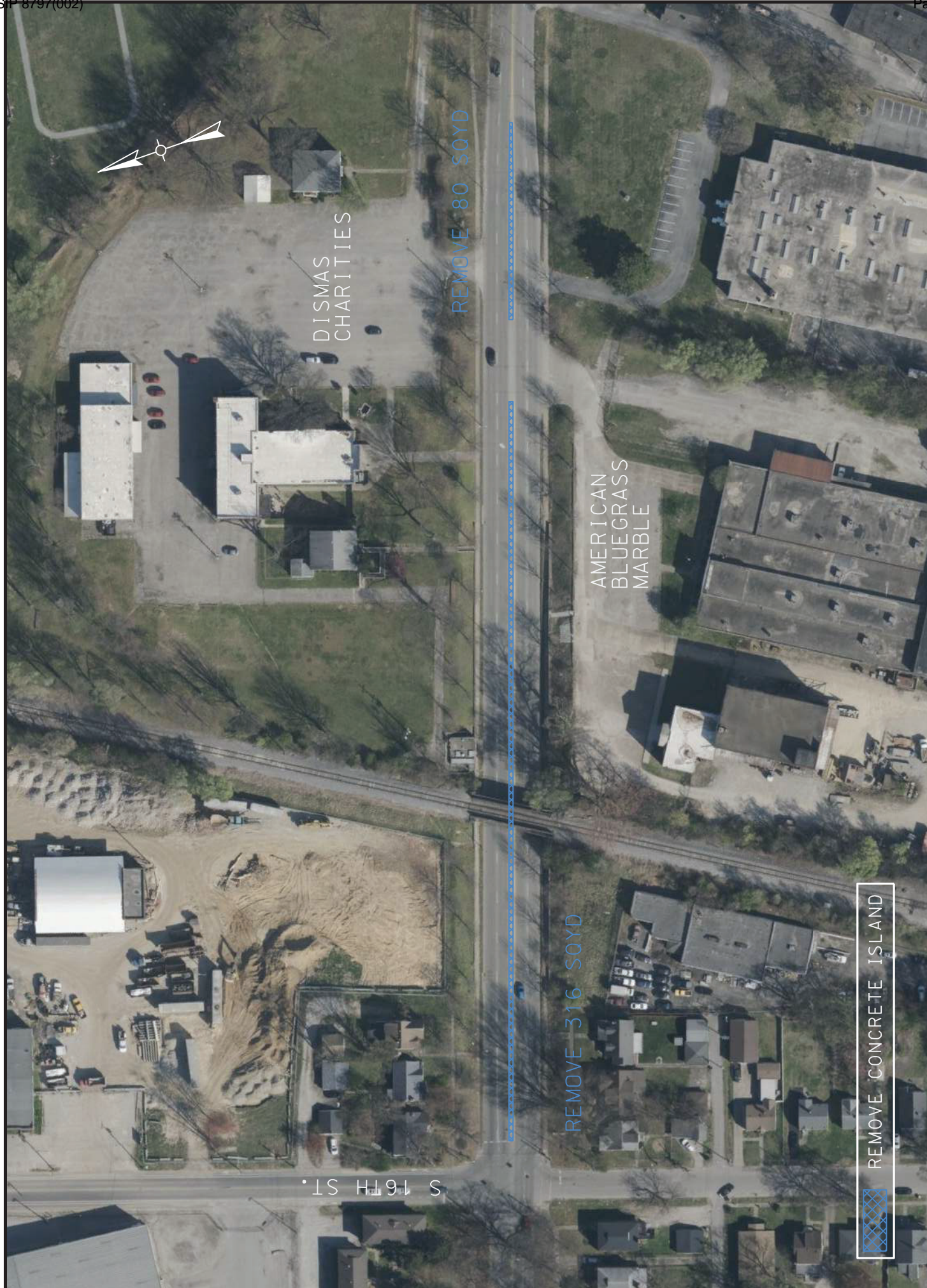
ITEM NO.	COUNTY OF
5-9048.00	JEFFERSON
SHEET NO.	
R03	

OpenRoads Designer v10.12.03.2  
FILE NAME: CATMP/PW/SE/D0141657/STRIPINGSHEETS\_ALGONQUINPKWY.DGN

USER: swaara

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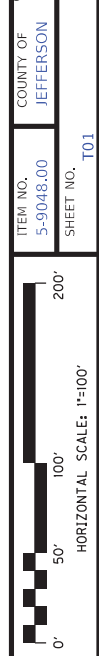
**DRAWING TITLE: ASPHALT PAVEMENT MILLING AND CONCRETE PAVEMENT RESTORATION DETAIL**

SCALE: 1"=120'

ITEM NO.	COUNTY OF
5-9048.00	JEFFERSON

SHEET NO. R05





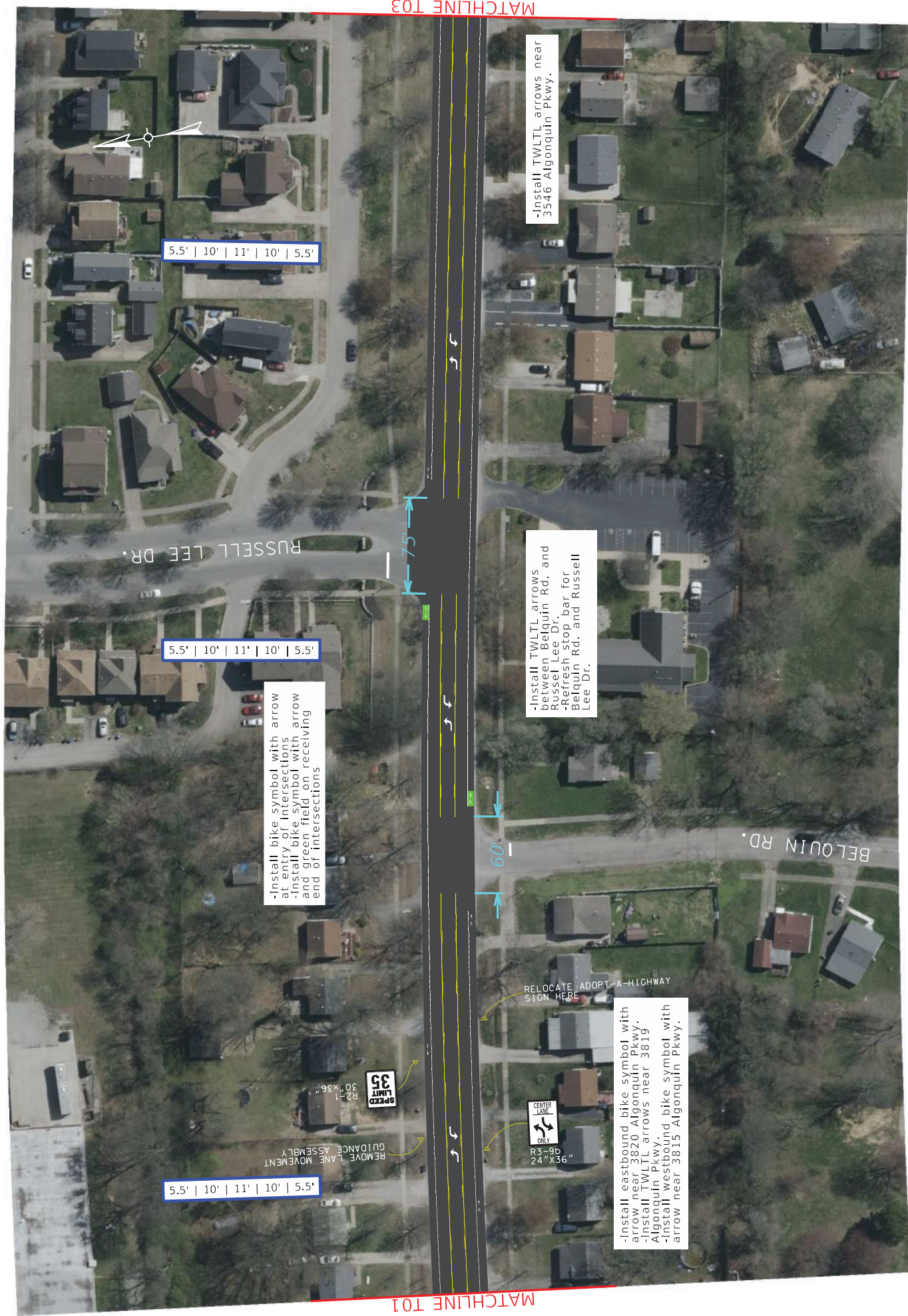
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ROADWAY RECONFIGURATION  
STRIPING & SIGNING PLANS



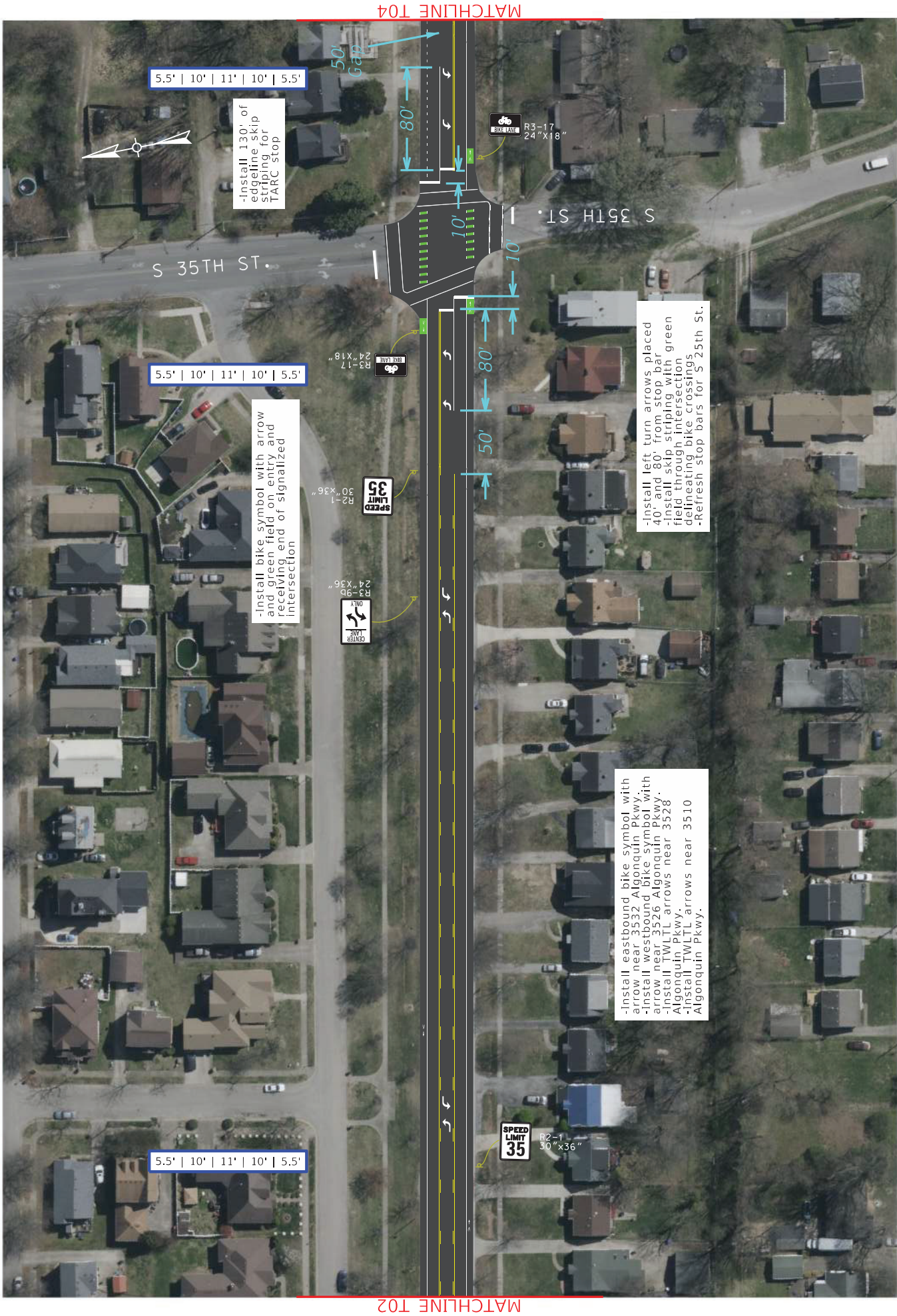
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OpenRoads Designer v10.12.03.2  
FILE NAME: C:\TMP\PIWISE\0141657\STRIPINGSHEETS\_ALGONQUINPKWY.DGN









DRAWING TITLE: KY 2054 (ALGONQUIN PKWY)  
ROADWAY RECONFIGURATION  
STRIPING & SIGNING PLANS

COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS

TEAM KENTUCKY  
TRANSPORTATION

USER: swaara

ITEM NO. 5-9048.00  
COUNTY OF JEFFERSON  
SHEET NO. T03

HORIZONTAL SCALE: 1"=100'

0' 50' 100' 200'





COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS

TEAM KENTUCKY

DRAWING TITLE: KY 2054 (ALGONQUIN PKWY)  
ROADWAY RECONFIGURATION  
STRIPING & SIGNING PLANS

ITEM NO.  
5-9048.00

COUNTY OF  
JEFFERSON

SHEET NO.  
T04

0' 50' 100' 200'

HORIZONTAL SCALE: 1"=100'

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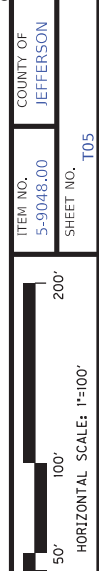
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USER: swaaria

OpenRoads Designer v10.12.03.2

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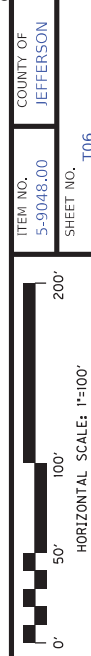
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ROADWAY RECONFIGURATION  
STRIPING & SIGNING PLANS

COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS

USER: swearia

OpenRoads Designer v10.12.03.2  
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DRAWING TITLE: KY 2054 (ALGONQUIN PKWY)  
ROADWAY RECONFIGURATION  
STRIPING & SIGNING PLANS

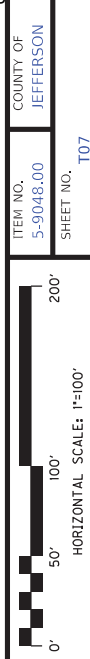


COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS

USER: swearia

OpenRoads Designer v10.12.03.2  
FILE NAME: C:\TMP\PIWISE\0141657\STRIPINGSHEETS\_ALGONQUINPKWY.DGN





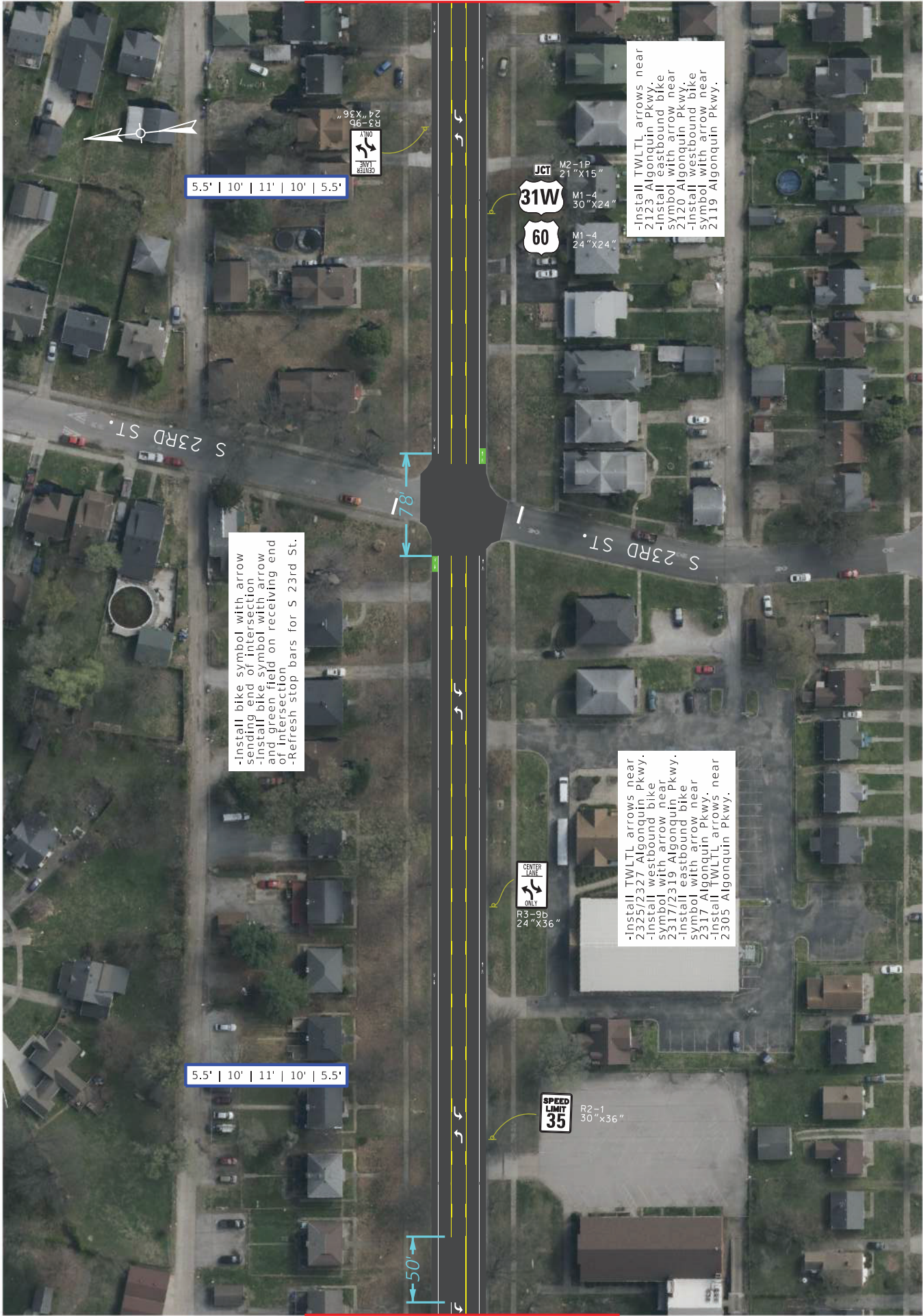
**DRAWING TITLE: KY 2054 (ALGONQUIN PKWY)  
ROADWAY RECONFIGURATION  
STRIPING & SIGNING PLANS**


**COMMONWEALTH OF KENTUCKY**  
 DEPARTMENT OF HIGHWAYS  


USER: swearia

OpenRoads Designer v10.12.03.2  
FILE NAME: C:\TMP\PIWISE\0141657\STRIPINGSHEETS\_ALGONQUINPKWY.DGN





ITEM NO.	COUNTY OF
5-9048.00	JEFFERSON
SHEET NO.	T08

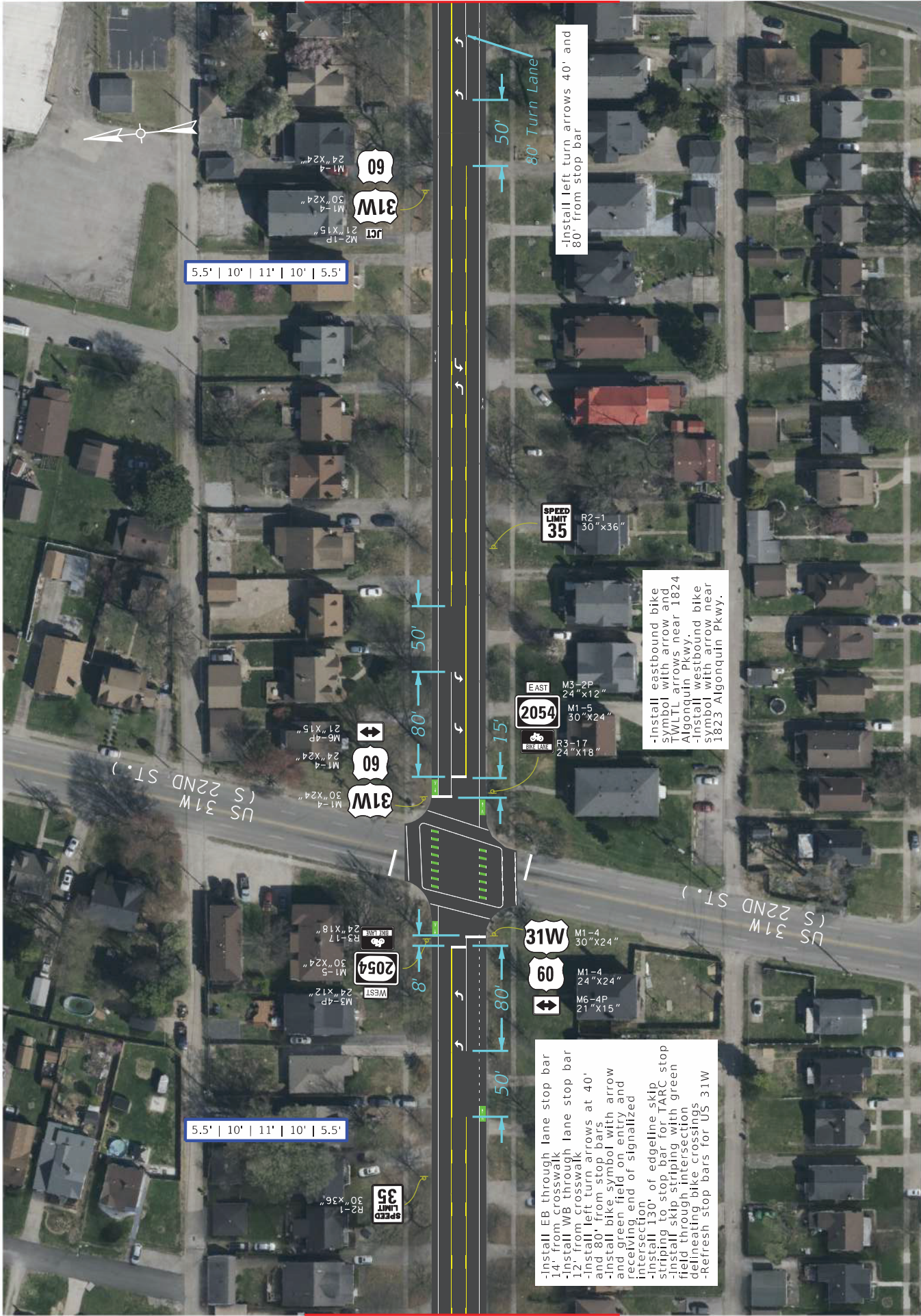


DRAWING TITLE: KY 2054 (ALGONQUIN PKWY)  
ROADWAY RECONFIGURATION  
STRIPING & SIGNING PLANS

COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS

TEAM KENTUCKY  
TRANSPORTATION





0'50'100'200'

HORIZONTAL SCALE: 1"=100'

ITEM NO.  
5-9048.00

COUNTY OF  
JEFFERSON

SHEET NO.  
T09

DRAWING TITLE: KY 2054 (ALGONQUIN PKWY)  
ROADWAY RECONFIGURATION  
STRIPING & SIGNING PLANS

COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS

TEAM KENTUCKY  
TRANSPORTATION

USER: swaaria





DRAWING TITLE: KY 2054 (ALGONQUIN PKWY)  
ROADWAY RECONFIGURATION  
STRIPING & SIGNING PLANS

COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS

USER: swearia

OpenRoads Designer v10.12.03.2  
FILE NAME: C:\TMP\PIP\WIS\D0141657\STRIPINGSHEETS\_ALGONQUINPKWY.DGN

ITEM NO.	COUNTY OF
5-9048.00	JEFFERSON
SHEET NO.	T10

HORIZONTAL SCALE: 1"=100'

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COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS

TEAM KENTUCKY  
TRANSPORTATION

USER: swaaria

DRAWING TITLE: KY 2054 (ALGONQUIN PKWY)  
ROADWAY RECONFIGURATION  
STRIPING & SIGNING PLANS

ITEM NO.  
5-9048.00

COUNTY OF  
JEFFERSON

SHEET NO.  
T11

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HORIZONTAL SCALE: 1"=100'





DRAWING TITLE: KY 2054 (ALGONQUIN PKWY)  
ROADWAY RECONFIGURATION  
STRIPING & SIGNING PLANS

ITEM NO.	COUNTY OF
5-9048.00	JEFFERSON

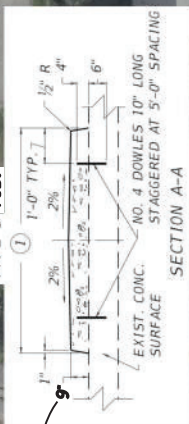
SHEET NO. T12

HORIZONTAL SCALE: 1"=100'





