



CALL NO. 107

CONTRACT ID. 071053

BOONE COUNTY

FED/STATE PROJECT NUMBER BRZ 0603(207)

LETTING DATE: September 28, 2007

Sealed Bids will be received in the Division of Construction Procurement and/or the Auditorium located on the 1st floor of the Transportation Cabinet Office Building until 10:00 AM EASTERY DAYLIGHT TIME September 28, 2007. Bids will be publicly opened and read at 10:00 AM EASTERY DAYLIGHT TIME.

ROAD AND/OR BRIDGE PLANS

DBE CERTIFICATION REQUIRED

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

(Check guaranty submitted: Cashier's Check Certified Check Bid Bond)

BID BONDS WHEN SUBMITTED WILL BE RETAINED WITH THE PROPOSAL

DBE General Plan Included

BID

PROPOSAL ISSUED TO: _____

SPECIMEN

Address

City

State

Zip

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PART I
SCOPE OF WORK

CONTRACT ID - 071053

ADMINISTRATIVE DISTRICT - 06

PROJECT(S) IDENTIFICATION AND DESCRIPTION:

COUNTY - BOONE

PCN - DE00830110753

BRZ 0603(207)

MARY GRUBB'S HIGHWAY EXTENSION REPLACE HIGH ST. NS RR BRIDGE OVERPASS WITH A RR UNDERPASS
APP. 1700 FT TO THE SOUTH BY EXTEND M. GRUBBS HWY TO HIGH ST, A DISTANCE OF 0.51 MILES.
GRADE & DRAIN WITH BRIDGE. SYP NO. 06-01046.00.

GEOGRAPHIC COORDINATES LATITUDE 38^51'00" LONGITUDE 84^36'00"

COMPLETION DATE(S):

130 WORKING DAYS

APPLIES TO ENTIRE CONTRACT

CONTRACT NOTES

PROPOSAL ADDENDA

All addenda to this proposal must be incorporated into the proposal when the bid is submitted to the Kentucky Department of Highways. Failure to use the correct and most recent bid sheet(s) may result in the bid being rejected.

BID SUBMITTAL

Bidder must use the Department's Highway Bid Program available on the Internet web site of the Department of Highways, Division of Construction Procurement. (www.transportation.ky.gov/contract)

The Bidder must download the bid items created from the web site to prepare a bid proposal for submission to the Department. The bidder must insert the completed bid item sheets printed from the Program into the bidder's proposal and submit with the disk created by said program.

JOINT VENTURE BIDDING

Joint Venture bidding is permissible. However, both companies MUST purchase a bidding proposal. Either proposal may be submitted but must contain the company names and signatures of both parties where required. 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 is advised that the Underground Facility Damage Protection Act of 1994, became law January 1, 1995. It is the contractor's responsibility to determine the impact of the act regarding this project, and take all steps necessary to be in compliance with the provision of the act.

CONTRACT DBE GOAL

The Disadvantaged Business Enterprise (DBE) goal established for this contract is 1% of the total value of the contract.

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

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 2004 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 Capacity Rating
102.08 Irregular Proposals
102.09 Proposal Guaranty

102.10 Delivery of Proposals
102.14 Disqualification of Bidders

CIVIL RIGHTS ACT OF 1964

The Kentucky Department of Highways, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Federal Department of Transportation (49 C.F.R., Part 21), issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the ground of race, color, or national origin.

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.

FHWA 1273

The requirements of Paragraph VI of FHWA 1273 does not apply to projects with a total cost of less than \$1,000,000.00.

SECOND TIER SUBCONTRACTS

Second Tier subcontracts on federally assisted projects shall be permitted. However, in the case of DBE's, second tier subcontracts will only be permitted where the other subcontractor is also a DBE. All second tier subcontracts shall have the consent of both the Contractor and the Engineer.

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.

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 READ PUBLICLY. 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 on the last page of this proposal. 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

All bidders are encouraged to submit their General DBE Participation Plan with their bid on the official form. Lowest responsive bidders whose bid packages include DBE Participation Plans may be awarded the contract at the next Awards Committee meeting provided that the DBE goal is met. 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;
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.

The apparent low bidder who does not submit a General DBE Participation Plan with the bid shall submit it within 10 calendar days after receipt of notification that they are the apparent low bidder. The project will not be considered for award prior to submission and approval of the apparent low bidder's DBE Participation Plan.

Detailed DBE Participation Plan forms will be included in the Contractor Package presented to successful bidders following the awarding of the project. The Detailed DBE Participation Plan must be completed and returned to Contract Procurement in accordance with Cabinet policy. A copy of the blank estimate will be included with the Detailed DBE Participation Plan to list sequence items by PCN (Project Control Number).

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

CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS

If the DBE participation submitted in the bid by the apparent lowest responsive bidder does not meet or exceed the DBE contract goal, the apparent lowest responsive bidder must submit a Good Faith Effort Package to satisfy the Cabinet that sufficient good faith efforts were made to meet the contract goals prior to submission of the bid. Efforts to increase the goal after bid submission will not be considered in justifying the good faith effort, unless the contractor can show that the proposed DBE was solicited prior to the letting date. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted. One complete set and nine (9) copies of this information must be received in the office of 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 DBE Liaison in the Office of Minority Affairs 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:

- 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 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 submit certified reports on monies paid to each DBE subcontractor or supplier utilized to meet a DBE goal.

Prime contractors will incorporate a requirement into DBE subcontracts, including supply contracts, that DBEs must provide to the Division of Construction, a copy of all checks received from the prime contractor within seven days of receipt of payment for work performed on Cabinet projects. Checks to DBE subcontractors must include the PCN number, estimate number, and the sequence and quantity.

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.

ASPHALT MIXTURE

The rate of application for all asphalt mixtures shall be estimated at 110 lbs/sy per inch of depth, unless otherwise noted.

DGA BASE

The rate of application for DGA Base shall be estimated at 115 lbs/sy per inch of depth.

INCIDENTAL SURFACING

The quantities established in the proposal include estimated quantities required for resurfacing or surfacing mailbox turnouts, farm field entrances, residential and commercial entrances, and road and street approaches. These items are to be paved to the limits as shown on Standard Drawing RPM 110 or to the limits as directed by the Engineer. In the event signal detectors are present in the intersecting streets or roads, the paving of the crossroads shall be to the right of way limit or back of the signal detector, whichever is the farthest back of the mainline. These areas are to be surfaced or resurfaced as directed by the Engineer and no direct payment will be allowed for placing and compacting.

FUEL AND ASPHALT PAY ADJUSTMENT

These contract items Lot Pay Adjustment, Asphalt Adjustment and Fuel Adjustment, are for possible future payments. Additional monies may need to be setup with an additional change order if existing contract amount is insufficient to pay all items on the contract. Unit price is \$1.00. Quantity will be actual adjustment after work is completed.

OPTION A

The Contractor is advised that the compaction of asphalt mixtures furnished for driving lanes and ramps, at 25mm (1 inch) or greater, on this project will be accepted according to OPTION A in accordance with Section 402 and Section 403 of the *2004 Standard Specification*. Joint cores as described in subsection 402.03.02 are required for surface mixtures only. The compaction of all other asphalt mixtures will be accepted by OPTION B.

SPECIAL NOTE FOR DRILLED SHAFTS

1.0 DESCRIPTION. Furnish all equipment, materials and labor necessary for constructing reinforced concrete drilled shafts in cylindrically excavated holes according to the details shown on the plans or as the Engineer directs. Construct the shaft to the lines and dimensions shown on the plans, or as the Engineer directs.

2.0 MATERIALS.

2.1 Concrete. Use Class A Modified concrete unless otherwise shown on the plans. The slump at the time of placement shall be 6.5 to 9.5 inches, the coarse aggregate shall be size 67, 68, 78, 8 or 9M, and the water/cementitious material ratio shall not exceed 0.45. Include water reducing and retarding admixtures. Type F high range water reducers used in combination with retarding admixtures or type G high range water reducers fully meeting trial batch requirements are permitted and Class F fly ash is permitted in conformance with Section 601. Design the mix such that the concrete slump exceeds 4 inches at 4 hours after batching. If the estimated concrete transport, plus time to complete placement, exceeds 4 hours, design the concrete to have a slump that exceeds 4 inches or more for the greater time after batching.

Perform trial batches prior to beginning drilled shaft construction in order to demonstrate the adequacy of the proposed concrete mix. Demonstrate that the mix to be used will meet the requirements for temperature, slump, air content, water/cementitious material ratio, and compressive strength. Use the ingredients, proportions and equipment (including batching, mixing, and delivery) to be used on the project. Make at least 2 independent consecutive trial batches of 3 cubic yards each using the same mix proportions and meeting all specification requirements for mix design approval. Submit a report containing these results for slump, air content, water/cement ratio, temperature, and compressive strength and mix proportions for each trial batch to the Engineer for review and approval. Failure to demonstrate the adequacy of the concrete mix, methods, or equipment to the Engineer is cause for the Engineer to require appropriate alterations in concrete mix, equipment, and/or method by the Contractor to eliminate unsatisfactory results. Perform additional trial batches required to demonstrate the adequacy of the concrete mix, method, or equipment.

2.2 Steel Reinforcement. Provide Grade 60 deformed bars conforming to Section 811 of the Standard Specifications. Rail steel is permitted for straight bars only. Place according to Section 602 of the Standard Specifications, this Special Note, and the plans. Use non-corrosive centering devices and feet to maintain the specified reinforcement clearances.

2.3 Casings. Provide casing meeting the requirements of AASHTO M270 Grade 36 steel unless otherwise specified. Ensure casing is smooth, clean, watertight, true and straight, and of ample strength to withstand handling, installation, and extraction stresses and the pressure of both concrete and the surrounding earth materials. Ensure the outside diameter of casing is not less than the specified diameter of shaft.

Use only continuous casings. Cut off the casing at the prescribed elevation and trim to within tolerances prior to acceptance. Extend casing into the Rock Disintegration Zone (RDZ), or rock, a sufficient distance to stabilize the shaft excavation against collapse, excessive deformation, and/or

flow of water if required and/or shown on the plans.

Install from the work platform continuous casing meeting the design thickness requirements, but not less than 3/8 inch, to the elevations shown on the plans. When drilled shafts are located in open water areas, extend casings above the water elevation to the plan tip elevation to protect the shaft concrete from water action during concrete placement and curing. If temporary surface casings are used, extend each casing up to the work platform. Remove all temporary surface casing prior to final acceptance unless otherwise permitted by the Central Office Construction Engineer.

Ensure casing splices have full penetration butt welds conforming to the current edition of AWS D1.1 with no exterior or interior splice plates and produce true and straight casing.

2.4 Slurry. When slurry is to be used for installation of the Drilled Shaft, submit a detailed plan for its use and disposal. The plan should include, but not be limited to the following:

- 1) Material properties
- 2) Mixing requirements and procedures
- 3) Testing requirements
- 4) Placement procedures
- 5) Disposal techniques

Obtain the Central Office Division of Construction's approval for the slurry use and disposal plan before installing drilled shafts.

2.5 Tremies. Provide tremies of sufficient length, weight, and diameter to discharge concrete at the shaft base elevation. Ensure the tremie diameter is least 6 times the maximum size coarse aggregate to be used in the concrete mix and no less than 10 inches. Provide adequate wall thickness to prevent crimping or sharp bends that restrict concrete placement. Support tremies used for depositing concrete in a dry drilled shaft excavation so that the free fall of the concrete does not cause the shaft excavation to cave or slough. Maintain a clean and smooth tremie surface to permit both flow of concrete and unimpeded withdrawal during concrete placement. Do not allow any aluminum parts to contact the concrete. Construct tremies used to deposit concrete for wet excavations so that they are watertight and will readily discharge concrete.

2.6 Concrete Pumps. Provide pump lines with a minimum diameter of 5 inches and watertight joints.

2.7 Drop Chutes. Do not use aluminum drop chutes.

3.0 CONSTRUCTION.

3.1 Preconstruction.

3.1.1 Prequalification. The Department will require prequalification by the Division of Contract Procurement before accepting a bid for the construction of Drilled Shafts.

3.1.2 Pre-Bid Inspection. Inspect both the project site and all subsurface

information, including any soil or rock samples, prior to submitting a bid. Contact the Division of Materials, Geotechnical Branch (502-564-2374) to schedule a viewing of the subsurface information. Failure to inspect the project site and view the subsurface information will result in the forfeiture of the right to file a claim based on site conditions and may result in disqualification from the project.

3.1.3 Drilled Shaft Installation Plan. Upon request, the Department will review a Drilled Shaft Installation Plan. Submit the plan no later than 45 calendar days prior to constructing drilled shafts. Items covered in this plan should include, but not be limited to the following:

- 1) Name and experience record of jobsite drilled shaft superintendent and foremen in charge of drilled shaft operations for each shift.
- 2) List and size of proposed equipment including cranes, drills, augers, bailing buckets, final cleaning equipment, desanding equipment, slurry pumps, core sampling equipment, tremies or concrete pumps, casings, etc.
- 3) Details of overall construction operation sequence and the sequence of shaft construction in the bents or groups.
- 4) Details of shaft excavation methods including methods to over-ream or roughen shaft walls, if necessary.
- 5) Details of slurry when the use of slurry is anticipated. Include methods to mix, circulate, and desand the proposed slurry. Provide details of proposed testing, test methods, sampling methods, and test equipment.
- 6) Details of proposed methods to clean shaft and inside of casing after initial excavation.
- 7) Details of reinforcement handling, lifting, and placement including support and method to center in shaft. Also include rebar cage support during concrete placement and temporary casing removal.
- 8) Details of concrete placement including procedures for concrete tremie or pump. Include initial placement, raising during placement, and overfilling of the shaft to expel contaminated concrete.
- 9) Required submittals including shop drawings and concrete design mixes.
- 10) Other information shown in the plans or requested by the Engineer.
- 11) Special considerations for wet construction.
- 12) Details of environmental control procedures to protect the environment from discharge of excavation spoil, slurry (natural and mineral), and concrete overpour.

The Division of Construction will review the submitted procedure and provide comments and recommendations. The Contractor is responsible for satisfactory construction and ultimate performance of the Drilled Shaft.

3.2 General Construction. Construct drilled shafts as indicated in the plans or described in this Special Note by either the dry or wet method. When the plans describe a particular method of construction, use this method unless the Engineer permits otherwise. When the plans do not describe a particular method, propose a method on the basis of its suitability to the site conditions.

When necessary, set temporary removable surface casing. Use surface casing of sufficient length to prevent caving of the surface soils and to aid in maintaining shaft position and alignment. Predrilling with slurry and/or over-reaming to the outside diameter of the casing may be required to install the surface casing at some sites.

Provide equipment capable of constructing shafts to the deepest shaft depth shown in the plans plus 15 feet, 20 percent greater than the longest shaft (measured from the ground or water surface to the tip of the shaft), or 3 times the shaft diameter, whichever is greater. Blasting excavation methods are not permitted.

Use permanent casing unless otherwise noted in the Contract. Place casing as shown on the plans before beginning excavation. If full penetration cannot be attained, the Engineer may direct that excavation through the casing be accomplished and the casing advanced until reaching the plan tip elevation. In some cases, over-reaming to the outside diameter of the casing may be required before placing the casing. Cut off the casing at the prescribed elevation and leave the remainder of the casing in place. Do not use vibratory hammers for casing installation within 50 feet of shafts that have been completed less than 24 hours.

3.2.1 Dry Construction Method. Use the dry construction method only at sites where the ground water table and soil conditions (generally stiff to hard clays or rock above the water table) make it feasible to construct the shaft in a relatively dry excavation and where the sides and bottom of the shaft are stable and may be visually inspected by the Engineer prior to placing the concrete. The dry construction method consists of drilling the shaft excavation, removing accumulated seepage water and loose material from the excavation, and placing the shaft concrete in a relatively dry excavation.

3.2.2 Wet Construction Method. Use the wet construction method at all sites where it is impractical to excavate by the dry method. The wet construction method consists of drilling the shaft excavation below the water table, keeping the shaft filled with water (including natural slurry formed during the drilling process) or slurry as defined in part 2.4 of this Special Note, desanding and cleaning the slurry as required, final cleaning of the excavation by means of a bailing bucket, air lift, submersible pump or other approved devices and placing the shaft concrete (with a tremie or concrete pump beginning at the shaft bottom) which displaces the water or slurry as concrete is placed.

Where drilled shafts are located in open water areas, construct the shafts by the wet method using casings extending from above water elevation to the plan casing tip elevation to protect the shaft concrete from water action during placement and curing. Install the casing in a manner that will produce a positive seal at the bottom of the casing.

3.3 Slurry. When the Contractor elects to use slurry, adjust construction operations so that the slurry is in contact with the bottom 5 feet of the shaft for less than 4 hours unless the Engineer approves otherwise. If the 4-hour limit is exceeded, over-ream the bottom 5 feet of shaft.

3.4 Cleaning. Over-reaming, cleaning, or wire brushing the sidewalls of the shaft excavation and permanent casings may be necessary to remove the depth of softening or to remove excessive slurry cake buildup as indicated by sidewall samples or other test methods employed by the Engineer. Over-ream around the perimeter of the excavation a minimum depth of 1/2 inch and maximum depth of 3 inches.

3.5 Subsurface Exploration. Take subsurface exploration borings when shown on the plans or as the Engineer directs to determine the character of the material that the shaft extends through and the material directly below the shaft excavation. Complete subsurface exploration borings prior to beginning excavation for any drilled shaft in a group. Extend subsurface exploration borings a minimum depth of 3 shaft diameters but not less than 10 feet below the bottom of the anticipated tip of drilled shaft excavation as shown on the plans. For subsurface exploration borings in soil use thin-wall tube samples and perform standard penetration tests according to the Division of Material's Geotechnical Manual. When shafts extend into rock, soil samples are not required unless otherwise specified. Perform rock core drilling according to the Division of Material's Geotechnical Manual. When the Engineer directs, perform additional subsurface exploration borings prior to and/or during the course of the drilled shaft excavations. Measure soil samples and/or rock cores and visually identify and describe them on the subsurface log. Subsurface exploration borings must be performed by contractors/consultants on the Geotechnical Branch's approved list.

The Engineer will be on-site during the subsurface exploration process to evaluate the soil and/or rock core samples. The Engineer will determine the need to extend the borings to depths greater than the depths previously specified. Handle, label, identify, and store soil and/or rock samples according to the Division of Material's Geotechnical Manual and deliver them with the subsurface logs to the Engineer within 24-hours of completing the borings.

The Engineer will inspect the soil samples and/or cores and determine the final depth of required excavation (final drilled shaft tip elevation) based on evaluation of the material's suitability. The Engineer will establish the final tip elevations for shaft locations, other than those for which subsurface exploration borings have been performed, based on the results of the subsurface exploration. Within 15 calendar days after completion of the subsurface exploration borings, the Engineer will notify the contractor of the final tip elevations for shaft locations.

3.6 Excavations. The plans indicate the expected depths, the top of shaft elevations, and the estimated bottom of shaft elevations between which the drilled shaft are to be constructed. Drilled shafts may be extended deeper when the Engineer determines that the material encountered while drilling the shaft excavation is unsuitable and/or is not the same as anticipated in the design of the drilled shaft. Drilled shafts may be shortened when the Engineer determines the material encountered is better than that anticipated.

Begin drilled shaft excavation the excavation, excavation inspection, reinforcement placement, and concrete placement can be completed as one continuous operation. Do not construct new shafts within 24 hours adjacent to recently completed shafts if the center-to-center spacing is less than 3 shaft diameters.

Dispose of excavated material removed from the shaft according to the Standard Specifications or the contract documents.

Do not allow workmen to enter the shaft excavation for any reason unless both a suitable casing has been installed and adequate safety equipment and procedures have been provided to the workmen entering the excavation. Recommended Procedures for the Entry of Drilled Shaft Foundation Excavations, prepared by ADSC: The International Association of Foundation Drilling provides guideline recommendations for down-hole entry of drilled excavations.

3.7 Obstructions. Remove subsurface obstructions at drilled shaft locations. Such obstructions may include man-made materials such as old concrete foundations or natural materials

such as boulders. Blasting is not permitted.

3.8 Inspections of Excavations. Provide equipment for checking the dimensions and alignment of each shaft excavation. Determine the dimensions and alignment of the shaft excavation under the observation and direction of the Engineer. Provide equipment necessary to verify shaft cleanliness for the method of inspection selected by the Engineer.

Measure final shaft depths with a weighted tape or other approved methods after final cleaning. Ensure the base of each shaft has less than ½ inch of sediment at the time of concrete placement. For dry excavations, do not allow the depth of water to exceed 3 inches for tremie or pump methods of concrete placement. Verify shaft cleanliness to the Engineer using direct visual inspection or other method the Engineers determines acceptable. Video camera or underwater inspection procedures may be used if specified in the plans. Inspect the side surfaces of rock sockets to ensure they are rough and of such condition to ensure bond between the shaft concrete and the rock. Calipers, bent rods, or other devices may be used to inspect the diameter and roughness of rock sockets. When the Engineer directs, mechanically roughen surfaces found to be smooth.

3.9 Reinforcing Steel Cage Fabrication and Placement. Assemble the reinforcing steel cage, consisting of longitudinal bars, ties, spirals, cage stiffener bars, spacers, centering devices, and other necessary appurtenances and place as a prefabricated unit immediately after the shaft excavation is inspected and accepted, and just prior to concrete placement.

Tie the reinforcing steel with 100 percent double-wire ties and provide support so that it will remain within allowable tolerances for position. Locate splices as shown on the plans. Splice no more than 50 percent of the longitudinal reinforcing within 2-lap splice lengths of any location or within 3 feet of the splice location if approved mechanical connectors are used. All splices are to be in accordance with plan details. Use bands, temporary cross ties, etc. as required to provide a reinforcement cage of sufficient rigidity to prevent racking, permanent deformations, etc. during installation.

Use concrete centering devices or other approved non-corrosive centering devices at sufficient intervals along the length of the reinforcement cage to ensure concentric spacing for the entire cage length. As a minimum, provide a set of non-corrosive centering devices at intervals not exceeding 5 feet throughout the length of the shaft. When the size of the longitudinal reinforcement exceeds one inch in diameter the minimum spacing may be increased to 10 feet. As a minimum, provide a set of centering devices within 2 feet of the top and 2 feet of the bottom of the shaft. In addition provide one set of centering devices 2 feet above and 2 feet below each change in shaft diameter. Provide feet (bottom supports) at the bottom of the shaft on vertical bars. As a minimum, provide non-corrosive centering devices at 60 degree intervals around the circumference of the shaft to maintain the required reinforcement clearances. Ensure the centering devices maintain the specified annular clearance between the outside of the reinforcing cage and the side of the excavated hole or casing.

Concrete centering devices and feet will be constructed of concrete equal in quality and durability to the concrete specified for the shaft. Use epoxy coated centering devices fabricated from reinforcing steel. Use feet (bottom supports) of adequate size and number to assure the rebar cage is the proper distance above the bottom as determined by part 3.11 3) of this Special Note. The feet are not intended to support the weight of the cage. In the event that the shaft has been excavated below the anticipated tip elevation, extend the reinforcing cage at the tip (low) end by lap splices, mechanical connectors, or welded splices conforming to the Standard Specifications. In this

instance, splices need not be staggered and 100 percent of the reinforcing bars may be spliced at a given location. The bottom 12 inches of the shaft may not be reinforced when below plan tip elevation.

During concrete placement, support the reinforcing cage at or near the top of shaft such that the concrete feet are positioned approximately one inch above the bottom of shaft excavation. Not sooner than 24 hours after the completion of concrete placement, remove temporary supports. Provide the needed equipment, including extra cranes if necessary, to provide this cage support.

Prior to placing the reinforcement cage, demonstrate to the satisfaction of the Engineer that the fabrication and handling methods to be used will result in a reinforcing cage placed in the proper position, with the proper clearances, and without permanent bending, squashing, or racking of the reinforcement cage. During this demonstration bring the cage to an upright position, lower into a shaft excavation, and support as if for concrete placement.

Check the elevation of the top of the reinforcing cage before and after the concrete is placed. If the reinforcing cage is not maintained within the specified tolerances, correct to the satisfaction of the Engineer. Do not construct additional shafts until the contractor has modified his reinforcing cage support to obtain the required tolerances.

3.10 Concrete Placement. Place concrete according to the applicable portions of the Standard Specifications and with the requirements set forth herein. Do not apply the provisions of the Special Note for Structural Mass Concrete.

Place concrete as soon as practical after reinforcing steel placement but no later than 4 hours after completion of the shaft excavation. Place concrete continuously from the bottom to above the top elevation of the shaft. For shafts that extend above ground or water surface, place concrete continuously after the shaft is full until good quality concrete is evident at the top of the shaft. Form any portion of the shaft above ground with a removable form or other approved method to the dimensions shown on the plans.

For shafts constructed in the wet with the top of the shaft below the water surface and below top of casing, place concrete to approximately one shaft diameter but no less than 2 feet above the top of shaft elevation. Remove contaminated concrete and deleterious material, as determined by the Engineer, accumulated above the top of shaft elevation immediately after completing concrete placement. Deleterious material and contaminated concrete may be airlifted under a head of water or slurry provided that the head is maintained at or near the exterior water surface elevation. Carefully remove any concrete remaining above plan top of shaft after curing and excess casing removal.

Place concrete either by free fall, through a tremie, or concrete pump. Use the free fall placement method in dry holes only. The maximum height of free fall placement is 20 feet. Do not allow concrete placed by free fall to contact either the reinforcing cage or hole sidewall. Drop chutes may be used to direct concrete to the base during free fall placement.

Place concrete in the shaft in one continuous operation. Maintain a minimum slump of 4 inches or more throughout the placement for 4 hours after batching. Adjust approved admixtures in the concrete mix for the conditions encountered on the job so that the concrete remains in a workable plastic state throughout the placement. Perform slump loss tests to demonstrate that the concrete will maintain a 4-inch or greater slump for a period of time equal to the estimated transport plus the 2-hour placement time, but not less than 4 hours.

When the Engineer determines the concrete placement methods and/or equipment during construction of any technique and/or production shafts to be inadequate, make appropriate

alterations to eliminate unsatisfactory results.

Drilled shafts not meeting the concrete placement requirements of this Special Note or contract plans are unacceptable. Correct all unacceptable completed shafts to the satisfaction of the Engineer.

3.10.1 Tremie Placement. Tremies may be used for concrete placement in either wet or dry holes. Extend the tremie to the shaft base elevation before starting underwater placement. Valves, bottom plates, or plugs may be used only if concrete discharge can begin approximately 2 inches above the excavation bottom. Remove plugs from the excavation unless otherwise approved by the Engineer. Maintain tremie discharge at or near the bottom of excavation as long as practical during concrete placement. Immerse tremie discharge end as deep as practical in the concrete but not less than 10 feet.

If at any time during the concrete pour the tremie line orifice is removed from the fluid concrete column and discharges concrete above the rising concrete surface, the entire drilled shaft is considered defective. In such case, remove the reinforcing cage and concrete, complete any necessary sidewall cleaning or over-reaming as directed by the Engineer, and repour the shaft.

3.10.2 Pumped Concrete. Concrete pumps and lines may be used for concrete placement in either wet or dry excavations. Do not begin concrete placement until the pump line discharge orifice is at the shaft base elevation.

For wet excavations, use a plug or similar device to separate the concrete from the fluid in the hole until pumping begins. Remove the plug unless otherwise approved by the engineer.

Ensure the discharge orifice remains at least 10 feet below the surface of the fluid concrete. When lifting the pump line during concrete placement, reduce the line pressure until the orifice has been repositioned at a higher level in the excavation.

If at any time during the concrete pour the pump line orifice is removed from the fluid concrete column and discharges concrete above the rising concrete level, the Department will consider the shaft defective. In such case, remove the reinforcing cage and concrete, complete any necessary sidewall cleaning or over-reaming as the Engineer directs, and repour the shaft.

3.10.3 Drop Chutes. Drop chutes may be used to direct placement of free fall concrete in excavations where the maximum depth of water does not exceed one inch. Do not use the free fall method of placement in wet excavations. Concrete may be placed through either a hopper at the top of the tube or side openings as the drop chute is retrieved during concrete placement. Reduce the height of free fall and/or reduce the rate of concrete flow into the excavation if the concrete placement causes the shaft excavation to cave or slough, or if the concrete strikes the reinforcing cage or sidewall. When the Engineer determines free fall placement cannot be accomplished satisfactorily, use either tremie or pumping to accomplish the pour.

3.11 Construction Tolerances. The following construction tolerances apply to drilled shafts unless otherwise stated in the contract document:

- 1) Construct drilled shaft within 3 inches of plan position in the horizontal plane at the top of the shaft.
- 2) Do not vary the vertical alignment of a shaft excavation from the plan alignment by more than 1/4 inch per foot of depth or 6 inches total.
- 3) Maintain the top of the reinforcing steel cage no more than 6 inches above and no more than 3 inches below plan position.
- 4) All casing diameters shown on the plans refer to O.D. (outside diameter) dimensions. The casing dimensions are subject to American Pipe Institute tolerances applicable to regular steel pipe. A casing larger in diameter than shown in the plans may be used, at no additional cost, with prior approval by the Department.
- 5) Maintain the top of shaft concrete within ± 3 inches from the plan top of shaft elevation, measured after excess shaft concrete has been removed.
- 6) Design excavation equipment and methods so that the completed shaft excavation will have a planar bottom. Maintain the cutting edges of excavation equipment normal to the vertical axis of the equipment within a tolerance of $\pm 3/8$ inch per foot of diameter. The tip elevation of the shaft has a tolerance of ± 6 inches from final shaft tip elevation unless otherwise specified in the plans.

Drilled shaft excavations and completed shafts not constructed within the required tolerances are unacceptable. Correct all unacceptable shaft excavations and completed shafts to the satisfaction of the Engineer. When a shaft excavation is completed with unacceptable tolerances, present corrective measures designed by a registered Professional Engineer for approval.

4.0 MEASUREMENT.

4.1 Drilled Shafts. The Department will not measure for payment any trial batches required to demonstrate the adequacy of the concrete mix, method, or equipment; additional technique shafts required to demonstrate the adequacy of concrete placement methods or equipment; concrete required to fill an oversized casing or oversized excavation; obstruction removal; over-reaming or sidewall cleaning; inspection work or inspection equipment; materials or work necessary, including engineering analyses and redesign, to alter unacceptable work methods or to complete corrections for unacceptable work; and will consider them incidental to the Drilled Shaft.

4.1.1 Drilled Shaft, Common. The Department will measure the length, in linear feet, of drilled shaft above the top of rock elevation shown on the plans. The Department will consider this quantity Drilled Shaft, Common regardless of the character of material actually encountered.

4.1.2 Drilled Shafts, Solid Rock. The Department will measure the length, in linear feet, of drilled shaft below the top of rock elevation shown on plans. The Department will consider this quantity Drilled Shafts, Solid Rock regardless of the character of material actually encountered during excavation.

4.3 Rock Coring and Rock Sounding. The Department will measure subsurface exploration borings shown on the plans, as specified in part 3.5 of this Special Note, and as the Engineer directs, in linear feet to the nearest 0.1-foot. The Department will not measure over-

reaming or subsurface exploration performed deeper than the elevations indicated on the plans, unless directed by the Engineer, for payment and will consider it incidental to this item of work. Additionally, the Department will consider all mobilization, equipment, labor, thin wall tube samples, rock cores, standard penetration tests, incidental items, and operations necessary to complete the boring operations incidental to this item or work.

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

Payment shall be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Drilled Shaft, Diameter*, Common	Linear Foot
Drilled Shaft, Diameter*, Solid Rock	Linear Foot
Rock Sounding	Linear Foot
Rock Coring	Linear Foot

* *See Plan Sheets for sizes of shafts.*

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

November 7, 2005

SPECIAL NOTE FOR PROJECT IDENTIFICATION SIGNS

When directed by the Engineer, install Project Identification Signs furnished by the Department at each end of the project. The signs furnished by the Department will be approximately 44" X 72" or 72" X 120" aluminum sign blanks with standard color reflective sheeting with the applicable county and project names affixed. The Engineer will determine the size and location of the signs, if any, to be used on the project(s) at the time of construction.

Pick up the signs to be furnished by the Department at the District Traffic Operations Facility. Furnish posts and hardware for mounting the signs. Install the signs at locations determined by the Engineer. Maintain the signs during the duration of the project. Upon completion of the work, remove the signs and return them to District Traffic Operations Facility. Retain possession of the posts and hardware.

The Department will measure installation of the Project Identification Signs in individual units, Each. Payment at the contract unit price Each shall be full compensation for all labor, materials, equipment, and incidentals required for picking up, installing, maintaining, and returning the project identification signs furnished by the Department.

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
20588NC	Install Project Identification Signs	Each

SPECIAL PROVISION FOR WASTE AND BORROW SITES

The contractor is advised that it is their responsibility to gain U.S. Army Corp of Engineer's approval before utilizing a waste or borrow site that involves "Waters of the United States". "Waters of the United States" are defined as perennial or intermittent streams, ponds or wetlands. Ephemeral streams are also considered jurisdictional waters, and are typically dry except during rainfall, but have a defined drainage channel. Questions concerning any potential impacts to "Waters..." should be brought to the attention of the appropriate District Office for the Corps of Engineers for a determination, prior to disturbance. Any fees associated with obtaining approval from the U.S. Army Corp of Engineer or other appropriate regulatory agencies for waste and borrow sites is the responsibility of the contractor.

SPECIAL NOTES FOR PROTECTION OF RAILWAY INTERESTS

**1. AUTHORITY OF RAILROAD ENGINEER AND
DEPARTMENT ENGINEER:**

The authorized representative of the Railroad Company, hereinafter referred to as Railroad Engineer, shall have final authority in all matters affecting the safe maintenance of Railroad traffic of Railroad Company including the adequacy of the foundations and structures supporting the Railroad tracks.

The authorized representative of the Department, hereinafter referred to as the Engineer, shall have authority over all other matters as prescribed herein and in the Project Specifications.

2. NOTICE OF STARTING WORK:

A. The contractor shall not commence any work on railroad rights-of-way until the contractor has complied with the following conditions:

- a.** Given the Railroad written notice, with copy to the Engineer who has been designated to be in charge of the work, at least ten days in advance of the date the contractor proposes to begin work on Railroad rights-of-way. Notice to be given to:

Office of Chief Engineer
Bridges & Structures
Norfolk Southern Corporation
1200 Peachtree Street, N. E.
Atlanta, Georgia 30309

- b.** Obtained written authorization from the Railroad to begin work on Railroad rights-of-way, such authorization to include an outline of specific conditions with which the contractor must comply.
- c.** Obtained written approval from the Railroad of Railroad Protective Insurance Liability coverage as required by paragraph 14 herein.
- d.** Furnished a schedule for all work within the Railroad rights-of-way as required by paragraph 7, B.1.

- B. The Railroad's written authorization to proceed with the work shall include the names, addresses, and telephone numbers of the Railroad's representatives who are to be notified as hereinafter required. Where more than one representative is designated, the area of responsibility of each representative shall be specified.

3. **INTERFERENCE WITH RAILROAD OPERATIONS:**

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

4. **TRACK CLEARANCES:**

- A. The minimum track clearances to be maintained by the Contractor are shown on the Project Plans. However, before undertaking any work within Railroad right-of-way, or before placing any obstruction over any track, the Contractor shall:

1. Notify the Railroad's representative at least 72 hours in advance of the work.
2. Receive assurance from the Railroad's representative that arrangements have been made for flagging service as may be necessary.
3. Receive permission from the Railroad's representative to proceed with the work.
4. Ascertain that the Engineer has received copies of notice to the Railroad and of the Railroad's response thereto.

5. **CONSTRUCTION PROCEDURES:**

A. **General:**

Construction work and operations by the Contractor on Railroad property shall be:

1. Subject to the inspection and approval of the Railroad.
2. In accord with all of the Railroad's written specific conditions.
3. In accord with the Railroad's general rules, regulations and requirements including those relating to safety, fall protection and personal protective equipment.
4. In accord with these Special Notes.

B. **Excavation:**

The subgrade of an operated track shall be maintained with edge of beam at least 14'-0" from centerline of track and not more than 24-inches below top of rail. Contractor will not be required to make existing section meet this specification if substandard, in which case existing section will be maintained.

C. **Excavation for Structures:**

The Contractor will be required to take special precaution and care in connection with excavating and shoring pits, and in driving piles or sheeting for footings adjacent to tracks to provide adequate lateral support for the tracks and the loads which they carry, without disturbance of track alignment and surface, and to avoid obstructing track clearances with working equipment, tools or other material. All plans and calculations for shoring shall be prepared

and signed by a Registered Professional Engineer. The Registered Professional Engineer will be responsible for the accuracy for all controlling dimensions as well as the selection of soil design values that accurately reflect the actual field conditions. The procedure for doing such work, including the need of and plans and calculations for shoring shall first be approved by the Engineer and the Railroad Engineer, but such approval shall not relieve the Contractor from liability.

D. Demolition, Erection, Hoisting

1. Railroad tracks and other railroad property must be protected from damage during the procedure.
2. The Contractor is required to submit a plan showing the location of cranes, horizontally and vertically, operating radii, with delivery or disposal locations shown. The location of all tracks and other railroad facilities as well as all obstructions such as wire lines, poles, adjacent structures, etc. must also be shown.
3. Crane rating sheets showing cranes to be adequate for 150% of the actual weight of the pick. A complete set of crane charts, including crane, counterweight, and boom nomenclature is to be submitted.
4. Plans and computations showing the weight of the pick must be submitted. Calculations shall be made from plans of the existing and/or proposed structure showing complete and sufficient details with supporting data for the demolition or erection of the structure. If plans do not exist, lifting weights must be calculated from field measurements. The field measurements are to be made under the supervision of the Registered Professional Engineer submitting the procedure and calculations.
5. A data sheet must be submitted listing the types, size, and arrangements of all rigging and connection equipment.
6. A complete procedure is to be submitted, including the order of lifts, time required for each lift, and any repositioning or re-hitching of the crane or cranes.
7. All erection or demolition plans, procedures, data sheets, etc. submitted must be prepared, signed and sealed by a Registered Professional Engineer.

8. The Railroad's representative must be present at the site during the entire demolition and erection procedure period.
9. All procedures, plans and calculations shall first be approved by the Engineer and the Railroad Engineer, but such approval does not relieve the Contractor from liability.

E. Blasting:

1. The Contractor shall obtain advance approval of the Railroad Engineer and the Engineer for use of explosives on or adjacent to Railroad property. The request for permission to use explosives shall include a detailed blasting plan. If permission for use of explosives is granted, the Contractor will be required to comply with the following:
 - (a) Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Contractor and a licensed blaster.
 - (b) Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way radios.
 - (c) No blasting shall be done without the presence of an authorized representative of the Railroad. At least 72 hours advance notice to the person designated in the Railroad's notice of authorization to proceed (see paragraph 2B) will be required to arrange for the presence of an authorized Railroad representative and such flagging as the Railroad may require.
 - (d) Have at the job site adequate equipment, labor and materials and allow sufficient time to clean up debris resulting from the blasting without delay to trains, as well as correcting at his expense any track misalignment or other damage to Railroad property resulting from the blasting as directed by the Railway's authorized representative. If his actions result in delay of trains, the Contractor shall bear the entire cost thereof.
2. The Railroad representative will:
 - (a) Advise the Contractor of the amount of track time available for the blasting operation and clean up.

- (b) Have the authority to order discontinuance of blasting if, in his opinion, blasting is too hazardous or is not in accord with these special provisions.

F. Maintenance of Railroad Facilities:

1. The Contractor will be required to maintain all ditches and drainage structures free of silt or other obstructions that may result from construction operations and provide and maintain any erosion control measures as required. The Contractor will promptly repair eroded areas within Railroad rights-of-way and repair any other damage to the property of the Railroad or its tenants.
2. All such maintenance and repair of damages due to the Contractor's operations shall be done at the Contractor's expense.

G. Storage of Materials and Equipment:

Materials and equipment shall not be stored where they will interfere with Railroad operations, nor on the rights-of-way of the Railroad Company without first having obtained permission from the Railroad Engineer, and such permission will be with the understanding that the Railroad Company will not be liable for damage to such material and equipment from any cause and that the Railroad Engineer may move or require the Contractor to move, at the Contractor's expense, such material and equipment.

All grading or construction machinery that is left parked near the track unattended by a watchman shall be effectively immobilized so that it cannot be moved by unauthorized persons. The Contractor shall protect, defend, indemnify and save Railroad, and any associated, controlled or affiliated corporation, harmless from and against all losses, costs, expenses, claim or liability for loss or damage to property or the loss of life or personal injury, arising out of or incident to the Contractor's failure to immobilize grading or construction machinery.

H. Cleanup:

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

6. DAMAGES:

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

7. FLAGGING SERVICES:

A. When Required:

Under the terms of the agreement between the Department and the Railroad, the Railroad has sole authority to determine the need for flagging required to protect its operations. In general, the requirements of such services will be whenever the Contractor's personnel or equipment are or are likely to be, working on the Railroad's right-of-way, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a railroad structure or the railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging.

Normally, the Railroad will assign one flagman to a project; but in some cases, more than one may be necessary, such as yard limits where three (3) flagmen may be required. However, if the Contractor works within distances that violate instructions given by the Railroad's authorized representative or performs work that has not been scheduled with the Railroad's authorized representative, a flagman or flagmen may be required full time until the project has been completed.

B. Scheduling and Notification:

- 1. The Contractor's work requiring railroad flagging should be scheduled to limit the presence of a flagman at the site to a maximum of 50 hours per week. The Contractor shall receive Railroad approval of work schedules requiring a flagman's presence in excess of 40 hours per week.**
- 2.. Not later than the time that approval is initially requested to begin work on Railroad right-of-way, Contractor shall furnish to the Railroad and the Department a schedule for all work required to complete the portion of the project within**

Railroad right-of-way and arrange for a job site meeting between the Contractor, the Department, and the Railroad's authorized representative. Flagman or Flagmen may not be provided until the job site meeting has been conducted and the Contractor's work scheduled.

3. The Contractor, through the Engineer, will be required to give the Railroad representative at least 10 working days of advance written notice of intent to begin work within Railroad right-of-way in accordance with this special provision. Once begun, when such work is then suspended at any time, or for any reason, the Contractor, through the Engineer, will be required to give the Railroad representative at least 3 working days of advance notice before resuming work on Railroad right-of-way. Such notices shall include sufficient details of the proposed work to enable the Railroad representative to determine if flagging will be required. If such notice is in writing, the Contractor shall furnish the Engineer a copy; if notice is given verbally, it shall be confirmed in writing with copy to the Engineer. If flagging is required, no work shall be undertaken until the flagman, or flagmen are present at the job site. It may take up to 30 days to obtain flagging initially from the Railroad. When flagging begins, the flagman is usually assigned by the Railroad to work at the project site on a continual basis until no longer needed and cannot be called for on a spot basis. If flagging becomes unnecessary and is suspended, it may take up to 30 days to again obtain from the Railroad. Due to Railroad labor agreements, it is necessary to give 5 working days notice before flagging service may be discontinued and responsibility for payment stopped.
- 4.. If, after the flagman is assigned to the project site, an emergency arises that requires the flagman's presence elsewhere, then the Contractor shall delay work on Railroad right-of-way until such time as the flagman is again available. Any additional costs resulting from such delay shall be borne by the Contractor and not the Department or Railroad.

C. Payment:

1. The Department will be responsible for paying the Railroad directly for any and all costs of flagging which may be required to accomplish the construction.
2. The estimated cost of flagging is \$650 per day based on a 10-hour work day. This cost includes the base pay for the flagman, overhead, and includes an estimated \$50 per diem

charge for travel expenses, meals and lodging. The charge to the Department by the Railroad will be the actual cost based on the rate of pay for the Railroad's employees who are available for flagging service at the time the service is required.

3. Work by a flagman in excess of 8 hours per day or 40 hours per week, but not more than 12 hours a day will result in overtime pay at 1 and 1/2 times the appropriate rate. Work by a flagman in excess of 12 hours per day will result in overtime at 2 times the appropriate rate. If work is performed on a holiday, the flagging rate is 2 and 1/2 times the normal rate.
4. Railroad work involved in preparing and handling bills will also be charged to the Department. Charges to the Department by the Railroad shall be in accordance with applicable provisions of Subchapter B, Part 140, Subpart I and Subchapter G, Part 646, Subpart B of the Federal-Aid Policy Guide issued by the Federal Highway Administration on December 9, 1991, including all current amendments. Flagging costs are subject to change. The above estimates of flagging costs are provided for information only and are not binding in any way.

D. Verification:

1. The Railroad flagman assigned to the project will notify or make an attempt to notify the Engineer upon arrival at the job site on the first day (or as soon thereafter as possible) that flagging services begin and on the last day that he performs such services for each separate period that services are provided. The Engineer will document such notification in the project records. The Engineer will also sign the flagman's diary showing daily time spent and activity at the project site, when requested.

8. HAUL ACROSS RAILROAD:

- A. Where the plans show or imply that materials of any nature must be hauled across the Railroad, unless the plans clearly show that the Department has included arrangements for such haul in its agreement with the Railroad, the Contractor will be required to make all necessary arrangements with the Railroad regarding means of transporting such materials across the Railroad. The Contractor will be required to bear all costs incidental to such crossings whether services are performed by the contractor's own forces or by Railroad personnel.

- B. No crossing, including those arranged for by the Department, may be established for use of the Contractor for transporting materials or equipment across the track or tracks of the Railroad unless specific authority for its installation, maintenance, necessary watching and flagging thereof and removal has been obtained, and until a private crossing agreement has been executed between the Contractor and Railroad.

9. **WORK FOR THE BENEFIT OF THE CONTRACTOR:**

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

10. **COOPERATION AND DELAYS:**

- A. It shall be the Contractor's responsibility to arrange a schedule with the Railroad for accomplishing stage construction involving work by the Railroad or tenants of the Railroad. In arranging the schedule the contractor shall ascertain, from the Railroad, the lead time required for assembling crews and materials and shall make due allowance therefore.
- B. No charge or claim of the Contractor against either the Department or the Railroad Company will be allowed for hindrance or delay on account of railway traffic; any work done by the Railway Company or other delay incident to or necessary for safe maintenance of railway traffic or for any delays due to compliance with these special provisions.

11. **TRAINMAN'S WALKWAYS:**

Along the outer side of each exterior track of multiple operated track, and on each side of single operated track, an unobstructed continuous space suitable for trainman's use in walking along trains, extending to a line not less than 10 feet from centerline of track, shall be maintained. Any temporary impediments to walkways and track drainage encroachments or obstructions allowed during work hours while Railway's protective service is provided shall be removed before the close of each work day. If there is

any excavation near the walkway, a handrail, with 10'-0" minimum clearance from centerline of track, shall be placed.