**STANDARD BARRIER  
MEDIAN**



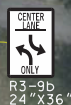
**MODIFIED HEIGHT**

-Install westbound bike lane symbol with arrow just west of the entrance to Dismas Charities

CONSTRUCT 325 SQYD STANDARD BARRIER MEDIAN  
TYPE 3 OR TYPE 3 MOD. (6 FT WIDTH)  
CONSTRUCT TYPE 3 IF FINAL RIDING SURFACE TO BE  
CONCRETE OR TYPE 3 MOD. IF SURFACE TO BE ASPHALT)

- Install white 12" cross hatching on 20' centers
- Install 100' of flush median delineated with yellow 24" cross hatching on 10' centers
- Install yellow cone cap

- Install eastbound bike lane symbol with arrow just west of the entrance to American Bluegrass Marble
- Install TWLTL arrows between the entrances for American Bluegrass Marble and Dismas Charities















0'50'100'200'

HORIZONTAL SCALE: 1"=100'

ITEM NO.	COUNTY OF
5-9048.00	JEFFERSON
SHEET NO.	T16

DRAWING TITLE: KY 2054 (ALGONQUIN PKWY)  
ROADWAY RECONFIGURATION  
STRIPING & SIGNING PLANS

COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS

TEAM KENTUCKY

TRANSPORTATION

USER: swaaria





DRAWING TITLE: KY 2054 (ALGONQUIN PKWY)  
ROADWAY RECONFIGURATION  
STRIPING & SIGNING PLANS


**COMMONWEALTH OF KENTUCKY**  
 DEPARTMENT OF HIGHWAYS  

 TEAM KENTUCKY  
 TRANSPORTATION & INFRASTRUCTURE

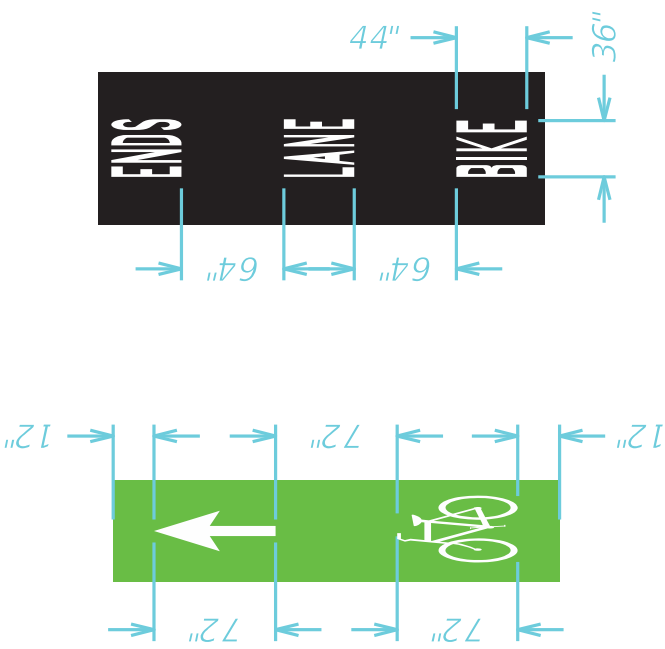






GENERAL NOTES

- Dimensions provided are approximate. Verify prior to installation if stripe locations are adequate and adjust as necessary.
- All stop bars, yield bars, bike symbols with arrows, cross hatching, and lane-use arrows shall be thermoplastic unless otherwise indicated.
- Shaded area is intended to represent the planned resurfacing limits but Engineer to determine actual limits at time of construction.
- Skip striping to be 2' skip with 4' gap unless otherwise indicated.
- Striping shall be 6" thermoplastic unless otherwise specified.
- Yield bars shall be 24" (X) by 36" (Y) triangles with equal, approximate 6" spacing across the lane. See Yield Bar Detail.
- Crosswalks shall be minimum 10' and encompass the entire width of adjacent sidewalk ramp. If field conditions require, crosswalks can be reduced to 8' wide.
- Enhanced crosswalks shall also include 24" white bars with 24" gaps, parallel with flow of traffic.
- Stop bars to be 6' (min.) from crosswalk unless otherwise indicated.
- Re-install/refresh side street thermoplastic markings as necessary.



Bicycle symbol with green field detail

"BIKE LANE" "ENDS" pavement marking detail

PRODUCT DATA SHEET

ENNIS-FLINT



Extended Season MMAX® Colored Lane Treatment with Corundum

**PRODUCT DESCRIPTION:** Extended Season MMAX® colored lane treatment is a preferential lane treatment system combining methyl methacrylate resins with hardwearing aggregate and colorfast pigments to deliver an extremely durable, non-slip, highly visible, and color-stable area marking that can be applied year-round. MMAX® colored lane treatment can be used to delineate bike lanes, bus lanes, or other specialty applications, where a durable area marking is required.

ADVANTAGES:

- Extended season application in summer and winter
- Durable
- Color-stable
- Fast back-to-traffic
- Non-slip surface
- Easy to apply; pre-packaged for on-site mixing and convenience

AVAILABLE COLORS:

- EF Green (PMS 361C) - 999670G-KIT
- Transit Lane Red (PMS 7622C) - 999670TRAN-KIT
- Truffle (PMS 7530C) - 999670TR-KIT
- Terracotta (PMS 7595C) - 999670TC-KIT
- Brick Red (PMS 7624C) - 999670BR-KIT
- Hollywood Green (PMS 7484C) - 999670G349-KIT
- Red (PMS 200C) - 999670R-KIT
- White - 999670W-KIT

TECHNICAL DATA:

ASTM Testing	Results	Test Method
Hardness	50-60 Shore D Corundum only: 9	D2240 Mohs Scale
Elongation	> 30%	D638 Type I
No Pick-Up Time at 77°F	< 30 minutes	D711
Density	18.5 +/- 0.5 lbs/gallon	D1475
Viscosity	85-105 Krebs	2195-99
Total Solids	> 99%	D2369
Pot Life	< 15 minutes	AASHTO T-237
VOC	< 100 grams/liter	D3960-05
Skid	> 60 BPN	E303
Water Absorption	< 0.25%	D570

PACKAGING:

One kit includes:

- MMAX® colored lane treatment resin: 2 gallons / 7.57 liters
- Supplied in 5 gallon pail for easy mixing
- MMAX® material aggregate: 1 – 25.0 lbs. / 11.34 kg bag
- Catalyst: 8 fl. oz. / 236 ml (0.52 lbs. / 0.24 kg)

**THEORETICAL COVERAGE:** Each MMAX® colored lane treatment kit mixes to 2.79 gallons and covers approximately 45-50 sq. ft. @ 90-mil build thickness. Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, method of application, surface irregularities, overthinning, climate conditions, or excessive film build.

**DRY TIME:** MMAX® colored lane treatment dries to a lab ASTM D711 no pickup in less than 30 minutes when ambient and surface temperature are 77° F at 50±5% humidity. Dry time is temperature, humidity, and film thickness dependent. MMAX® colored lane treatment must be 100% cured, which will be a hardened, solid state, before traffic is permitted. Curing typically takes 30-60 minutes and is based on temperature and amount of catalyst added.

PRODUCT DATA SHEET

ENNIS-FLINT



Extended Season MMAX® Colored Lane Treatment with Corundum

**STORAGE:** Avoid extreme storage temperatures. Keep materials in dry, protected areas, between 40°F-80°F. Keep out of the direct sunlight and protected from open flame.

**SHELF LIFE:** Shelf life is one year in unopened packaging.

PRODUCT APPLICATION INSTRUCTIONS

**RECOMMENDED EQUIPMENT:** Squeegees shall be designed for heavy-duty usage and sourced locally. Rollers shall be medium nap in texture and require a roller cage and handle. Sprayers shall be capable of 98:2 mix ratios by weight of resin to catalyst. Drill shall be high speed, high torque, capable of supplying enough power to thoroughly mix MMAX® colored lane treatment additives when paired with a paint mixing paddle.

**SURFACE PREPARATION:** MMAX® colored lane treatment can be applied on stable, well compacted asphalt or non-bituminous concrete surfaces, such as Portland cement concrete. New substrates should be allowed to age harden or cure for minimum 15 days (asphalt) to 30 days (concrete) before installation. Clean the application area thoroughly. All loose particles - dirt, sand dust, etc. - must be removed. Use a broom and power blower or compressed air. The surface must be clean, dry, and free of all dust, oil, debris, and any other material that might interfere with the bond between the material and surface to be treated. Clean areas containing chemical contaminants such as vehicle fluids using a degreasing solution. Ensure removal of contaminants and degreasing solution well in advance of the application. All curing compounds shall be completely removed from concrete surfaces prior to installation by shot blasting, water blasting, or grinding. Existing concrete surfaces shall be wire brushed but may require blasting or grinding, dependent on condition. Aged surfaces containing reflective cracking should be repaired or it should be expected that the reflective cracking may reappear.

**OBSTACLES:** Pavement markings that are to be left in place, utilities, drainage structures, curbs, and any other structure within or adjacent to the treatment location shall be masked to protect from application. Existing pavement markings conflicting with the surface treatment should be removed by grinding or water blasting. Extra care should be taken to thoroughly remove the dust and debris caused from grinding.

**MIXING:** Catalyst quantity shall be based on pavement temperature per the materials mixing guide below and must be mixed very thoroughly with the resin using a drill. Check spray equipment capabilities to determine whether to add aggregate to mix or broadcast during application. Material with aggregate shall mix to approximately 2.79 gallons (10.55 liters) and weigh approximately 52 lbs. (23.6 kg). Clean the mixing paddle between uses or material will immediately initiate curing if exposed to previously catalyzed material (and not cleaned).

MATERIALS MIXING GUIDE

Component	Quantity	Unit
Resin	2 (7.6)	gallons (liters)
Aggregate	25.0 (11.34)	lbs (kg)
Powder Catalyst < 80°F (< 27°C)	0.52 (0.24) 8 (0.24)	lbs (kg) fluid ounces (liters)
Powder Catalyst 80°F to 130°F (27°C to 54°C)	0.26 (0.12) 4 (0.12)	lbs (kg) fluid ounces (liters)
Powder Catalyst 130°F to 150°F (54°C to 65°C)	0.24 (0.108) 3.5 (0.10)	lbs (kg) fluid ounces (liters)

**INSTALLATION WITHOUT SPECIALIZED EQUIPMENT:** Mixed MMAX® colored lane treatment shall immediately be poured onto the pavement and distributed at 45-50 sq. ft. per pail using a squeegee. Trowels can be used where a squeegee is not effective. Use roller to back roll the material to remove working lines and create a consistent, anti-slip texture. Remove masking as material gels, but before it cures.

**INSTALLATION WITH SPECIALIZED SPRAY EQUIPMENT:** Sprayers shall be capable of 98:2 mix ratios by weight of resin to catalyst. Aggregate can either be broadcast after the first spray pass, followed by a second pass; or mixed into the resin part depending on spray equipment capabilities.

**CLEAN UP:** Clean all tools in acetone before material is cured. Clean in well ventilated areas and do not come into direct contact with solvents - use proper personal protective equipment per the Safety Data Sheet. Acetone is extremely flammable; take proper handling measures to reduce static discharge and combustion. Dispose of all contaminated materials in accordance with all applicable federal, state and local laws and regulations.

PRODUCT DATA SHEET

ENNIS-FLINT



Extended Season MMAX® Colored Lane Treatment with Corundum

LIMITATIONS OF LIABILITY:

The product data offered herein is based on test conducted by or on behalf of PPG and is, to the best of our knowledge, true and accurate. All statements are made without warranty, expressed or implied. Statements regarding the suitability of products for certain types of applications are based on PPG’s knowledge of typical requirements that are often placed on PPG products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer’s sole responsibility to validate that a particular product is suitable for use in a particular application. Because the conditions of use are beyond our control, neither PPG nor its agents shall be liable for any injury, loss or damage, direct or consequential, arising from the use or the inability to use the product described herein. As PPG has neither control over the installation of product described herein nor control of the environmental factors the installed markings are subjected to, there is no guarantee as to the durability or the retroreflective properties of any marking system applied. No person is authorized to make any statement or recommendation not contained in the Product Data, and any such statement or recommendation, if made, shall not bind PPG. Further, nothing contained herein shall be construed as a recommendation to use any product in conflict with existing patents, and no license under the claims of any patent is either implied or granted.

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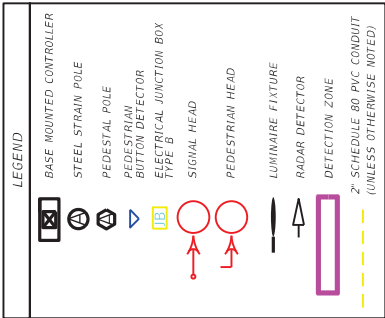
ITEM	DESCRIPTION	UNIT	KY 2054 (ALGONQUIN PKWY.) & S. 35TH ST.	KY 2054 (ALGONQUIN PKWY.) & KY1934 (CAINE RUN RD.)/ WILSON AVE.	KY 2054 (ALGONQUIN PKWY.) & BEECH ST.	KY 2054 (ALGONQUIN PKWY.) & CYPRESS ST.	KY 2054 (ALGONQUIN PKWY.) & US 31W (S. 22ND ST.)	KY 2054 (ALGONQUIN PKWY.) & DIXIE HWY.	KY 2054 (ALGONQUIN PKWY.) & S. 16TH ST.	5,9048.00 TOTAL
4720	BRACKET 4 FT	EACH	0	0	4	4	0	0	0	8
4722	BRACKET 8 FT	EACH	4	0	0	0	4	0	4	12
4724	BRACKET 12 FT	EACH	0	4	0	0	0	4	0	8
4780	FUSED CONNECTOR KIT 1)	EACH	5	0	5	5	5	5	0	25
4820	TRENCHING AND BACKFILLING	LF	42	20	33	49	26	55	30	255
4832	WIRE-NO. 12	LF	1,860	2,190	1,695	1,755	1,785	2,295	1,830	13,410
4844	CABLE-NO.14/5C	LF	630	725	535	585	625	720	600	4,420
4845	CABLE-NO.14/7C	LF	1,975	2,235	1,550	1,605	1,745	2,485	1,445	13,040
4885	MESSENGER-10800 LB	LF	355	460	295	315	335	0	295	2,055
4886	MESSENGER-15400 LB	LF	0	0	0	0	0	410	0	410
4932	INSTALL STEEL STRAIN POLE	EACH	4	4	4	4	4	4	4	28
6472	INSTALL SPAN MOUNTED SIGN	EACH	0	0	0	0	0	0	1	1
20093NS835	INSTALL PEDESTRIAN HEAD-LED	EACH	8	8	8	8	8	8	8	56
20188NS835	INSTALL LED SIGNAL-3 SECTION	EACH	9	10	10	10	10	10	9	68
20266NS835	INSTALL LED SIGNAL- 4 SECTION	EACH	2	2	0	0	0	2	0	6
20390NS835	INSTALL COORDINATING UNIT	EACH	1	1	1	1	1	1	1	7
21743NN	INSTALL PEDESTRIAN DETECTOR	EACH	8	8	8	8	8	8	8	56
23157EN	TRAFFIC SIGNAL POLE BASE 2)	CUYD	16.6	16.9	16.2	15.9	16.2	17.5	15.2	114.5
23222EC	INSTALL SIGNAL PEDESTAL	EACH	1	0	1	1	1	1	0	5
24528ED	TETHER WIRE	LF	355	460	295	315	335	410	295	2,465
24589ED	LED LUMINAIRE	EACH	4	4	4	4	4	4	4	28
24900EC	PVC CONDUIT-1 1/4 IN-SCHEDULE 80	LF	37	0	22	44	26	45	0	174
24901EC	PVC CONDUIT-2 IN-SCHEDULE 80	LF	70	70	75	70	65	75	80	505
24908EC	INSTALL SIGNAL CONTROLLER TY-ATC	EACH	1	1	1	1	1	1	1	7
24955ED	REMOVE SIGNAL EQUIPMENT	EACH	1	1	1	1	1	1	1	7
26119EC	INSTALL RADAR PRESENCE DETECTOR TYPE A	EACH	4	5	4	4	4	4	4	29

NOTES:

1) QUANTITY INCLUDES 5 FUSED KITS PER PEDESTRIAN PEDESTAL. NEUTRAL CONNECTIONS FOR THE PEDESTRIAN HEADS TO SHARE A FUSE CONNECTOR KIT.

2) QUANTITY FOR PEDESTRIAN PEDESTAL BASE INCLUDED IF APPLICABLE.





SPAN-MOUNTED DEVICES		
DEVICE	SPAN	DIST. ON FACING DIR.
5	A-B	36"
2A	A-B	42"
2B	A-B	52"
8A	B-C	43"
8B	B-C	55"
8C	POLE C	SB
1	C-D	45"
6A	C-D	51"
6B	C-D	62"
4A	D-A	61"
4B	D-A	74"

WIRING SCHEDULE		
CABLE	ORIGIN	ENDING
1-#14/7C	CONTROLLER	PH 4C
1-#14/7C	CONTROLLER	PH 6D
1-POWER/COMM	CONTROLLER	RADAR A
1-#14/7C	CONTROLLER	SH 5
1-#14/5C	CONTROLLER	SH 2B
1-POWER/COMM	CONTROLLER	RADAR B
1-#14/7C	CONTROLLER	PH 2C
1-#14/7C	CONTROLLER	PH 4D
1-#14/7C	CONTROLLER	SH 8A
1-#14/5C	CONTROLLER	SH 8C
1-POWER/COMM	CONTROLLER	RADAR C
1-#14/7C	CONTROLLER	PH 2D
1-#14/7C	CONTROLLER	PH 8D
1-#14/5C	CONTROLLER	SH 4B
1-#14/7C	CONTROLLER	SH 4A
1-POWER/COMM	CONTROLLER	RADAR D
1-#14/7C	CONTROLLER	PH 6C
1-#14/7C	CONTROLLER	PH 8E
1-#14/5C	CONTROLLER	SH 6A
3-WIRE # 12	CABINET OUTLET	POLE A
3-WIRE # 12	CABINET OUTLET	POLE B
3-WIRE # 12	CABINET OUTLET	POLE C
3-WIRE # 12	CABINET OUTLET	POLE D

STR. POLE	HEIGHT	SPAN	ATT. HT.	CALC. SERV. MOMENT	SAG	NORTHING	EASTING
A	32	A-B	28.5	148 K-FT	5%	267815.020	1191131.854
B	30	B-C	26.5	140 K-FT	5%	27734.841	1191117.771
C	32	C-D	29.0	127 K-FT	5%	267750.618	1191056.799
D	32	D-A	28.5	202 K-FT	5%	267841.817	1191034.367
PED. A			29.0			267826.789	1191122.779

COORDINATES ARE BASED ON KENTUCKY STATE PLANE, NORTH ZONE 1601, NAD 83. COORDINATES WERE OBTAINED BY RTK-GPS METHODS UTILIZING THE KY CORS VRS NETWORK.

RADAR DETECTION ZONE SCHEDULE			
INPUT POINT	PHASE ZONE	INDEX	DISTANCE FROM STOP BAR
1	1	1	10' X 30' 0"
2	6	6	10' X 30' 0"
3	5	5	10' X 30' 0"
4	2	2	10' X 30' 0"
5	8	8A	10' X 30' 0"
6	8	8B	10' X 30' 0"
7	4	4	10' X 30' 0"

INSTALL STEEL STRAIN POLE D

- ON POLE D, INSTALL:
  - 2 PED DETECTORS
  - 2 PED HEADS (6C AND 8E)
  - 1 RADAR DETECTOR (ZONES 2/5)
  - 1 LUMINAIRE FIXTURE

GENERAL CONVENTIONAL NOTES:

ALL SPLICES NOTED ON THIS PLAN SHALL BE APPROVED BY CENTRAL OFFICE TRAFFIC OPERATIONS. THESE SPLICES SHALL BE WATERPROOF AND SHALL BE OF THE CORRECT SIZE FOR THE WIRE USED AND SHALL BE RAYCHEM GTAP-2(B18), OR APPROVED EQUAL. ALL SPLICES SHALL BE INCIDENTAL TO THE WIRE AND CABLE BEING INSTALLED.

ALL MESSENGER CABLE TO BE MINIMUM 10,800 LB TENSILE STRENGTH, UNLESS OTHERWISE NOTED.

ALL SIGNAL HEADS SHALL BE TETHERED.

THE CONTRACTOR MAY HAVE TO PROVIDE A CLAMP ASSEMBLY FOR SOME OF THE MESSENGER CABLES. THE MESSENGER CABLES SHALL BE INCIDENTAL TO THE INSTALLATION OF THE STEEL STRAIN POLE. THE CLAMP ASSEMBLIES SHALL BE SUITABLE FOR ATTACHING MESSENGER CABLE AND SHALL BE THE SAME TYPE OF ASSEMBLY AS THE ONE PROVIDED WITH THE POLE. EACH CLAMP ASSEMBLY SHALL CONSIST OF A MINIMUM OF TWO (2) SECTIONS. SECTIONS SHALL BE CONNECTED USING A MINIMUM OF ONE (1) BOLT WITH A MINIMUM TENSILE LOAD OF 17,050 LBS. ALL POLE CLAMP HARDWARE SHALL BE HOT-DIPPED GALVANIZED. THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PROPOSED ASSEMBLY TO THE DIVISION OF TRAFFIC OPERATIONS.

THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES & DISTRICT UTILITY AGENT PRIOR TO BEGINNING CONSTRUCTION. HAND DIG AREAS WHERE POLES OR CONDUIT CROSSES UTILITY (TELEPHONE, GAS, WATER, SEWER, ETC.),

THE CONTRACTOR SHALL CONTACT THE RADAR MANUFACTURER FOR INSTALLATION INSTRUCTIONS. THE CONTRACTOR SHALL CONTACT THE DISTRICT TRAFFIC ENGINEER AND ENGINEERING SUPPORT SUPERVISOR TO VERIFY THE RADAR MEETS THE SPECIFICATIONS AS NOTED OR IS AN APPROVED EQUAL.

ALL BASES SHALL BE FLUSH WITH SIDEWALK IF INSTALLED IN SIDEWALK.

CONVENTIONAL LIGHTING:

NEW LUMINAIRES WILL BE POWERED VIA THE SIGNAL CABINET. CONTRACTOR WILL CONNECT ONE CIRCUIT TO THE NON-CONTROLLER RESERVED GFI-CIRCUIT BREAKER PROTECTED OUTLET. THE SECOND CIRCUIT WILL BE CONNECTED TO AN UNUSED TERMINAL STRIP WITH A PIG-TAIL CONNECTION. SEE DETAIL SHEET 19.

ALL LUMINAIRE FIXTURES SHALL HAVE A #12 AWG GREEN GROUND WIRE RUN FROM BOTTOM OF POLE TO THE LUMINAIRE FOR GROUNDING. GROUNDING WIRES SHALL BE CONNECTED TO GROUNDING LUGS ON CONDUITS OR ON THE POLE/TRANSFORMER BASE.

LUMINAIRE FIXTURES SHALL BE POSITIONED AS SHOWN IN THIS DETAIL BUT FINAL POSITION SHALL BE APPROVED BY DISTRICT TRAFFIC ENGINEER.

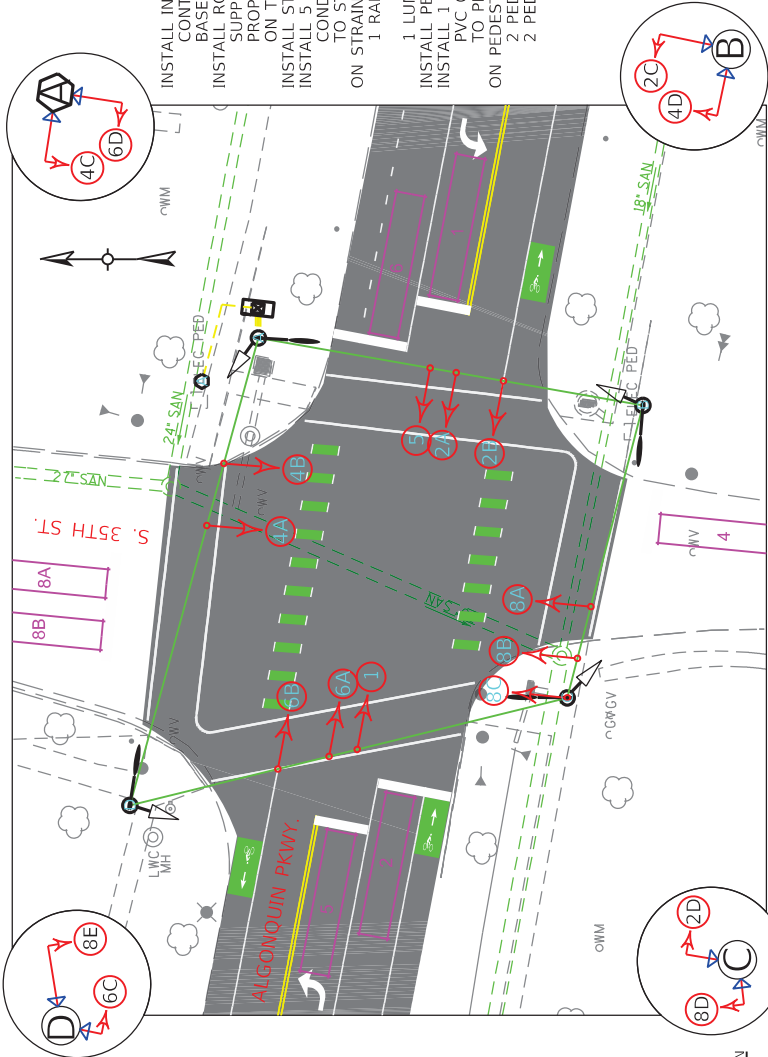
LUMINAIRE FIXTURES SHALL BE ARCH-NP-150-740-U-T2R FIXTURES.