12. GUIDELINES FOR PERSONNEL ON RAILROAD RIGHT-OF-WAY:

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

13. GUIDELINES EQUIPMENT ON RAILROAD RIGHT-OF-WAY:

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

- E. Swinging loads must be secured to prevent movement while train is passing.**
- F. No loads will be suspended above a moving train.**
- G. No equipment will be allowed within 25' of centerline of track without specific authorization of the flagman.**
- H. Trucks, tractors or any equipment will not touch ballast line without specific permission from railroad official and flagman.**
- I. No equipment or load movement within 25' or above a standing train or railroad equipment without specific authorization of the flagman.**
- J. All operating equipment within 25' of track must halt operations when a train is passing. All other operating equipment may be halted by the flagman if the flagman views the operation to be dangerous to the passing train.**
- K. All equipment, loads and cables are prohibited from touching rails.**
- L. While clearing and grubbing, no vegetation will be removed from railroad embankment with heavy equipment without specific permission from the Railroad Engineer and flagman.**
- M. No equipment or materials will be parked or stored on Railroad's property unless specific authorization is granted from the Railroad Engineer.**
- N. All unattended equipment that is left parked on Railroad property shall be effectively immobilized so that it cannot be moved by unauthorized persons.**
- O. All cranes and boom equipment will be turned away from track after each work day or whenever unattended by an operator.**

14. INSURANCE:

- A. In addition to any other forms of insurance or bonds required under the terms of the contract and specifications, the Prime Contractor will be required to carry insurance of the following kinds and amounts:**
 - 1. Commercial General Liability Insurance having a combined single limit of not less than \$2,000,000 per occurrence for all loss,**

damage, cost and expense, including attorneys' fees, arising out of bodily injury liability and property damage liability during the policy period. Said policy shall include "explosion, collapse, and underground hazard" ("XCU") coverage, shall be endorsed to name Railroad specified in item A.2 below as an additional insured, and shall include a severability of interests provision.

2. Railroad Protective Liability Insurance having a combined single limit of not less than \$2,000,000 each occurrence and \$6,000,000 in the aggregate applying separately to each annual period. If the project involves track over which passenger trains operate, the insurance limits required are not less than a combined single limit of \$5,000,000 each occurrence and \$10,000,000 in the aggregate applying separately to each annual period. Said policy shall provide coverage for all loss, damage or expense arising from bodily injury and property damage liability, and physical damage to property attributed to acts or omissions at the job site.

The standards for the Railroad Protective Liability Insurance are as follows:

The insurer must be rated A- or better by A.M. Best Company, Inc.

The policy must be written using one of the following combinations of Insurance Services Office ("ISO") Railroad Protective Liability Insurance Form Numbers:

CG 00 35 01 96 and CG 28 31 10 93; or CG 00 35 07 98 and CG 28 31 07 98; or CG 00 35 10 01; or CG 00 35 12 04.

The named insured shall read:

The Cincinnati New Orleans & Texas Pacific Railway
and

Norfolk Southern Railway Company

Three Commercial Place

Norfolk, Virginia 23510-2191

Attn: D. W. Fries, Director Risk Management

The description of operations must appear on the Declarations, must match the project description in this agreement, and must include the appropriate Department project and contract identification numbers.

The job location must appear on the Declarations and must include the city, state and appropriate highway name/number.

The name and address of the prime contractor must appear on the Declarations.

The name and address of the Department must be identified on the Declarations as the "Involved Governmental Authority or Other Contracting Party."

Other endorsements/forms that will be accepted are:

**Broad Form Nuclear Exclusion – Form IL 00 21
30-day Advance Notice of Non-renewal or cancellation
Required State Cancellation Endorsement
Quick Reference or Index Form CL/IL 240**

Endorsements/forms that are NOT acceptable are:

Any Pollution Exclusion Endorsement except CG 28 31

Any Punitive or Exemplary Damages Exclusion

Known injury or Damage Exclusion form CG 00 59

Any Common Policy Conditions form

Any other endorsement/form not specifically authorized in item no. 2.h above.

- B. If any part of the work is sublet, similar insurance, and evidence thereof as specified in A.1 above, shall be provided by or on behalf of the subcontractor to cover its operations on Railroad’s right of way.**

- C. Prior to entry on Railroad right-of-way, the original Railroad Protective Liability Insurance Policy shall be submitted by the Prime Contractor to the Department at the address below for its review and transmittal to the Railroad. In addition, certificates of insurance evidencing the Prime Contractor’s and any subcontractors’ Commercial General Liability Insurance shall be issued to the Railroad and the Department at the addresses below, and forwarded to the Department for its review and transmittal to the Railroad. The certificates of insurance shall state that the insurance coverage will not be suspended, voided, canceled, or reduced in coverage or limits without (30) days advance written notice to Railroad and the Department. No work will be permitted by Railroad on its right-of-way until it has reviewed and approved the evidence of insurance required herein.**

DEPARTMENT:

**Steve Waddle, Director
Division of Contract Procurement
KY Transportation Cabinet
200 Mero Street, 3rd Floor West
Frankfort, Kentucky 40622**

RAILROAD:

**Mr. D. W. Fries, ARM
Risk Manager
Norfolk Southern Corporation
Three Commercial Place
Norfolk, VA 23510-2191**

15. FAILURE TO COMPLY:

In the event the Contractor violates or fails to comply with any of the requirements of these Special Provisions:

- A. The Railroad Engineer may require that the Contractor vacate Railroad property.**

B. The Engineer may withhold all monies due the Contractor on monthly statements.

Any such orders shall remain in effect until the Contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

16. PAYMENT FOR COST OF COMPLIANCE:

No separate payment will be made for any extra cost incurred on account of compliance with these special provisions. All such costs shall be included in prices bid for other items of the work as specified in the payment items.

**Office of Chief Engineer
Bridges & Structures
Norfolk Southern Corporation
1200 Peachtree Street, N. E.
Atlanta, GA 30309**

**Date: June 8, 2007
Railroad File: 117-29489
Railroad Milepost: 21.25 (CNO&TP)**

Right-of-Way Certification Form

Federal Funded

State Funded

This form must be completed and submitted to FHWA with the PS&E package for federal-aid funded Interstate, Appalachia, and Mega projects. This form shall also be submitted to FHWA for all federal-aid projects that fall under conditions No. 2 & 3 outlined elsewhere in this form. For all other federal-aid projects, this form shall be completed and retained in the KYTC project file.

Date: APRIL 25, 2007

Project #: FD 52 C008 6953701 R

County: BOONE

Item #: 06-1046.00

Federal #: ACBRZ 0603 (175)

Letting Date: June 22, 2007

Projects that require NO new or additional right-of-way acquisitions and/or relocations

The proposed transportation improvement will be built within the existing rights-of-way and there are no properties to be acquired, individuals and families ("relocatees") to be relocated, or improvements to be removed as a part of this project.

Projects that require new or additional right-of-way acquisitions and/or relocations

Per 23 CFR 635.309, the KYTC hereby certify that all relocatees have been relocated to decent, safe, and sanitary housing or that KYTC has made available to relocatees adequate replacement housing in accordance with the provisions of the current FHWA directive(s) covering the administration of the Highway Relocation Assistance Program and that at least one of the following three conditions has been met. (**Check those that apply.**)

1. All necessary rights-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 these improvements and enter on all land. **Fair market value has been paid or deposited with the court.**

2. Although all necessary rights-of-way have 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. Trial or appeal of some parcels may be pending in court and on other parcels full legal possession has not been obtained, but an Interlocutory Judgment has been granted, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish these improvements. **Fair market value has been paid or deposited with the court for most parcels. Fair market value for all pending parcels will be paid or deposited with the court prior to start of construction. (See note.)**

Note: The KYTC shall re-submit a right-of-way certification form for this project prior to the start of construction, verifying that fair market value for all parcels has been paid or deposited with the court.

Right-of-Way Certification Form



3. The acquisition or right of occupancy and use of a **few** remaining parcels are not complete and/or some parcels still have occupants. However, all remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. The KYTC is hereby requesting authorization to advertise this project for bids and to proceed with physical construction even though the necessary rights-of-way will not be fully acquired, and/or some occupants will not be relocated, and/or the fair market value will not be paid or deposited with the court for some parcels at the start of construction. KYTC will fully meet all the requirements outlined in 23 CFR 309(c) (3) and 49 CFR 102(j) and will expedite completion of all acquisitions, relocations, and full payments after construction starts. A full explanation and reason for this request, including identification of each such parcel and dates on which acquisitions, payments, and relocations will be completed, is attached to this certification form for FHWA consideration and approval. (See note.)

Note: The KYTC may request authorization on this basis only in unique and unusual circumstances. Proceeding to construction of projects on this basis shall be the exception and never become the rule. In all FHWA-approved cases, the KYTC shall make extraordinary efforts to expedite completion of the acquisition, payment for all affected parcels, and the relocation of all relocatees promptly 30 days after start of construction.

Approved: Henry C. Germann
Printed Name

/s/ Henry C. Germann District ROW Supervisor
Approved

Approved: Elsworth Turner
Printed Name

_04-26-07 Director of ROW & Utilities or Designee
Approved

Approved: Olivia Michael
Printed Name

_04-26-07 FHWA, Right-of-Way Officer
Approved

Right-of-Way Certification Form

Date: April 25, 2007

Project #: FD 52 C008 6953701 R County: BOONE
 Item #: 06-1046.00 Federal #: ACBRZ 0603 (175)
 Letting Date: June 22, 2007

This project has 9 total number of parcels to be acquired, and 2 total number of individual or families to be relocated, as well as 1 total number of businesses to be relocated.

- 9 Parcels were acquired by a signed fee simple deed and fair market value has been paid
- Parcels have been acquired through condemnation and IOJ granted by the court and fair market value has been deposited with the court
- Parcels have not been acquired at this time (*explain below for each parcel*)
- Parcels have been acquired but fair market value has not been paid or has not been deposited with the court (*explain below for each parcel*)(**used on Type 3 only**)
- Some displacees have not been relocated from all parcels: (*explain below for each parcel*)(*notes to plans may be required*)

Parcel #	Name/Station	Explanation for delayed acquisition, delayed relocation, or delayed payment of fair market value	Proposed date of payment or of relocation

There are 0 billboards and/or 0 cemeteries involved on this project.
 There are 0 water or monitoring wells on parcels 0 and 0. All have been acquired and are the responsibility of the project contractor to close/cap.

SPECIAL NOTES FOR UTILITY CLEARANCE IMPACT ON CONSTRUCTION

Boone County
FD 52 008 69537 01U
REPLACE BRIDGE & APPROACHES AT
NS RR 100' EAST US-25 ON HIGH ST. IN WALTON
Item No. 06-1046.00

GENERAL NOTES AND NOTICES RELATIVE TO WATER CONSTRUCTION

The information provided below in these Special Notes For Utility Clearance Impact on Construction may not be exact nor complete. The information provided is for the contractor's use in planning the execution of the work. It shall be the road contractor's responsibility to verify the completeness and/or accuracy of all such information being furnished.

The road contractor MUST use flowable fill as the backfill media any place water lines cross under existing or proposed roadway surfaces. It should also be noted that the cost of the flowable fill shall be incidental to the cost of the water line being installed.

All existing gas, water and sanitary sewer services are to be maintained throughout road construction. Temporary water and sewer facilities to maintain service are to be provided and paid for by the road contractor as incidental to road construction. No additional compensation will be paid the contractor for temporary work and materials to maintain existing water and sewer services. **No unauthorized discharge of sewage due to the road contractor's work will be allowed.**

The contractor shall notify the utility owner(s) of all planned shutdowns of utility mains or utility service to customers at least three business days in advance. Advance notice will allow for customers to be notified by the utility owner. Any unannounced disruption of gas, water, or sanitary sewer services or mains that inconveniences any customer is to be avoided.

Any intentional or accidental disruption of service due to damage to gas, sewer or water mains caused by any of the contractor's operations without three days advance notice to the utility owner shall be cause for the Cabinet to charge liquidated damages in the amount of ten thousand dollars per day (\$10,000/day) per occurrence against the contractor until such time as the utility main is restored.

Any intentional or accidental disruption of any individual gas, water or sewer service caused by any of the contractor's operations without three days advance notice to the utility owner shall be cause for the Cabinet to charge liquidated damages in the amount of five thousand dollars per day (\$5,000/day) per occurrence against the contractor until such time as service is restored.

In the case of a main disruption, liquidated damages shall be charged at the main disruption rate only. Liquidated damages shall not be charged in addition for service disruptions when a main disruption is involved.

The City of Walton will provide inspection when work is being performed by the contractor on their facilities. It will be the road contractor's responsibility to notify the City of the need for inspection service.

The Kentucky Division of Water permit for relocation of City of Walton water main facilities is included in the proposal.

CITY OF WALTON WATER MAIN facilities are to be relocated by the road contractor using plans inserted into the project plans and specifications inserted into the proposal.

SPECIAL NOTES FOR UTILITY CLEARANCE, IMPACT ON CONSTRUCTION (CONTINUED)
ITEM NO 1046.00

Unplanned service disruption will result in the road contractor being assessed a disincentive in the amount of \$5,000.00 per day.

No additional compensation will be paid the contractor for extra depth main construction.

CITY OF WALTON SANITARY SEWER facilities will not be affected by this road construction and will remain as shown on the plan sheets.

All existing sanitary sewers are to be maintained throughout road construction. Temporary facilities to maintain a customer service are to be provided and paid for by the road contractor as incidental to road construction.

Unplanned service disruption will result in the road contractor being assessed a disincentive in the amount of \$5,000.00 per day.

DUKE ENERGY ELECTRIC & GAS, CINCINNATI BELL TELEPHONE AND INSIGHT COMMUNICATIONS (CATV) FACILITIES are to be relocated by the respective utility companies to accommodate this project. It is estimated that this work will be completed on or about September 1, 2007. Some of this relocation work may still be in progress when the road contractor arrives. The road contractor is to coordinate and cooperate with these companies until completion of their utility work.

RAILROADS: CNO & TP R/R—NORFOLK SOUTHERN CORP has facilities involved in this project. Appropriate notes are included elsewhere in the project proposal.

PROTECTION OF UTILITIES

THE LOCATION OF UTILITIES PROVIDED IN THE CONTRACT DOCUMENTS HAS BEEN FURNISHED BY THE FACILITY OWNERS AND/OR BY REVIEWING RECORD DRAWINGS AND MAY NOT BE ACCURATE. IT WILL BE THE ROADWAY CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITIES BEFORE EXCAVATING BY CALLING THE VARIOUS UTILITY OWNERS AND BY EXAMING ANY SUPPLEMENTAL INFORMATION SUPPLIED BY THE CABINET. IF NECESSARY, THE ROADWAY CONTRACTOR SHALL DETERMINE THE EXACT LOCATION AND ELEVATION OF UTILITIES BY HAND DIGGING TO EXPOSE UTILITIES BEFORE EXCAVATING IN THE AREA OF A UTILITY. THE COST FOR REPAIR AND ANY OTHER ASSOCIATED COSTS FOR ANY DAMAGE TO UTILITIES CAUSED BY THE ROADWAY CONTRACTOR'S OPERATIONS SHALL BE BORNE BY THE ROADWAY CONTRACTOR.

THE CONTRACTOR IS ADVISED TO CONTACT THE BUD ONE-CALL SYSTEM; HOWEVER, THE CONTRACTOR SHOULD BE AWARE THAT THE OWNERS OF UNDERGROUND FACILITIES ARE NOT REQUIRED TO BE MEMBERS OF THE BUD ONE-CALL SYSTEM. IT MAY BE NECESSARY FOR THE CONTRACTOR TO CONTACT THE COUNTY COURT CLERK TO DETERMINE WHAT UTILITY COMPANIES HAVE FACILITIES IN THE PROJECT AREA.

WATER SPECIFICATIONS

- **Owner:** City of Walton
40 N. Main Street
P.O. Box 95
Walton, KY 41094
Ph. 859-485-4383

- **Description:** Water Main Relocation

- **Location:** Walton, Boone County
High Street Bridge Replacement
FD42 008 3011
BRZ 0060 3155
Item No. 06-1046.00

- **Date:** May 14, 2007

Water Specifications

Section I DESCRIPTION OF BID ITEMS

1. **RELOCATE FIRE HYDRANT:** Includes allowing for the City of Walton's Inspector to inspect the existing fire hydrant prior to reuse, returning unusable fire hydrants to the City of Walton's Warehouse and picking up a replacement hydrant for use if the existing fire hydrant is determined unfit for reuse. Includes all labor, equipment, excavation, materials and backfill to relocate existing fire hydrant to valve, pipe, and anchoring tee as indicated on plans and on standard drawings contained in the plans. The pipe, valve and anchoring tee shall be paid under separate bid items when required. The Contractor to supply and install all anchoring couplings, fire hydrant extensions, concrete blocking, restoration, granular drainage material, etc. needed to install the fire hydrant complete and ready for use as shown on the plans, and in accordance with the specifications and standard drawings. No additional payment will be made for rock excavation. Paid EACH (EA) when complete.
2. **DUCTILE IRON PIPE AND MECHANICAL JOINT PIPE (ALL SIZES)** Includes the specified pipe, polyethylene wrap, labor, equipment, excavation, bedding, restoration, disinfection, testing, backfill, etc. required to install the specified pipe at the location shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. No additional payment will be made for rock excavation. Paid LINEAR FOOT (LF).
3. **TEES, BENDS, REDUCERS, AND INCREASERS (ALL SIZES)** Includes the specified ductile iron or mechanical joint fitting, polyethylene wrap, labor, equipment, excavation, blocking, anchoring, disinfection, backfill, restoration, etc. to install the specified fitting at the locations shown on the plans in accordance with the specifications and standard drawing complete and ready for use. Paid EACH (EA) when complete.
4. **VALVES (ALL SIZES)** Includes the specified resilient seat gate valve for valve sizes of 300 mm (12") and smaller, and butterfly valves for larger valves, polyethylene wrap, labor, equipment, excavation, anchoring (if any), valve box and valve stem extensions, backfill, 600 mm x 600 mm x 100 mm (2'x2'x4") concrete pad, restoration, testing, disinfection, etc. required to install the specified valve at the location shown on the plans in accordance with the specifications and standard drawings complete and ready for use. Paid EACH (EA) when complete.
5. **ADJUST EXISTING WATER VALVE BOX TO GRADE** Includes all labor, equipment, valve box and valve stem extensions (if required), excavation, backfill, 600 mm x 600 mm x 100 mm (2'x2'x4") concrete pad, restoration, etc. to adjust the top of the box to finished grade complete and ready for use. Paid EACH (EA) when complete.
6. **COPPER SERVICE (ALL SIZES)** Includes the specified copper service, labor, equipment, excavation, backfill, testing, disinfection, and restoration to install the

pipe at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready for use. No additional payment will be made for rock excavation or for bedding required in rock excavation. Paid LINEAR FOOT (LF)

7. RECONNECT TO SERVICE Includes all labor and materials, including fittings and bends necessary to connect new service line to existing service line. Paid EACH (EA) when complete.
8. RELOCATE WATER METERS (ALL SIZES) Includes all labor, equipment, excavation, additional fittings, disinfection, testing, restoration, etc. to relocate the existing water meter (whatever size exists), meter yoke, meter box, casting, etc. from its old location to the location shown on the plans or as directed, in accordance with the specifications and standard drawings complete and ready for use. The required new service pipe will be paid under separate bid items. Paid EACH (EA) when complete.
9. RECONNECT TO MAIN Includes all labor and materials, including fittings and bends and valve necessary to connect service line to the water main. Where the reconnect is made to an existing main this item includes reusing the existing service tap or abandoning the existing service tap by shutting off the curbstop at the existing main and disconnecting the copper service which is being abandoned. Paid EACH (EA) when complete.
10. ADJUST WATER METER BOX TO GRADE Include all labor, equipment, excavation, materials, backfill, restoration, etc. to adjust the meter casting to finished grade (whatever size exists) at the location shown on the plans or as directed in accordance with the specifications and standard drawings complete and ready for use. Paid EACH (EA) when complete.
11. TIE-IN TO (ALSO, CONNECT TO) EXISTING MAIN (ALL SIZES) Includes all labor, equipment, excavation, fittings, sleeves, couplings, blocking, anchoring, restoration, disinfection, testing and backfill required to make the tie-in as shown on the plans, and in accordance with the specifications complete and ready for use. Pipe for tie-ins shall be paid under separate bid items and shall be measured thru tie-in fittings. Paid EACH (EA) when complete.
12. PLUG AND BLOCK (ALL SIZES) This item shall include the specified plug and any labor, equipment, excavation, concrete, backfill and restoration required to install the plug and blocking at the location shown on the plans or as directed in accordance with the specifications. Paid EACH (EA) when complete.
13. ADJUST FIRE HYDRANT TO GRADE Includes all labor, equipment, excavation, materials and backfill to adjust the existing fire hydrant using the fire hydrant manufacturer's extension kit for adjustments of 18" or less. Adjustments greater than 18" require anchoring couplings and vertical bends to adjust to grade. The Contractor will supply and install all anchor couplings, bends, fire hydrant extension, concrete blocking, restoration, granular drainage material, etc. needed to adjust the fire hydrant complete and ready for use as shown on the plans, and in accordance with the specifications and standard drawings. This also includes allowing for the City of Walton's Inspector to inspect the existing fire hydrant prior to adjusting,

returning unusable fire hydrants to the City of Walton's Warehouse and picking up a replacement hydrant and piping for use if the existing fire hydrant is determined unfit for adjustment. If it is determined by the City of Walton that the existing hydrant is unfit for adjustment the City will supply the hydrant and piping necessary to make adjustment. The Contractor shall furnish the equipment, labor and materials (other than fire hydrant and piping) to install the hydrant, piping, concrete blocking, restoration, granular drainage material, etc, needed to adjust the fire hydrant complete and ready for use as shown on the plans and in accordance with the specifications and standard drawings. No additional payment will be made for rock excavation. Paid EACH (EA) when complete.

14. AIR RELEASE VALVE This item shall include the air release valve, valve box and lid, tapping the main, and any labor, equipment, excavation, concrete backfill and restoration required to install the air release valve at the location shown on the plans or as directed in accordance with the specifications. Paid EACH (EA) when complete.
15. FIRE HYDRANT ASSEMBLY Includes all labor, equipment, excavation, materials and backfill to install fire hydrant. The Contractor will supply and install all anchor couplings, bends, fire hydrant extension, concrete blocking, restoration, granular drainage material, etc, needed to install the fire hydrant complete and ready for use as shown on the plans, and in accordance with the specifications and standard drawings. No additional payment will be made for rock excavation. Paid EACH (EA) when complete.
16. CONCRETE ENCASUREMENT Includes all labor, equipment, excavation, backfill, concrete, restoration, material, etc. to construct the concrete encasement of the water main stream crossing as shown on the plans, and in accordance with the specifications and standard drawings. Work is to comply with the City of Walton's Standards Paid LINEAR FOOT (LF) when complete.
17. CASING PIPE Includes the casing pipe (K.D.O.T. Spec.), labor, equipment, excavation, bedding, restoration, backfill, etc. required to install the casing pipe at the location shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. No additional payment will be made for rock excavation. Paid LINEAR FOOT (LF).
18. TAPPING SLEEVE AND VALVE Includes tapping sleeve and valve, labor and materials, equipment, excavation, backfill, and incidental items, as shown on plan in accordance with the specifications and standard drawings complete and ready for use.

Section II GENERAL INSTRUCTIONS AND SPECIAL NOTES

1. **WATER SHUTDOWNS** No customer of the City of Walton shall be without water for a period longer than 4 hours unless approved by the City of Walton. All customers to be without water shall be notified 24 hours in advance. No active water main shall be shut down without prior approval of the City of Walton. Tie-ins on this project may have to be scheduled at night, on weekends or other off peak hours.
2. **PROTECTION OF EXISTING UTILITIES** The existing utilities shown on the plans are shown as best known at the time the plans were developed and are to be used as a guide only by the Contractor. The Contractor shall use all means at his disposal to accurately locate all affected utilities, whether shown on the plans or not, prior to excavation and protect these utilities during construction. Any damage to existing utilities during construction that are shown or not shown on the plans shall be repaired at the Contractor's expense.
3. **STATIONS AND DISTANCES** All stations and distances indicated in the plans or specifications are approximate; therefore, some minor adjustment may have to be made during construction to fit actual field conditions.
4. **FIRE HYDRANT DISCONNECTION** No fire hydrant shall be removed from service without prior approval of the City of Walton, and the proper fire authority.
5. **RESIDENT ENGINEER** "Resident Engineer" as referred to in the specifications or in the plans shall mean the Kentucky Department of Highways Engineer in charge of the project and his inspectors.
6. **WATER MAIN INSPECTION** City of Walton and their inspectors, and the resident engineer and his inspectors shall be jointly responsible for inspection of water line facilities installation. Where the phrase "as directed" appears in these specifications without defining who is doing the directing, it shall be understood "as directed" means jointly directed by the Resident Engineer and the City of Walton.
7. **PRIOR INSPECTION OF EXISTING METER SETTINGS** The Contractor with the City of Walton's inspector shall make an inspection of all meter settings to adjusted or relocated prior to construction. Any meter setting not up to the City of Walton's standard shall be noted and parts furnished to the Contractor by the City of Walton for installation as needed. Any water meter setting, fire hydrant or any other water facilities that are to be relocated, adjusted, reused or remain and are damaged by the Contractor shall be repaired at the contractors expense. Any old water meter settings removed and not reused shall be turned over to the City of Walton.
8. **SPECIAL BACKFILL NOTE** No sand or granular material shall be used for backfill above 300 mm (12") over the top of the pipe or around structures. Only compacted soil or flowable fill shall be used unless approved or otherwise directed by the Resident Engineer.
9. **GENERAL SAFETY** For the security and safety of people in and adjacent to trenches or construction operations, the "Manual of Accident Prevention in

Construction" published by the Associated General Contractors Association of America, the "Manual On Uniform Traffic Control Devices" published by the Federal Highway Administration, and the safety regulations of the appropriate state and local agencies shall be followed when specifically applicable, or by similarity of operation or as necessary for adequate protection.