LUMINAIRE BRACKET ARMS SHALL BE 8-FT LONG AND MOUNTED AT TOP OF POLE, UNLESS OTHERWISE NOTED.

FLASHING YELLOW ARROW SIGNAL WIRING AND SPECIAL REQUIREMENTS

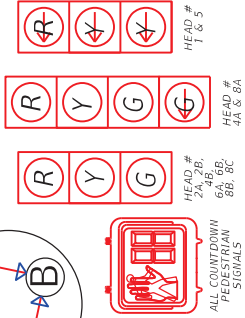
THREE-SECTION FYA HEADS	CONNECTION	COLOR	OUTPUT FILE CONNECTION FOR FYA ON PHASE 1	OUTPUT FILE CONNECTION OF FYA ON PHASE 5
RED ARROW	RED	RED	PHASE 1 RED	PHASE 5 RED
STEADY YELLOW ARROW	ORANGE	ORANGE	PHASE 1 YELLOW	PHASE 5 YELLOW
FLASHING YELLOW ARROW	BLACK	BLACK	PHASE 1 GREEN	PHASE 5 GREEN
NOT USED	BLUE	BLUE	N/A	N/A
EQUIPMENT GROUND	GREEN	GREEN	WHITE	WHITE
NOT USED	WHITE/TRACER	WHITE/TRACER		

THE CONTRACTOR SHALL CONNECT THE CONNECTOR LABELED "2PY 4PY 8PY" TO CONNECTOR "CMU 13.16 R.U" BEHIND THE OUTPUT PANEL. IF IT IS A SOLID STATE CABINET (SIEMENS) ONLY HAVE 2 CONNECTORS WHICH SIMPLY NEED TO BE CONNECTED TOGETHER.



- INSTALL INSTALL TYPE ATC CONTROLLER IN MODEL 332 BASE MOUNTED CABINET
- INSTALL ROUTER, ANTENNA, POWER SUPPLY, AND CABLING IN PROPOSED CABINET AS SHOWN ON THE SPECIFICATIONS SHEETS
- INSTALL STEEL STRAIN POLE A
- INSTALL 5 - 2" SCHEDULE 80 PVC CONDUIT FROM CONTROLLER TO STRAIN POLE A
- ON STRAIN POLE A, INSTALL:
  - 1 RADAR DETECTOR (ZONES 8A/8B)
  - 1 LUMINAIRE FIXTURE
  - INSTALL PEDESTAL POLE A
  - INSTALL 1 - 1 1/4" SCHEDULE 80 PVC CONDUIT FROM CONTROLLER TO PEDESTAL POLE A
  - ON PEDESTAL POLE A, INSTALL:
    - 2 PED DETECTORS
    - 2 PED HEADS (4C AND 6D)

SIGNAL HEADS



- INSTALL STEEL STRAIN POLE B
- ON POLE B, INSTALL:
  - 2 PED DETECTORS
  - 2 PED HEADS (2C AND 4D)
  - 1 RADAR DETECTOR (ZONES 1/6)
  - 1 LUMINAIRE FIXTURE

- INSTALL STEEL STRAIN POLE C
- ON POLE C, INSTALL:
  - 2 PED DETECTORS
  - 2 PED HEADS (2D AND 8D)
  - 1 RADAR DETECTOR (ZONE 4)
  - 1 LUMINAIRE FIXTURE

COORDINATES ARE BASED ON  
KENTUCKY STATE PLANE  
NORTH ZONE 1601, NAD 83.  
COORDINATES WERE OBTAINED BY  
KY CORS VRS NETWORK.

STR. POLE	HEIGHT	SPAN	ATT. HT.	CALC. SERV. MOMENT	SAG	NORTHING	EASTING
A	32	A-B	28.0	131 K-FT	5%	267640.582	1192477.956
B	34	B-C	29.0	241 K-FT	5%	267631.494	1192564.686
C	32	C-D	28.0	133 K-FT	5%	267538.178	1192482.345
D	34	D-A	30.0	255 K-FT	5%	267544.930	1192390.125

SPECIAL NOTE:  
LUMINAIRE BRACKET ARMS FOR THIS  
SIGNAL ARRANGEMENT TO BE 12 FT IN LENGTH.

INSTALL STEEL STRAIN POLE B  
ON POLE B, INSTALL:  
2 PED DETECTORS  
2 PED HEADS (4C AND 6D)  
1 RADAR DETECTOR (ZONE 6)  
1 LUMINAIRE FIXTURE

INPUT POINT	PHASE	ZONE	INDEX	SIZE	DISTANCE FROM STOP BAR
1	1	1	1	10' X 30'	0'
2	6	6	6	10' X 30'	0'
3	5	5	5	10' X 30'	0'
4	2	2	2	10' X 30'	0'
5	3	3	3	10' X 30'	0'
6	8	8	8	10' X 30'	0'
7	7	7	7	10' X 30'	0'
8	4	4	4	10' X 30'	0'

RADAR DETECTION ZONE SCHEDULE

CABLE	ORIGIN	ENDING	CONNECTING
1-#14/7C	CONTROLLER	PH 6C	PH 6C & 1 PED. DETECT.
1-#14/7C	CONTROLLER	PH 8D	PH 8D & 1 PED. DETECT.
1-POWER/COMM	CONTROLLER	RADAR A	RADAR A
1-#14/7C	CONTROLLER	SH 7	SH 7
1-#14/5C	CONTROLLER	SH 4A, 4B	SH 4A, 4B
1-POWER/COMM	CONTROLLER	RADAR B	RADAR B
1-#14/7C	CONTROLLER	PH 4C	PH 4C & 1 PED. DETECT.
1-#14/7C	CONTROLLER	PH 6D	PH 6D & 1 PED. DETECT.
1-#14/5C	CONTROLLER	SH 5	SH 5
1-POWER/COMM	CONTROLLER	SH 2B	SH 2A, 2B
1-#14/7C	CONTROLLER	PH 2C	RADAR C
1-#14/7C	CONTROLLER	PH 4D	PH 4D & 1 PED. DETECT.
1-#14/5C	CONTROLLER	SH 6A	SH 6A, 6B
1-POWER/COMM	CONTROLLER	SH 1	SH 1
1-#14/7C	CONTROLLER	RADAR D	RADAR D
1-#14/7C	CONTROLLER	PH 2D	PH 2D & 1 PED. DETECT.
1-#14/7C	CONTROLLER	PH 8C	PH 8C & 1 PED. DETECT.
1-#14/5C	CONTROLLER	SH 8A	SH 8A, 8B
3-WIRE # 12	CABINET OUTLET	SH 3	SH 3
3-WIRE # 12	CABINET OUTLET	POLE A	LUM. FIX. A
3-WIRE # 12	CABINET OUTLET	POLE B	LUM. FIX. B
3-WIRE # 12	CABINET OUTLET	POLE C	LUM. FIX. C
3-WIRE # 12	CABINET OUTLET	POLE D	LUM. FIX. D

DEVICE	SPAN	DIST. ON FACING DIR.
7	A-B	42'
4A	A-B	52'
4B	A-B	61'
5	B-C	59'
2A	B-C	76'
2B	B-C	88'
3	C-D	39'
8A	C-D	48'
8B	C-D	57'
6A	D-A	74'
6B	D-A	90'

LEGEND
BASE MOUNTED CONTROLLER
STEEL STRAIN POLE
PEDESTAL POLE
PEDESTRIAN DETECTOR
ELECTRICAL JUNCTION BOX
TYPE B
SIGNAL HEAD
PEDESTRIAN HEAD
LUMINAIRE FIXTURE
RADAR DETECTOR
DETECTION ZONE
2" SCHEDULE 80 PVC CONDUIT (UNLESS OTHERWISE NOTED)

GENERAL CONVENTIONAL NOTES:

ALL SPLICES NOTED ON THIS PLAN SHALL BE APPROVED BY CENTRAL OFFICE TRAFFIC OPERATIONS. THESE SPLICES SHALL BE WATERPROOF AND SHALL BE OF THE CORRECT SIZE FOR THE WIRE USED AND SHALL BE RAYCHEM GTAP-2(B18), OR APPROVED EQUAL. ALL SPLICES SHALL BE INCIDENTAL TO THE WIRE AND CABLE BEING INSTALLED.

ALL MESSENGER CABLE TO BE MINIMUM 10,800 LB TENSILE STRENGTH, UNLESS OTHERWISE NOTED.

ALL SIGNAL HEADS SHALL BE TETHERED.

THE CONTRACTOR MAY HAVE TO PROVIDE A CLAMP ASSEMBLY FOR SOME OF THE MESSENGER CABLES. THE MESSENGER CABLES SHALL BE INSTALLED TO THE INSTALLATION OF THE STEEL STRAIN POLE. THE CLAMP ASSEMBLIES SHALL BE SUITABLE FOR ATTACHING MESSENGER CABLE AND SHALL BE THE SAME TYPE OF ASSEMBLY AS THE ONE PROVIDED WITH THE POLE. EACH CLAMP ASSEMBLY SHALL CONSIST OF A MINIMUM OF TWO (2) SECTIONS. SECTIONS SHALL BE CONNECTED USING A MINIMUM OF ONE (1) BOLT WITH A MINIMUM TENSILE LOAD OF 17,050 LBS. ALL POLE CLAMP HARDWARE SHALL BE HOT-DIPPED GALVANIZED. THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PROPOSED ASSEMBLY TO THE DIVISION OF TRAFFIC OPERATIONS.

THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES & DISTRICT UTILITY AGENT PRIOR TO BEGINNING CONSTRUCTION. HAND DIG AREAS WHERE POLES OR CONDUIT CROSSES UTILITY TELEPHONE, GAS, WATER, SEWER, ETC.,).

THE CONTRACTOR SHALL CONTACT THE RADAR MANUFACTURER FOR INSTALLATION INSTRUCTIONS. THE CONTRACTOR SHALL CONTACT THE DISTRICT TRAFFIC ENGINEER AND ENGINEERING SUPPORT SUPERVISOR TO VERIFY THE RADAR MEETS THE SPECIFICATIONS AS NOTED OR IS AN APPROVED EQUAL.

ALL BASES SHALL BE FLUSH WITH SIDEWALK IF INSTALLED IN SIDEWALK.

CONVENTIONAL LIGHTING:

NEW LUMINAIRES WILL BE POWERED VIA THE SIGNAL CABINET. CONTRACTOR WILL CONNECT ONE CIRCUIT TO THE NON-CONTROLLER RESERVED GF-CIRCUIT BREAKER PROTECTED OUTLET. THE SECOND CIRCUIT WILL BE CONNECTED TO AN UNUSED TERMINAL STRIP WITH A PIG-TAIL CONNECTION. SEE DETAIL SHEET 19.

ALL LUMINAIRE FIXTURES SHALL HAVE A #12 AWG GREEN GROUND WIRE RUN FROM BOTTOM OF POLE TO THE LUMINAIRE FOR GROUNDING. GROUNDING WIRES SHALL BE CONNECTED TO GROUNDING LUGS ON CONDUITS OR ON THE POLE/TRANSFORMER BASE.

LUMINAIRE FIXTURES SHALL BE POSITIONED AS SHOWN IN THIS DETAIL BUT FINAL POSITION SHALL BE APPROVED BY DISTRICT TRAFFIC ENGINEER.

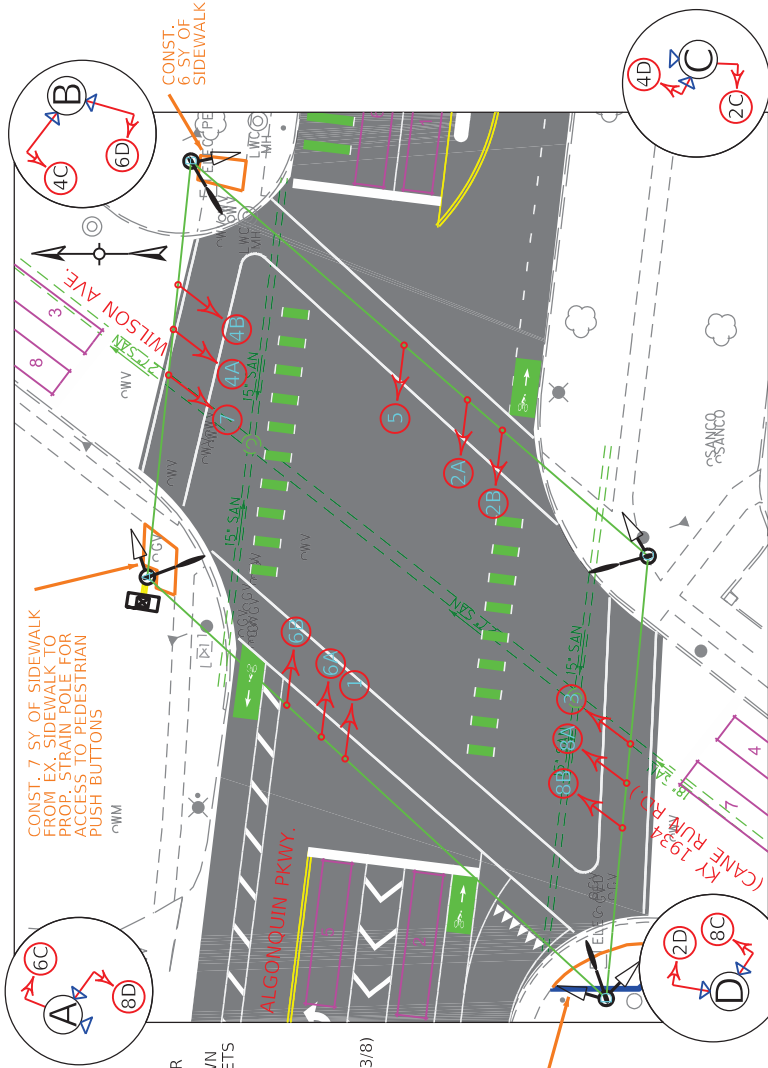
LUMINAIRE FIXTURES SHALL BE ARCH-NP41-50-740-U-T2R FIXTURES.

LUMINAIRE BRACKET ARMS SHALL BE 8-FT LONG AND MOUNTED AT TOP OF POLE, UNLESS OTHERWISE NOTED.

FLASHING YELLOW ARROW SIGNAL WIRING AND SPECIAL REQUIREMENTS

CONNECTION	COLOR	OUTPUT FILE CONNECTION FOR FTA ON PHASE	OUTPUT FILE CONNECTION OF FTA ON PHASE 3
RED ARROW	RED	PHASE 1 RED	PHASE 5 RED
STEADY YELLOW ARROW	ORANGE	PHASE 1 YELLOW	PHASE 5 YELLOW
FLASHING YELLOW ARROW	BLACK	PHASE 1 GREEN	PHASE 5 GREEN
GREEN ARROW	BLUE	PHASE 1 BLUE	PHASE 5 BLUE
NEUTRAL GREEN ARROW NOT USED IF THREE-SECTION FTA)	WHITE	PHASE 1 WHITE	PHASE 5 WHITE
EQUIPMENT GROUND	GREEN	WHITE	WHITE
NOT USED	WHITE/TRACER	WHITE	WHITE

THE CONTRACTOR SHALL CONNECT THE CONNECTOR LABELED "2PY 4PY 8PY" TO CONNECTOR "CMU 13.16 R.U" BEHIND THE OUTPUT PANEL. IF IT IS A SOLID STATE CABINET (SIEMENS) ONLY HAVE 2 CONNECTORS WHICH SIMPLY NEED TO BE CONNECTED TOGETHER.



INSTALL STEEL STRAIN POLE C  
ON POLE C, INSTALL:  
2 PED DETECTORS  
2 PED HEADS (2C AND 4D)  
1 RADAR DETECTOR (ZONE 1)  
1 LUMINAIRE FIXTURE

INSTALL STEEL STRAIN POLE D  
ON POLE D, INSTALL:  
2 PED DETECTORS  
2 PED HEADS (2D AND 8C)  
2 RADAR DETECTORS (ZONES 4/7 & 2/5)  
1 LUMINAIRE FIXTURE



COORDINATES ARE BASED ON  
KENTUCKY STATE PLANE  
NORTH ZONE 1601, NAD 83.  
COORDINATES WERE OBTAINED BY  
KVCORS UTILIZING THE  
KVCORS VRS NETWORK.

STR. POLE	HEIGHT	SPAN	ATT. HT.	CALC. SERV. MOMENT	SAG	NORTHING	EASTING
A	30	A-B	25.0	123 K-FT	5%	267479.528	1193624.272
B	30	A-C	27.5	143 K-FT	5%	267484.070	1193687.082
C	30	C-D	26.0	159 K-FT	5%	267399.002	1193690.163
D	30	D-A	27.0	112 K-FT	5%	267416.280	1193624.046
PED. A		D-C	26.0			267486.442	1193634.664

SPECIAL NOTE:  
LUMINAIRE BRACKET ARMS FOR THIS  
SIGNAL ARRANGEMENT TO BE 4 FT. IN LENGTH.

INSTALL STEEL STRAIN POLE B  
ON POLE B, INSTALL:  
2 PED DETECTORS  
2 PED HEADS (4C AND 6D)  
1 RADAR DETECTOR (ZONE 8)  
1 LUMINAIRE FIXTURE

INPUT POINT	PHASE	ZONE	INDEX	SIZE	DISTANCE FROM STOP BAR
1	1	1	1	10" X 30"	0'
2	6	6	6	10" X 30"	0'
3	5	5	5	10" X 30"	0'
4	2	2	2	10" X 30"	0'
5	8	8	8	10" X 30"	0'
6	4	4	4	10" X 30"	0'

CABLE	ORIGIN	ENDING	CONNECTING
1-#14/7C	CONTROLLER	PH 6C	PH 6C & 1 PED. DETECT.
1-#14/7C	CONTROLLER	PH 8D	PH 8D & 1 PED. DETECT.
1-POWER/COMM	CONTROLLER	RADAR A	RADAR A
1-#14/5C	CONTROLLER	SH 4B	SH 4A, 4B
1-POWER/COMM	CONTROLLER	RADAR B	RADAR B
1-#14/7C	CONTROLLER	PH 4C	PH 4C & 1 PED. DETECT.
1-#14/7C	CONTROLLER	PH 6D	PH 6D & 1 PED. DETECT.
1-#14/7C	CONTROLLER	SH 5	SH 5
1-#14/5C	CONTROLLER	SH 2B	SH 2A, 2B
1-#14/5C	CONTROLLER	SH 6A	SH 6A, 6B
1-#14/7C	CONTROLLER	SH 1	SH 1
1-POWER/COMM	CONTROLLER	RADAR D	RADAR D
1-#14/7C	CONTROLLER	PH 2D	PH 2D & 1 PED. DETECT.
1-#14/7C	CONTROLLER	PH 8C	PH 8C & 1 PED. DETECT.
1-#14/5C	CONTROLLER	SH 8A	SH 8A, 8B
1-POWER/COMM	CONTROLLER	RADAR C	RADAR C
1-#14/7C	CONTROLLER	PH 2C	PH 2C & 1 PED. DETECT.
1-#14/7C	CONTROLLER	PH 4D	PH 4D & 1 PED. DETECT.
3-WIRE # 12	CABINET OUTLET	POLE A	LUM. FIX. A
3-WIRE # 12	CABINET OUTLET	POLE B	LUM. FIX. B
3-WIRE # 12	CABINET OUTLET	POLE C	LUM. FIX. C
3-WIRE # 12	CABINET OUTLET	POLE D	LUM. FIX. D

SPAN-MOUNTED DEVICES	DEVICE	SPAN	DIST. ON FACING DIR.
4A	A-B	39'	NB
4B	A-B	47'	NB
5	B-C	39'	EB
2A	B-C	46'	EB
2B	B-C	54'	EB
8A	C-D	42'	SB
8B	C-D	50'	SB
1	D-A	36'	WB
6A	D-A	42'	WB
6B	D-A	50'	WB

LEGEND
BASE MOUNTED CONTROLLER
STEEL STRAIN POLE
PEDESTAL POLE
PEDESTRIAN DETECTOR
ELECTRICAL JUNCTION BOX
TYPE B
SIGNAL HEAD
PEDESTRIAN HEAD
LUMINAIRE FIXTURE
RADAR DETECTOR
DETECTION ZONE
2" SCHEDULE 80 PVC CONDUIT (UNLESS OTHERWISE NOTED)

GENERAL CONVENTIONAL NOTES:

ALL SPLICES NOTED ON THIS PLAN SHALL BE APPROVED BY CENTRAL OFFICE TRAFFIC OPERATIONS. THESE SPLICES SHALL BE WATERPROOF AND SHALL BE OF THE CORRECT SIZE FOR THE WIRE USED AND SHALL BE RAYCHEM GTAP-21818), OR APPROVED EQUAL. ALL SPLICES SHALL BE INCIDENTAL TO THE WIRE AND CABLE BEING INSTALLED.

ALL MESSENGER CABLE TO BE MINIMUM 10,800 LB TENSILE STRENGTH, UNLESS OTHERWISE NOTED.

ALL SIGNAL HEADS SHALL BE TETHERED.

THE CONTRACTOR MAY HAVE TO PROVIDE A CLAMP ASSEMBLY FOR SOME OF THE MESSENGER CABLES. THE MESSENGER CABLES SHALL BE INCIDENTAL TO THE INSTALLATION OF THE STEEL STRAIN POLE. THE CLAMP ASSEMBLIES SHALL BE SUITABLE FOR ATTACHING MESSENGER CABLE AND SHALL BE THE SAME TYPE OF ASSEMBLY AS THE ONE PROVIDED WITH THE POLE. EACH CLAMP SHALL BE CONNECTED USING A MINIMUM OF TWO (2) SECTIONS. SECTIONS SHALL BE CONNECTED USING A MINIMUM OF ONE (1) BOLT WITH A MINIMUM TENSILE LOAD OF 17,050 LBS. ALL POLE CLAMP HARDWARE SHALL BE HOT-DIPPED GALVANIZED. THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PROPOSED ASSEMBLY TO THE DIVISION OF TRAFFIC OPERATIONS.

THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES & DISTRICT UTILITY AGENT PRIOR TO BEGINNING CONSTRUCTION. HAND DIG AREAS WHERE POLES OR CONDUIT CROSSES UTILITY (TELEPHONE, GAS, WATER, SEWER, ETC.),

THE CONTRACTOR SHALL CONTACT THE RADAR MANUFACTURER FOR INSTALLATION INSTRUCTIONS. THE CONTRACTOR SHALL CONTACT THE DISTRICT TRAFFIC ENGINEER AND ENGINEERING SUPPORT SUPERVISOR TO VERIFY THE RADAR MEETS THE SPECIFICATIONS AS NOTED OR IS AN APPROVED EQUAL.

ALL BASES SHALL BE FLUSH WITH SIDEWALK IF INSTALLED IN SIDEWALK.

CONVENTIONAL LIGHTING:

NEW LUMINAIRES WILL BE POWERED VIA THE SIGNAL CABINET. CONTRACTOR WILL CONNECT ONE CIRCUIT TO THE NON-CONTROLLER RESERVED GFI-CIRCUIT BREAKER PROTECTED OUTLET. THE SECOND CIRCUIT WILL BE CONNECTED TO AN UNUSED TERMINAL STRIP WITH A PIG-TAIL CONNECTION. SEE DETAIL SHEET 19.