10. MATERIAL HANDLING Pipe, fittings, valves, hydrants, and accessories shall be loaded, unloaded, and handled by lifting with hoists or skidding so as to avoid shock or damage. Under no circumstances shall such materials be dropped. Pipe handled on skidways shall not be skidded or rolled against other pipe.
11. PROTECTION OF PAVEMENT Where main construction is located in or adjacent to pavements, all construction equipment shall have rubber tires. Crawler equipment will be permitted when there is no danger of damaging pavement.
12. NOISE, DUST AND ODOR CONTROL The Contractors construction activities shall be conducted so as to eliminate all unnecessary noise, dust, and odors. The use of oil or other materials, for dust control, which may cause tracking, will not be permitted.
13. EXCAVATION AND CONSTRUCTION MATERIALS All excavated material and all construction materials in prosecution of the work shall be deposited so as not to endanger the work, create unnecessary annoyance to the public, or interfere with natural drainage courses. During the course of the work, all material piles shall be kept trimmed up and maintained in a neat, workmanlike manner. All material piles shall be kept a reasonable distance away from roadways so as not to cause a hazard and block the motorist's view.
14. PROTECTION OF TREES, SHRUBS, AND OTHER ITEMS TO REMAIN Special care shall be taken by the Contractor to avoid unnecessary damage to trees or shrubs and their root systems or any other items shown to remain. Should the Contractor do unnecessary damage to any item shown to remain, the item shall be repaired or replaced at the contractors expense. Should unnecessary damage be caused to items to remain and is determined not repairable, the Contractor shall compensate the owner for the loss if any.
15. UNACCEPTABLE EXCAVATED TRENCH MATERIAL Any excavated trench material which is determined unacceptable for backfill shall be removed from the area and wasted at a location acquired by the Contractor and approved by the Resident Engineer. Acceptable backfill material shall be acquired by the Contractor at a location approved by the Resident Engineer. The disposition and handling of unacceptable material and the acquisition and handling of acceptable material shall be at the Contractors expense.
16. BLASTING ROCK No blasting of rock shall be performed without specific permission of the Resident Engineer. Blasts shall be properly covered and all utilities and structures in the area shall be properly protected. Warning shall be given to all persons in the area who could be affected by the blasting. Blasting shall be at the risk of the Contractor who shall be liable for all damages to persons or property caused by the blasting. All blasting shall be performed in accordance with all regulations of the Kentucky Department of Mines and Minerals and all other

governing agencies having jurisdiction. The Kentucky Department of Mines and Minerals, area emergency response agencies, utility companies with utilities in the area shall be notified of the blasting sufficiently in advance.

17. **ABANDONED VALVES** The valve boxes shall be removed from all abandoned valves prior to final roadway paving. This shall be done to the satisfaction of the Engineer. Paving over a valve box without removing same will not be acceptable. No separate payment will be made for removal of valve boxes but shall be considered incidental to water line construction.
18. **SALVAGED AND STOCKPILED ITEMS** The Contractor shall salvage all items in a workmanlike manner. Any item damaged by the Contractor thru negligence shall be replaced with new items at the contractors expense. All salvaged items to be stockpiled and picked up by BCWD, shall be stored in a safe place until pickup. The Contractor is to notify BCWD at 859-586-6155 when salvaged items are available for pickup.
18. **CONSTRUCTION PROCEDURE** The successful contractor to prepare construction procedure with respect to the installation of water utilities. The Sequence and Procedure of Water Utilities Construction shall be approved by the City of Watlon's Engineering Department prior to the beginning of the water utilities relocations.

Section III MATERIAL SPECIFICATIONS

1. CONCRETE All concrete shall be Class A in accordance with KYDOH Standard Specs. for Road and Bridge Construction current edition and shall be placed in accordance with same unless otherwise noted. The concrete shall be placed to the dimensions as required in the plans or specifications. Reinforcing steel shall be placed in the concrete as required in the plans or specifications.
2. CONCRETE REINFORCING STEEL All reinforcing steel shall be Grade 40. The size, location, placement, and quantity shall be as required in the plans or specifications.
3. WATER MAIN
 - A. **DUCTILE IRON PIPE.** Ductile iron pipe shall meet the requirements of ANSI A21.51 (AWWA C151)
 1. **Material.** The chemical constituents shall meet the physical property recommendations of ASTM A536 to ensure that the iron is suitable for satisfactory drilling and cutting.
 2. **Minimum Thickness.** Unless otherwise shown on the plans, the minimum thickness of the barrel of the pipe shall be Class 50. All pipe shall be clearly marked as to class by the manufacturer.
 3. **Coating and Lining.** The pipe shall be coated outside with a bituminous coating in accordance with ANSI A 21.51 (AWWA C151) and lined inside with cement mortar and seal coated in accordance with ANSI A21.4 (AWWA- C104).
 4. **Fittings & Glands.** Fittings and glands shall be ductile iron as specified in Section 3A, "Ductile Iron Fittings".
 5. **Polyethylene Encasement.** Ductile Iron Pipe shall be encased with Polyethylene film conforming to ANSI A21.5 (AWWA C105)
 - B. **PIPE JOINTS**
 1. **Push on and Mechanical.** - Push-on and mechanical joints including accessories shall conform to ANSI A21.11 (AWWA-C111). Bolts shall be high strength COR-10 tee head with hex nuts. The maximum deflection at push-on joints and/or mechanical joints shall be 5 degrees or as recommended by the Manufacturer.
 2. **Flanged.** - Flanged joints shall meet the requirements of ANSI A21.15 (AWWA C115) or ANSI B16.1
 - a. **Gaskets.** All flanged joints shall be furnished with 1/16 inch thick full face red rubber.

b. Bolts. Bolts shall have American Standard heavy unfinished hexagonal head and nut dimensions all a specified in ANSI B18.2. For bolts of 1-3/4 inches in diameter and larger, bolt studs with a nut on each end are recommended. Material for bolts and nuts shall conform to ASTM A307, Grade B.

3. Restrained. - If restrained joint system is required on the plans, all pipes, bends, valves, etc. shall be restrained. Restrained joints shall consist of a device to provide a flexible, tied joint. Acceptable devices would be a clamp type joint or bell-bolt flexible tied joint or approved equal. Method of restraining and laying schedule shall be approved by the Engineer prior to the start of the project. Manufacturer installation instructions shall be followed. Restrained joints shall be capable of withstanding a maximum joint pressure of 14 kg/sq.cm (200 psi.) unless otherwise noted.

a. Bell and Spigot Bell and spigot joints shall conform to ANSI A21.6.

b. Push-on. Restrained push-on joints shall conform to ANSI A21.11 (AWWA C111). When bolts and nuts are required, they shall be corrosion resistant high strength steel. **Mechanical joints with retainer gland and Lok-Set joints are not acceptable unless otherwise specified.**

4. FITTINGS

A. DUCTILE IRON FITTINGS. Ductile Iron Compact Fittings and accessories shall conform to AWWA C153 and Full Body Fittings - and accessories to AWWA C110. Bolts and nuts shall be high strength, corrosion resistant alloy, such as "Cor-Ten" or approved equal.

1. Working Pressures. All fittings and accessories shall be Ductile Iron, rated for a minimum of 14 kg/sq.cm (200 psi) working pressure or as specified herein. The fittings and accessories shall be new and unused. (NOTE: Certain areas of the District's service area require materials used, to be of a higher working pressure than 14 kg/sq.cm (200 psi.))

2. Coating and Lining. The fittings shall be coated outside with a bituminous coating in accordance with ANSI A21.10 (AWWA C110) and lined inside with cement mortar and seal coated in accordance with ANSI A21.4 (AWWA C104).

3. Fittings and Glands. All pipe fittings shall be mechanical joint fittings. Mechanical joints shall conform to AWWA C111.

4. Polyethylene Encasement. Ductile Iron Fittings shall be encased with polyethylene film conforming to ANSI A21.5 (AWWA C105)

B. JOINTS

1. Mechanical. Mechanical joints including accessories shall conform to ANSI A21.11 (AWWA C111). Glands shall be ductile iron. Bolts shall be high strength COR-10 tee head with hex nuts.
2. Flanged. Flanged joints shall meet the requirements of ANSI A21.15 (AWWA C115) OR ANSI B16.1 and be used with the express approval of the Engineer.
 - a. Gaskets. All flanged joints shall be furnished with 1/16 inch thick full face red rubber.
 - b. Bolts. Bolts shall be stainless steel and have American Standard heavy unfinished hexagonal head and nut dimensions all a specified in ANSI B18.2. For bolts of 1-3/4 inches in diameter and larger, bolt studs with a nut on each end are recommended. Material for bolts and nuts shall conform to ASTM A307, Grade B.
3. Restrained. If restrained joints is shown on the plans, all pipe, bends, valves, etc. shall be restrained.
 - a. Bell and Spigot. Bell and spigot joints shall conform to ANSI A21.6.

5. POLYETHYLENE WRAP

All ductile iron pipe, fittings, valves, and fire hydrant leads shall be polyethylene wrapped, installed according to the current edition of AWWA C105. Ductile iron fittings, valves, and fire hydrant leads used in the installation of P.V.C. pipe shall be included.

- A. Material. Polyethylene wrap shall be a minimum of a 8-mil polyethylene tube.
- B. Installation. The contractor shall cut the roll in tubes 600 mm (2 feet) longer than a standard length of pipe. Each tube shall be slipped over the length of pipe, centering to allow a 300 mm (1') overlap on each adjacent pipe section. After the lap is made, slack in the tubing shall be taken up for a snug fit and the overlay shall be secured with polyethylene tape.

Pipe shall not be wrapped and stored on site for any period of time, but wrapped and immediately placed in the trench, fittings shall be wrapped prior to installing blocking or pads. Polyvinyl chloride pipe requires no wrap. Odd shaped appurtenances such as valves, tees, fittings, and other ferrous metal pipeline appurtenances shall be wrapped by using a flat sheet of polyethylene. Wrapping shall be done by placing the sheet under the appliances and bringing the edges together, folding twice, and taping down.

6. FIRE HYDRANTS

- A. DESCRIPTION. The Contractor shall provide all labor, materials, tools, and equipment required to furnish and install in good workmanlike manner all fire hydrants complete and ready for service where shown on the plans or where directed by the Engineer and as specified herein.

- B. FIRE HYDRANTS. Fire hydrants shall conform to AWWA C502. Hydrants shall conform to the standards of the City of Walton as SHOWN on the plans. All fire hydrants shall have auxiliary valves for isolating water flow to the hydrant. All fire hydrants and auxiliary valves shall be positively locked to the water main by restrained joints, hydrant adapters, or other approved method.

Hydrants shall be designed to 14 kg/sq.cm (200 psi) working pressure and shall be shop tested to 21 kg/sq.cm (300 psi) hydrostatic pressure with the main valve both open and closed. The barrel shall have a breakable safety section and/or base bolts just above the ground line. Hydrants shall have a main valve opening of 5 1/4 inches, a 6 inch mechanical joint inlet to be suitable for setting in a trench 1,000 mm (3' 6") deep minimum, and shall be the traffic style hydrant so that the main valve remains closed when the barrel is broken off. Hydrants shall have a dry top and shall be self draining, when the main valve is closed. Self draining hydrants shall drain to dry wells provided exclusively for that purpose. Hydrant drains shall not be connected to storm or sanitary sewers. Hydrants located in areas determined by the Engineer (flood zones) shall have all drain holes plugged prior to installation. Hydrants shall be rotatable in a minimum of eight (8) position in 360 degrees. All hydrants shall have two (2)- two and one half (2 1/2) inch hose nozzles and one (1) steamer or pumper connection threaded to conform to the City of Walton's Standards: steamer nozzle shall be National Standard Thread and 2 1/2" outlets shall be the City of Walton's Standard Thread (Old Cincinnati Thread). The operating nut and the nuts of the nozzle caps shall be square in shape, measuring one (1) inch from side to side. Hydrant body shall be painted yellow for areas designed for 10.5 kg/sq.cm (150 psi) working pressure and red for areas in excess of 10.5 kg/sq.cm (150 psi). Hydrants used in areas in excess of 10.5 kg/sq.cm (150 psi) working pressure shall be designed to operate at the higher pressures and shall have independent operating valves on each 2 1/2" outlet.

All hydrants shall be right hand open, clockwise as specified in Standard Drawings and shall have a direction arrow of operation cast into the dome of the hydrant. Installation per Standard Drawing.

- C. INSTALLATION. The installation of fire hydrants shall be in conformance with "Mains Installation" section, paragraph "Setting Hydrants".
- D. Polyethylene Encasement Fire hydrant tee, anchoring pipe and part of the fire hydrant shoe shall be encased with Polyethylene film conforming to ANSI A21.5 (AWWA C105). (See Standard Drawing)

7. VALVES

- A. DESCRIPTION. The Contractor shall provide all labor, materials, tools, and equipment required to furnish and install in good workmanlike manner all valves and accessories complete and ready for service where shown on the plans or where directed by the Engineer and as specified herein.

- B. GATE VALVES. Gate valves shall conform to AWWA C509 and shall be cast iron or ductile body, resilient wedge, non-rising stem with rubber "O" ring packing seals. The valves shall open by turning counter-clockwise. All valves shall have openings through the body of the same circular area as that of the pipe to which they are attached. Valves shall have mechanical joint ends unless otherwise shown on the plans or directed by the Engineer. All valves shall be designed for a working pressure of 17.5 kg/sq.cm (250 psi) unless otherwise noted on the plans or in the "Supplemental Specifications". An extension stem shall be furnished if required, to bring the operating nut within 1,000 mm (3-1/2 feet) of finished grade. Extension stems shall be securely fastened to the valve stem. The Contractor shall make all valves tight under their working pressures after they have been placed and before the main is placed in operation.
- C. BUTTERFLY VALVES. Unless otherwise specified valves 400 mm (16 inches) and larger shall be butterfly valves rated at 17.5 kg/sq.cm (250 psi) working pressure and conform to the applicable portions of AWWA Standard C504, latest edition. Engineer shall approve all butterfly valves before installation. The contractor shall be required to transport all butterfly valves to the District's Warehouse for testing and pick them up after testing is completed. Valve testing will be completed at a rate of one valve per day under normal conditions, with prior notice given to the District.
1. Body - The valves shall be AWWA Class 250B designed for tight shut-off against a differential pressure of 17.5 kg/sq.cm (250 psi). Valve bodies shall be constructed of ductile iron. Two trunnions for shaft bearing shall be integral with the valve body. The valves and appurtenances shall be suitable for buried service.
 2. Ends - Valves shall have mechanical joint ends and shall be furnished with high strength COR-10 tee head with hex nuts, ductile iron glands, and rubber gaskets for each mechanical joint end.
 - a. Prestressed Concrete Pipe - Valves for use with prestressed concrete pipe shall be furnished with victualic ends for victualic coupling Style 44, unless otherwise shown on the plans. The use of mechanical joint type valves with the proper adapter pieces on both sides of the valves are acceptable in lieu of the victualic style valve with prestressed concrete pipe.
 3. Discs - Valve discs of cast steel, fabricated steel, or cast bronze are not acceptable.
 4. Seats - Seats bonded on the discs are not acceptable.
 5. Shaft Seals - If stuffing boxes are utilized for shaft seals they shall be constructed of cast iron, ASTM A126. Gland assemblies shall be of cast bronze, ASTM B132. The packing gland shall be housed in a solid walled cast iron, ASTM A48, Class 40 one piece structure or equal.
 6. Operators - The valve operating mechanism shall be for counterclockwise opening. There shall be no external moving parts on valve or operator

except the operator input shaft. Input shaft is to be operated by a 50 mm (2") square operating nut. Maximum required input force on the operator shaft to open and close the valve shall be 40 pounds. The total number of turns applied to the operating nut required to completely open the valve from a completely closed position shall not be less than twice the normal valve diameter. An extension stem shall be furnished to bring the operating nut within 1,000 mm (3 1/2 feet) of the finished grade. Extension stems shall be securely fastened to the valve stem.

D. TAPPING SLEEVES AND VALVES. Tapping sleeves and valves shall be designed for a working pressure of 17.5 kg/sq.cm (250 psi). The tapping sleeve together with the tapping valve shall be tested at 17.5 kg/sq.cm (250 psi) for visible leakage and pressure drop before the main is tapped. Tapping sleeve and valve used in high pressure areas shall be tested at 24.5 kg/sq.cm (350 psi).

1. Tapping Sleeves Tapping sleeves shall be two piece with mechanical joint type ends, and be so designed as to assure uniform gasket pressure and permit centering of the sleeve on the pipe.
2. Tapping Valves Tapping valves shall have a flange on one end for bolting to the tapping sleeve and a mechanical joint type end connection on the outlet with slotted standard flange or other adapters for connection to the tapping machine. The valves shall open by turning counterclockwise. Tapping valves shall conform to AWWA C509.

E. VALVE BOXES All valves shall be provided with valve boxes. Valve boxes shall be of standard, adjustable, heavy duty cast iron extension type, two piece, 5 1/4 inch shaft, screw type, and of such length as necessary to extend from valve to finished grade, Tyler #562-S, Tyler #564-S or approved equal. Valve box cover shall be stamped "Water". Tops shall be set at final established grade.

F. AIR RELEASE AND VACUUM VALVES. Air release valves shall be constructed at high points in the water line as indicated on the plans. These valves shall permit the air in the pipeline to escape as the pipe line fills and allows the air to re-enter as the line empties. These valves shall be APCO Air Release Valves Model #200-A, 17.5 kg/sq.cm (250 psi) working pressure, 25 mm (1"), cast iron body and cover. 400 mm (16") and larger water mains shall be a 50 mm (2") air release valve and curb stop. Refer to Standard Drawing for reference.

8. **STEEL CASING PIPE**

Casing pipe shall be steel pipe with a minimum yield strength of 2450 kg/sq.cm (35,000 psi) with a minimum wall thickness as listed below:

Nominal Diameter Casing Normal Wall	Normal Wall Thickness	Nominal Diameter Casing Pipe

Under 350 mm (14")	0.251"		650 mm (26")	0.438"
350 & 400 mm(14"&16")	0.282"		700 & 750 mm(28"&30")	0.469"
450 mm (18")	0.313"		800 mm (32")	0.501"
500 mm (20")	0.344"		850 & 900 mm(34"&36")	0.532"
550 mm (22")	0.375"		950 – 1050mm(38,40&42")	0.563"
600 mm (24")	0.407"		1200 mm (48")	0.626"

The inside diameter of the casing pipe shall be at least 100 mm (4") greater than the outside diameter of the carrier pipe joints. Steel casing sections shall be connected by welding, conforming to AWWA C206.

Adequate pipe spacers shall be installed to ensure that the carrier pipe is adequately supported in the center of the casing pipe throughout it's length, particularly at the ends. There shall not be any metallic contact between the casing and carrier pipe. Casing shall be backfilled with pea gravel or sand after the carrier pipe is installed to prevent pipe movement. Casings shall have both ends sealed up in such a way as to prevent the entrance of foreign material. See Standard Drawing for installation details.

9. **MATERIAL APPROVAL** Material certification and test samples shall be provided by the Contractor, at the contractors expense, as required by the City of Walton and the Kentucky Department of Highways. No material shall be used until approved. All rejected material be removed from the project and approved material acquired by the Contractor at the Contractor's expense.
10. **PAVING MATERIALS FOR REPLACEMENT IN KIND** All materials for replacement in kind of streets, sidewalks, curbs, walls etc. shall meet the requirements of the applicable sections of KYDOH Standard Specifications For Road And Bridge Construction.
11. **FLOWABLE FILL** This material shall meet the requirements of the Kentucky Department of Highways' Standard Specifications for Road and Bridge Construction.

Section IV CONSTRUCTION

- A. GENERAL Installation of water mains and appurtenances shall conform to the latest edition of AWWA Standard C600 for D.I.P.

Water main pipe and fittings shall be laid on a good level foundation with no gaps or humps under the pipe or fittings. Excavation shall be done by hand at joints to prevent the pipe and fittings from being supported by the mechanical joint or slip joint bell. Pipe shall be laid with the bell ends facing in the direction of laying.

The interior of the pipe shall be thoroughly cleaned of foreign matter before being lowered into the trench and shall be kept clean during laying operations. ALL OPEN ENDS ARE TO BE CLOSED WITH CAPS OR PLUGS AT ALL TIMES WHEN PIPE LAYING OPERATIONS ARE NOT IN OPERATION AND AT THE END OF THE DAY. All caps or plugs shall be properly installed and blocked in advance of filling, flushing, and testing mains. All securing and blocking shall be inspected by the Engineer prior to backfilling of ditch.

- B. HANDLING Pipe, fittings, valves, hydrants and accessories shall be loaded and unloaded by lifting with hoists or skidding so as to avoid damage. Under no circumstances shall such materials be dropped. Pipe handled on skidways shall not be skidded or rolled against other pipe. Pipe hooks that extend inside the ends of the pipe shall not be used for handling the pipe since they could damage the lining. Under no circumstances shall such materials be dropped. The interior of all pipe, fittings and other accessories shall be kept free from dirt and foreign material at all times. When handling P.V.C. pipe care should be taken to avoid abrasion damage, gouging of the pipe, rocks, and any stressing of the bell joints or damage of the bevel ends.
- C. TREE REMOVAL Stumps of trees designated for removal 25 mm (12") in diameter and smaller shall be physically removed. Any stump larger than 25 mm (12") shall be ground down to 15 mm (6") below final grade level.
- D. DEWATERING Should water be encountered, the Contractor shall furnish and operate suitable pumping equipment of such capacity adequate to dewater the trench. The trench shall be sufficiently dewatered so that the laying and joining of the pipe is made in the dry. The Contractor shall convey all trench water to a natural drainage channel or storm sewer without causing any property damage.
- E. CONSTRUCTION EQUIPMENT Where mains are located in or adjacent to pavements, all backfilling and material handling equipment shall have rubber tires. Crawler equipment shall be permitted when there is no danger of damaging pavement.
- F. TRENCH SUPPORT Supporting open cuts for mains shall be the responsibility of the Contractor where trenching may cause unnecessary damage to street pavement, trees, structures, poles, utilities, or other private or public property. During the progress of the work, whenever and wherever it is necessary, the Contractor shall, at his expense, support the sides of the excavation by adequate

and suitable sheeting, shoring, bracing, or other approved means. Such trench support material and equipment shall remain in place until backfilling operations have progressed to the point where the supports may be withdrawn without endangering property.

- G. NOISE DUST AND ODOR CONTROL. The Contractor's construction activities shall be conducted so as to eliminate all unnecessary noise, dust and odors.
- H. DISINFECTION AND LEAKAGE TESTING. See Section "Disinfection and Leakage Testing."
- I. TRENCH EXCAVATION AND BOTTOM PREPARATION.