ALL LUMINAIRE FIXTURES SHALL HAVE A #12 AWG GREEN GROUND WIRE RUN FROM BOTTOM OF POLE TO THE LUMINAIRE FOR GROUNDING. GROUNDING WIRES SHALL BE CONNECTED TO GROUNDING LUGS ON CONDUITS OR ON THE POLE/TRANSFORMER BASE.

LUMINAIRE FIXTURES SHALL BE POSITIONED AS SHOWN IN THIS DETAIL BUT FINAL POSITION SHALL BE APPROVED BY DISTRICT TRAFFIC ENGINEER.

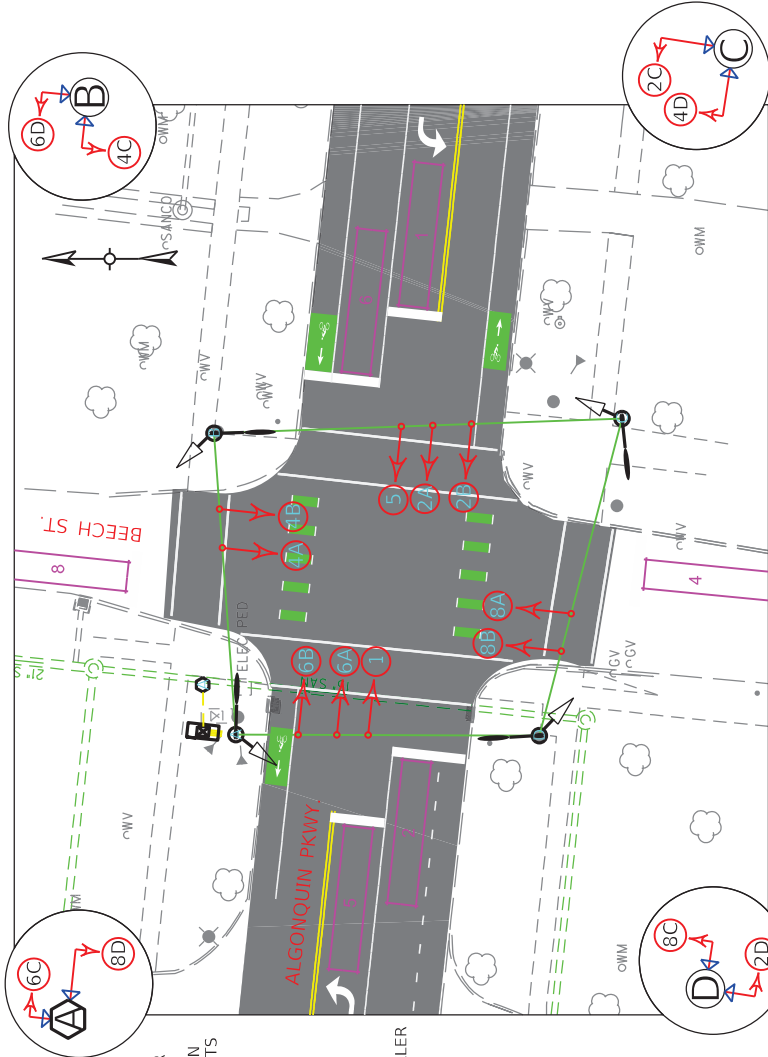
LUMINAIRE BRACKET ARMS SHALL BE 8-FT LONG AND MOUNTED AT TOP OF POLE, UNLESS OTHERWISE NOTED.

LUMINAIRE BRACKET ARMS SHALL BE ARCH-NPA1-50-740-U-T2R FIXTURES.

FLASHING YELLOW ARROW SIGNAL WIRING AND SPECIAL REQUIREMENTS

THREE-SECTION FTA HEADS	CONNECTION	COLOR	OUTPUT FILE CONNECTION FOR FTA ON PHASE 1	OUTPUT FILE CONNECTION OF FTA ON PHASE 5
RED ARROW	RED	RED	PHASE 1 RED	PHASE 5 RED
STEADY YELLOW ARROW	ORANGE	ORANGE	PHASE 1 YELLOW	PHASE 5 YELLOW
FLASHING YELLOW ARROW	BLACK	BLACK	PHASE 1 GREEN	PHASE 5 GREEN
NOT USED	BLUE	BLUE	N/A	N/A
EQUIPMENT GROUND	GREEN	GREEN	WHITE	WHITE
NOT USED	WHITE/TRACER	WHITE/TRACER		

THE CONTRACTOR SHALL CONNECT THE CONNECTOR LABELED "2PY 4PY 8PY" TO CONNECTOR "CMU 13.16 R.U" BEHIND THE OUTPUT PANEL. IF IT IS A SOLID STATE CABINET (SIEMENS) ONLY HAVE 2 CONNECTORS WHICH SIMPLY NEED TO BE CONNECTED TOGETHER.



INSTALL STEEL STRAIN POLE C  
ON POLE C, INSTALL:  
2 PED DETECTORS  
2 PED HEADS (2C AND 4D)  
1 RADAR DETECTOR (ZONE 1/6)  
1 LUMINAIRE FIXTURE

INSTALL STEEL STRAIN POLE D  
ON POLE D, INSTALL:  
2 PED DETECTORS  
2 PED HEADS (2D AND 8C)  
1 RADAR DETECTOR (ZONE 4)  
1 LUMINAIRE FIXTURE

R	Y	G
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HEAD # 1 & 5	HEAD # 2A, 2B, 4A, 4B, 6A, 6B
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COORDINATES ARE BASED ON  
KENTUCKY STATE PLANE  
NORTH ZONE 1601, NAD 83.  
COORDINATES WERE OBTAINED BY  
KVCORS VRS NETWORK.

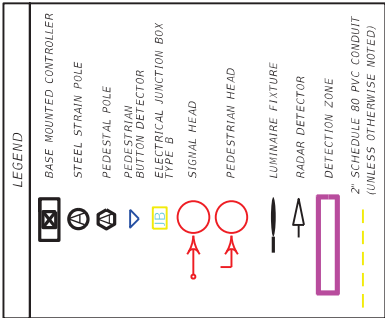
STR. POLE	HEIGHT	SPAN	ATT. HT.	CALC. SERV. MOMENT	NORTHING	EASTING
A	30	A-B	25.5	109 K-FT	287180.491	1196531.879
B	30	B-C	28.0	145 K-FT	287185.425	1196607.620
C	30	C-D	26.5	137 K-FT	287102.245	1196594.122
D	30	D-A	27.5	159 K-FT	287113.418	1196508.445
PED. A		D-C	27.0		287171.039	1196608.876

INSTALL STEEL STRAIN POLE B  
ON POLE B, INSTALL:  
1 RADAR DETECTOR (ZONES 8A/8B)  
1 LUMINAIRE FIXTURE  
INSTALL PEDESTAL POLE A  
INSTALL 1 - 1 1/4" SCHEDULE 80 PVC CONDUIT  
FROM STRAIN POLE B TO PEDESTAL POLE A  
ON PEDESTAL POLE A, INSTALL:  
2 PED DETECTORS  
2 PED HEADS (4C AND 6D)

INPUT POINT	PHASE	ZONE	INDEX	SIZE	DISTANCE FROM STOP BAR
1	1	1	1	10' X 30'	0'
2	6	6	1	10' X 30'	0'
3	5	5	5	10' X 30'	0'
4	2	2	2	10' X 30'	0'
5	8	8A	8	10' X 30'	0'
6	8	8B	18	10' X 30'	0'
7	4	4A	4	10' X 30'	0'
8	4	4B	14	10' X 30'	0'

CABLE	ORIGIN	ENDING	CONNECTING
1-#14/7C	CONTROLLER	PH 6C	PH 6C & 1 PED. DETECT.
1-#14/7C	CONTROLLER	PH 8D	PH 8D & 1 PED. DETECT.
1-#14/5C	CONTROLLER	SH 4B	SH 4A, 4B
1-POWER/COMM	CONTROLLER	RADAR B	RADAR B
1-#14/7C	CONTROLLER	PH 4C	PH 4C & 1 PED. DETECT.
1-#14/7C	CONTROLLER	PH 6D	PH 6D & 1 PED. DETECT.
1-#14/5C	CONTROLLER	SH 5	SH 5
1-#14/5C	CONTROLLER	SH 2B	SH 2A, 2B
1-POWER/COMM	CONTROLLER	RADAR C	RADAR C
1-#14/7C	CONTROLLER	PH 2C	PH 2C & 1 PED. DETECT.
1-#14/5C	CONTROLLER	PH 4D	PH 4D & 1 PED. DETECT.
1-#14/7C	CONTROLLER	SH 6A	SH 6A, 6B
1-POWER/COMM	CONTROLLER	RADAR D1	SH 1
1-POWER/COMM	CONTROLLER	RADAR D2	RADAR D1
1-#14/7C	CONTROLLER	PH 2D	PH 2D & 1 PED. DETECT.
1-#14/7C	CONTROLLER	PH 8C	PH 8C & 1 PED. DETECT.
1-#14/5C	CONTROLLER	SH 8A	SH 8A, 8B
3-WIRE # 12	CABINET OUTLET	POLE A	LUM. FIX. A
3-WIRE # 12	CABINET OUTLET	POLE B	LUM. FIX. B
3-WIRE # 12	CABINET OUTLET	POLE C	LUM. FIX. C
3-WIRE # 12	CABINET OUTLET	POLE D	LUM. FIX. D

DEVICE	SPAN	DIST. ON FACING DIR.
4A	A-B	49'
4B	A-B	60'
5	B-C	60'
2A	B-C	61'
2B	B-C	69'
8A	C-D	51'
8B	C-D	61'
1	D-A	29'
6A	D-A	38'
6B	D-A	44'



GENERAL CONVENTIONAL NOTES:

ALL SPLICES NOTED ON THIS PLAN SHALL BE APPROVED BY CENTRAL OFFICE TRAFFIC OPERATIONS. THESE SPLICES SHALL BE WATERPROOF AND SHALL BE OF THE CORRECT SIZE FOR THE WIRE USED AND SHALL BE RAYCHEM GTAP-21818), OR APPROVED EQUAL. ALL SPLICES SHALL BE INCIDENTAL TO THE WIRE AND CABLE BEING INSTALLED.

ALL MESSENGER CABLE TO BE MINIMUM 10,800 LB TENSILE STRENGTH, UNLESS OTHERWISE NOTED.

ALL SIGNAL HEADS SHALL BE TETHERED.

THE CONTRACTOR MAY HAVE TO PROVIDE A CLAMP ASSEMBLY FOR SOME OF THE INSTALLATION OF THE STEEL STRAIN POLE. THE CLAMP ASSEMBLIES SHALL BE SUITABLE FOR ATTACHING MESSENGER CABLE AND SHALL BE THE SAME TYPE OF ASSEMBLY AS THE ONE PROVIDED WITH THE POLE. EACH CLAMP SHALL BE CONNECTED USING A MINIMUM OF TWO (2) SECTIONS. SECTIONS SHALL BE CONNECTED USING A MINIMUM OF ONE (1) BOLT WITH A MINIMUM TENSILE LOAD OF 17,050 LBS. ALL POLE CLAMP HARDWARE SHALL BE HOT-DIPPED GALVANIZED. THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PROPOSED ASSEMBLY TO THE DIVISION OF TRAFFIC OPERATIONS.

THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES & DISTRICT UTILITY AGENT PRIOR TO BEGINNING CONSTRUCTION. HAND DIG AREAS WHERE POLES OR CONDUIT CROSSES UTILITY TELEPHONE, GAS, WATER, SEWER, ETC.).

THE CONTRACTOR SHALL CONTACT THE RADAR MANUFACTURER FOR INSTALLATION INSTRUCTIONS. THE CONTRACTOR SHALL CONTACT THE DISTRICT TRAFFIC ENGINEER AND ENGINEERING SUPPORT SUPERVISOR TO VERIFY THE RADAR MEETS THE SPECIFICATIONS AS NOTED OR IS AN APPROVED EQUAL.

ALL BASES SHALL BE FLUSH WITH SIDEWALK IF INSTALLED IN SIDEWALK.

CONVENTIONAL LIGHTING:

NEW LUMINAIRES WILL BE POWERED VIA THE SIGNAL CABINET. CONTRACTOR WILL CONNECT ONE CIRCUIT TO THE NON-CONTROLLER RESERVED GF-CIRCUIT BREAKER PROTECTED OUTLET. THE SECOND CIRCUIT WILL BE CONNECTED TO AN UNUSED TERMINAL STRIP WITH A PIG-TAIL CONNECTION. SEE DETAIL SHEET 19.

ALL LUMINAIRE FIXTURES SHALL HAVE A #12 AWG GREEN GROUND WIRE RUN FROM BOTTOM OF POLE TO THE LUMINAIRE FOR GROUNDING. GROUNDING WIRES SHALL BE CONNECTED TO GROUNDING LUGS ON CONDUITS OR ON THE POLE/TRANSFORMER BASE.

LUMINAIRE FIXTURES SHALL BE POSITIONED AS SHOWN IN THIS DETAIL BUT FINAL POSITION SHALL BE APPROVED BY DISTRICT TRAFFIC ENGINEER.

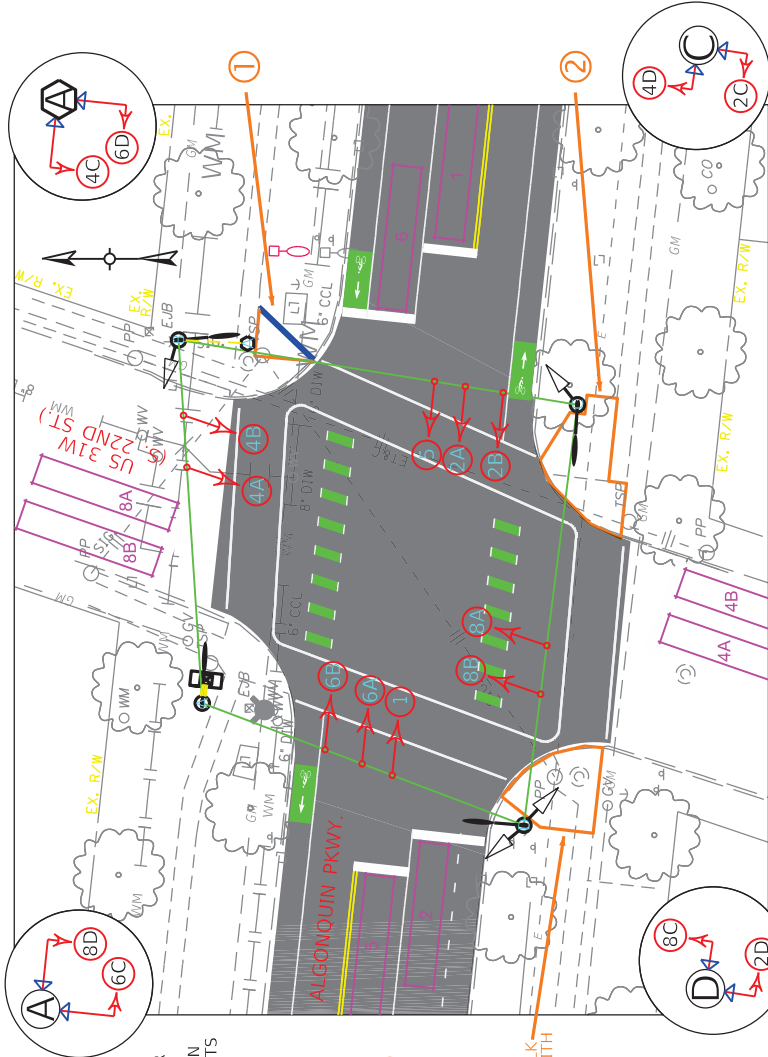
LUMINAIRE FIXTURES SHALL BE ARCH-NP41-50-740-U-T2R FIXTURES.

LUMINAIRE BRACKET ARMS SHALL BE 8-FT LONG AND MOUNTED AT TOP OF POLE, UNLESS OTHERWISE NOTED.

FLASHING YELLOW ARROW SIGNAL WIRING AND SPECIAL REQUIREMENTS

THREE-SECTION FTA HEADS	CONNECTION	COLOR	OUTPUT FILE CONNECTION FOR FTA ON PHASE 1	OUTPUT FILE CONNECTION OF FTA ON PHASE 5
RED ARROW	RED	RED	PHASE 1 RED	PHASE 5 RED
STEADY YELLOW ARROW	ORANGE	ORANGE	PHASE 1 YELLOW	PHASE 5 YELLOW
FLASHING YELLOW ARROW	BLACK	BLACK	PHASE 1 GREEN	PHASE 5 GREEN
NOT USED	BLUE	BLUE	N/A	N/A
EQUIPMENT GROUND	GREEN	GREEN	WHITE	WHITE
NOT USED	WHITE/TRACER	WHITE/TRACER		

THE CONTRACTOR SHALL CONNECT THE CONNECTOR LABELED "2PY 4PY 8PY" TO CONNECTOR "CMU 13.16 R.U" BEHIND THE OUTPUT PANEL. IF IT IS A SOLID STATE CABINET (SIEMENS) ONLY HAVE 2 CONNECTORS WHICH SIMPLY NEED TO BE CONNECTED TOGETHER.

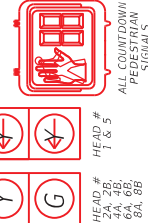


INSTALL STEEL STRAIN POLE C

ON POLE C, INSTALL:  
2 PED DETECTORS  
2 PED HEADS (2C AND 4D)  
1 RADAR DETECTOR (ZONES 1/6)  
1 LUMINAIRE FIXTURE

INSTALL STEEL STRAIN POLE D

ON POLE D, INSTALL:  
2 PED DETECTORS  
2 PED HEADS (2D AND 8C)  
2 RADAR DETECTORS  
(ZONES 2/5 AND 4A/4B)  
1 LUMINAIRE FIXTURE





WIRING SCHEDULE										
CABLE	ORIGIN	ENDING	CONNECTING	STR. POLE	HEIGHT ATT. HT.	CALC. SERV. MOMENT	SAG	NORTHING	EASTING	
1-#1/47C	CONTROLLER	PH 4C	PH 4C & 1 PED. DETECT.	A	32	30.0	204 K-FT	5%	267097.440	1197371.908
1-#1/47C	CONTROLLER	PH 6D	PH 6D & 1 PED. DETECT.	B	32	30.0	173 K-FT	5%	267012.347	1197353.937
1-POWER/COMM	CONTROLLER	RADAR A	RADAR A SH 5	C	32	30.0	184 K-FT	5%	267010.607	1197239.460
1-#1/47C	CONTROLLER	SH 2B	SH 2A, 2B RADAR B	D	32	30.0	186 K-FT	5%	267095.439	1197250.628
1-POWER/COMM	CONTROLLER	RADAR B	PH 2C & 1 PED. DETECT.	PED. A					267000.894	1197332.210
1-#1/47C	CONTROLLER	PH 2C	PH 4D & 1 PED. DETECT.							
1-#1/47C	CONTROLLER	PH 4D	PH 4D & 1 PED. DETECT.							
1-#1/47C	CONTROLLER	SH 3	SH 3							

RADAR DETECTION ZONE SCHEDULE	
COORDINATES	KENTUCKY STATE

**SPECIAL NOTES:**  
ALL MESSENGER CABLE FOR THIS SIGNAL ARRANGEMENT TO BE MINIMUM 15,400 LB TENSILE STRENGTH.  
LUMINAIRE BRACKET ARMS FOR THIS SIGNAL ARRANGEMENT TO BE 12 FT IN LENGTH.

**GENERAL CONVENTIONAL NOTES:**

ALL SPLICES NOTED ON THIS PLAN SHALL BE APPROVED BY CENTRAL OFFICE TRAFFIC OPERATIONS. THESE SPLICES SHALL BE WATERPROOF AND SHALL EXCEED THE MINIMUM REQUIREMENTS FOR ALL SPLICES AND SHALL EXCEED GMP-2(8)18.20. APPROVED FOR USE SPLICES SHALL BE INCIDENTAL TO THE WIRE AND CABLE BEING INSTALLED.

**INSTALL STEEL STRAIN POLE D  
ON STRAIN POLE D, INSTALL:  
2 PED DETECTORS  
2 PED HEADS (6C AND 8D)  
1 RADAR DETECTOR (ZONES 2/5)  
1 LUMINAIRE FIXTURE**

ALL MESSENGER CABLE TO BE MINIMUM 10,800 LB TENSILE STRENGTH, UNLESS OTHERWISE NOTED.

ALL SIGNAL HEADS SHALL BE TETHERED.

THE CONTRACTOR MAY HAVE TO PROVIDE A CLAMP ASSEMBLY FOR SOME OF THE ATTACHMENTS OF THE MESSENGER CABLE. THIS SHALL BE INCIDENTAL TO THE INSTALLATION OF THE STEEL STRAIN POLE. THE CLAMP ASSEMBLIES SHALL BE OF THE SAME TYPE AS THE ONE PROVIDED WITH THE POLE. EACH CLAMP ASSEMBLY SHALL CONSIST OF A MINIMUM OF TWO (2) SECTIONS. SECTIONS SHALL BE CONNECTED USING A MINIMUM OF ONE (1) BOLT WITH A MINIMUM TENSILE STRENGTH OF 100,000 LBS. THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE CLAMP ASSEMBLY TO THE DIVISION OF TRANSPORTATION FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE CLAMP ASSEMBLY TO THE DIVISION OF TRAFFIC OPERATIONS,

THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES & DISTRICT UTILITY AGENT PRIOR TO BEGINNING CONSTRUCTION. HAND DIG AREAS WHERE POLES OR CONDUIT CROSSES UTILITY (TELEPHONE, GAS, WATER, SEWER, ETC.).

THE CONTRACTOR SHALL CONTACT THE RADAR MANUFACTURER FOR INSTALLATION INSTRUCTION. PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONTACT THE KANSAS DISTRICT TRAFFIC ENGINEER AND ENGINEERING SUPPORT SUPERVISOR TO VERIFY THE RADAR MEETS THE SPECIFICATIONS AS NOTED OR IS AN APPROVED EQUIVALENT.

CONVENTIONAL LIGHTING:

NEW LUMINAIRES WILL BE POWERED VIA THE SIGNAL CABINET. CONTRACTOR WILL CONNECT ONE CIRCUIT TO THE NON-CONTROLLER RESERVED GFI-CIRCUIT BREAKER PROTECTED OUTLET. THE SECOND CIRCUIT WILL BE CONNECTED TO AN UNUSED TERMINAL STRIP WITH A PIG-TAIL CONNECTION. SEE DETAIL SHEET T9.

ALL LUMINAIRE FIXTURES SHALL HAVE A #12 AWG GREEN GROUND WIRE RUN FROM BOTTOM OF POLE TO THE LUMINAIRE FOR GROUNDING. GROUNDING WIRES SHALL BE CONNECTED TO GROUNDING LUGS ON CONDUITS OR ON THE POLE/TRANSFORMER BASE.

LUMINAIRE FIXTURES SHALL BE POSITIONED AS SHOWN IN THIS DETAIL BUT FINAL POSITION SHALL BE APPROVED BY DISTRICT TRAFFIC ENGINEER.

LUMINAIRE FIXTURES SHALL BE ARCH-N-PA1-50-740-U-T2R FIXTURES.

LUMINAIRE BRACKET ARMS SHALL BE 8-FT LONG AND MOUNTED AT TOP OF POLE, UNLESS OTHERWISE NOTED.

## FLASHING YELLOW ARROW SIGNAL WIRING AND SPECIAL REQUIREMENTS
































































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HEAD #  
1 & 5

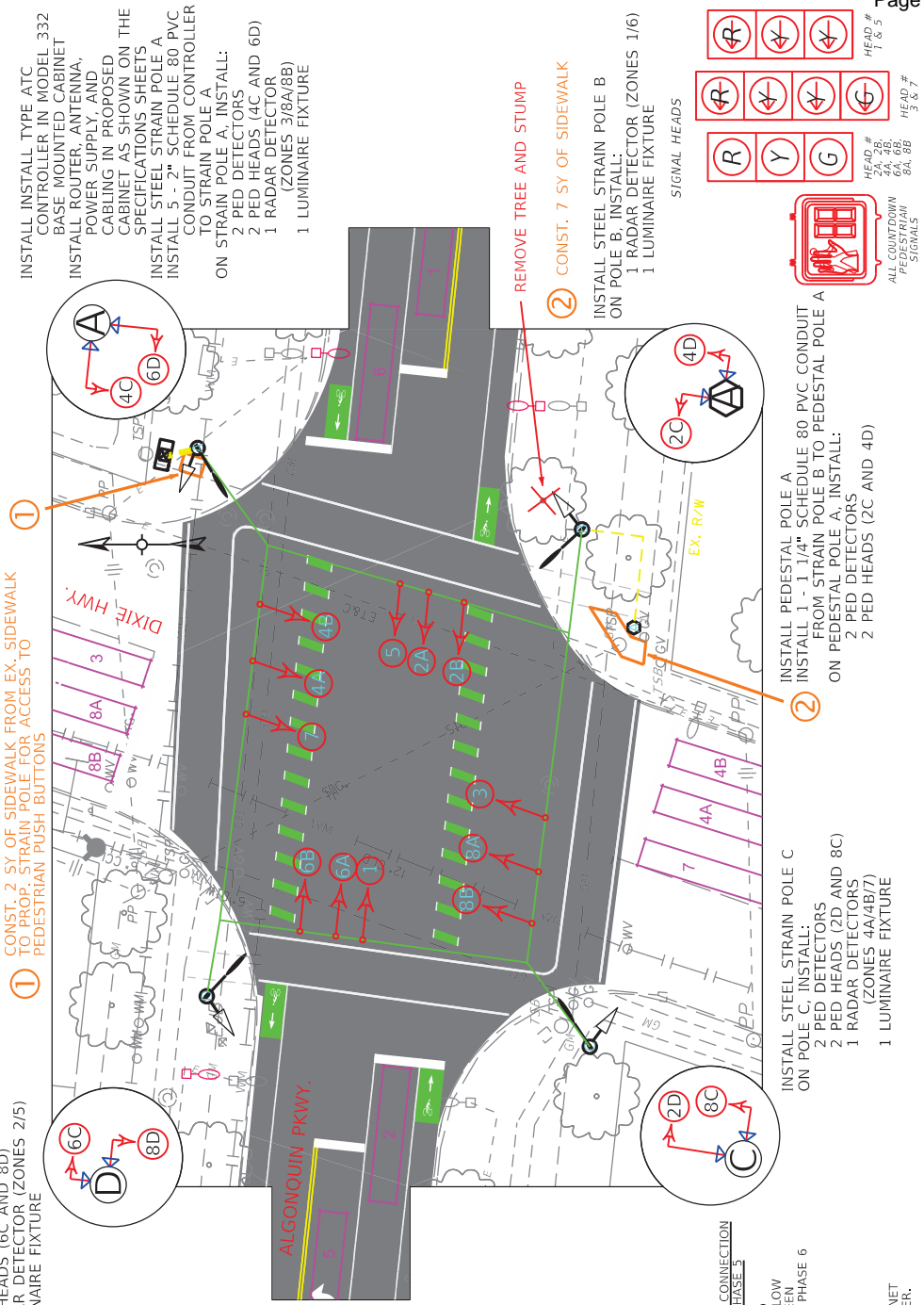
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3 & 7

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7, 26, 44, 46, 48, 50, 55, 56, 58, 60, 68

ALL COUNTDOWN  
PEDESTRIAN  
SIGNALS

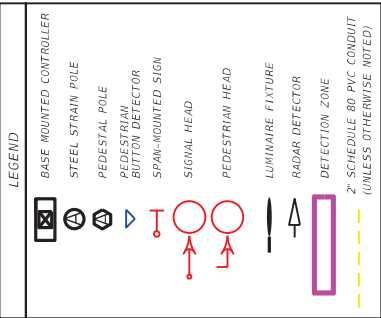


THE CONTRACTOR SHALL CONNECT THE CONNECTOR LABELED "2PY 4PY 6PY 8PY" TO CONNECTOR "CMU 13.16.R.U" BEHIND THE OUTPUT PANEL. IF IT IS A SOLID STATE CABINET (SIEMENS) ONLY HAVE 2 CONNECTORS WHICH SIMPLY NEED TO BE CONNECTED TOGETHER.



DRAWING TITLE: SIGNAL DETAIL SHEET  
KY 2054 (ALGONQUIN PKWY) @ DIXIE HWY.

SCALE: 1" = 40'



SPAN-MOUNTED DEVICES		
DEVICE	SPAN	DIST ON FACING DIR.
4A	A-B	31'
4B	A-B	41'
5	B-C	35'
2A	B-C	41'
2B	B-C	59'
8A	C-D	31'
8B	C-D	41'
S-1	D-A	42'
6A	D-A	48'
6B	D-A	56'

WIRING SCHEDULE		
CABLE	ORIGIN	ENDING
1-#14/7C	CONTROLLER	PH 6C & 1 PED. DETECT.
1-#14/7C	CONTROLLER	PH 8D & 1 PED. DETECT.
1-POWER/COMM	CONTROLLER	RADAR A1
1-POWER/COMM	CONTROLLER	RADAR A2
1-#14/5C	CONTROLLER	SH 4A, 4B
1-POWER/COMM	CONTROLLER	RADAR B
1-#14/7C	CONTROLLER	PH 4C & 1 PED. DETECT.
1-#14/7C	CONTROLLER	PH 6D & 1 PED. DETECT.
1-#14/7C	CONTROLLER	SH 2
1-#14/5C	CONTROLLER	SH 2B
1-#14/7C	CONTROLLER	PH 2C & 1 PED. DETECT.
1-#14/7C	CONTROLLER	PH 4D & 1 PED. DETECT.
1-#14/5C	CONTROLLER	SH 6A
1-POWER/COMM	CONTROLLER	RADAR D
1-#14/7C	CONTROLLER	PH 2D & 1 PED. DETECT.
1-#14/5C	CONTROLLER	SH 8A
3-WIRE #12	CABINET OUTLET	POLE A
3-WIRE #12	CABINET OUTLET	POLE B
3-WIRE #12	CABINET OUTLET	POLE C
3-WIRE #12	CABINET OUTLET	POLE D

STR. POLE	HEIGHT	SPAN	ATT. HT.	CALC. SERV. MOMENT	SAG	NORTHING	EASTING
A	30	A-B	25.5	124 K-FT	5%	266697.383	1200069.561
B	30	B-C	27.0	133 K-FT	5%	266670.810	1200126.173
C	30	C-D	26.0	126 K-FT	5%	266603.721	1200097.249
D	30	D-A	26.5	129 K-FT	5%	266620.671	1200037.042

COORDINATES ARE BASED ON  
NAD 83  
RTK GPS METHODS UTILIZING THE  
KY COAS VRS NETWORK.

GENERAL CONVENTIONAL NOTES:

ALL SPLICES NOTED ON THIS PLAN SHALL BE APPROVED BY CENTRAL OFFICE TRAFFIC OPERATIONS. THESE SPLICES SHALL BE WATERPROOF AND SHALL BE OF THE CORRECT SIZE FOR THE WIRE USED AND SHALL BE RAYCHEM GTAP-2(B18), OR APPROVED EQUAL. ALL SPLICES SHALL BE INCIDENTAL TO THE WIRE AND CABLE BEING INSTALLED.

ALL MESSENGER CABLE TO BE MINIMUM 10,800 LB TENSILE STRENGTH, UNLESS OTHERWISE NOTED.

ALL SIGNAL HEADS SHALL BE TETHERED.

THE CONTRACTOR MAY HAVE TO PROVIDE A CLAMP ASSEMBLY FOR SOME OF THE MESSENGER CABLES. THE MESSENGER CABLES SHALL BE INSTALLED TO THE INSTALLATION OF THE STEEL STRAIN POLE. THE CLAMP ASSEMBLIES SHALL BE SUITABLE FOR ATTACHING MESSENGER CABLE AND SHALL BE THE SAME TYPE OF ASSEMBLY AS THE ONE PROVIDED WITH THE POLE. EACH CLAMP ASSEMBLY SHALL CONSIST OF A MINIMUM OF TWO (2) SECTIONS. SECTIONS SHALL BE CONNECTED USING A MINIMUM OF ONE (1) BOLT WITH A MINIMUM TENSILE LOAD OF 17,050 LBS. ALL POLE CLAMP HARDWARE SHALL BE HOT-DIPPED GALVANIZED. THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PROPOSED ASSEMBLY TO THE DIVISION OF TRAFFIC OPERATIONS.

THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES & DISTRICT UTILITY AGENT PRIOR TO BEGINNING CONSTRUCTION. HAND DIG AREAS WHERE POLES OR CONDUIT CROSSES UTILITY (TELEPHONE, GAS, WATER, SEWER, ETC.),

THE CONTRACTOR SHALL CONTACT THE RADAR MANUFACTURER FOR INSTALLATION INSTRUCTIONS. THE CONTRACTOR SHALL CONTACT THE DISTRICT TRAFFIC ENGINEER AND ENGINEERING SUPPORT SUPERVISOR TO VERIFY THE RADAR MEETS THE SPECIFICATIONS AS NOTED OR IS AN APPROVED EQUAL.

ALL BASES SHALL BE FLUSH WITH SIDEWALK IF INSTALLED IN SIDEWALK.

CONVENTIONAL LIGHTING:

NEW LUMINAIRES WILL BE POWERED VIA THE SIGNAL CABINET. CONTRACTOR WILL CONNECT ONE CIRCUIT TO THE NON-CONTROLLER RESERVED GFI-CIRCUIT BREAKER PROTECTED OUTLET. THE SECOND CIRCUIT WILL BE CONNECTED TO AN UNUSED TERMINAL STRIP WITH A PIG-TAIL CONNECTION. SEE DETAIL SHEET 19.

ALL LUMINAIRE FIXTURES SHALL HAVE A #12 AWG GREEN GROUND WIRE RUN FROM BOTTOM OF POLE TO THE LUMINAIRE FOR GROUNDING. GROUNDING WIRES SHALL BE CONNECTED TO GROUNDING LUGS ON CONDUITS OR ON THE POLE/TRANSFORMER BASE.

LUMINAIRE FIXTURES SHALL BE POSITIONED AS SHOWN IN THIS DETAIL BUT FINAL POSITION SHALL BE APPROVED BY DISTRICT TRAFFIC ENGINEER.

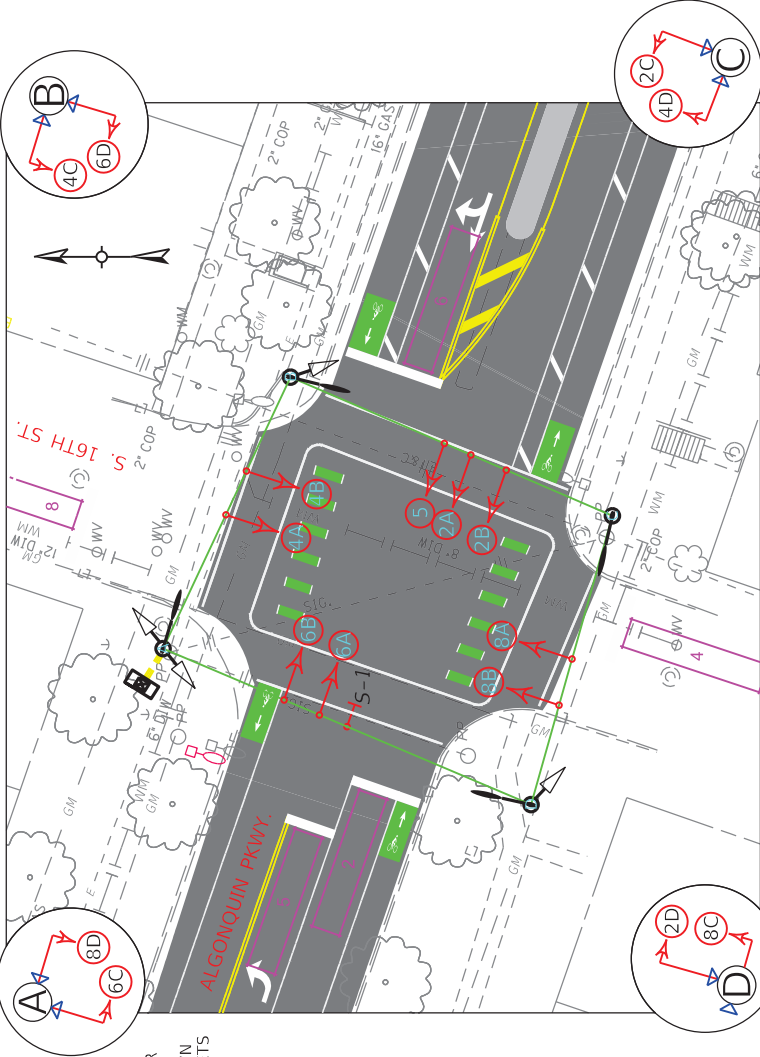
LUMINAIRE FIXTURES SHALL BE ARCH-NP41-50-740-U-T2R FIXTURES.

LUMINAIRE BRACKET ARMS SHALL BE 8-FT LONG AND MOUNTED AT TOP OF POLE, UNLESS OTHERWISE NOTED.

FLASHING YELLOW ARROW SIGNAL WIRING AND SPECIAL REQUIREMENTS

THREE-SECTION FYA HEADS	CONNECTION	COLOR	OUTPUT FILE CONNECTION FOR FYA ON PHASE 1	OUTPUT FILE CONNECTION OF FYA ON PHASE 5
RED ARROW	RED	RED	PHASE 1 RED	PHASE 5 RED
STEADY YELLOW ARROW	ORANGE	ORANGE	PHASE 1 YELLOW	PHASE 5 YELLOW
FLASHING YELLOW ARROW	BLACK	BLACK	PHASE 1 GREEN	PHASE 5 GREEN
NOT USED	BLUE	BLUE	N/A	N/A
EQUIPMENT GROUND	GREEN	GREEN	WHITE	WHITE
NOT USED	WHITE/TRACER	WHITE/TRACER		

THE CONTRACTOR SHALL CONNECT THE CONNECTOR LABELED "2PY 4PY 8PY" TO CONNECTOR "CMU 13.16 R.U" BEHIND THE OUTPUT PANEL. IF IT IS A SOLID STATE CABINET (SIEMENS) ONLY HAVE 2 CONNECTORS WHICH SIMPLY NEED TO BE CONNECTED TOGETHER.



INSTALL INSTALL TYPE ATC

CONTROLLER IN MODEL 332  
BASE MOUNTED CABINET  
INSTALL ROUTER, ANTENNA, POWER  
SUPPLY, AND CABLING IN  
PROPOSED CABINET AS SHOWN  
ON THE SPECIFICATIONS SHEETS

INSTALL STEEL STRAIN POLE A  
INSTALL 5'-2" SCHEDULE 80 PVC  
CONDUIT FROM CONTROLLER  
TO STRAIN POLE A

ON STRAIN POLE A, INSTALL:  
2 PED DETECTORS  
2 PED HEADS (6C AND 8D)  
2 RADAR DETECTORS  
(ZONES 2/5/8)  
1 LUMINAIRE FIXTURE

SPAN-MOUNTED SIGN



S-1

SIGNAL HEADS



HEAD # 2A, 2B, 4A, 4B, 6A, 6B  
HEAD # 5



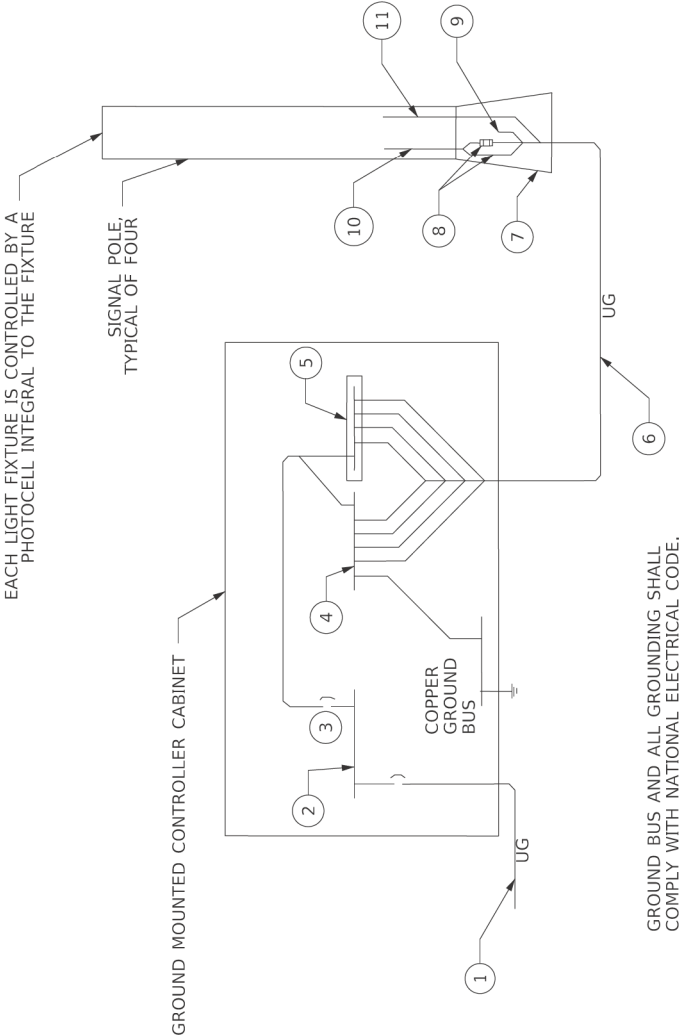
ALL COUNTDOWN  
PEDESTRIAN  
SIGNALS

INSTALL STEEL STRAIN POLE D  
ON POLE D, INSTALL:  
2 PED DETECTORS  
2 PED HEADS (2D AND 8C)  
1 RADAR DETECTOR (ZONE 4)  
1 LUMINAIRE FIXTURE

INSTALL STEEL STRAIN POLE C  
ON POLE C, INSTALL:  
2 PED DETECTORS  
2 PED HEADS (2C AND 4D)  
1 LUMINAIRE FIXTURE

INSTALL STEEL STRAIN POLE B

ON POLE B, INSTALL:  
2 PED DETECTORS  
2 PED HEADS (4C AND 6D)  
1 RADAR DETECTOR (ZONE 6)  
1 LUMINAIRE FIXTURE



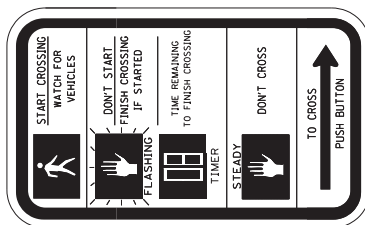
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- UNDERGROUND ELECTRICAL SERVICE TO CONTROLLER CABINET, 120 VOLT, SINGLE PHASE.
- CABINET MAIN TERMINAL STRIP.
- 120 VOLT, 1-POLE, 10 AMP CIRCUIT BREAKER FEEDING LIGHT FIXTURES. COVER AND PROTECT CIRCUIT BREAKER.
- NEUTRAL/GROUND TERMINAL STRIP. CONNECT TO CABINET GROUND.
- TERMINAL STRIP FOR LIGHTING. COVER AND PROTECT.
- 4-#12/3C IN 2" CONDUIT UNDERGROUND TO FIRST POLE. OUTER JACKER SHALL BE UV RATED/SUNLIGHT RESISTANT. THERE MAY BE FEWER THAN FOUR CABLES DEPENDING ON THE NUMBER OF PROPOSED LUMINAIRES AT THE INTERSECTION.
- SIGNAL POLE BASE, TYPICAL OF FOUR.
- FUSE CONNECTOR KIT WITH FUSE FOR HOT CONDUCTOR TO FIRST LIGHT FIXTURE. USE 6 AMP SLOW BLOW FUSE KIT TO CONTAIN LUG FOR NEUTRAL CONDUCTOR TO FIRST LIGHT.
- GROUND LUG IN BASE OF POLE CONNECTED TO GROUND CONDUCTOR IN CABLE TO FIRST LIGHT.
- 1-# 12/3C UP POLE TO FIRST LIGHT FIXTURE.
- 3-# 12/3C UP POLE TO TOP THEN OVERHEAD TO OTHER POLES AT INTERSECTION. AT EACH POLE, 1-# 12/3C WILL GO DOWN POLE TO BASE AND CONNECT TO FUSE CONNECTOR, NEUTRAL AND GROUND LUGS. THEN 2-# 12 WILL GO BACK UP POLE TO CONNECT TO LIGHT FIXTURE AS SHOWN IN THIS DETAIL. OUTER JACKET OF CABLE SHALL BE UV RATED/SUNLIGHT RESISTANT.

TYPICAL ONE-LINE DIAGRAM



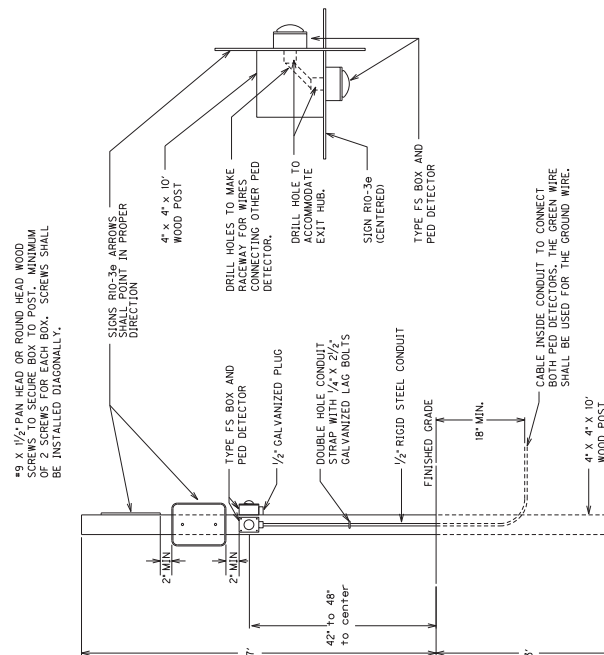


FILE NAME: C:\PWWORK\TED.SWANSEGAR\DM528756\05-PED DETECTOR (PO).DGN



R10-3e SIGN (9" X 15")  
FOR COUNTDOWN ONLY

PED DETECTOR



SPECIAL NOTE FOR TRANSFORMER DOOR:  
 FURNISH A SHOCK HAZARD WARNING STICKER ON  
 DISCONNECT WITH THE FOLLOWING INFORMATION:  
 VOLTAGE (120 VOLT)  
 GLOVE CLASS (0)  
 LIMITED APPROACH BOUNDARY (42 IN)  
 RESTRICTED APPROACH BOUNDARY (CONTACT)  
 SEE NEMA 70E FOR ADDITIONAL PPE REQUIRED