1. General. The Contractor shall perform all excavation of every description and of whatever substances encountered to the depths indicated on the drawings or as otherwise specified. During excavation material suitable for backfilling shall be piled in an orderly manner a sufficient distance from the banks of the trench to avoid overloading and to prevent slides or cave-ins. All excavated materials not required or suitable for backfill shall be removed and wasted at a site acquired by the Contractor and approved by the Engineer. Topsoil shall be stripped from the excavation area before excavation begins.

Such grading shall be done as may be required to prevent surface water from flowing into trenches or other excavations, and any water accumulating therein shall be removed by pumping or other approved methods. The trench shall be sufficiently dewatered so that the laying and joining of pipe is made in the dry. The Contractor shall take whatever action necessary to insure that water pumped from the trench will not damage private property. If necessary the Contractor shall haul trench water to another suitable location for disposal.

Such sheeting and shoring shall be furnished and installed by the Contractor, at his own expense, as may be necessary for the protection of the work, protection of other utilities, protection of structures, the safety of the personnel, and the safety of the public. All shoring shall be removed when the work is completed unless directed otherwise by the Engineer. The Contractor shall also furnish whatever barricades or fencing necessary to provide for the safety of pedestrians in excavation areas and for traffic control as discussed in other sections. All open trenches shall be adequately covered, barricaded and/or backfilled during non-working hours in order to adequately protect vehicular and pedestrian traffic.

The Contractor shall excavate whatever material encountered. Trenches shall be excavated to the widths shown in the table headed "Trench Width" or as otherwise indicated in the plans, and the banks shall be as nearly vertical as practicable. The bottom of the trenches shall be accurately graded to provide uniform bearing and support for each section of the pipe or conduit on undisturbed soil at every point along its entire length, except for bell holes and for the proper sealing of the pipe joints. Bell holes and depressions in order that the pipe rest upon the prepared bottom for as nearly its full length as practicable, shall be only of such length, depth, and width as required for properly making the particular type of joint. Additional depth shall be excavated in rock as described elsewhere herein.

Except in cases where the elevations of the water lines are indicated on the plans, trenches for water line shall be of a depth that will provide a minimum cover over the top of the pipe of 900 mm (36 inches) from the indicated finished grade, and avoid interference of the water lines with other existing or proposed utilities. Where the note occurs, "Slope to Drain", the Contractor shall manage to keep a positive slope in that direction in order that air may travel to the air vent. Where paved surfaces are to be disturbed by an open cut, the Contractor shall provide suitable machinery to cut the edges of the pavement in a smooth straight line.

2. Rock The word "rock" wherever used as the name of an excavated material, shall mean boulders and solid masonry larger than .3823 cubic meter (1/2 cubic yard) in volume, or solid ledge rock and masonry which, in the opinion of the Engineer, requires for its removal, drilling and blasting, wedging, sledging, barring, or breaking up with a power operated hand tool. Any material which can be excavated using a hand pick and shovel, power operated excavator, power operated backhoe or power operated shovel shall not be defined as rock.
3. Blasting Rock. No blasting of rock shall be done within 12 m (40 feet) of pipes or structures without specific permission from the Engineer. Blasts shall be properly covered and the pipe or structure properly protected. Warnings shall be given to all persons in the immediate vicinity. Blasting shall be at the risk of the Contractor who shall be liable for all damages to persons or property. Necessary permits shall be secured and paid for by the Contractor.
4. Trench Width. Widths of trenches shall be held to a minimum to accommodate the pipe and appurtenances. The trench width shall be measured at the top of the pipe barrel and shall conform to the following limits:

Earth

- a. Minimum - outside diameter of the pipe barrel plus 200 mm (8 inches), 100 mm (4 inches) each side of pipe.
Maximum - nominal pipe diameter plus 600 mm (24 inches).

Rock

- Minimum – 600 mm (24") or less, nominal pipe size: outside diameter of pipe barrel plus 300 mm (12"), @ 150 mm (6") each side.
Minimum - Larger than 600 mm (24"), nominal pipe size: outside diameter of pipe barrel plus 350 mm (18"), @ 325 mm (9") each side.
Maximum - nominal pipe diameter plus 600 mm (24").
- b. Butterfly Valves. Trench width shall be over excavated 600 mm (24") on the side that the operating mechanism is located on the butterfly valve when the surrounding area cannot be hand dug.
 - c. Structures. The minimum excavation limits for structures shall be as indicated. In rock, the excavation limits shall not exceed 300 mm (12 inches) from the outside wall and 150 mm (6 inches) below the footer.

5. Excessive Trench Width. If, for any reason the trench width exceeds the maximum trench width defined in paragraph "Trench Width", the Contractor, subject to approval of the Engineer, shall provide compacted stone bedding, additional strength pipe or concrete encasement, at the contractor expense.
 6. Bottom Preparation The Contractor shall use excavation equipment that produces an even foundation. For the entire length of the trench, a compacted layer of sand or bankrun bedding material shall be installed below the pipe. Bell holes and depressions for joints, valves, and fittings shall be dug after the trench bedding has been graded in order that the pipe rest upon the prepared bedding for as nearly its full length as practicable. Bell holes and depressions shall be only of such length, depth, and width as required for properly making the particular type of joint.
 - a. Earth. The trench shall be excavated to the depth required, so as to provide a uniform and continuous bearing and support for the pipe barrel. A minimum of a 80 mm (3") sand shall be installed on the solid and undisturbed ground. The finished trench bottom shall be accurately prepared by means of hand tools.
 - b. Rock. Where excavation is made in rock or boulder, the trench shall be excavated 6 inches below the pipe barrel for pipe 600 mm (24 inches) in diameter or less, and inches for pipe larger than 600 mm (24 inches) in diameter. All loose material shall be removed from the trench bottom. After preparation of the trench bottom, a pipe bed shall be prepared using sand and thoroughly compacted. The bedding material shall be spread the full width of the trench bottom.
 7. Water Main Depth. Mains 300 mm (12") and less in size shall be not less than 900 mm (36") in depth and no more than 1,200 mm (48") in depth, unless otherwise specified. Mains larger than 300 mm (12") shall be installed as shown on the plans.
 8. Excessive Trench Depth. If, for any reason, the trench depth exceeds the trench depth shown on the Plans, the Contractor is responsible for any and all additional cost incurred for the excessive depth.
 9. Foundation. The mains are to be built on a good foundation. If, in the Engineer's opinion, the material forming the trench bottom is not suitable for a good foundation, a further depth shall be excavated and the same filled with suitable material. Unauthorized excavation below the trench bottom shall be filled with compacted crushed stone at the Contractor expense.
- J. PIPE, VALVE, HYDRANT AND METER SETTING INSTALLATION The provisions of AWWA C600 shall apply in addition to the following:
1. Pipe shall not be laid in water or when trench or weather conditions are unsuitable for the work except when permitted by the Engineer. Unless otherwise indicated in the plans or in Section I, Bid Item Explanations, the material shall be new and unused. The interior of the pipe shall be thoroughly cleaned of foreign matter before being lowered into the trench and shall be kept clean during laying

operations by plugging or other approved methods. Pipe shall be laid with bell ends facing in the direction of laying, unless otherwise directed by the Engineer. After placing a length of pipe in the trench, the spigot end shall be centered in the bell of the pipe and forced home. All pipe shall be laid with ends abutting and true to line and grade. Deflection of pipe joints in excess of the manufacturer's recommendations will not be permitted. A watertight pipe plug or bulkhead shall be provided and used to prevent the entrance of foreign material whenever pipe laying operations are not in progress. Any pipe that has the grade or joint disturbed after laying shall be taken up and relayed. Any section of pipe found to be defective before or after laying shall be removed and replaced at the Contractor's expense.

2. Pipe Cutting. The cutting of pipe for installing valves, fittings, or hydrants shall be done in a neat and workmanlike manner without damage to the pipe or lining. The end shall be smooth and at right angles to the axis of the pipe. Flame cutting of metal pipe by means of an oxyacetylene torch shall not be permitted. All pipe cutting shall be at the Contractor's expense.
3. Push-On Joints. The surfaces with which the rubber gaskets comes in contact shall be thoroughly cleaned just prior to assembly. The gasket shall then be inserted into the groove in the bell. Before starting joint assembly, a liberal coating of special lubricant shall be applied to the spigot end. (Special lubricant shall be suitable for use in potable water) With the spigot end centered in the bell, the spigot end is pushed home.
4. Mechanical Joints. Mechanical joints require that the spigot be centrally located in the bell. The surfaces with which the rubber gasket comes in contact shall be thoroughly cleaned just prior to assembly. The clean surfaces shall be brushed with a special lubricant just prior to slipping the gasket over the spigot end and into the bell. (Special lubricant shall be suitable for use in potable water) The lubricant shall also be brushed over the gasket prior to installation to remove the loose dirt and lubricate the gasket as it is forced into its retaining space. P.V.C. pipe spigot ends shall be field cut smooth and at right angles to the axis of the pipe for installation in mechanical joint fittings.

1. Bolt Torque The normal range of bolt torque to be applied to standard cast iron bolts in a joint are:

<u>Size</u>	<u>Range of Torque</u> <u>in foot-pounds</u>
5/8"	40 - 60
3/4"	60 - 90
1"	70 - 100
1-1/4"	90 - 120

5. Restrained Joints

- a. Ball and Socket. Ball and Socket joints shall be assembled and installed according to the manufacturers recommendations. The joint shall be thoroughly cleaned and lubricated. Check the retainer ring fastener. After installation, all slack shall be taken out of the pipe joint.

- b. Push-On. Assemble and install the push-on joint according to the manufacturer's recommendations. Restrained joint-type pipe and fittings shall only be used as approval by the Engineer. Retaining glands, field lock gaskets, or retaining flanges shall not be considered as providing a restrained joint. The joint shall be thoroughly cleaned and lubricated. Check the retainer ring fastener. After installation, all slack shall be taken out of the pipe joint.
6. Setting Valves. Valves shall be set on a firm solid concrete block foundation so that no load will be transferred to the connecting pipe. Valves in water mains shall, where possible, be located on the street property lines extended, unless otherwise shown on the plans. A valve box shall be provided for every valve. The valve box shall not transmit shock or stress to the valve and shall be centered and plumb over the operating nut of the valve. The box cover shall be set flush with the surface of the finished pavement unless otherwise shown. All valves boxes with the exception of isolating valves for fire hydrants that are located in non-paved areas shall have a minimum of 600 mm x 600 mm x 100 mm (2'x2'x4") concrete pad as shown in Standard Drawing.
7. Setting Hydrants. Hydrants shall be located as shown on the plans or as directed by the Engineer. The location shall provide complete accessibility and minimize the possibility of damage from vehicles or injury to pedestrians. All hydrants shall stand plumb with the pumper nozzle facing the curb. Hydrant shall be set to the established grade, with the traffic flange within 100 mm (4") above final grade in accordance to Standard Drawing. Each hydrant shall be controlled by an independent gate valve with valve box. All valves used for hydrant control shall be anchored to the branch tee.
8. Thrust Blocking. All bends over five (5) degrees, plugs, caps, and tees shall be securely blocked against movement with concrete thrust blocks placed against undisturbed earth in accordance with Standard Drawing. Thrust blocks shall be approved by the Engineer prior to backfilling. Water mains shall have concrete thrust block at all pipe intersections and changes of direction to resist forces acting on the pipeline. All concrete thrust blocks shall be poured in such a manner that the bolts can be replaced without disturbing the blocking.

All caps or plugs used in mains to undergo hydrostatic test shall be properly installed and blocked in advance of testing mains. All caps or plug installations shall be approved by the Engineer's representative before the main is subjected to the pressure test.

- a. Concrete Blocking. Concrete blocking shall be K.D.O.T. Class A concrete as specified in Section "Concrete". Blocking shall be placed between undisturbed ground and the fitting to be anchored. The area of bearing on the fitting and on the ground in each instance shall be that shown herein. The blocking shall, unless otherwise shown, be so placed that the pipe and fitting joints will be accessible for repair.
 - b. Tie Rods. If shown or specified, movement shall be prevented by attaching suitable metal rods, clamps or restrained fittings. Steel tie rods or clamps, where permitted, shall be of adequate strength to prevent movement. Steel tie rods or clamps shall be painted with three coats of an approved bituminous

paint or coal tar enamel. A minimum of 3/4" welded eye bolts @ a 90 degree bend and 3/4" threaded rods may only be used with the approval of the Engineer for temporary restraint only. Duc-Lucs are prohibited for use.

- c. Restrained Fittings. Restrained fittings, where permitted, shall be subject to the approval of the Engineer.

9. Meter Setting Installation

The Contractor shall furnish all labor, equipment, excavation, backfill, testing, disinfection, and restoration to install the pipe at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready for use. No additional payment will be made for rock excavation or for bedding required in rock excavation. It will be the Contractors responsibility to remove and reset the service at his own expense if he fails to notify and receive the approval from the District. Contractors work shall be warranted for a period of one year of the date of activation of each service (meter set date).

1. Inspection & Notification. The Contractor shall notify all affected District customers prior to interrupting water service. The Contractor shall make 24 hours notification. Routine service inspection and final inspections will be made by the District upon request by the Contractor and in a timely manner. The Contractor shall provide the District 24 hours notification for inspection by the District. It is the Contractors responsibility to post "No Parking" signs and safety devices.
2. Installation of Service Lines The Contractor shall be familiar with copper piping, fittings and connections, and have available equipment to work with said materials. No sweat type fittings shall be permitted. Service line shall be installed as shown on the plans or as directed by the District. The Contractor shall excavate whatever material encountered. The service lines shall be installed using boring and jacking or open cut (as specified on the plans) at the depth required to clear existing and proposed sewers, but in no case shall the line be installed with less than 36 inches cover from final grade. The trench width shall be as excavated to a maximum of 2 feet. The line shall be laid on firm soil. In rock, sufficient extra depth shall be excavated and refilled with acceptable compacted soil or bedding sand to provide a cushion for the elimination of the possibility of crushing or perforating the pipe. Connections shall be made using normal practices for water line installation and in accordance with the standards in the plans or contained herein.
 - a. Water Service Taps. The Contractor shall maintain a minimum of 36" cover over any tap. The corporation installed into the main shall have no more the 4 threads showing between the top of the water main and the bottom of the corporation.
 - b. Service Line. The Contractor shall maintain a constant cover of 36" over any water line. Methods of pushing or jacking under the existing street must avoid bending or kinking the pipe. No open cuts of the pavement will be permitted unless pre-approved by the District. All copper shall be cut

using a copper-tubing cutter. All connections shall be flared connections. No oil base or other contaminating materials will be used in lubricants, caulking and sealers. The Contractor shall be responsible for making all joints watertight.

- c. **Meter Vault.** All meter vaults shall be located inside existing right-of-ways or water main easements of record or as directed by the District. Typically the meter vault shall sit 5' behind the back edge of curb or edge of pavement. The Contractor shall contact the customer and determine a suitable location of the setting within the above guidelines. It is the Contractor's responsibility to notify the District's Inspector if these conditions cannot be met. The District's Inspector will inspect any questionable meter setting location prior to the Contractor installing.

Meter vaults shall be set to allow the meter cover to be level with the back edge of the existing curb or the back edge of paving along roadways without curbs. It is the Contractor's responsibility to ensure that the meter vault does not settle due to poor compaction or any other reason within the Contractor's control. The Contractor at no additional expense to the District shall adjust any meter vault that sinks below grade due to poor workmanship by the Contractor to grade.

K. TRENCH BACKFILL

All trench backfill shall be free from cinders, refuse, organic material, boulders, rocks or other material which in the opinion of the Engineer is unsuitable. No backfill shall be made with frozen material.

1. BACKFILL

- a. Trench Bottom Preparation. The pipe shall be bedded on sand to achieve full pipe barrel support. In any event not less than 80 mm (3") of sand bedding shall be used.
- b. Backfill to 300 mm (12") Over Pipe Barrel. All trench excavations shall be backfilled immediately after pipe is laid with the exception of thrust blocks. Compacted sand shall be used to backfill the trench from the bottom of the pipe barrel to the 300 mm (12") over the pipe barrel. No flushing of backfill shall be permitted to achieve compaction. Clay bulkheads shall be installed as specified under Bulkheads Section.
- c. Remaining Trench Backfill. From 300 mm (12") above the pipe barrel to the surface, excavated trench material or flowable fill may be used as backfill material. No material shall be used for backfill that contains frozen earth, vegetation or organic material, debris, rocks **200 mm (8")** or larger measured in any direction, or earth with an exceptionally high void content.
- d. Compaction. All backfill shall be placed in uniform loose layers, not to exceed 300 mm (12") layers, and each layer shall be compacted to a density not less than 95 percent of the standard Proctor maximum dry density (ASTM D698). The backfill shall be compacted in such a manner and with appropriate

equipment so that there is no pipe damage, pipe misalignment or damage to joints. No flushing of backfill shall be permitted to achieve compaction.

- e. Bulkheads. When a granular bedding is provided in rock or when granular backfill is used, the Contractor shall place bulkheads of clay soil across the trench at 30.48 m (100') intervals to resist the movement of groundwater through the granular material. Such bulkheads shall be carefully compacted and shall extend approximately 900 mm (3 feet) in a direction parallel to the pipe and shall extend from the bottom of the trench to a point 100 mm (4") below final grade level.
 - f. Flowable Fill as Backfill As required by the Engineer, flowable fill shall be per Special Note 7X of the Ky. Department of Highways Standard Specifications for Road and Bridge Construction.
 - g. Surface Conditions. The trench surface shall be periodically attended to during the course of the contract. The trench surface shall be maintained in a safe condition and shall not interfere with natural drainage.
- L. INSTALLATION OF PIPE BY BORING OR JACKING. At certain locations where designated on the plans, the Contractor will be required to install pipe under paved areas or other obstacles by boring a hole large enough to pull the pipe through without obstructing the designated area, or by jacking, whichever is the most feasible.
- M. WATER METERS Water Meters shall be installed at locations shown on the plans. The meter shall be constructed as shown on Standard Drawings contained herein or in the plans.
- N. CONNECTIONS (TIE-INS) TO EXISTING WATER LINES All connections to existing water lines shall be made at location shown on the plans. Care shall be taken in each case that none of the sterilizing water may enter the system during the sterilizing operation. Each connection shall be preceded with a one inch corporation stop and drain to allow bleeding of the water line of air and sterilizing water. This corporation stop shall be furnished and installed at the Contractor's expense. All sections of pipe and appurtenances to be used for tie-ins and not sterilized, shall be thoroughly cleaned by scrubbing with a chlorine solution prior to installation. All tie-ins of mains shall be done with transitional or straight solid sleeves. Mains shall be flushed of sterilizing water before tie-ins to existing mains are made.
- O. INSTALLATION OF SERVICE LINES Service line shall be installed as shown on the plans or as directed. The Contractor shall excavate whatever material encountered. The service lines shall be installed using boring and jacking or open cut (as specified on the plans) at the depth required to clear existing and proposed sewers, but in no case shall the line be installed with less than 900 mm (36") cover from final grade. The trench width shall be as excavated to a maximum of 600 mm (2'). The line shall be laid on firm soil. In rock, sufficient extra depth shall be excavated and refilled with acceptable compacted soil or bedding sand to provide a cushion for the elimination of the possibility of crushing or perforating the pipe. Connections shall be made using normal practices for water line installation and in accordance with the

standards in the plans or contained herein. Backfill shall meet the same requirements as that described in PIPE TRENCH BACKFILL.

P. APPLICABLE SPECIFICATIONS & STANDARDS

The following specifications and standards form a part of these Specification:

- A. **American Water Works Association (AWWA) Standards**
- B. **Boone County Water District Standards Drawing & Specifications.**
- C. **"Manual of Accident Prevention in Construction" published by the **Associated General contractors of America****
- D. **Kentucky Occupational Safety and Health Administration's "Kentucky Occupational Safety and Health Standards for General Industry" current edition.**
- E. **American National Standards Institute (ANSI)**
- F. **American Society for Testing & Materials (ASTM)**
- G. **Kentucky Division of Water Quality**
- H. **"Recommended Standards for Water Works" current edition**

Section V DISINFECTION AND LEAKAGE TEST

- A. SCOPE. This section covers the disinfection of the new water mains, fittings, temporary services and associated appurtenances. The Contractor shall provide all labor, materials, tools, equipment, and incidentals required to test the mains for watertightness and disinfect the mains as directed by the District and as specified herein. Gauges for the test shall be furnished by the Contractor.
- B. TEST SECTION. After the main has been installed and backfilled all newly installed pipe or any valved section thereof shall be considered a test section.
- C. WITNESS. All tests performed for each test section shall be witnessed and approved by the District before acceptance. In the event the Contractor performs any test without witness by the District, the Contractor will be required to test the section again in conformance with this specification at no cost to the District.
- D. GENERAL. All disinfection work shall conform to the requirements of the latest revision of ANSI/AWWA C651 and the requirements of the Kentucky Division of Water. If any State requirements conflict with the provisions of this section, the State requirements shall govern.

Water required for flushing and disinfection work will be provided as stipulated in the temporary facilities.

When it is necessary to interrupt service to water customers, each customer affected shall be notified in advance of the proposed service interruption and its probable duration in accordance with the project requirements.

- E. DISINFECTION PROCEDURE. During construction or after the installation of the pipe and fittings is complete, an approved disinfection method, according to governing standards, shall be used. The disinfection solution shall be allowed to stand in the main and associated appurtenances for a period of at least twenty-four (24) hours.

During disinfection, all valves, hydrants, and service line connections shall be operated to ensure that all appurtenances are disinfected. Valves shall be manipulated in such a manner that the strong disinfection solution in the main from flowing back into the supply line. Check valves shall be used if required.

All non-disinfected fittings used for tie-ins or repairs shall be cleaned and swabbed with a liquid sodium hypochlorite disinfecting solution prior to installation.

- F. FINAL FLUSHING. Upon completion of chlorination but before sampling and bacteriological testing, Contractor shall remove all heavily chlorinated water from the main and temporary services by flushing with potable water at the

maximum velocity which can be developed under the direction and control of the District.

The Contractor shall properly neutralize and dispose of the chlorinated water and flushing water in accordance with all applicable regulations. Contractor shall obtain all special waste disposal permits necessary.

- G. DISPOSAL OF HEAVILY CHLORINATED WATER. Contractor shall apply a de-chlorinating agent to the water to be wasted to neutralize thoroughly the chlorine residual remaining in the water. (See the following table for neutralizing chemicals.) Federal, state, and local regulatory agencies should be contacted to determine special provisions for disposal of heavily chlorinated water.

Chlorine residual of water being disposed of shall be de-chlorinated by treating with one of the chemicals listed in the following table:

Pounds of Chemicals Required to De-chlorinate Various Residual Chlorine Concentrations in 100,000 Gallons of Water*

Residual Chlorine Concentration <i>mg/L</i>	Sulfur Dioxide (SO ₂)	Sodium Bisulfate (NaHSO ₃)	Sodium Sulfite (Na ₂ SO ₃)	Sodium Thiosulfate (Na ₂ S ₂ O ₃ @5H ₂ O)
1	0.8	1.2	1.4	1.2
2	1.7	2.5	2.9	2.4
10	8.3	12.5	14.6	12.0
50	41.7	62.6	73.0	60.0

* Except for residual chlorine concentration, all amounts are in pounds.

The Contractor shall provide all necessary materials, equipment and labor for applying the de-chlorinating chemical in a manner such that proper mixing and contact time of the chemical and the heavily chlorinated water is obtained for complete removal of chlorine being flushed. The Contractor shall periodically test the flush water to verify that the chlorine residual is zero.

- H. CHLORINE RESIDUAL TESTS. Upon completion of final flushing, the District will perform chlorine residual tests to ensure the chlorine residual in the main and temporary services is not higher than that generally prevailing in the remainder of the water distribution system and is acceptable to the District.
- I. BACTERIOLOGICAL TESTS.
1. After flushing has been completed and the chlorine residual is not greater than 1.2 ppm, a bacteriological sample shall be taken in accordance with the Kentucky Department of Environmental Protection Agency, Safe Drinking Water Act.