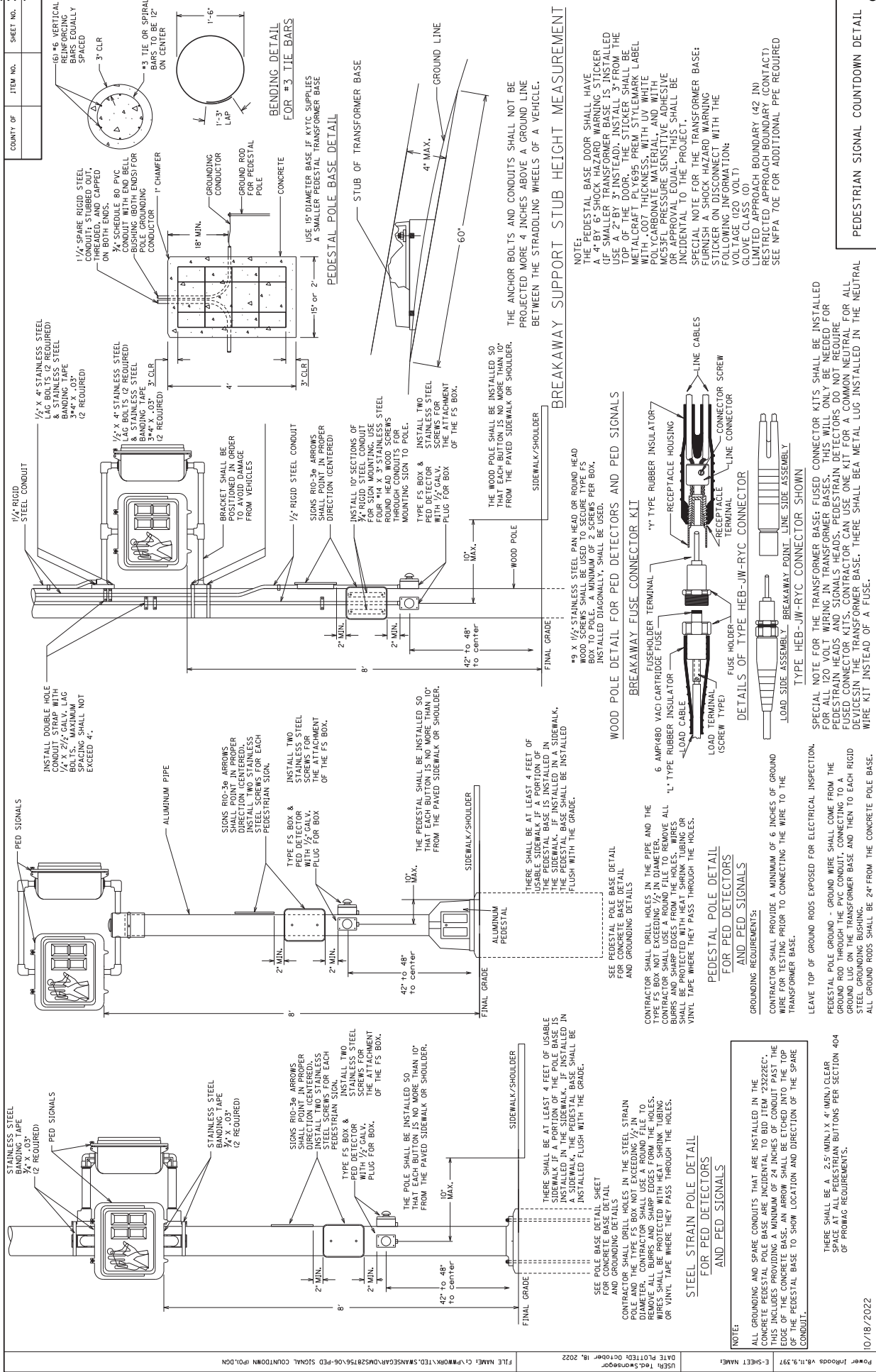
SEE PEDESTRIAN SIGNAL COUNTDOWN  
DETAIL SHEET FOR PEDESTAL POLE  
BASE DETAIL

## PEDESTAL POST DETAIL FOR PED DETECTORS &amp; SIGNS

PIPED DETECTOR ON WOOD POST DETAIL

## 0/18/2022

## PEDESTRIAN DETECTOR DETAIL



PEDESTRIAN SIGNAL COUNTDOWN DETAIL

10/18/2022

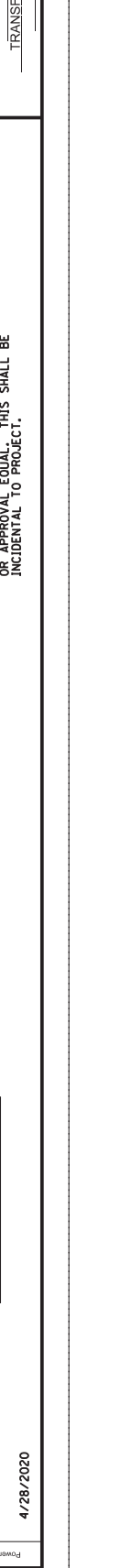
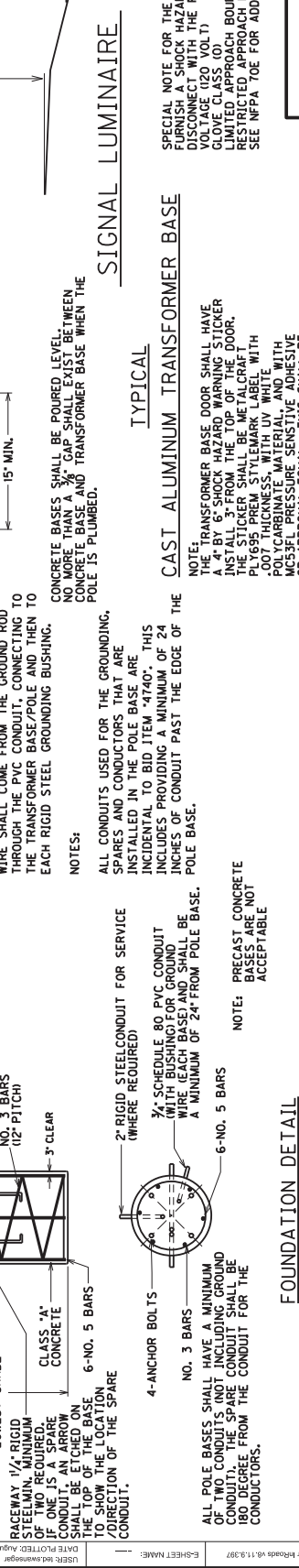
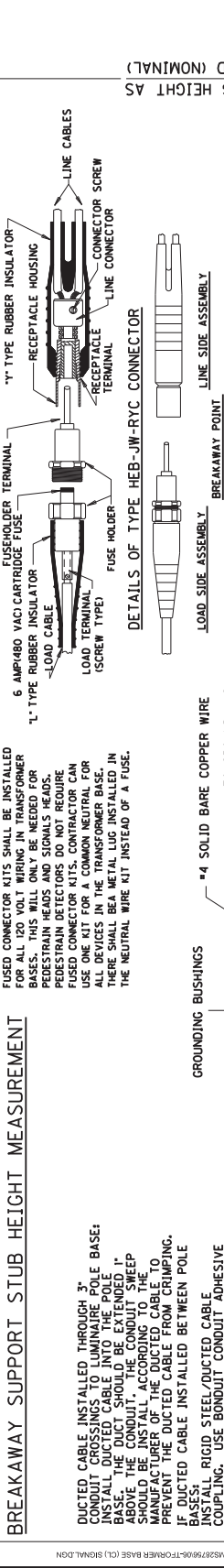


STUB OF TRANSFORMER BASE

7/8" SCHEDULE 80 PVC CONDUIT  
(WITH BUSHING) FOR GROUND  
WIRE (EACH BASE) AND SHALL BE

GROUNDING CLAMP

GROUNDING DETAIL



CAST ALUMINUM TRANSFORMER BASE

NOTE:  
THE TRANSFORMER BASE DOOR SHALL HAVE A 4" BY 6" SHOCK HAZARD WARNING STICKER INSTALLED 3" FROM THE TOP OF THE DOOR. THE STICKER SHALL BE METAL CRAFT PLASTIC, 1/8" THICKNESS, WITH LIV WHITE POLYCARBONATE MATERIAL, AND WITH MC53F PRESSURE SENSITIVE ADHESIVE.

NO PVC CONDUIT  
FOR GROUND  
SECOND SHALL BE  
24 FROM POLE BASE.  
INCLUDES PROVIDING A MINIMUM OF 24  
INCHES OF CONDUIT PAST THE EDGE OF THE  
POLE BASE.

NOTE: PRECAST CONCRETE  
BASES ARE NOT  
ACCEPTABLE

FOOTINGS & 11.9.007

3. E-SHEET MAINT

FOOTING DETAIL

The diagram shows a cross-section of a foundation. A central vertical pole is labeled 'NO. 3 BARS'. The pole is surrounded by a circular structure labeled 'ALL POLE BASES SHALL HAVE A MINIMUM OF TWO CONDUITS (NOT INCLUDING GROUND CONDUIT). THE SPARE CONDUIT SHALL BE 180 DEGREE FROM THE CONDUIT FOR THE CONDUCTORS.' The pole is also labeled '6-NO. 5 BARS'. The foundation is labeled '4-ANCHOR BOLTS'. The top of the pole is labeled '3/4" SCHEDULE 80 (WITH BUSHINGS) WIRE (EACH BAR A MINIMUM OF 18" LONG)'. The bottom of the pole is labeled 'NO. 3 BARS'.

OR APPROVAL EQUAL. THIS SHALL BE INCIDENTAL TO PROJECT.

PowerShell 4/26/2020

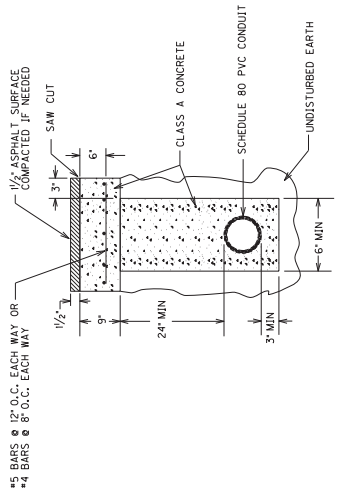
4/28/2020

11/27/2024

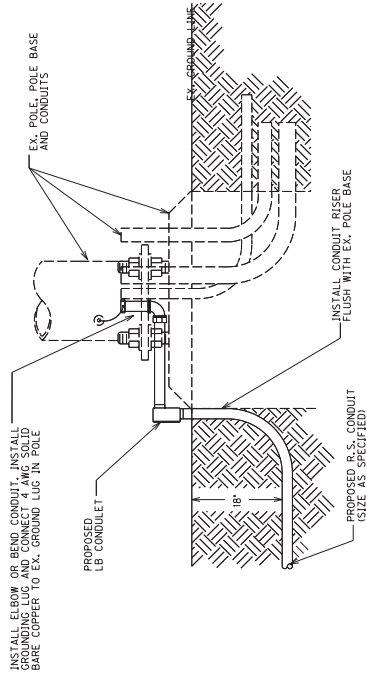
JUNCTION BOX DIMENSIONS (NOMINAL)						
	A	B	C	D	E	F
TYPE A	23"	14"	27"	2"	25"	15"
TYPE B	18"	11"	12"	1½" *	20"	13"
TYPE C	36"	24"	30"	3"	38"	26"

TRAFFIC SIGNAL AND  
ROADWAY LIGHTING  
JUNCTION BOX AND CONDUIT DETAILS

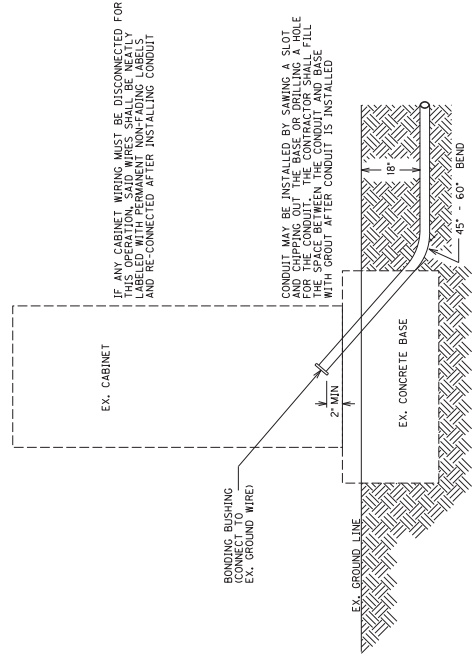
COUNTY OF	ITEM NO.	SHEET NO.



OPEN CUT PAVEMENT DETAIL



CONDUIT INSTALLATION IN EX. POLE BASE



CONDUIT INSTALLATION IN EX. CABINET BASE

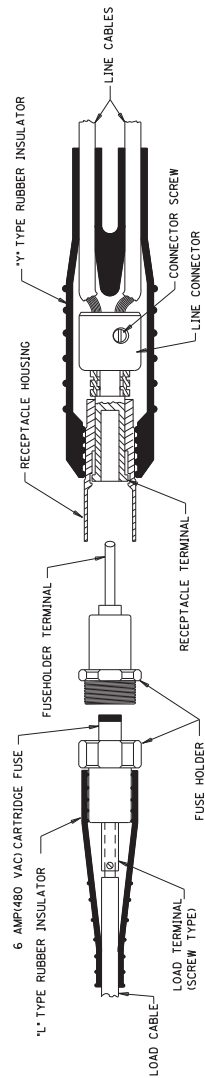
3/10/2017

CONDUIT INSTALLATIONS IN  
EXISTING LOCATIONS

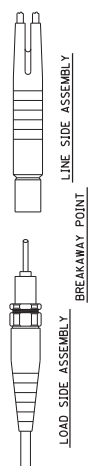


COUNTY OF	ITEM NO.	SHEET NO.

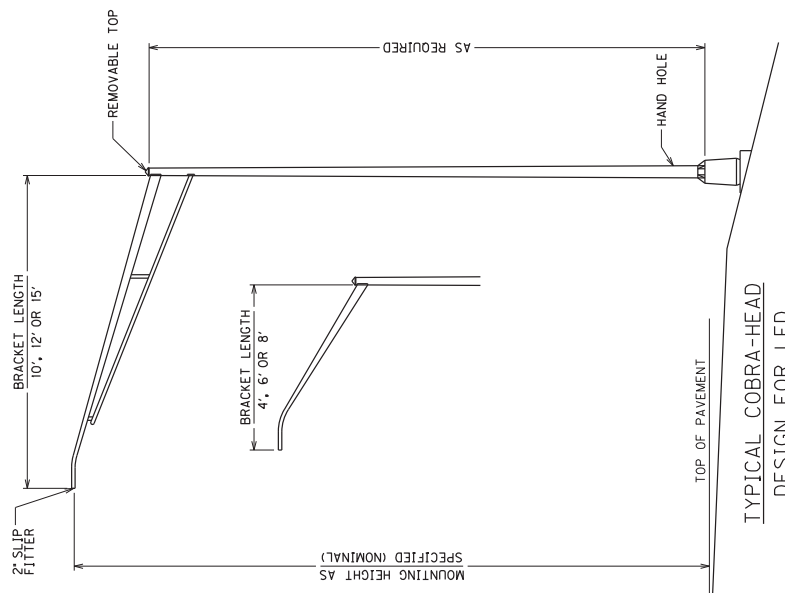
BREAKAWAY FUSE CONNECTOR KIT



DETAILS OF TYPE HEB-JW-RYC CONNECTOR



TYPE HEB-JW-RYC CONNECTOR SHOWN



TYPICAL COBRA-HEAD  
DESIGN FOR LED  
LUMINAIRES

SPECIAL NOTE: ALL LUMINAIRES SHALL HAVE THE NEMA LABEL ATTACHED TO THE BOTTOM OF THE FIXTURE TO VERIFY THE WATTAGE.

LUMINAIRE DESIGNATION EXAMPLE

2 - 7 - A - 6 - 10

1 - DISTANCE FROM RIGHT EDGE OF DRIVING LANE TO CENTER OF POLE BASE. (SEE NOTE BELOW)

2 - MAST ARM LENGTH

3 - LUMINAIRE EQUIVALENT

4 - LUMINAIRE EQUIVALENT

5 - CIRCUIT NUMBER

NOTE: IF NO SETBACK DIMENSION IS INDICATED, THE MAST ARM LENGTH DENOTES THE DISTANCE FROM THE RIGHT EDGE OF PAVEMENT TO CENTER OF POLE BASE.

ALL TYPE A LUMINAIRES ARE MOUNTED AT 30' (NOMINAL) LED EQUIVALENT TO 100 WATTS HPS.

ALL TYPE B LUMINAIRES ARE MOUNTED AT 30' (NOMINAL) LED EQUIVALENT TO 150 WATTS HPS.

ALL TYPE C LUMINAIRES ARE MOUNTED AT 40' (NOMINAL) LED EQUIVALENT TO 250 WATTS HPS.

ALL TYPE D LUMINAIRES ARE MOUNTED AT 40' (NOMINAL) LED EQUIVALENT TO 400 WATTS HPS.

COBRA-HEAD LUMINAIRE/FUSE  
CONNECTOR DETAILS

4-24-2017

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: 5-9048.00

County: Jefferson

Description: Algonquin Parkway - HSIP

Cabinets	Master code	
	7 T-01-0020	Base Mounted 332 Cabinet
	7 T-01-0105	ATC Controller
	7 T-01-0106	1C w/Maxtime (this should go with item ATC controller)
	7 T-01-0200	School Clock
	7 T-01-0501	Conflict Monitor, Model 2018
	7 T-01-0510	Isolator, Model 242 (1 for 2070, plus for ped detector and railroad)
	45 T-01-0700	Load Switches

Signals		
	68 T-02-0009	Siemens 3 Section Signal
	68 T-02-0032	Siemen 3 section backplate
	6 T-02-0033	Siemen 4 section 12" signal (poly)
	6 T-02-0043	Siemen 4-sec. straight signal backplate
	56 T-02-0090	Pedestrian signal housing
	17 T-02-0300	LED Module 12" red arrow
	34 T-02-0310	LED Module 12" yellow arrow
	6 T-02-0320	LED Module 12" green arrow
	57 T-02-0330	LED Module 12" red ball
	57 T-02-0340	LED Module 12" yellow ball
	57 T-02-0350	LED Module 12" green ball
	56 T-02-0365	LED Countdown Pedestrian Module

Special items			
	7 T-02-0504	Router (this includes power supply/antenna/cabling)	
	1 T-09-0415	30 X 36 through 36 X 36 sign hanger (New)	
	5 T-02-0660	Pedstl.top mntg.bkt Two-way	
	5 T-02-0670	Pedestal	
	56 T-06-0710	Ped Detector Pole Mount FSA Box	
	56 T-06-0730	Ped Button w/o Plunger	
	56 T-17-0015	9 X 15 Countdown Ped Sign DBL Sided	
	7 T-06-0020	Safety Switch Disconnect, 60A, 2 Pole	
	7 T-06-0820	Surge Protector AC Output	
	7	Radar Kit	Special Order

Poles		
	17 T-04-0020	Steel Strain Pole 30 foot
	9 T-04-0030	Steel Strain Pole 32 foot
	2 T-04-0040	Steel Strain Pole 34 foot

REQUIRED

Electrical Contractor Supervisor

Project Engineer

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

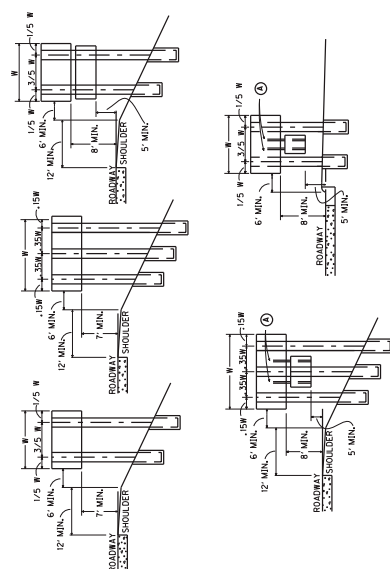
Signature of Project Engineer or Designee

Contact number for Supervisor

Contact number for Project Engineer

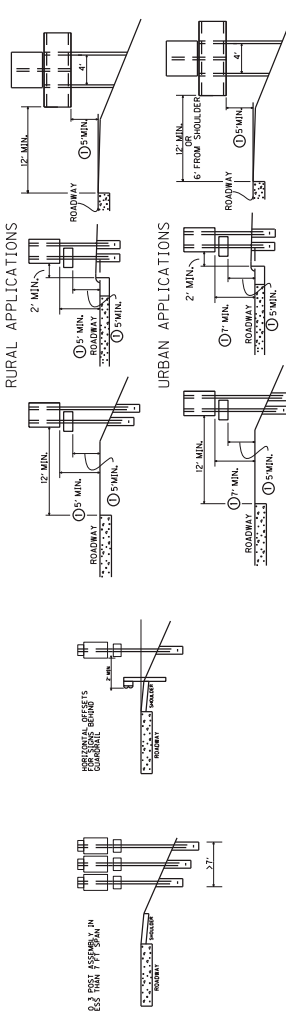
[illegible]

## PANEL SIGNS



5) ATTACHMENT OF SECONDARY SIGN TO MAJOR SIGN IS TO BE MADE WITH TWO (2) 3" X 3" X  $\frac{3}{4}$ " ANGLES OF SUFFICIENT LENGTH TO EXTEND FROM THE LOWER EDGE OF THE SECONDARY SIGN TO AT LEAST THREE FEET UP THE BACK OF THE MAJOR SIGN. A MINIMUM OF ONE POST CLIP PER FOOT SHALL BE USED IN ATTACHING EXTRUSIONS TO EACH ANGLE.

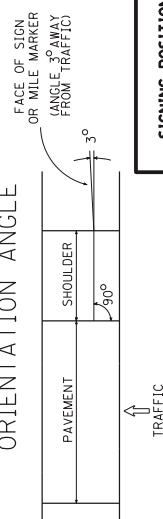
## SHEETING SIGNS



NOTE: SHOULD A SIGN BE LOCATED AT A POINT WHERE GUARDRAIL IS CALLED FOR OR EXISTING, ALL SIGN SUPPORTS SHALL BE PLACED BEHIND THE GUARDRAIL AND LATERAL OFFSET SHALL BE MEASURED FROM THE GUARDRAIL.

① NOT TO EXCEED 8' IN URBAN AREAS AND 6' IN RURAL AREAS UNLESS SPECIFIED BY THE ENGINEER

ORIENTATION ANGLE



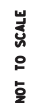
NOTE: STATION NUMBERS ARE GIVEN FOR NOTED DIRECTION OF TRAVEL ONLY. CORRESPONDING MILEPOST MARKERS FOR OTHER DIRECTION SHOULD BE PLACED DIRECTLY OPPOSITE THOSE FOR WHICH STATION NUMBERS ARE GIVEN.

IN JEFFERSON COUNTY, FINAL LOCATION OF MILEPOST MARKERS SHALL BE VERIFIED BY TRIMARC, NOTIFY TRIMARC AT LEAST TWO WEEKS PRIOR TO BEGINNING WORK ON THIS ITEM.

901 WEST MAIN STREET  
LOUISVILLE, KY 40202  
502-587-6624  
270-307-7456

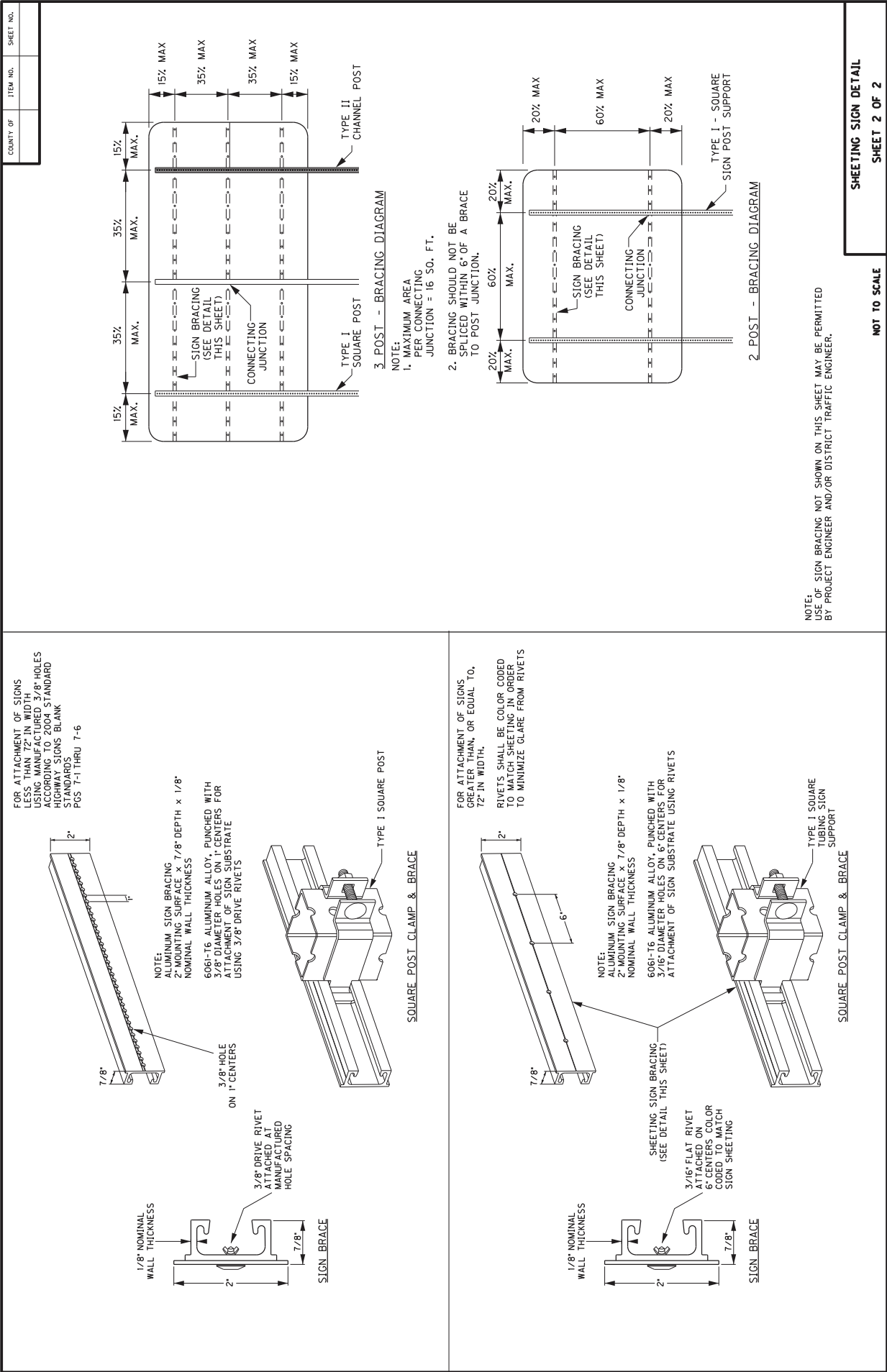
SIGNING POSITIONING DETAIL SHEET

COUNTY OF	ITEM NO.	SHEET NO.



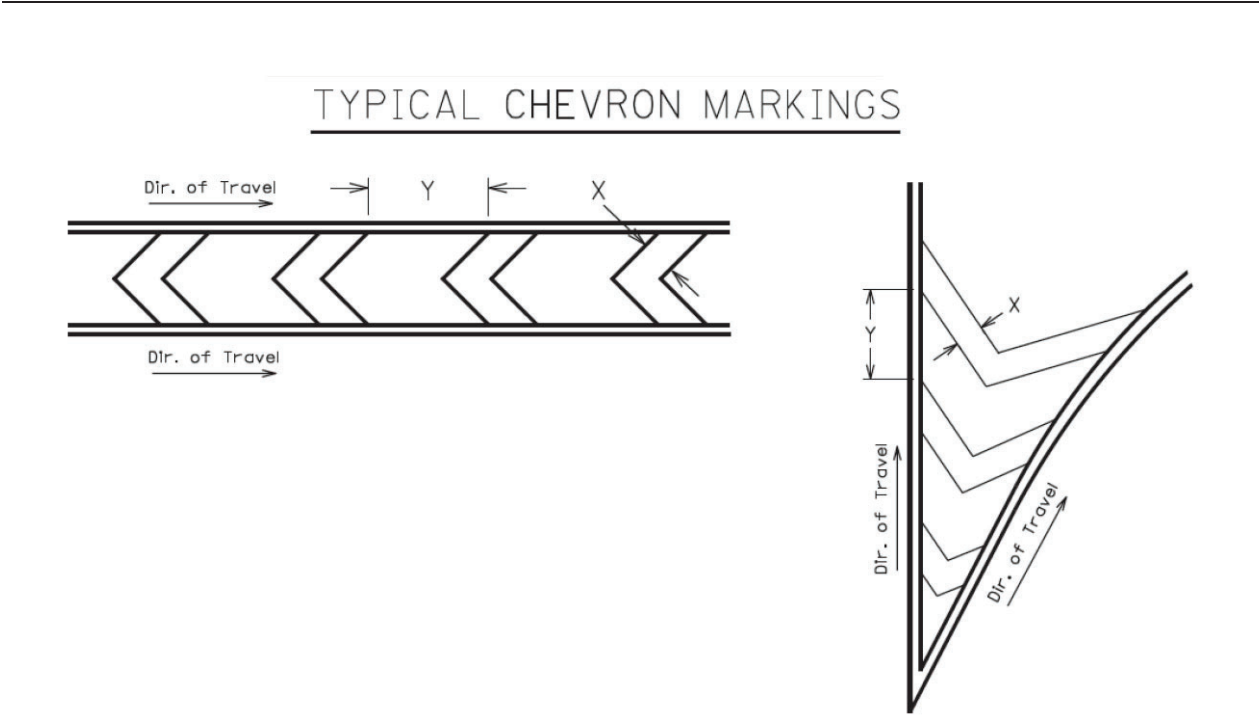
**SHEETING SJGN DETAIL**  
**SHEET 1 OF 2**







CHEVRON PAVEMENT MARKINGS DETAIL



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.

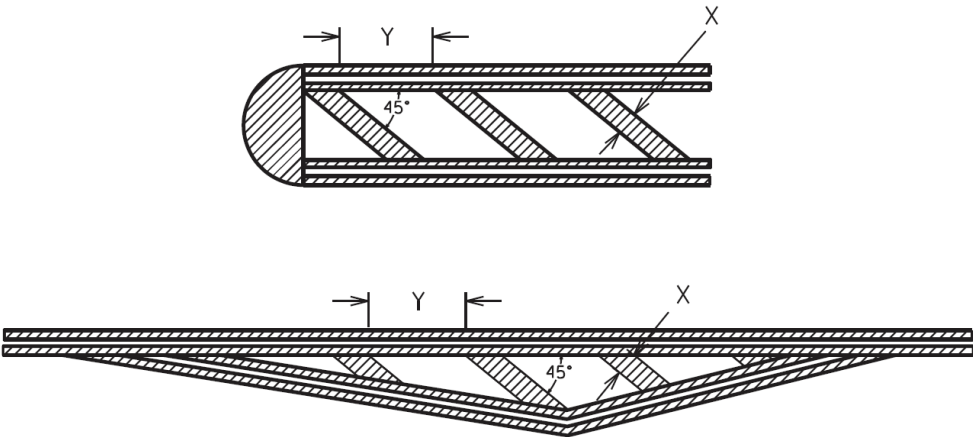
The Department will measure the finished in-place area of Chevron Pavement Markings in Square Feet. The Department will NOT measure overlaps or the void space between the chevrons. See Section 717.04 for additional measurement information.

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

Code	Pay Item	Pay Unit
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.

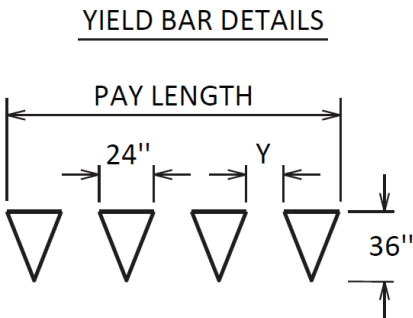
Refer to Section 717 of the Standard Specifications for Road and Bridge Construction, current edition, for more information concerning Material and Construction specifications.

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

YIELD BAR PAVEMENT MARKING DETAIL



NOTE: SPACING (Y) BETWEEN  
TRIANGLES SHOULD BE 3" - 12"

Triangles should be evenly spaced. The spacing (Y) between triangles will depend on the width of the lane the yield bar is for. Unless otherwise directed by the Engineer, space the triangles according to the lane width as follows:

<u>Lane Width</u>	<u># of Triangles</u>	<u>Spacing (Y)</u>
9'	4	4"
10'	4	8"
11'	5	3"
12'	5	6"
13'	5	9"
14'	6	4"
15'	6	7"
16'	7	4"

In the event of larger lane widths, install triangles on equal spacing, as close to the 3" minimum 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.

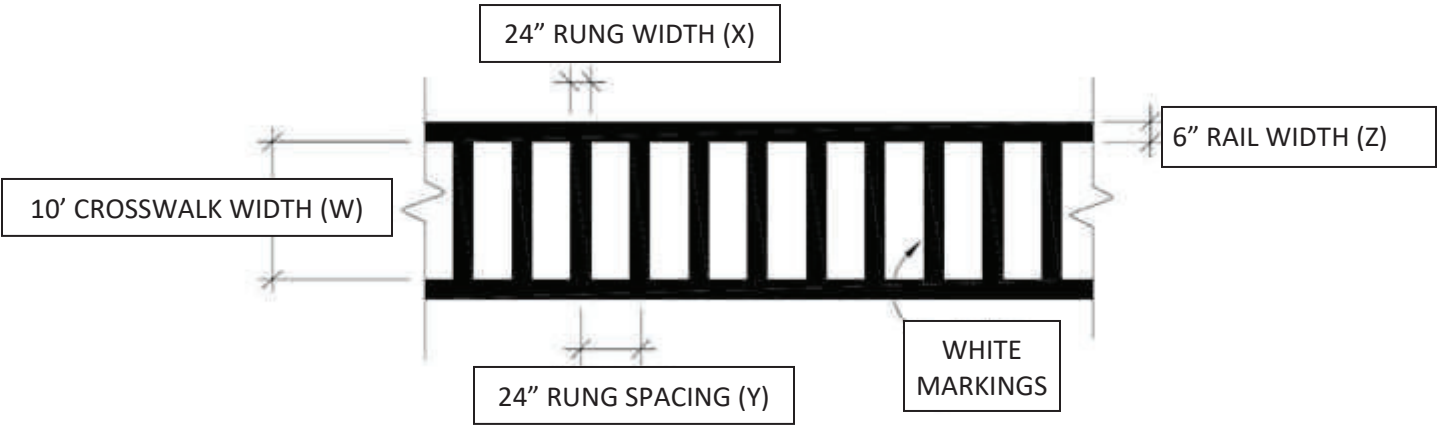
The Department will measure Yield Bars in Linear Feet. The measurement will include the void space between triangles. See Section 717.04 for additional measurement information.

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

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
22520EN	Pave Marking-Thermo Yield Bar-36 Inch	Linear Foot
26165ES717	Pave Mark TY 1 Tape Yield Bar-36 Inch	Linear Foot



LADDER STYLE CROSSWALK DETAIL



Ladder Style Crosswalks consist of white markings that produce rails and rungs. The overall crosswalk width (W), rung width (X), rung spacing (Y), and rail width (Z) are to be installed as specified above or as specified on the plans and/or summary sheets (the latter case is typically because there are multiple crosswalks with different dimensions). If this detail, the plans, and/or summary sheets do not specify the dimensions, then construct the Ladder Style Crosswalks as directed by the District Traffic Engineer and/or 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 the rails in linear feet and make payment under the X-Walk bid item with a description containing the applicable rail width and material type.

The Department will measure the sum of the lengths of the rungs in linear feet and make payment under the X-Walk bid item with a description containing the applicable rung width and material type.

When listed in the bid items, the Department will make payment for the completed and accepted quantities of Ladder Style Crosswalks under the following:

Code	Pay Item	Pay Unit
06565	Pave Marking-Thermo X-Walk-6 Inch	Linear Foot
06566	Pave Marking-Thermo X-Walk-12 Inch	Linear Foot
23261EC	Pave Mark-Thermo-X-Walk-24 Inch	Linear Foot
23251ES717	Pave Mark TY 1 Tape X-Walk-6 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

**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 2026* and *Standard Drawings, Edition of 2025*.

### **SUPPLEMENTAL SPECIFICATIONS**

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

**SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS**

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

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

**2.0 MATERIALS.**

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

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

**2.2 Sign and Controls.** All signs must:

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

- 12) Allow an on-off flashing sequence at an adjustable rate.
- 13) Provide a sight to aim the message.
- 14) Provide a LED display color of approximately 590 nm amber.
- 15) Provide a controller that is password protected.
- 16) Provide a security device that prevents unauthorized individuals from accessing the controller.
- 17) Provide the following 3-line messages preprogrammed and available for use when the sign unit begins operation:

/KEEP/RIGHT/⇒⇒⇒/	/MIN/SPEED/**MPH/
/KEEP/LEFT/⇐⇐⇐/	/ICY/BRIDGE/AHEAD/ /ONE
/LOOSE/GRAVEL/AHEAD/	LANE/BRIDGE/AHEAD/
/RD WORK/NEXT/**MILES/	/ROUGH/ROAD/AHEAD/
/TWO WAY/TRAFFIC/AHEAD/	/MERGING/TRAFFIC/AHEAD/
/PAINT/CREW/AHEAD/	/NEXT/***/MILES/
/REDUCE/SPEED/**MPH/	/HEAVY/TRAFFIC/AHEAD/
/BRIDGE/WORK/***() FT/	/SPEED/LIMIT/**MPH/
/MAX/SPEED/**MPH/	/BUMP/AHEAD/
/SURVEY/PARTY/AHEAD/	/TWO/WAY/TRAFFIC/

\*Insert numerals as directed by the Engineer.  
Add other messages during the project when required by the Engineer.

2.3 Power.

- 1) Design solar panels to yield 10 percent or greater additional charge than sign consumption. Provide direct wiring for operation of the sign or arrow board from an external power source to provide energy backup for 21 days without sunlight and an on-board system charger with the ability to recharge completely discharged batteries in 24 hours.

**3.0 CONSTRUCTION.** Furnish and operate the variable message signs as designated on the plans or by the Engineer. Ensure the bottom of the message panel is a minimum of 7 feet above the roadway in urban areas and 5 feet above in rural areas when operating. Use Class I, II, or III signs on roads with a speed limit less than 55 mph. Use Class I or II signs on roads with speed limits 55 mph or greater.

Maintain the sign in proper working order, including repair of any damage done by others, until completion of the project. When the sign becomes inoperative, immediately repair or replace the sign. Repetitive problems with the same unit will be cause for rejection and replacement.

Use only project related messages and messages directed by the Engineer, unnecessary messages lessen the impact of the sign. Ensure the message is displayed in either one or 2 phases with each phase having no more than 3 lines of text. When no message is needed, but it is necessary to know if the sign is operable, flash only a pixel.

When the sign is not needed, move it outside the clear zone or where the Engineer directs. Variable Message Signs are the property of the Contractor and shall be removed from the project when no longer needed. The Department will not assume ownership of these signs.

**4.0 MEASUREMENT.** The final quantity of Variable Message Sign will be



11  
the actual number of individual signs acceptably furnished and operated during the project. The Department will not measure signs replaced due to damage or rejection.

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

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02671	Portable Changeable Message Sign	Each

Effective June 15, 2012

SPECIAL 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).

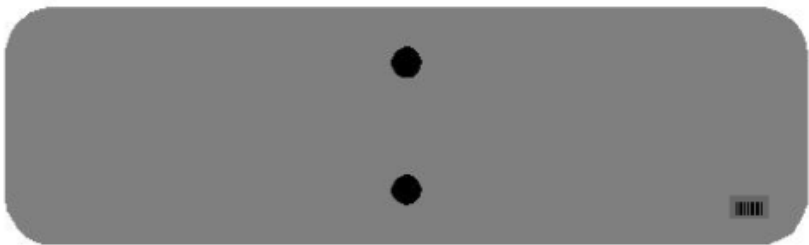
The installation of the permanent sign will be measured in accordance to Section 715.

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

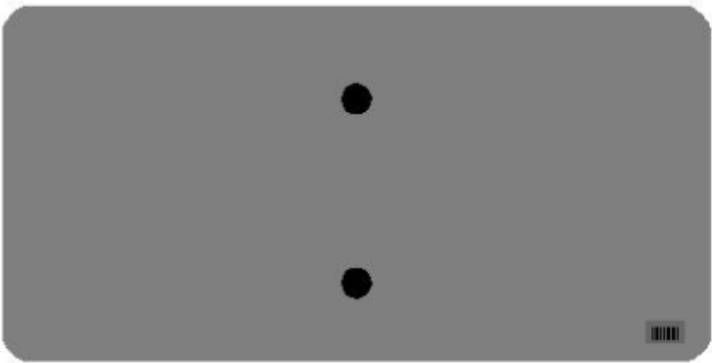
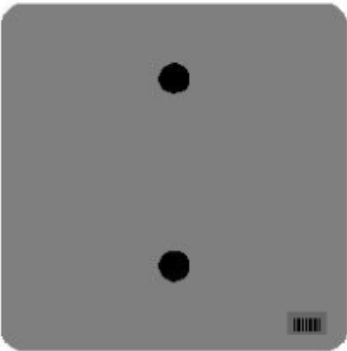
<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24631EC	Barcode Sign Inventory	Each

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.

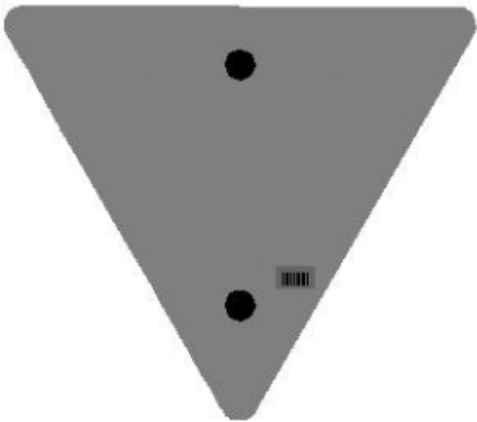
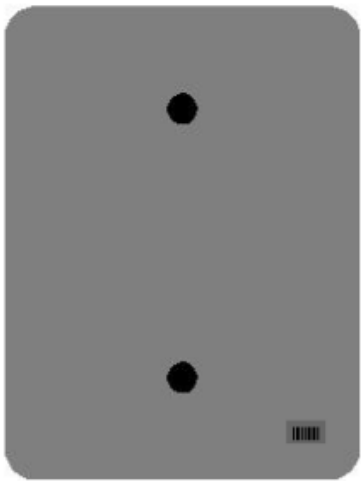
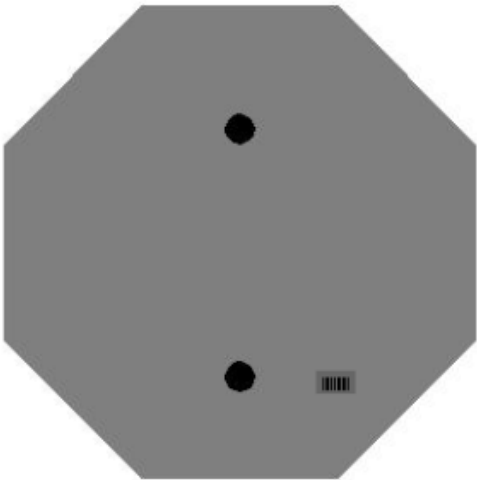
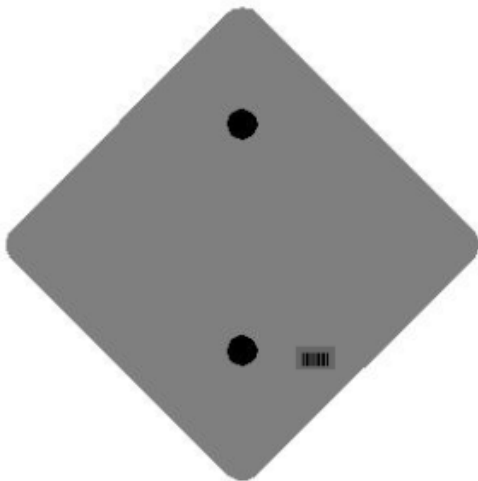
One Sign Post



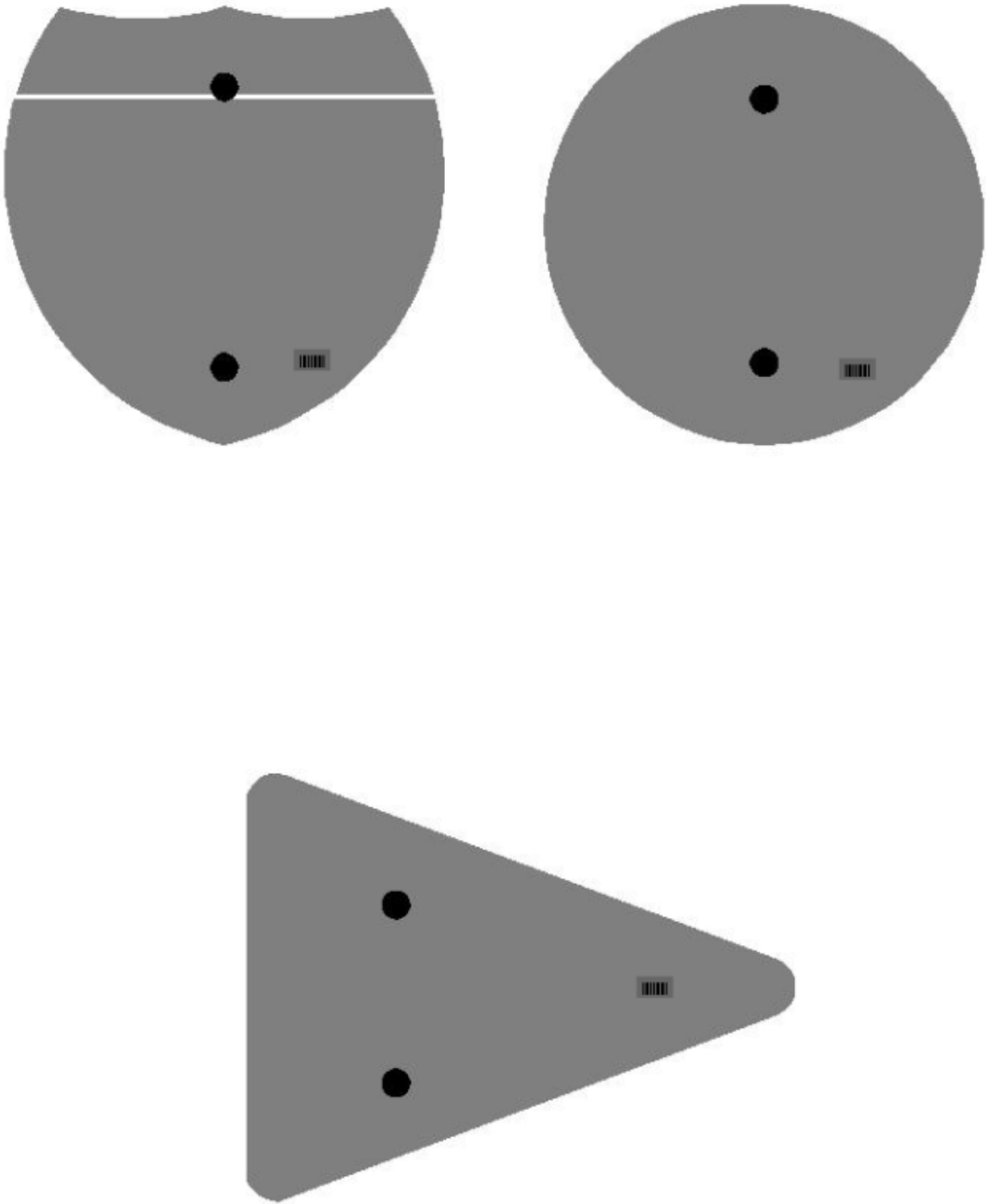
↑  
2" Wide Post



One Sign Post

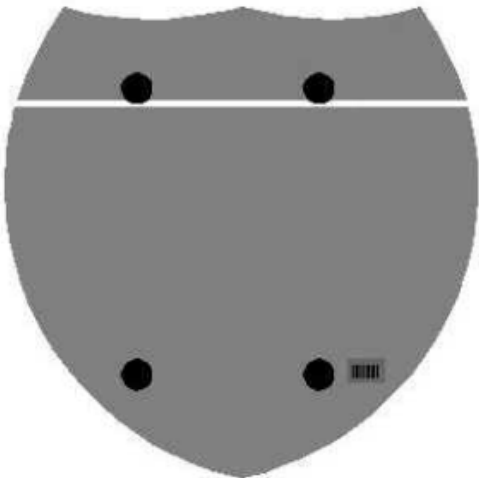


One Sign Post

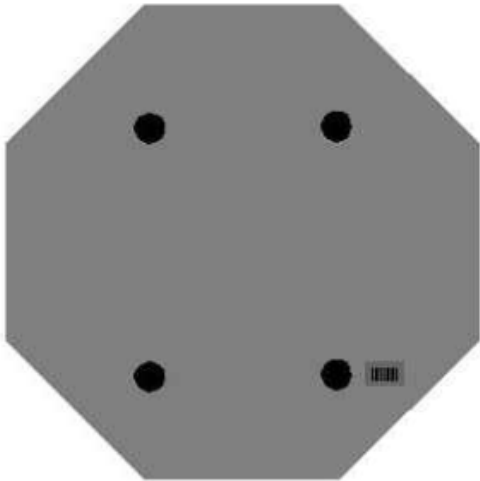




Double Sign Post



Interstate  
Shield



48" Stop

2 Post Signs



2025 STANDARD DRAWINGS THAT APPLY

<b>ROADWAY</b>	
<b>~ DRAINAGE ~</b>	
<u>MISCELLANEOUS DRAINAGE</u>	
SILT TRAP - TYPE C .....	RDY-230-01
 <b>~ GENERAL ~</b>	
<u>MISCELLANEOUS STANDARDS</u>	
MISCELLANEOUS STANDARDS.....	RGX-001-06
DETECTABLE WARNINGS .....	RGX-040-03
 <b>~ PAVEMENT ~</b>	
<u>MEDIANS, CURBS, APPROACHES, ENTRANCES, ETC.</u>	
STANDARD BARRIER MEDIAN.....	RPM-010-06
CURB AND GUTTER, CURBS AND VALLEY GUTTER .....	RPM-100-11
SIDEWALK RAMPS .....	RPM-170-09
SIDEWALK RAMP WITH HANDRAIL.....	RPM-172-07
 <u>NON-REINFORCED CONCRETE PAVEMENT</u>	
NON-REINFORCED CONCRETE PAVEMENT FOR SHOULDERS AND MEDIANS.....	RPN-001-07
JOINTED PLAIN CONCRETE PAVEMENT .....	RPN-015-05
 <u>STANDARD REINFORCED CONCRETE PAVEMENT</u>	
CONCRETE PAVEMENT JOINT DETAILS .....	RPS-010-11
EXPANSION AND CONTRACTION JOINT LOAD TRANSFER ASSEMBLIES .....	RPS-020-14
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-031-06
 <u>MISCELLANEOUS PAVING</u>	
STATION MARKINGS, CONCRETE PAVEMENT .....	RPX-001-04
HOT POURED ELASTIC JOINT SEALS FOR CONCRETE PAVEMENT .....	RPX-015-04

TRAFFIC  
~ **PERMANENT** ~  
MARKERS

INLAID PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS.....	TPM-110
INLAID PAVEMENT MARKER ARRANGEMENTS TWO-WAY LEFT TURN LANE .....	TPM-140
INLAID PAVEMENT MARKER ARRANGEMENT CHANNELIZED INTERSECTION .....	TPM-145
TYPICAL MARKINGS AT SIGNALIZED INTERSECTIONS .....	TPM-203
TYPICAL MARKINGS FOR GORE AREAS .....	TPM-204
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

~ **TEMPORARY** ~  
TRAFFIC CONTROL

LANE CLOSURE TWO-LANE HIGHWAY.....	TTC-100-05
LANE CLOSURE USING TRAFFIC SIGNALS .....	TTC-110-04
LANE CLOSURE MULTI-LANE HIGHWAY CASE I .....	TTC-115-04
DOUBLE LANE CLOSURE .....	TTC-125-04
SHOULDER CLOSURE .....	TTC-135-03
MEDIAN CROSSOVER CASE I.....	TTC-140-04
MEDIAN CROSSOVER CASE I.....	TTC-141-04

DEVICES

PAVEMENT CONDITION WARNING SIGNS .....	TTD-125-03
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STRIPING OPERATIONS

MOBILE OPERATION FOR PAINT STRIPING CASE I.....	TTS-100-02
MOBILE OPERATION FOR PAINT STRIPING CASE II.....	TTS-105-02
MOBILE OPERATION FOR DURABLE STRIPING CASE III .....	TTS-130-02
MOBILE OPERATION FOR DURABLE STRIPING CASE IV.....	TTS-135-02
CHANNELIZING DEVICES (INCLUDING BARRICADES).....	TTS-140

## **PART III**

### **EMPLOYMENT, WAGE AND RECORD REQUIREMENTS**



REQUIRED CONTRACT PROVISIONS  
FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

**1. Equal Employment Opportunity:** Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (see 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

**2. EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

**3. Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

**4. Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

**5. Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

**6. Training and Promotion:**

- a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.
- b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).
- c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.
- d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

**7. Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

- a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.
- b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.
- c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.
- d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide

sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

**8. Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

**9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

- a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.
- b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

**10. Assurances Required:**

- a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.
- b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:
  - (1) Withholding monthly progress payments;
  - (2) Assessing sanctions;
  - (3) Liquidated damages; and/or
  - (4) Disqualifying the contractor from future bidding as non-responsible.
- c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

**11. Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

- a. The records kept by the contractor shall document the following:

- (1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;
- (2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and
- (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

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

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

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

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

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

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

1. Minimum wages (29 CFR 5.5)

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

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in [29 CFR part 1](#), a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

- (i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to [DBAconformance@dol.gov](mailto: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](mailto:DBAconformance@dol.gov), refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division

under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. *Fringe benefits not expressed as an hourly rate.* Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

## 2. Withholding (29 CFR 5.5)

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

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph



2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901](#)–3907.