2. The mouth of the valve, hydrant, blow-off, etc. shall be sterilized using a propane torch or equivalent and then allowed to flow for a period of not less than 5 minutes.
 3. The standard sample shall be collected in sterile bottles, by the representative of the certified laboratory, care being taken not to contaminate the neck of the bottle or stopper during collection.
 4. This sample will then be delivered to a certified laboratory by the individual collecting the sample.
 5. Copies of the analysis shall be sent to the City of Walton's inspector directly from the laboratories.
 6. In the event that the laboratory analysis shows bacteria present, the line shall be re-chlorinated, sterilized, flushed, and a new sample taken until such time that the line meets the Safe Drinking Water Act Standards.
- J. REDISINFECTION. Should the bacteriological tests indicate the presence of coliform organisms at any sampling point, the main and temporary services shall be re-flushed, re-sampled, and re-tested. If check samples show the presence of coliform organisms, the main and temporary services shall be re-chlorinated at no additional cost to the District until results acceptable to the District are obtained.

Re-disinfection shall be completed by the continuous feed or by the slug method. Unless otherwise permitted, the chlorination agent shall be injected into the main and temporary services at the supply end through a corporation cock installed in the top of the pipe. All materials, equipment and labor necessary for the re-disinfection shall be supplied by Contractor at no additional cost to the District.

- K. HYDROSTATIC TESTING. Hydrostatic Testing will be in accordance with AWWA C600. The water main being tested shall have all air expelled by additional flushing or installation of taps on high points in the line. The pressure of the water main shall be gradually increased to obtain a minimum pressure of 7.0 kg/sq.cm (100 psi) over the design pressure 17.5 kg/sq.cm (250 psi). at the lowest elevation point of the water main or as directed by the Engineer. The test will be for a two (2) hour duration and will not vary by more than .35 kg/sq.cm (5 psi). All tests performed for each test section shall be witnessed and approved by a representative of the Engineer, in the event any test is performed without a representative of the Engineer, the Contractor shall be required to test the section again. Leakage is defined as the amount of water used to maintain the test pressure.

Section VI
VEHICULAR AND PEDESTRIAN TRAFFIC CONTROL

1. REFERENCE MATERIALS Traffic shall be maintained in accordance with the "Manual on Uniform Traffic Control" published by the Federal Highway Administration, current edition of Kentucky Department of Highways Standard Specifications for Road & Bridge Construction and current KYDOH Standard Drawings.
2. PEDESTRIAN TRAFFIC Should the Contractor be required to remove sidewalk or any other pavement used by pedestrians, the Contractor shall construct an approved, safe, alternate route with acceptable paving materials. Approval for alternate routes and temporary paving materials shall be acquired from the Engineer. The Contractor shall also construct temporary barricades and fences as required. No extra payment will be made for construction of temporary pedestrian walkways, fences or barricades required for water line construction, but shall be considered incidental to water line construction.
3. VEHICULAR TRAFFIC Vehicular traffic shall be maintained as required by the referenced materials listed above. The cost of all temporary paving materials for pavement restoration due to water line construction shall be considered incidental to the contract. The cost for all traffic control materials including signs, barricades, etc. shall be considered incidental to the contract. The Contractor shall be required to keep the construction area safe at all times and check that traffic control devices are in place. Should temporary paving materials used for water line construction fail to perform satisfactorily, the Contractor shall repair same at his own expense.

Section VII
TEMPORARY AND PERMANENT RESTORATION

1. **TEMPORARY RESTORATION** Any street, driveway, parking lot, sidewalk, stairs, walls, etc. disturbed by water line construction which is shown on roadway construction plans to be disturbed by roadway construction may be replaced with temporary materials. These temporary materials and their placement shall be approved by the Engineer prior to placement. The cost for temporary paving materials and their placement shall be considered incidental to the cost of water line construction.

2. **PERMANENT RESTORATION** Any street, driveway, parking lot, sidewalk, walls, shrubs, etc. disturbed by water line construction, which is shown on roadway construction plans to remain and not be disturbed by roadway construction, shall be replaced in kind. The concrete, asphalt, and stone removed shall be replaced with the same type material, the same thickness as that removed. All pavement shall be removed and replaced to 300 mm (1') beyond the limits of excavation as detailed on drawing contained herein. These permanent materials and their placement shall be approved by the Engineer prior to placement. The Contractor shall reconstruct same to the original lines and grades and in such a manner as to leave all such items in fully as good or better condition than that which existed prior to construction. All restoration work shall conform to the requirements of KDOH Standard Specifications for Road and Bridge Construction and to the drawing for pavement restoration contained herein. The cost for this permanent restoration shall be considered incidental to the cost of the water line construction.

3. **SEEDING AND SODDING** This work shall be performed under bid items pertaining to same for roadway construction and in accordance with KDOH Standard Specifications for Road and Bridge Construction

Section VIII METHOD OF MEASUREMENT AND BASIS OF PAYMENT

A. METHOD OF MEASUREMENT

1. Ductile Iron Water Line, each type and size, shall be measured by the linear meter laid in the trench, along the center line of the pipe, thru valves and fittings, to point of contact with existing lines, excluding any portion in concrete encasement or used in water main offsets.
2. Service Pipe, all sizes, shall be measured by the linear meter laid in the trench, excluding meter settings, from water main or existing service line to existing service line.
3. Water Line Undercut, when directed by the Engineer shall be measured along the subgrade for length and width and from pipe subgrade or bottom of fill, if in a fill placed for roadway as a part of this same contract, to bottom of undercut. Water line undercut shall be measured and paid by the cubic meter.
4. Method of Measurement For All Other Items, shall be by each or lump sum as specified for that particular item in "SECTION I, BID ITEM EXPLANATIONS" contained herein.

B. BASIS OF PAYMENT

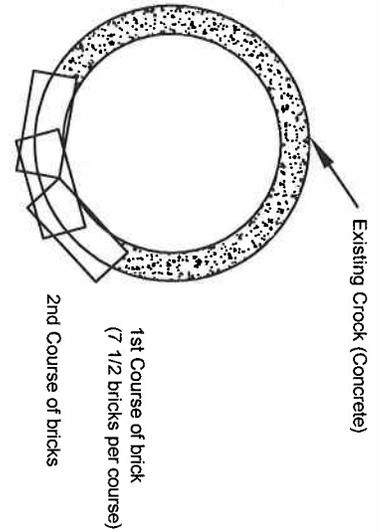
1. Excavation, for water lines from the surface to water line subgrade or to 150 mm (6") below water line subgrade in rock, for structures, for service lines, or for any other water system item will not be a bid item but shall be considered incidental to the bid item to which it pertains. No additional payment will be made for rock excavation.
2. Water Line Undercut, when directed by the Engineer and/or BCWD, shall be paid by the cubic meter. The accepted quantities of water line undercut will be paid at the agreed unit price of \$19.50 per cubic meter (\$15 x 1.3), which shall also include acquisition and placement of acceptable refill material. Should the Contractor be directed to perform water line undercut, the item "Water Line Undercut" at the agreed unit price of \$19.50 per cubic meter shall be added to the contract by change order.
3. Water Main Fittings, shall be paid EACH, couplings in tie-ins and all fittings in offsets shall be considered incidental to those items.
4. Backfill, for all phases of water line construction shall not be paid separately but shall be considered incidental to water line construction.
5. Temporary Restoration, of streets, roadways, sidewalks, steps, walls, trees, shrubs, etc. shall be considered incidental to water line construction when damaged by water line construction. The cost for this temporary restoration shall be considered incidental to the cost of the water line construction.

6. Traffic Control and Maintenance of Traffic, for a water line construction shall not be paid separately but shall be considered incidental to water line construction.
7. Basis of Payment for all Other Items, shall be by cubic meter, metric ton, linear meter, square meter, each, or lump sum as specified for that particular item.

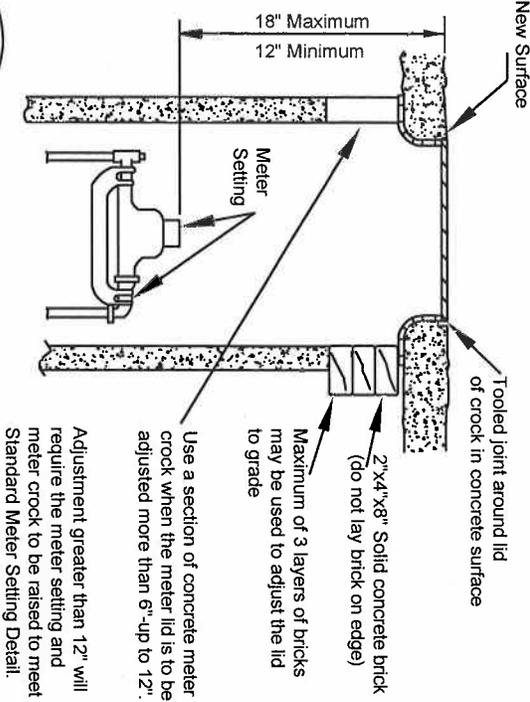
City of Walton Water Self Centering Alignment Ring Specification

Each valve box shall have a two piece AFC Centering Ring that centers the valve box directly in a vertical position. The Centering Ring must have an adjustable detented slide to compensate for multiple stem diameters. The installation of the alignment ring below the operating nut should not disturb the function of the operating nut nor should the operating nut have to be removed to install the Centering Ring. Alternate centering devices other than that listed above must have the approval of the City of Walton.

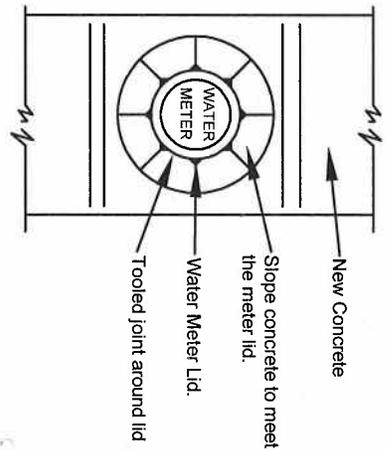
CENTER RING NOTE



NOTE:
SERVICES INSTALLED IN CONCRETE AREAS, NOT SUBJECT TO VEHICLE TRAFFIC, A FORD TYPE A32, OR APPROVED EQUAL, LID AND RING SHALL BE USED. AREAS SUBJECT TO VEHICLE TRAFFIC, A FORD TYPE A32HH, OR APPROVED EQUAL, LID AND RING SHALL BE USED.



Use a section of concrete meter crock when the meter lid is to be adjusted more than 6"-up to 12".
Adjustment greater than 12" will require the meter setting and meter crock to be raised to meet Standard Meter Setting Detail.



Note: Meter lid shall be flush with the top of the concrete surface. The concrete surface shall be tapered to provide a smooth transition to the meter lid. A tooled joint shall be formed around the meter lid.

RAISING WATER METER LIDS:

CONCRETE WATER METER CROCKS shall be raised by the use of an additional section of crock cut to achieve final grade, or by using bricks, butted to the end of the next brick in a continuous circle along the outside edge of the crock so that no dirt is allowed to enter the meter crock. If two (2) or more rows of bricks are used, the brick shall be staggered and installed as previously stated.

PLASTIC (PVC) METER CROCKS shall be raised by use of an adapter with a section of plastic crock cut to achieve final grade.

At no time shall wood be used to adjust the ring and lid to grade.

Meter ring and lids shall be reset solidly and shall have no broken edge to allow dirt to enter the crock.

If the meter box is damaged beyond repair it shall be replaced. See Standard Meter Setting Drawing.

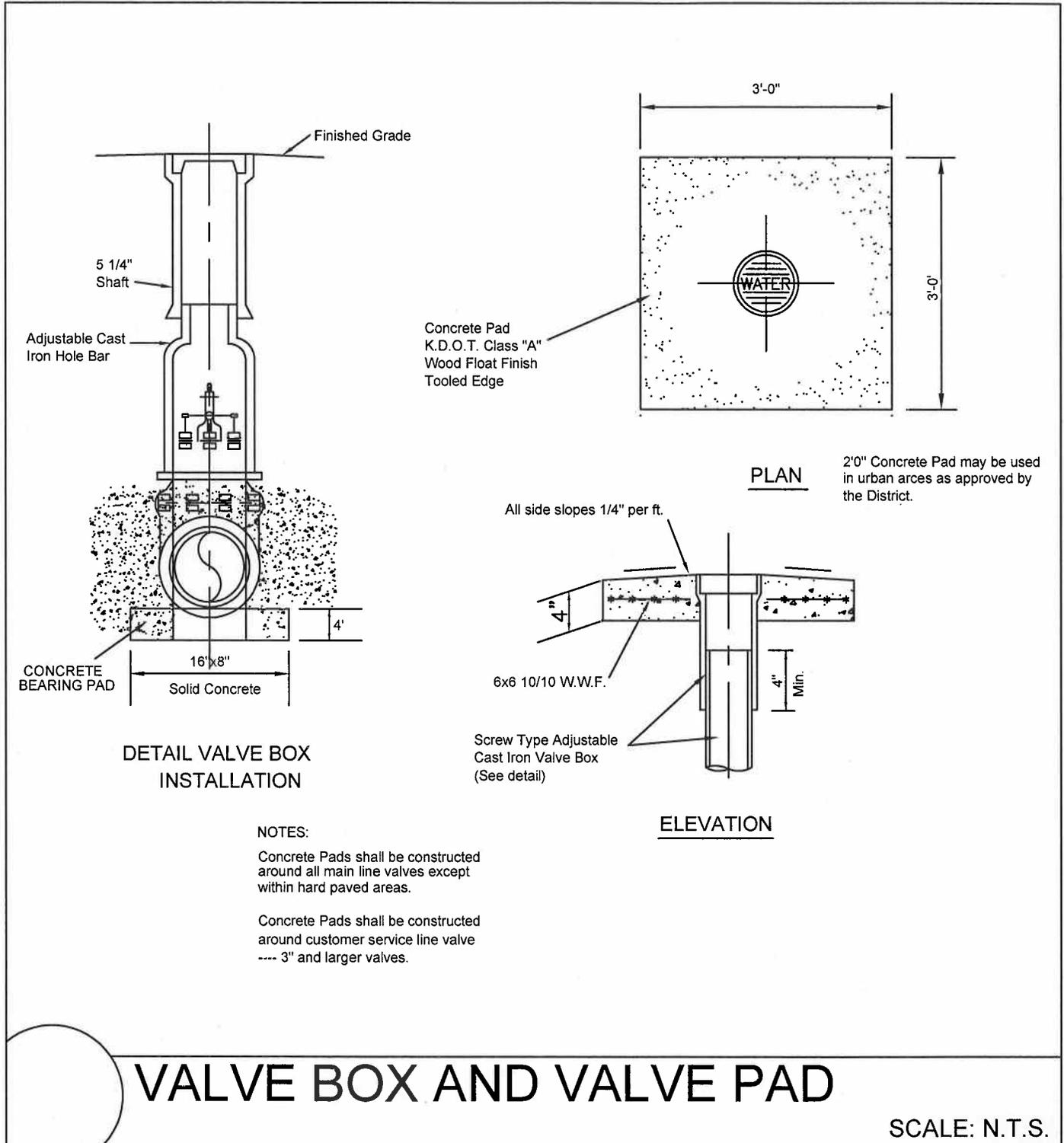
RAISING CURB STOPS OR VALVE BOXES:

Curb stop boxes and valve boxes shall be raised by turning the upper section to meet grade. If the upper section cannot be raised in this manner it shall be carefully broken off and replaced.

New upper sections shall be supplied by CCWD

ADJUSTING RING & LID TO GRADE

SCALE: N.T.S.

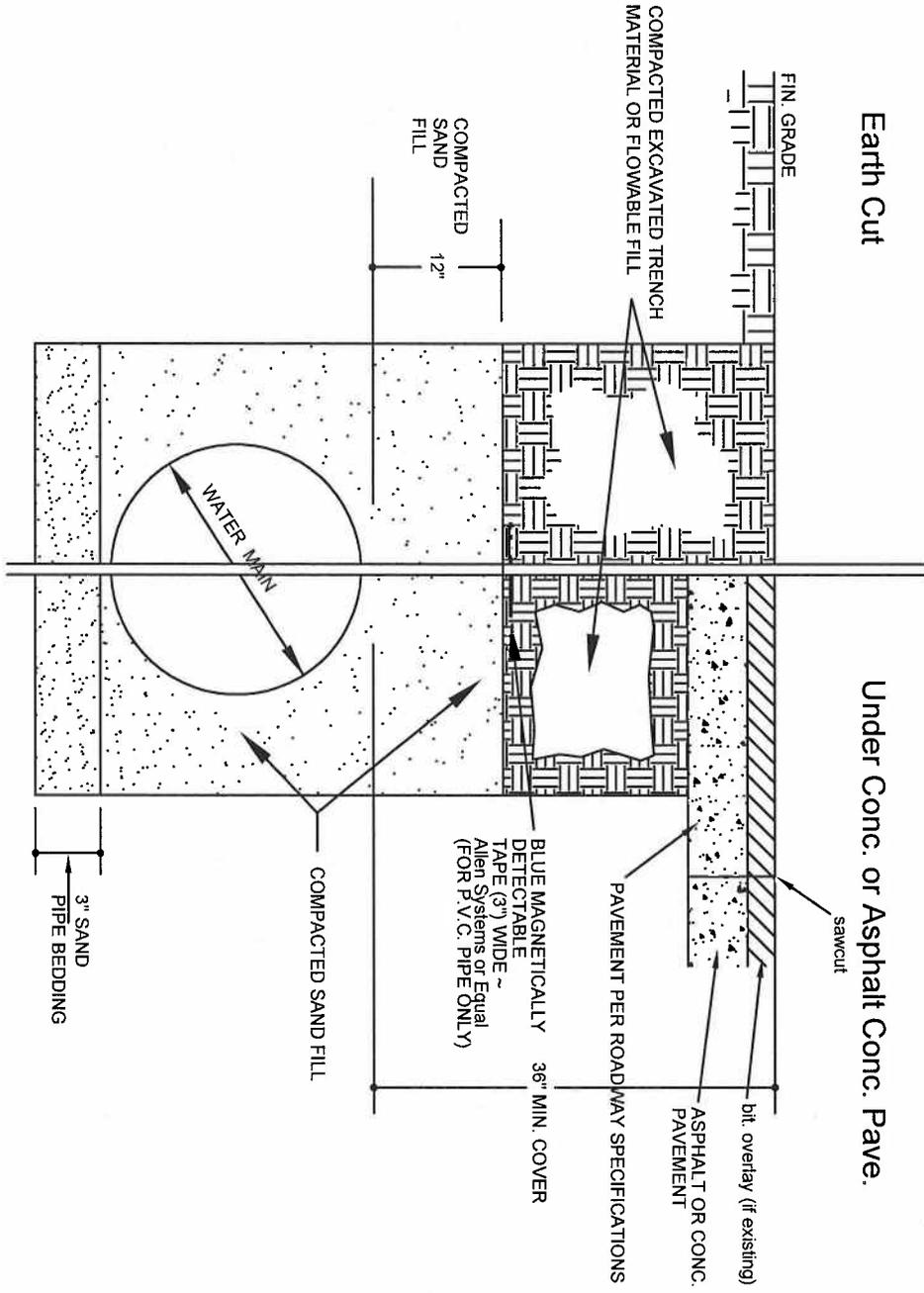


NOTES:
Concrete Pads shall be constructed around all main line valves except within hard paved areas.
Concrete Pads shall be constructed around customer service line valve ---- 3" and larger valves.

VALVE BOX AND VALVE PAD

SCALE: N.T.S.

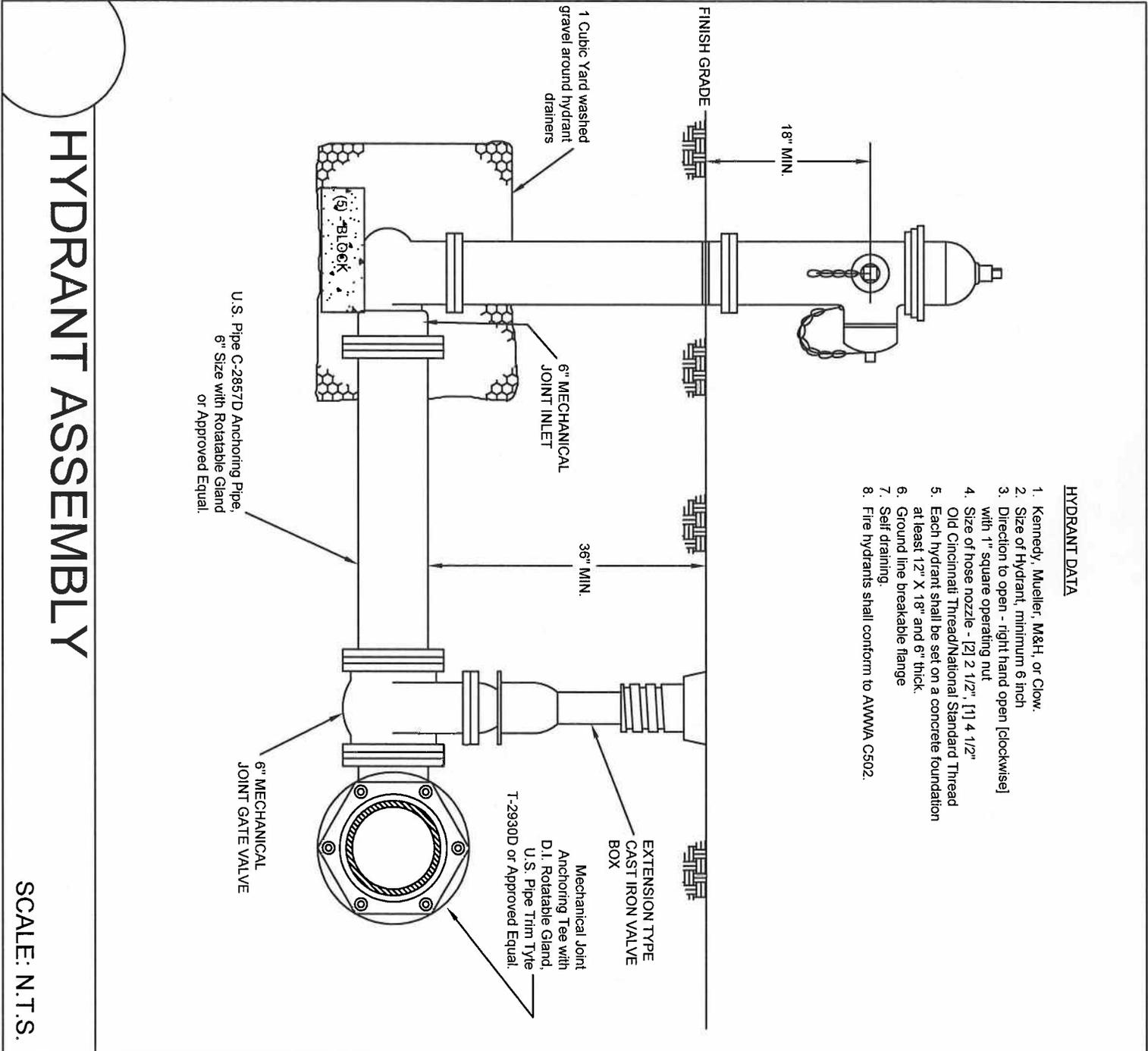
Backfill of all trenches will be compacted by the Standard Proctor Methods, ASTM D 698
All areas will require compaction to 95% of maximum density or to the satisfaction of the
Geo-Technical Engineer.



WATER MAIN TRENCH DETAIL

KYTC SPEC.

SCALE: N.T.S.