### 3. Records and certified payrolls (29 CFR 5.5)

*a. Basic record requirements (1) Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

*(2) Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

*(3) Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

*(4) Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

*b. Certified payroll requirements (1) Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting

agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

*(2) Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <https://www.dol.gov/sites/dolgov/files/WHDL/legacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

*(3) Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in [29 CFR part 3](#); and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

*(4) Use of Optional Form WH-347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under [18 U.S.C. 1001](#) and [31 U.S.C. 3729](#).

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under [29 CFR part 6](#) any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address

of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

#### **4. Apprentices and equal employment opportunity (29 CFR 5.5)**

a. *Apprentices (1) Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and [29 CFR part 30](#).

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

**5. Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

**6. Subcontracts.** The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

**7. Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

**8. Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

**9. Disputes concerning labor standards.** As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

**10. Certification of eligibility.** a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, [18 U.S.C. 1001](#).

**11. Anti-retaliation.** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#); or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#).

**V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

**1. Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

**2. Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or

mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)\* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

\* \$31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901](#)–3907.

4. **Subcontracts.** The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the

event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. **Anti-retaliation.** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

- a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;
- b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;
- c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or
- d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;

- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

## **VII. SAFETY: ACCIDENT PREVENTION**

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

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and

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

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

## **VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS**

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

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

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

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."



**IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)**

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

**X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION**

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

**1. Instructions for Certification – First Tier Participants:**

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.
- d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

- e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
- f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.
- g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.
- h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.
- i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

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**2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:**

- a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:
- (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.
  - (2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;
  - (3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and
  - (4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).
  - (5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and
  - (6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).
- b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

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**3. Instructions for Certification - Lower Tier Participants:**

- (Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.
- a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

- this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.
- f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.
- g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<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.

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**4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:**

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

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**XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or

cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**XII. USE OF UNITED STATES-FLAG VESSELS:**

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS  
PREFERENCE FOR APPALACHIAN DEVELOPMENT  
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS  
ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

**KENTUCKY TRANSPORTATION CABINET  
DEPARTMENT OF HIGHWAYS**

**EMPLOYMENT REQUIREMENTS  
RELATING TO  
NONDISCRIMINATION OF EMPLOYEES  
(APPLICABLE TO FEDERAL-AID SYSTEM CONTRACTS)**

**AN ACT OF THE KENTUCKY GENERAL ASSEMBLY  
TO PREVENT DISCRIMINATION IN EMPLOYMENT**

**KRS CHAPTER 344  
EFFECTIVE JUNE 16, 1972**

The contract on this project, in accordance with KRS Chapter 344, provides that during the performance of this contract, the contractor agrees as follows:

1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (forty and above); or limit, segregate, or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, national origin, sex, disability or age forty (40) and over. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor shall not print or publish or cause to be printed or published a notice or advertisement relating to employment by such an employer or membership in or any classification or referral for employment by the employment agency, indicating any preference, limitation, specification, or discrimination, based on race, color, religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, except that such a notice or advertisement may indicate a preference, limitation, or specification based on religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, when religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, is a bona fide occupational qualification for employment.

3. If the contractor is in control of apprenticeship or other training or retraining, including on-the-job training programs, he shall not discriminate against an individual because of his race, color, religion, national origin, sex, disability or age forty (40) and over, in admission to, or employment in any program established to provide apprenticeship or other training.

4. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

Revised: January 25, 2017



### Standard Title VI/Non-Discrimination Assurances

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

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

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

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

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

## EXECUTIVE BRANCH CODE OF ETHICS

The Executive Branch Code of Ethics created by Kentucky Revised Statutes (KRS) Chapter 11A, effective July 14, 1992, establishes the ethical standards that govern the conduct of all executive branch employees. The Executive Branch Code of Ethics, which states, in part:

KRS 11A.040 (7) provides:

A present or former public servant listed in KRS 11A.010(9)(a) to (g) shall not, within one (1) year following termination of his or her 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 one (1) year, he or she personally refrains from working on any matter in which he was directly involved during the last thirty-six (36) months of his or her 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 to obtain private benefits.

If you have worked for the executive branch of state government within the past year, 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 105, Frankfort, Kentucky 40601; telephone (502) 564-7954.

Revised: March 11, 2025

"General Decision Number: KY20260038 01/02/2026

Superseded General Decision Number: KY20250038

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).

Modification Number	Publication Date
0	01/02/2026

BRIN0004-003 06/01/2024

BRECKENRIDGE COUNTY

	Rates	Fringes
BRICKLAYER.....	\$ 33.70	16.57
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BRKY0001-005 06/01/2024		

BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, & TRIMBLE COUNTIES:

	Rates	Fringes
BRICKLAYER.....	\$ 35.00	17.13
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BRKY0002-006 06/01/2024		

BRACKEN, GALLATIN, GRANT, MASON & ROBERTSON COUNTIES:

	Rates	Fringes
BRICKLAYER.....	\$ 35.00	17.13
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BRKY0007-004 06/01/2024		

BOYD, CARTER, ELLIOT, FLEMING, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
BRICKLAYER.....	\$ 41.05	21.79
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BRKY0017-004 06/01/2024		

ANDERSON, BATH, BOURBON, BOYLE, CLARK, FAYETTE, FRANKLIN,  
HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS,  
OWEN, SCOTT, WASHINGTON & WOODFORD COUNTIES:

	Rates	Fringes
BRICKLAYER.....	\$ 35.00	17.13

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CARP0064-001 04/01/2025

	Rates	Fringes
CARPENTER.....	\$ 33.89	24.06
Diver.....	\$ 51.21	24.06
PILEDRIVERMAN.....	\$ 34.39	24.06

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ELEC0212-008 06/02/2025

BRACKEN, GALLATIN and GRANT COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 38.05	22.97

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ELEC0212-014 11/27/2023

BRACKEN, GALLATIN & GRANT COUNTIES:

	Rates	Fringes
Sound & Communication Technician.....	\$ 27.20	14.54

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ELEC0317-012 06/02/2025

BOYD, CARTER, ELLIOT & ROWAN COUNTIES:

	Rates	Fringes
ELECTRICIAN (Wiremen).....	\$ 41.15	29.35

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ELEC0369-007 05/27/2025

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.....	\$ 40.96	22.44

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ELEC0575-002 05/29/2023

FLEMING, GREENUP, LEWIS & MASON COUNTIES:

	Rates	Fringes
ELECTRICIAN.....	\$ 37.00	22.26

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ENGI0181-018 07/01/2025



	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1.....	\$ 41.55	19.60
GROUP 2.....	\$ 38.69	19.60
GROUP 3.....	\$ 39.14	19.60
GROUP 4.....	\$ 38.37	19.60

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 Concrete Pump; Skid Steer Machine with all Attachments; Switchman or Brakeman; Throttle Valve Person; Tractair & Road Widening Trencher; Tractor (50 H.P. or Over); Truck Crane Oiler; Tugger; Welding Machine; Well Points; & Whirley Oiler

GROUP 3 - All Off Road Material Handling Equipment, including Articulating Dump Trucks; Greaser on Grease Facilities servicing Heavy Equipment

GROUP 4 - Bituminous Distributor; Burlap & Curing Machine; Cement Gun; Concrete Saw; Conveyor; Deckhand Oiler; Grout Pump; Hydraulic Post Driver; Hydro Seeder; Mud Jack; Oiler; Paving Joint Machine; Power Form Handling Equipment; Pump; Roller (Earth); Steerman; Tamping Machine; Tractor (Under 50 H.P.); & Vibrator

CRANES - with booms 150 ft. & Over (Including JIB), and where the length of the boom in combination with the length of the piling 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.

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IRON0044-009 06/01/2025

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.....	\$ 35.88	23.90
Structural.....	\$ 37.77	23.90

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IRON0070-006 06/01/2025

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.....	\$ 36.17	25.80

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IRON0769-007 06/01/2025

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,  
Pecksville, 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.....	\$ 39.70	29.59
ZONE 2.....	\$ 40.10	29.59
ZONE 3.....	\$ 41.70	29.59

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 07/01/2025

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.....	\$ 26.87	19.66
GROUP 2.....	\$ 27.12	19.66
GROUP 3.....	\$ 27.17	19.66
GROUP 4.....	\$ 27.77	19.66

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; Bushhammer; Chain Saw Operator; Concrete  
Saw Operator; Deckhand Scow Man; Dry Cement Handler;  
Environmental - Nuclear, Radiation, Toxic & Hazardous Waste  
- Level C; Forklift Operator for Masonary; Form Setter;

Green Concrete Cutting; Hand Operated Grouter & Grinder  
Machine Operator; Jackhammer; Pavement Breaker; Paving  
Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven  
Georgia Buggy & Wheel Barrow; Power Post Hole Digger;  
Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind  
Trencher; Sand Blaster; Concrete Chipper; Surface Grinder;  
Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman;  
Gunnite Operator & Mixer; Grout Pump Operator; Side Rail  
Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free  
Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher;  
Environmental - Nuclear, Radiation, Toxic & Hazardous Waste  
- Levels A & B; Miner & Driller (Free Air); Tunnel Blaster;  
& Tunnel Mucker (Free Air); Directional & Horizontal  
Boring; Air Track Drillers (All Types); Powdermen &  
Blasters; Troxler & Concrete Tester if Laborer is Utilized

LAB00189-008 07/01/2025

ANDERSON, BULLITT, CARROLL, HARDIN, HENRY, JEFFERSON, LARUE,  
MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE &  
WASHINGTON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 26.87	19.66
GROUP 2.....	\$ 27.12	19.66
GROUP 3.....	\$ 27.17	19.66
GROUP 4.....	\$ 27.77	19.66

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; Bushhammer; Chain Saw Operator; Concrete  
Saw Operator; Deckhand Scow Man; Dry Cement Handler;  
Environmental - Nuclear, Radiation, Toxic & Hazardous Waste  
- Level C; Forklift Operator for Masonary; Form Setter;  
Green Concrete Cutting; Hand Operated Grouter & Grinder  
Machine Operator; Jackhammer; Pavement Breaker; Paving  
Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven  
Georgia Buggy & Wheel Barrow; Power Post Hole Digger;  
Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind  
Trencher; Sand Blaster; Concrete Chipper; Surface Grinder;  
Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman;

Gunnite Operator & Mixer; Grout Pump Operator; Side Rail  
Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free  
Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher;  
Environmental - Nuclear, Radiation, Toxic & Hazardous Waste  
- Levels A & B; Miner & Driller (Free Air); Tunnel Blaster;  
& Tunnel Mucker (Free Air); Directional & Horizontal  
Boring; Air Track Drillers (All Types); Powdermen &  
Blasters; Troxler & Concrete Tester if Laborer is Utilized

LAB00189-009 07/01/2025

BRECKINRIDGE & GRAYSON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 26.87	19.66
GROUP 2.....	\$ 27.12	19.66
GROUP 3.....	\$ 27.17	19.66
GROUP 4.....	\$ 27.77	19.66

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; Bushhammer; Chain Saw Operator; Concrete  
Saw Operator; Deckhand Scow Man; Dry Cement Handler;  
Environmental - Nuclear, Radiation, Toxic & Hazardous Waste  
- Level C; Forklift Operator for Masonary; Form Setter;  
Green Concrete Cutting; Hand Operated Grouter & Grinder  
Machine Operator; Jackhammer; Pavement Breaker; Paving  
Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven  
Georgia Buggy & Wheel Barrow; Power Post Hole Digger;  
Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind  
Trencher; Sand Blaster; Concrete Chipper; Surface Grinder;  
Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman;  
Gunnite Operator & Mixer; Grout Pump Operator; 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.....	\$ 22.30	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.....	\$ 23.89	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 12/01/2024

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS and ROWAN COUNTIES

	Rates	Fringes
Painters:		
Bridges; Locks; Dams; Tension Towers & Energized Substations.....	\$ 37.53	23.95
Power Generating Facilities.	\$ 34.29	23.95

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PLUM0248-003 06/01/2025

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
Plumber and Steamfitter.....	\$ 42.75	25.76

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PLUM0392-007 06/01/2025

BRACKEN, CARROLL (Eastern Half), GALLATIN, GRANT, MASON, OWEN & ROBERTSON COUNTIES:

	Rates	Fringes
Plumbers and Pipefitters.....	\$ 43.30	27.40

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PLUM0502-003 08/01/2024

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.....	\$ 41.90	24.89

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SUKY2010-160 10/08/2001

	Rates	Fringes
Truck drivers:		
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

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.  
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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave

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

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

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

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

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

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

Union Average Rate Identifiers

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

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

Survey Rate Identifiers

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

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

State Adopted Rate Identifiers

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

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WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

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

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

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to [BCWD-Office@dol.gov](mailto:BCWD-Office@dol.gov) or by mail to:

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

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to [dba.reconsideration@dol.gov](mailto:dba.reconsideration@dol.gov) or by mail 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 any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210.

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END OF GENERAL DECISION

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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

**PART IV**

**BID ITEMS**

264400

PROPOSAL BID ITEMS

Report Date 12/29/25

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264400

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	298.00	TON		\$	
0020	00190		LEVELING & WEDGING PG64-22	639.00	TON		\$	
0030	00356		ASPHALT MATERIAL FOR TACK	42.50	TON		\$	
0040	00388		CL3 ASPH SURF 0.38B PG64-22	6,386.00	TON		\$	
0050	02676		MOBILIZATION FOR MILL & TEXT (JEFFERSON KY 2054 HSIP)	1.00	LS		\$	
0060	02677		ASPHALT PAVE MILLING & TEXTURING	6,920.00	TON		\$	
0070	21722EN		MILLING CONCRETE PAVEMENT	65.00	TON		\$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0080	01875		STANDARD HEADER CURB	44.00	LF		\$	
0090	01919		STANDARD BARRIER MEDIAN TYPE 3	325.00	SQYD		\$	
0100	01919		STANDARD BARRIER MEDIAN TYPE 3 (MOD)	325.00	SQYD		\$	
0110	02016		REMOVE CONCRETE ISLAND	646.00	SQYD		\$	
0120	02115		SAW-CLEAN-RESEAL TVERSE JOINT	2,275.00	LF		\$	
0130	02116		SAW-CLEAN-RESEAL LONGIT JOINT	3,295.00	LF		\$	
0140	02460		REMOVE TREES OR STUMPS	1.00	EACH		\$	
0150	02562		TEMPORARY SIGNS	500.00	SQFT		\$	
0160	02650		MAINTAIN & CONTROL TRAFFIC (JEFFERSON KY 2054 HSIP)	1.00	LS		\$	
0170	02671		PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH		\$	
0180	02705		SILT TRAP TYPE C	11.00	EACH		\$	
0190	02708		CLEAN SILT TRAP TYPE C	11.00	EACH		\$	
0200	02720		SIDEWALK-4 IN CONCRETE	124.00	SQYD		\$	
0210	02775		ARROW PANEL	2.00	EACH		\$	
0220	04933		TEMP SIGNAL 2 PHASE	1.00	EACH		\$	
0230	06511		PAVE STRIPING-TEMP PAINT-6 IN	4,355.00	LF		\$	
0240	06542		PAVE STRIPING-THERMO-6 IN W	38,914.00	LF		\$	
0250	06543		PAVE STRIPING-THERMO-6 IN Y	38,429.00	LF		\$	
0260	06546		PAVE STRIPING-THERMO-12 IN W	85.00	LF		\$	
0270	06556		PAVE STRIPING-DUR TY 1-6 IN W	4,282.00	LF		\$	
0280	06557		PAVE STRIPING-DUR TY 1-6 IN Y	3,711.00	LF		\$	
0290	06565		PAVE MARKING-THERMO X-WALK-6 IN	3,422.00	LF		\$	
0300	06568		PAVE MARKING-THERMO STOP BAR-24IN	1,115.00	LF		\$	
0310	06569		PAVE MARKING-THERMO CROSS-HATCH	3,833.00	SQFT		\$	
0320	06574		PAVE MARKING-THERMO CURV ARROW	112.00	EACH		\$	
0330	06575		PAVE MARKING-THERMO COMB ARROW	6.00	EACH		\$	
0340	06576		PAVE MARKING-THERMO ONLY	1.00	EACH		\$	
0350	06610		INLAID PAVEMENT MARKER-MW	75.00	EACH		\$	
0360	06611		INLAID PAVEMENT MARKER-MY	18.00	EACH		\$	
0370	06612		INLAID PAVEMENT MARKER-BY	559.00	EACH		\$	

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0380	10020NS		FUEL ADJUSTMENT	11,001.00	DOLL	\$1.00	\$	\$11,001.00
0390	10030NS		ASPHALT ADJUSTMENT	27,631.00	DOLL	\$1.00	\$	\$27,631.00
0400	20177ED		FULL DEPTH PATCHING	11,641.00	SQFT		\$	
0410	20782NS714		PAVE MARKING THERMO-BIKE (SYMBOL)	112.00	EACH		\$	
0420	20782NS714		PAVE MARKING THERMO-BIKE (WORD)	1.00	EACH		\$	
0430	20997ED		REMOVE TRAFFIC ISLAND	215.00	SQYD		\$	
0440	21417ES717		PAVE MARK THERMO CONE CAP-SOLID YELLOW	254.00	SQFT		\$	
0450	22520EN		PAVE MARKING-THERMO YIELD BAR-36 IN	31.00	LF		\$	
0460	22692NS714		PAVEMENT MARKING-THERMO LETTERS	12.00	EACH		\$	
0470	23158ES505		DETECTABLE WARNINGS	114.00	SQFT		\$	
0480	23253ES717		PAVE MARK TY 1 TAPE CROSS-HATCH	1,977.00	SQFT		\$	
0490	23261EC		PAVE MARK-THERMO-X-WALK-24 IN	107.00	LF		\$	
0500	23267ES717		PAVE MARK TY 1 TAPE-BIKE	2.00	EACH		\$	
0510	23267ES717		PAVE MARK TY 1 TAPE-BIKE (BIKE LANE ARROW)	2.00	EACH		\$	
0520	23269ES717		PAVE MARK TY 1 TAPE-COMBO ARROW	2.00	EACH		\$	
0530	23270ES717		PAVE MARK TY 1 TAPE-CURV ARROW	2.00	EACH		\$	
0540	23928EC		PAVE MARK-THERMO "BUS" 8 FT	1.00	EACH		\$	
0550	23974EC		BIKE PATH	544.00	SQYD		\$	
0560	24386EC		PAVE MARKING THERMO-BIKE LANE ARROW	112.00	EACH		\$	
0570	24679ED		PAVE MARK THERMO CHEVRON	126.00	SQFT		\$	
0580	26186ES717		PAVE MARK TY 1 TAPE CONE CAP-SOLID Y	40.00	SQFT		\$	
0590	26192EC		PAVE MARKING-THERMO SHARED LANE MARKING	2.00	EACH		\$	

Section: 0003 - SIGNING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0600	06406		SBM ALUM SHEET SIGNS .080 IN	614.33	SQFT		\$	
0610	06410		STEEL POST TYPE 1	1,157.00	LF		\$	
0620	06472		INSTALL SPAN MOUNTED SIGN	1.00	EACH		\$	
0630	21373ND		REMOVE SIGN	38.00	EACH		\$	
0640	21813NN		REMOVE AND RELOCATE SHEET SIGNS	26.00	EACH		\$	
0650	24631EC		BARCODE SIGN INVENTORY	130.00	EACH		\$	

Section: 0004 - SIGNALIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0660	04720		BRACKET 4 FT	8.00	EACH		\$	
0670	04722		BRACKET 8 FT	12.00	EACH		\$	
0680	04724		BRACKET 12 FT	8.00	EACH		\$	
0690	04780		FUSED CONNECTOR KIT	25.00	EACH		\$	
0700	04820		TRENCHING AND BACKFILLING	255.00	LF		\$	
0710	04832		WIRE-NO. 12	13,410.00	LF		\$	
0720	04844		CABLE-NO. 14/5C	4,420.00	LF		\$	

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0730	04845		CABLE-NO. 14/7C	13,040.00	LF		\$	
0740	04885		MESSENGER-10800 LB	2,055.00	LF		\$	
0750	04886		MESSENGER-15400 LB	410.00	LF		\$	
0760	04932		INSTALL STEEL STRAIN POLE	28.00	EACH		\$	
0770	20093NS835		INSTALL PEDESTRIAN HEAD-LED	56.00	EACH		\$	
0780	20188NS835		INSTALL LED SIGNAL-3 SECTION	68.00	EACH		\$	
0790	20266ES835		INSTALL LED SIGNAL- 4 SECTION	6.00	EACH		\$	
0800	20390NS835		INSTALL COORDINATING UNIT	7.00	EACH		\$	
0810	21743NN		INSTALL PEDESTRIAN DETECTOR	56.00	EACH		\$	
0820	23157EN		TRAFFIC SIGNAL POLE BASE	114.50	CUYD		\$	
0830	23222EC		INSTALL SIGNAL PEDESTAL	5.00	EACH		\$	
0840	24528ED		TETHER WIRE	2,465.00	LF		\$	
0850	24589ED		LED LUMINAIRE	28.00	EACH		\$	
0860	24900EC		PVC CONDUIT-1 1/4 IN-SCHEDULE 80	174.00	LF		\$	
0870	24901EC		PVC CONDUIT-2 IN-SCHEDULE 80	505.00	LF		\$	
0880	24908EC		INSTALL SIGNAL CONTROLLER-TY ATC	7.00	EACH		\$	
0890	24955ED		REMOVE SIGNAL EQUIPMENT	7.00	EACH		\$	
0900	26119EC		INSTALL RADAR PRESENCE DETECTOR TYPE A	29.00	EACH		\$	

Section: 0005 - DEMOBILIZATION & MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0910	02568		MOBILIZATION	1.00	LS		\$	
0920	02569		DEMOBILIZATION	1.00	LS		\$	