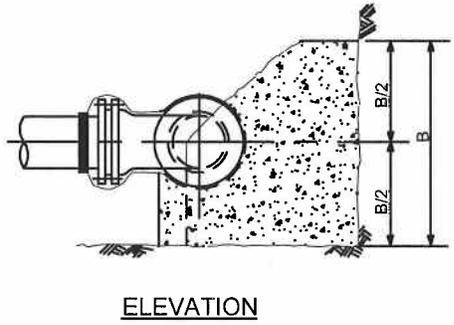
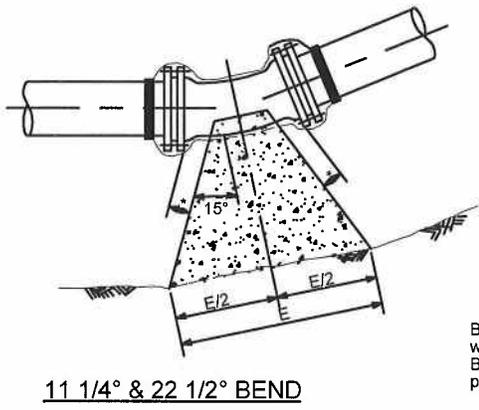
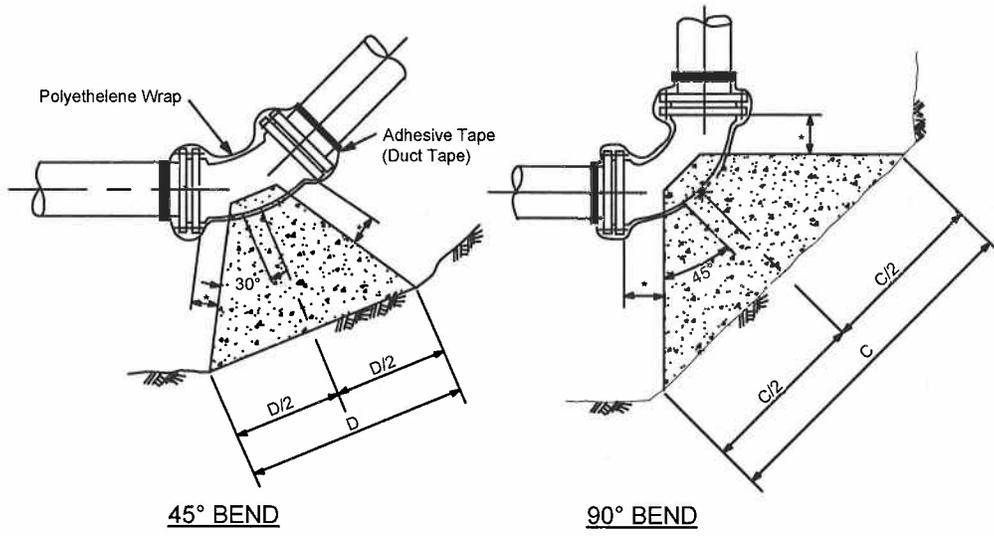


HYDRANT DATA

1. Kennedy, Mueller, M&H, or Clow.
2. Size of Hydrant, minimum 6 inch
3. Direction to open - right hand open [clockwise] with 1" square operating nut
4. Size of hose nozzle - [2] 2 1/2", [1] 4 1/2"
5. Old Cincinnati Thread/National Standard Thread
6. Each hydrant shall be set on a concrete foundation at least 12" X 18" and 6" thick.
7. Ground line breakable flange
8. Self draining.
9. Fire hydrants shall conform to AWWA C502.

HYDRANT ASSEMBLY

SCALE: N.T.S.



Blocking shall be poured after polyethelene wrap is in place.
Blocking shall be inspected by the District prior to backfilling.

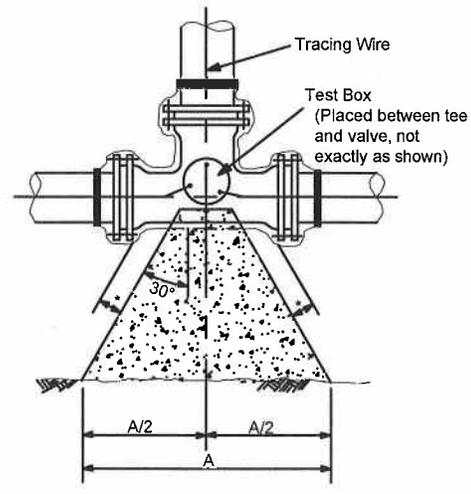
150 PSI/250 PSI

PIPE SIZE	A	B	C	D	E
6"	2'0"/2'6"	1'6"/1'6"	3'0"/3'6"	1'6"/2'0"	1'0"/1'0"
8"	2'6"/3'6"	2'0"/2'0"	3'6"/4'6"	2'0"/2'6"	1'0"/1'6"
10"	3'6"/4'0"	2'6"/2'6"	4'6"/5'6"	2'6"/3'0"	1'6"/1'6"
12"	4'0"/5'0"	3'0"/3'0"	5'6"/6'6"	3'0"/3'6"	1'6"/2'0"
16"	5'0"/6'0"	3'0"/4'0"	7'0"/8'6"	4'0"/4'6"	3'0"/3'0"
20"	6'0"/7'6"	5'0"/5'0"	7'0"/10'6"	4'0"/6'0"	3'0"/3'0"

* Distance to be 1/2" longer than entire length of the bolt used.

NOTES

- 1 PVC Fittings shall be per specifications.
- 2 Concrete to be 3500 psi.
- 3 All fittings to be Mechanical Joint.
- 4 Thrust blocks to be placed against undisturbed earth - use additional concrete as required for over excavation.
- 5 Blocking to be placed in a manner so that bolts can be removed without disturbing the block.



TEE (DEAD END OR FIRE HYDRANT SIMILAP)

CONCRETE THRUST BLOCK

SCALE: N.T.S.

NOTICE

**DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS**

"PENDING"

PROJECT: Boone County, Item 06-1046.00
Mary Grubbs Highway

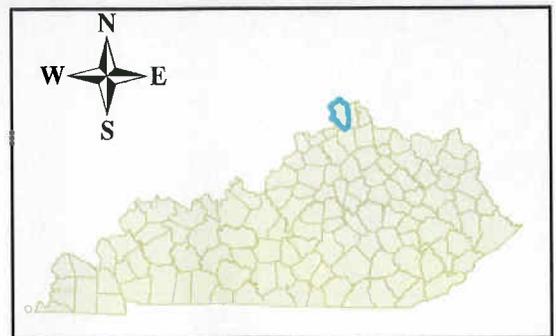
THIS SHALL SERVE AS A NOTICE TO THE CONTRACTOR THAT A DEPARTMENT OF THE ARMY SECTION 404 NATIONWIDE PERMIT IS REQUIRED AND IS PENDING APPROVAL FOR PORTIONS OF THIS PROJECT. THIS NOTICE IS FOR INFORMATIONAL PURPOSES ONLY AND SHALL BE SUPERSEDED UPON RECEIPT OF THE APPROVED PERMIT.

THE DEPARTMENT OF THE ARMY PERMITS ARE AUTHORIZED AND ISSUED UNDER AUTHORITY OF SECTION 10 OF THE RIVERS AND HARBOR ACT AND SECTION 404 OF THE CLEAN WATER ACT. IN COMPLIANCE WITH THE U.S. ARMY CORPS OF ENGINEERS' SECTION 404 REGULATIONS AND PROCEDURES, THE CONTRACTOR **SHALL NOT** PERFORM THE PROPOSED WORK AS LISTED WITHIN THIS NOTICE, WHICH INVOLVES IMPACTS TO WATERS OF THE UNITED STATES, UNTIL THE KENTUCKY TRANSPORTATION CABINET HAS SECURED THE APPROPRIATE APPROVALS AND HAS PROVIDED COPIES OF THESE APPROVALS TO THE CONTRACTOR.

KYTC Item No. 06-1046.00 Mary Grubbs Highway



Mary Grubbs Highway
Boone County
KYTC Item No. 06-1046.00
Walton, KY



SUMMARY OF SECTION 404 & 401 IMPACTS

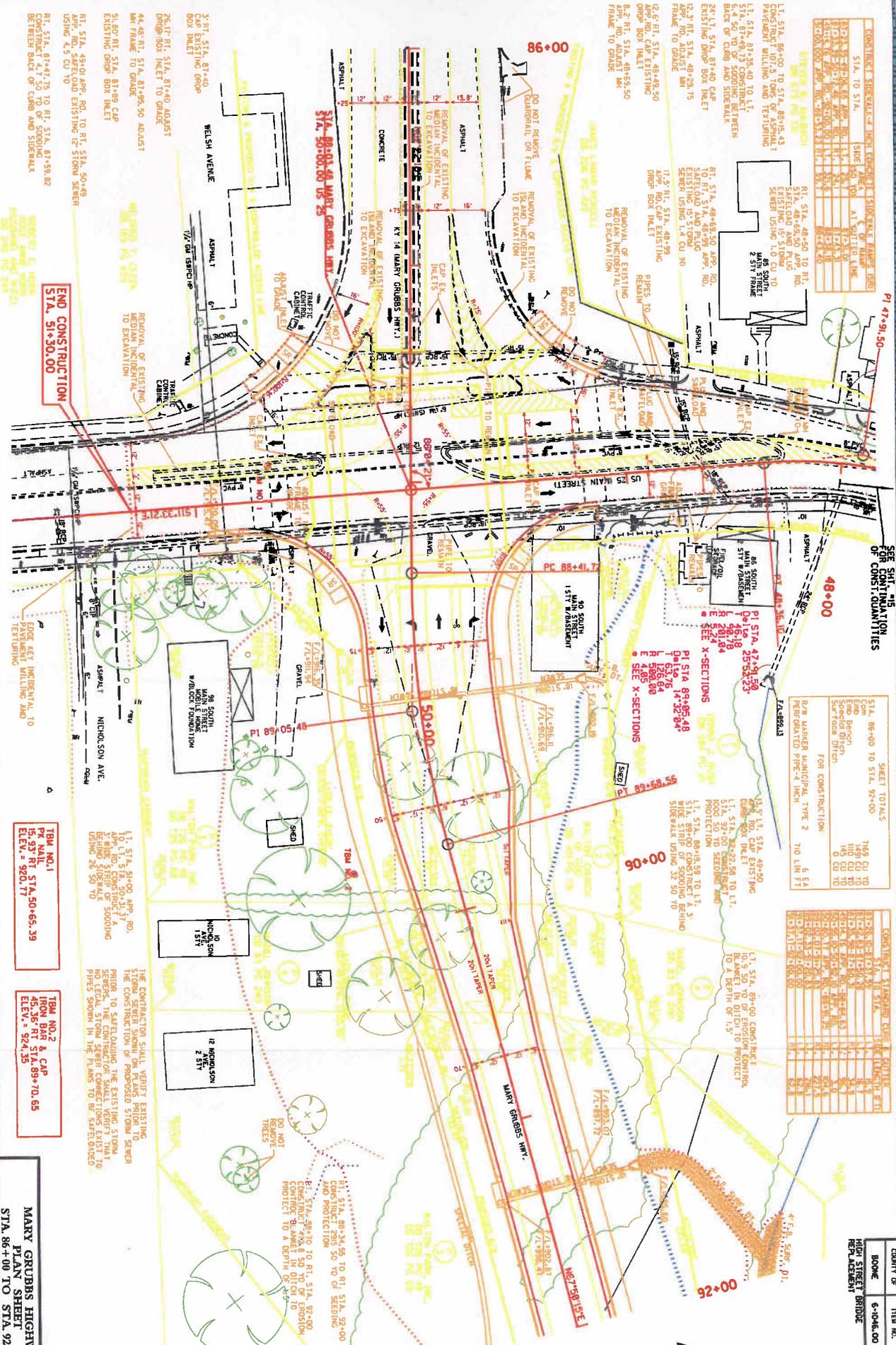
Mary Grubbs Highway Replace Bridge & Approaches Boone County, Kentucky KYTC Item No. 06-1046.00

Culvert Impacts proposed by project

- #1 Station 982+16 – Construct a 48” pipe 252 feet in length. This site will impact **426 feet** of an UT to Cruises Creek. Field investigations indicate this stream is **intermittent** in nature with a watershed of **9.52 acres**. The impact to U.S. Waters is **0.024 acre**.
(Nationwide Permit No. 14)
- #2 Station 96+17 – Construct a 48” pipe 84 feet in length. This site will impact **200 feet** of an UT to Cruises Creek. Field investigations indicate this stream is **intermittent** in nature with a watershed of **18.23 acres**. The impact to U.S. Waters is **0.014 acre**.
(Nationwide Permit No. 14)
- #3 Station 105+30 – Construct a 48” pipe 188 feet in length. This site will impact **300 feet** of an UT to Cruises Creek. Field investigations indicate this stream is **intermittent** in nature with a watershed of **23.93 acres**. The impact to U.S. Waters is **0.017 acre**.
(Nationwide Permit No. 14)

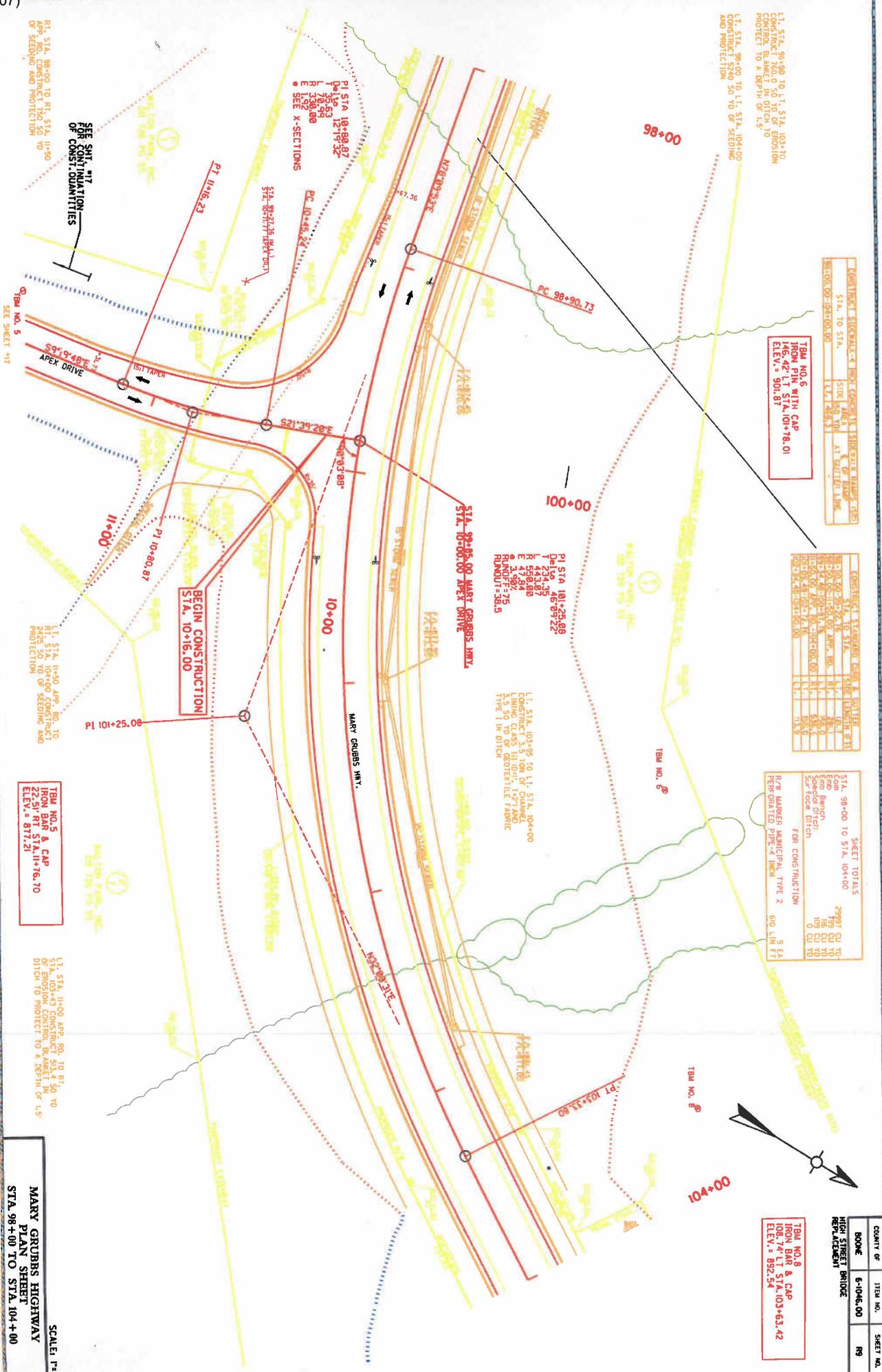
Wetland Impacts proposed by project

- #1 Wetland Site – Construct a controlled fill over **0.25 acre** of jurisdictional wetland near station 92+00. This emergent wetland is associated with the UT to Cruises Creek. Mitigation will be performed off-site at the Ova Arnett wetland mitigation site in Bath County. A proposed 2:1 ratio requires a debit of 0.50 acre at the mitigation site.
(Nationwide Permit No. 14)



CONSTRUCTION QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY
1	12" MANHOLE	1
2	18" MANHOLE	1
3	24" MANHOLE	1
4	30" MANHOLE	1
5	36" MANHOLE	1
6	42" MANHOLE	1
7	48" MANHOLE	1
8	54" MANHOLE	1
9	60" MANHOLE	1
10	66" MANHOLE	1
11	72" MANHOLE	1
12	78" MANHOLE	1
13	84" MANHOLE	1
14	90" MANHOLE	1
15	96" MANHOLE	1
16	102" MANHOLE	1
17	108" MANHOLE	1
18	114" MANHOLE	1
19	120" MANHOLE	1
20	126" MANHOLE	1
21	132" MANHOLE	1
22	138" MANHOLE	1
23	144" MANHOLE	1
24	150" MANHOLE	1
25	156" MANHOLE	1
26	162" MANHOLE	1
27	168" MANHOLE	1
28	174" MANHOLE	1
29	180" MANHOLE	1
30	186" MANHOLE	1
31	192" MANHOLE	1
32	198" MANHOLE	1
33	204" MANHOLE	1
34	210" MANHOLE	1
35	216" MANHOLE	1
36	222" MANHOLE	1
37	228" MANHOLE	1
38	234" MANHOLE	1
39	240" MANHOLE	1
40	246" MANHOLE	1
41	252" MANHOLE	1
42	258" MANHOLE	1
43	264" MANHOLE	1
44	270" MANHOLE	1
45	276" MANHOLE	1
46	282" MANHOLE	1
47	288" MANHOLE	1
48	294" MANHOLE	1
49	300" MANHOLE	1
50	306" MANHOLE	1
51	312" MANHOLE	1
52	318" MANHOLE	1
53	324" MANHOLE	1
54	330" MANHOLE	1
55	336" MANHOLE	1
56	342" MANHOLE	1
57	348" MANHOLE	1
58	354" MANHOLE	1
59	360" MANHOLE	1
60	366" MANHOLE	1
61	372" MANHOLE	1
62	378" MANHOLE	1
63	384" MANHOLE	1
64	390" MANHOLE	1
65	396" MANHOLE	1
66	402" MANHOLE	1
67	408" MANHOLE	1
68	414" MANHOLE	1
69	420" MANHOLE	1
70	426" MANHOLE	1
71	432" MANHOLE	1
72	438" MANHOLE	1
73	444" MANHOLE	1
74	450" MANHOLE	1
75	456" MANHOLE	1
76	462" MANHOLE	1
77	468" MANHOLE	1
78	474" MANHOLE	1
79	480" MANHOLE	1
80	486" MANHOLE	1
81	492" MANHOLE	1
82	498" MANHOLE	1
83	504" MANHOLE	1
84	510" MANHOLE	1
85	516" MANHOLE	1
86	522" MANHOLE	1
87	528" MANHOLE	1
88	534" MANHOLE	1
89	540" MANHOLE	1
90	546" MANHOLE	1
91	552" MANHOLE	1
92	558" MANHOLE	1
93	564" MANHOLE	1
94	570" MANHOLE	1
95	576" MANHOLE	1
96	582" MANHOLE	1
97	588" MANHOLE	1
98	594" MANHOLE	1
99	600" MANHOLE	1
100	606" MANHOLE	1
101	612" MANHOLE	1
102	618" MANHOLE	1
103	624" MANHOLE	1
104	630" MANHOLE	1
105	636" MANHOLE	1
106	642" MANHOLE	1
107	648" MANHOLE	1
108	654" MANHOLE	1
109	660" MANHOLE	1
110	666" MANHOLE	1
111	672" MANHOLE	1
112	678" MANHOLE	1
113	684" MANHOLE	1
114	690" MANHOLE	1
115	696" MANHOLE	1
116	702" MANHOLE	1
117	708" MANHOLE	1
118	714" MANHOLE	1
119	720" MANHOLE	1
120	726" MANHOLE	1
121	732" MANHOLE	1
122	738" MANHOLE	1
123	744" MANHOLE	1
124	750" MANHOLE	1
125	756" MANHOLE	1
126	762" MANHOLE	1
127	768" MANHOLE	1
128	774" MANHOLE	1
129	780" MANHOLE	1
130	786" MANHOLE	1
131	792" MANHOLE	1
132	798" MANHOLE	1
133	804" MANHOLE	1
134	810" MANHOLE	1
135	816" MANHOLE	1
136	822" MANHOLE	1
137	828" MANHOLE	1
138	834" MANHOLE	1
139	840" MANHOLE	1
140	846" MANHOLE	1
141	852" MANHOLE	1
142	858" MANHOLE	1
143	864" MANHOLE	1
144	870" MANHOLE	1
145	876" MANHOLE	1
146	882" MANHOLE	1
147	888" MANHOLE	1
148	894" MANHOLE	1
149	900" MANHOLE	1
150	906" MANHOLE	1
151	912" MANHOLE	1
152	918" MANHOLE	1
153	924" MANHOLE	1
154	930" MANHOLE	1
155	936" MANHOLE	1
156	942" MANHOLE	1
157	948" MANHOLE	1
158	954" MANHOLE	1
159	960" MANHOLE	1
160	966" MANHOLE	1
161	972" MANHOLE	1
162	978" MANHOLE	1
163	984" MANHOLE	1
164	990" MANHOLE	1
165	996" MANHOLE	1
166	1002" MANHOLE	1
167	1008" MANHOLE	1
168	1014" MANHOLE	1
169	1020" MANHOLE	1
170	1026" MANHOLE	1
171	1032" MANHOLE	1
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173	1044" MANHOLE	1
174	1050" MANHOLE	1
175	1056" MANHOLE	1
176	1062" MANHOLE	1
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180	1086" MANHOLE	1
181	1092" MANHOLE	1
182	1098" MANHOLE	1
183	1104" MANHOLE	1
184	1110" MANHOLE	1
185	1116" MANHOLE	1
186	1122" MANHOLE	1
187	1128" MANHOLE	1
188	1134" MANHOLE	1
189	1140" MANHOLE	1
190	1146" MANHOLE	1
191	1152" MANHOLE	1
192	1158" MANHOLE	1
193	1164" MANHOLE	1
194	1170" MANHOLE	1
195	1176" MANHOLE	1
196	1182" MANHOLE	1
197	1188" MANHOLE	1
198	1194" MANHOLE	1
199	1200" MANHOLE	1
200	1206" MANHOLE	1
201	1212" MANHOLE	1
202	1218" MANHOLE	1
203	1224" MANHOLE	1
204	1230" MANHOLE	1
205	1236" MANHOLE	1
206	1242" MANHOLE	1
207	1248" MANHOLE	1
208	1254" MANHOLE	1
209	1260" MANHOLE	1
210	1266" MANHOLE	1
211	1272" MANHOLE	1
212	1278" MANHOLE	1
213	1284" MANHOLE	1
214	1290" MANHOLE	1
215	1296" MANHOLE	1
216	1302" MANHOLE	1
217	1308" MANHOLE	1
218	1314" MANHOLE	1
219	1320" MANHOLE	1
220	1326" MANHOLE	1
221	1332" MANHOLE	1
222	1338" MANHOLE	1
223	1344" MANHOLE	1
224	1350" MANHOLE	1
225	1356" MANHOLE	1
226	1362" MANHOLE	1
227	1368" MANHOLE	1
228	1374" MANHOLE	1
229	1380" MANHOLE	1
230	1386" MANHOLE	1
231	1392" MANHOLE	1
232	1398" MANHOLE	1
233	1404" MANHOLE	1
234	1410" MANHOLE	1
235	1416" MANHOLE	1
236	1422" MANHOLE	1
237	1428" MANHOLE	1
238	1434" MANHOLE	1
239	1440" MANHOLE	1
240	1446" MANHOLE	1
241	1452" MANHOLE	1
242	1458" MANHOLE	1
243	1464" MANHOLE	1
244	1470" MANHOLE	1
245	1476" MANHOLE	1
246	1482" MANHOLE	1
247	1488" MANHOLE	1
248	1494" MANHOLE	1
249	1500" MANHOLE	1
250	1506" MANHOLE	1
251	1512" MANHOLE	1
252	1518" MANHOLE	1
253	1524" MANHOLE	1
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256	1542" MANHOLE	1
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261	1572" MANHOLE	1
262	1578" MANHOLE	1
263	1584" MANHOLE	1
264	1590" MANHOLE	1
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266	1602" MANHOLE	1
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268	1614" MANHOLE	1
269	1620" MANHOLE	1
270	1626" MANHOLE	1
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282	1698" MANHOLE	1
283	1704" MANHOLE	1
284	1710" MANHOLE	1
285	1716" MANHOLE	1
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287	1728" MANHOLE	1
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290	1746" MANHOLE	1
291	1752" MANHOLE	1
292	1758" MANHOLE	1
293	1764" MANHOLE	1
294	1770" MANHOLE	1
295	1776" MANHOLE	1
296	1782" MANHOLE	1
297	1788" MANHOLE	1
298	1794" MANHOLE	1
299	1800" MANHOLE	1
300	1806" MANHOLE	1
301	1812" MANHOLE	1
302	1818" MANHOLE	1
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315	1896" MANHOLE	1
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317	1908" MANHOLE	1
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320	1926" MANHOLE	1
321	1932" MANHOLE	1
322	1938" MANHOLE	1
323	1944" MANHOLE	1
324	1950" MANHOLE	1
325	1956" MANHOLE	1
326	1962" MANHOLE	1
327	1968" MANHOLE	1
328	1974" MANHOLE	1
329	1980" MANHOLE	1
330	1986" MANHOLE	1
331	1992" MANHOLE	1
332</		



SCALE: 1"=20'
MARY GRUBBS HIGHWAY
STA. 98+00 TO STA. 104+00

COUNTY OF	ITEM NO.	SHEET NO.
BOONE	6-1046-00	R9
HIGH STREET BRIDGE REPLACEMENT		

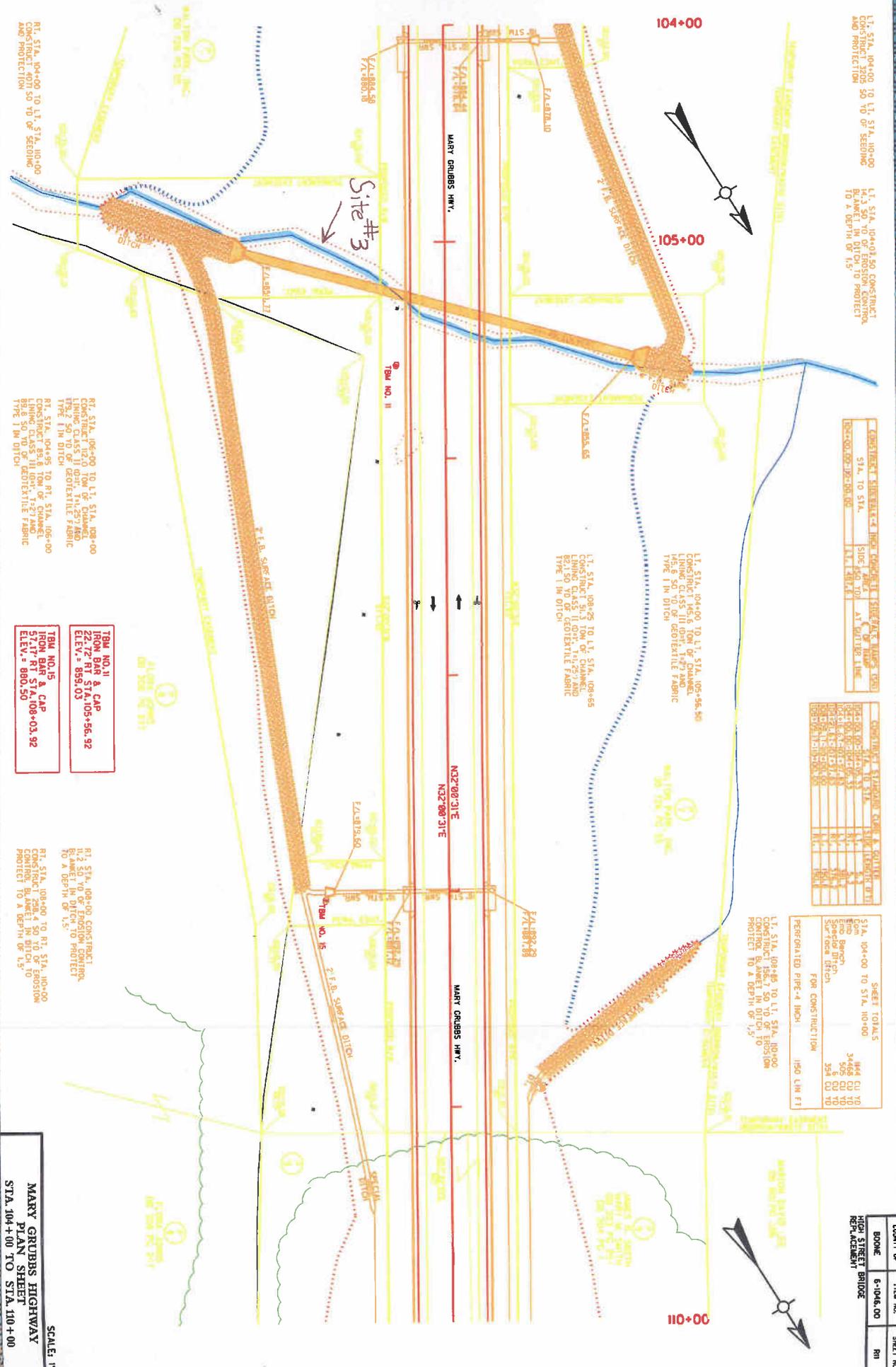
TBM NO. 8
IRON BAR & CAP
106.74' L1 STA. 103+63.42
ELEV. = 892.54

TBM NO. 8
R/W NUMBER MATERIAL TYPE 2
FOR CONSTRUCTION
REINFORCED PIPE

STA. TO STA.	SIDE OF ROAD	AMOUNT
98+00 TO 104+00		

TBM NO. 6
IRON PIN WITH CAP
146.42' L1 STA. 101+78.01
ELEV. = 901.87

CONSTRUCTION QUANTITIES	STA. TO STA.	SIDE OF ROAD	AMOUNT
	98+00 TO 104+00		



L.I. STA. 104+00 TO L.I. STA. 109+00
CONSTRUCT 2x20 50 TO OF SEEDING
AND PROTECTION

L.I. STA. 104+01.50 CONSTRUCT
BLANKET IN DITCH TO PROTECT
TO A DEPTH OF 1.5'

CONSTRUCT SIDEWALK	INCH	CONCRETE	SIDEWALK	TYPE	TO
STA. TO STA.	SIDE	TO	AT	OUTLET	LINE
104+00.00-105+00.00	18"	CONCRETE	18"	CONCRETE	18"

CONSTRUCTION	ITEM	QUANTITY	UNIT
FOR CONSTRUCTION	150 LHM FT		
	34466 CU TO		
	506 CU TO		
	554 CU TO		

PERSONALIZED PIPE-4 INCH
FOR CONSTRUCTION

1. STA. 109+48 TO L.I. STA. 109+00
CONSTRUCT 18x7 50 TO OF EROSION
CONTROL BLANKET IN DITCH TO
PROTECT TO A DEPTH OF 1.5'

RT. STA. 104+00 TO L.I. STA. 110+00
CONSTRUCT 40T 50 TO OF SEEDING
AND PROTECTION

RT. STA. 106+00 TO L.I. STA. 108+00
CONSTRUCT 12x12 TON OF CHANNEL
TYPE 50 TO OF GEOTEXTILE FABRIC
TYPE 1M DITCH

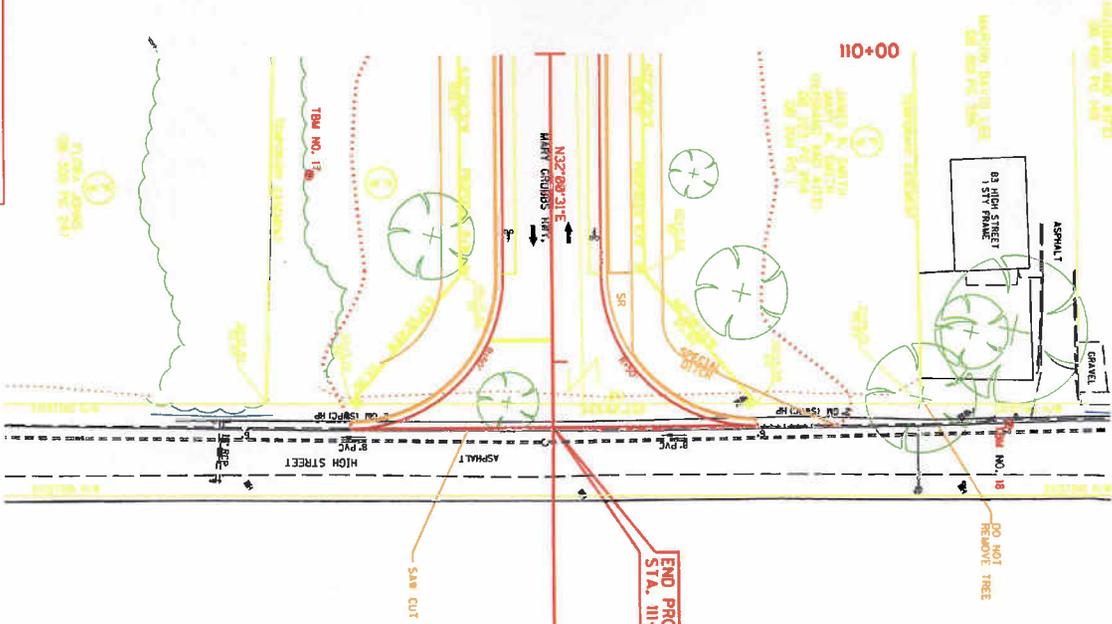
TBM NO. 15
FROM BAR 51 A108+403.92
ELEV. = 880.50

RT. STA. 109+00 TO L.I. STA. 110+00
CONSTRUCT 28x4 50 TO OF EROSION
CONTROL BLANKET IN DITCH TO
PROTECT TO A DEPTH OF 1.5'

SCALE: 1"=2'
MARY GIBBS HIGHWAY
PLAN SHEET
STA. 104+00 TO STA. 110+00

COUNTY OF	TBM NO.	SHEET NO.
BOONE	6-1046.00	RM

TBM NO. 17
IRON BARR & CAP
78.79' RT STA. 110+38.88
ELEV. = 901.59



END PROJECT
STA. 113+21.70

TBM NO. 18
PK MAIL
7.95' RT STA. 28+51.51
ELEV. = 903.62

L1, STA. 110+00 TO L1, STA. 113+21.70
CONSTRUCT 600 SQ YD OF SEEDING
AND PROTECTION
L1, STA. 110+00 TO L1, STA. 113+21.70
CONSTRUCT 200.0 SQ YD OF EROSION
CONTROL BLANKET IN DITCH TO PROTECT
TO A DEPTH OF 1.5'

SAWNEY ENTERPRISES, INC.
5000 EASTLYN ROAD
MARIETTA, GA 30067

RT, STA. 110+00 TO LT, STA. 113+21.70
CONSTRUCT 50 YD OF SEEDING
AND PROTECTION
RT, STA. 110+00 TO RT, STA. 113+00
CONSTRUCT 135.0 SQ YD OF EROSION
CONTROL BLANKET IN DITCH TO PROTECT
TO A DEPTH OF 1.5'
L1, STA. 113+21.70 CONSTRUCT
132 LIN FT OF EDGE KEY

CONTRACT STATIONING	STA. TO STA.	SIDE	TYPE	CONTRACT
110+00-00-00-00	110+00-00-00-00	L1	SEEDING	600 SQ YD

CONTRACT STATIONING	STA. TO STA.	CONTRACT
110+00-00-00-00	110+00-00-00-00	600 SQ YD

STA. TO STA.	CONTRACT
110+00 TO STA. 113+21.70	3000 CU YD 0 CU YD 0 CU YD 0 CU YD

FOR CONSTRUCTION
R/W NUMBER MUNICIPAL, TYPE 2
PERFORATED PIPE 24 INCH



COUNTY OF	TOWN NO.	SHEET NO.
BOONE	6-1046.00	R13

SCALE: 1"=20'
MARY GRUBBS HIGHWAY
PLAN SHEET
STA. 110+00 TO STA. 113+21.70

N O T I C E

DIVISION OF WATER WATER QUALITY CERTIFICATION

“WAIVER”

PROJECT: Boone County, Item No. 06-1046.00
Mary Grubbs Highway

The Division of Water has waived the Section 401 activities for this project by issuance of a Water Quality Certification “Waiver”. The contractor shall post a copy of this Water Quality Certification Waiver in a conspicuous location at the project site for the duration of construction and comply with the general conditions as required.

To more readily expedite construction, the contractor may elect to alter the design or perform the work in a manner different from what was originally proposed and specified. Prior to commencing such alternative work, the contractor shall obtain **written** permission from the Division of Construction and the appropriate permit agency. A copy of any request to alter this proposal and subsequent responses shall be forwarded to the Division of Environmental Analysis, DA Permit Coordinator, for office records and for informational purposes.



ERNIE FLETCHER
GOVERNOR

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
14 REILLY ROAD
FRANKFORT, KENTUCKY 40601
www.kentucky.gov

TERESA J. HILL
SECRETARY

May 8, 2007

David Waldner
Kentucky Transportation Cabinet
Division of Environmental Analysis
200 Mero Street
Frankfort, KY 40622

Re: Water Quality Certification
Waiver # 2007-0065-W
Mary Grubbs Highway - Boone County
AI No: 83364, Activity ID: APE20070001
UTs to Cruises Creek
Boone County, Kentucky
LAT/LONG: 38 51'35"N/84 36'36"W

Dear Mr. Waldner:

It is the understanding of the Kentucky Division of Water (KDOW) that this project is subject to Section 404 of the Clean Water Act and consists of:

- Impacts to 926 linear feet of unnamed tributaries to Cruises Creek and the loss of 0.25 acres of jurisdictional wetlands for bridge construction and approach work.

KDOW hereby waives the right to issue a 401 Water Quality Certification for this project. However, other permits may be required from the Division of Water for this project. If this project takes place within the floodplain, a permit may be required from the Water Resources Branch. The contact person is Ali Daneshmand. If this project will disturb one acre or more of land, a KPDES general storm water permit will be required from the KPDES Branch. The contact person is Ronnie Thompson. Both can be reached at (502) 564-3410.

All future correspondence on this project must reference **AI No. 83364**. If you should have any questions concerning this letter, please me at (502) 564-2150.

Sincerely,

A handwritten signature in cursive script that reads "Jennifer Garland".

Jennifer Garland, Supervisor
Water Quality Certification Section
Division of Water

JG:DN:tw

COPIES SENT TO:

Norma Condra, USACE: Louisville

Ron Mikulak, USEPA: Atlanta

Lee Andrews, USFWS: Frankfort

Ronald Rigney, II, KTC
Division of Environmental Analysis
200 Mero Street
Frankfort, KY 40622

Lajuanda Haight-Maybriar, Licking River Basin Coordinator



Kentucky Transportation Cabinet

Highway District 6

And

_____ (2), Construction

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

Groundwater protection plan

For Highway Construction Activities

For

**Replace Bridge and Approaches at NS 100' East
of US 25 on High Street**

Project: PCN ## - #####

SYP Item: 06-1046.00

KyTC BMP Plan for Project PCN ## - #####

Project information

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

1. Owner – Kentucky Transportation Cabinet, District 6
2. Resident Engineer: (2)
3. Contractor name: (2)
Address: (2)

Phone number: (2)
Contact: (2)
Contractors agent responsible for compliance with the KPDES permit requirements (3):
4. Project Control Number (2)
5. Route (Address) High Street (CS 3011) Walton, KY
6. Latitude/Longitude (project mid-point) dd/mm/ss, dd/mm/ss 38.861409 N, 84.604884 w
7. County (project mid-point) Boone
8. Project start date (date work will begin): (2)
9. Projected completion date: (2)

KyTC BMP Plan for Project PCN ## - #####

A. Site description:

1. Nature of Construction Activity (from letting project description) Replace Bridge and Approaches at NS system 100' East of US 25 in Walton
2. Order of major soil disturbing activities (2) and (3)
3. Projected volume of material to be moved 81500 CY
4. Estimate of total project area (acres) 24
5. Estimate of area to be disturbed (acres) 24
6. Post construction runoff coefficient will be included in the project drainage folder. Persons needing information pertaining to the runoff coefficient will contact the resident engineer to request this information.(1)
7. Data describing existing soil condition (1) & (2)
8. Data describing existing discharge water quality (if any) (1) & (2)
9. Receiving water name Cruises Creek
10. TMDLs and Pollutants of Concern in Receiving Waters: (1 DEA)
11. Site map – Project layout sheet plus the erosion control sheets in the project plans that depict Disturbed Drainage Areas (DDAs) and related information. These sheets depict the existing project conditions with areas delineated by DDA (drainage area bounded by watershed breaks and right of way limits), the storm water discharge locations (either as a point discharge or as overland flow) and the areas that drain to each discharge point. These plans define the limits of areas to be disturbed and the location of control measures. Controls will be either site specific as designated by the designer or will be annotated by the contractor and resident engineer before disturbance commences. The project layout sheet shows the surface waters and wetlands.
12. Potential sources of pollutants:

The primary source of pollutants is solids that are mobilized during storm events. Other sources of pollutants include oil/fuel/grease from servicing and operating construction equipment, concrete washout water, sanitary wastes and trash/debris. (3)

KyTC BMP Plan for Project PCN ## - #####

B. Sediment and Erosion Control Measures:

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

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

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

KyTC BMP Plan for Project PCN ## -

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

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- Permanent Seeding and Protection
 - Placing Sod
 - Planting trees and/or shrubs where they are included in the project
- BMP's including Storm Water Management Devices such as velocity dissipation devices and Karst policy BMP's to be installed during construction to control the pollutants in storm water discharges that will occur after construction has been completed are NA

C. Other Control Measures

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

2. Waste Materials

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

3. Hazardous Waste

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

4. Spill Prevention

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

- **Good Housekeeping:**

KyTC BMP Plan for Project PCN ## -

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

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

➤ **Hazardous Products:**

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

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

The following product-specific practices will be followed onsite:

➤ **Petroleum Products:**

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

The contractor shall prepare an Oil Pollution Spill Prevention Control and Countermeasure plan when the project that involves the storage of petroleum products in 55 gallon or larger containers with a total combined storage capacity of 1,320 gallons. This is a requirement of 40 CFR 112.

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

➤ **Fertilizers:**

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

➤ **Paints:**

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

➤ **Concrete Truck Washout:**

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

➤ **Spill Control Practices**

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

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

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- Spills of toxic or hazardous material will be reported to the appropriate state/local agency as required by KRS 224 and applicable federal law.
- The spill prevention plan will be adjusted as needed to prevent spills from reoccurring and improve spill response and cleanup.
- Spills of products will be cleaned up promptly. Wastes from spill clean up will be disposed in accordance with appropriate regulations.

D. Other State and Local Plans

This BMP plan shall include any requirements specified in sediment and erosion control plans, storm water management plans or permits that have been approved by other state or local officials. Upon submittal of the NOI, other requirements for surface water protection are incorporated by reference into and are enforceable under this permit (even if they are not specifically included in this BMP plan). This provision does not apply to master or comprehensive plans, non-enforceable guidelines or technical guidance documents that are not identified in a specific plan or permit issued for the construction site by state or local officials. (1)

E. Maintenance

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

F. Inspections

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

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- All erosion prevention and sediment control measures will be inspected at least once each week and following any rain of one-half inch or more.
- Inspections will be conducted by individuals that have received KyTC Grade Level II training or other qualification as prescribed by the cabinet that includes instruction concerning sediment and erosion control.
- Inspection reports will be written, signed, dated, and kept on file.
- Areas at final grade will be seeded and mulched within 14 days.
- Areas that are not at final grade where construction has ceased for a period of 21 days or longer and soil stock piles shall receive temporary mulch no later than 14 days from the last construction activity in that area.
- All measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of being reported.
- Built-up sediment will be removed from behind the silt fence before it has reached halfway up the height of the fence.
- Silt fences will be inspected for bypassing, overtopping, undercutting, depth of sediment, tears, and to ensure attachment to secure posts.
- Sediment basins will be inspected for depth of sediment, and built-up sediment will be removed when it reaches 70 percent of the design capacity and at the end of the job.
- Diversion dikes and berms will be inspected and any breaches promptly repaired. Areas that are eroding or scouring will be repaired and re-seeded / mulched as needed.
- Temporary and permanent seeding and mulching will be inspected for bare spots, washouts, and healthy growth. Bare or eroded areas will be repaired as needed.
- All material storage and equipment servicing areas that involve the management of bulk liquids, fuels, and bulk solids will be inspected weekly for conditions that represent a release or possible release of pollutants to the environment.

G. Non – Storm Water discharges

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

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

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- Uncontaminated groundwater and rain water (from dewatering during excavation).

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

H. Groundwater Protection Plan (3)

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

- Contractors statement: (3)

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

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

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

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

_____ 2. (j) Storing or related handling of road oils, dust suppressants,, at a central location;

_____ 2. (k) Application or related handling of road oils, dust suppressants or deicing materials, (does not include use of chloride-based deicing materials applied to roads or parking lots);

_____ 2. (m) Installation, construction, operation, or abandonment of wells, bore holes, or core holes, (this does not include bore holes for the purpose of explosive demolition);

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

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

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The contractor is responsible for the preparation of a plan that addresses the

401 KAR 5:037 Section 3. (3) Elements of site specific groundwater protection plan:

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

KyTC BMP Plan for Project PCN ## -

Contractor and Resident Engineer Plan certification

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

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

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

Resident Engineer and Contractor Certification:

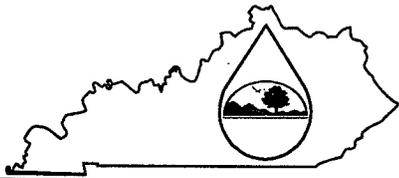
(2) Resident Engineer signature

Signed _____ title _____, _____ signature
 Typed or printed name²

(3) Signed _____ title _____, _____ signature
 Typed or printed name¹

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

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



**Kentucky Pollutant Discharge Elimination System
 (KPDES)
 Notice of Intent (NOI)
 for Storm Water Discharges
 Associated with Industrial Activity Under the
 KPDES General Permit**

Submission of this Notice of Intent constitutes notice that the party identified in Section I of this form intends to be authorized by a KPDES permit issued for storm water discharges associated with industrial activity. Becoming a permittee obligates such discharger to comply with the terms and conditions of the permit.

ALL NECESSARY INFORMATION MUST BE PROVIDED ON THIS FORM (See Instructions on back)

I. Facility Operator Information

Name:	KyTC District 6	Phone:	859-341-2700
Address:	421 Buttermilk Pike	Status of Owner/Operator:	S
City, State, Zip Code:	Covington, KY 41017		

II. Facility/Site Location Information

Name:	KyTC PCN ## #####		
Address:	High Street (CS3011)		
City, State, Zip Code:	Walton, KY		
County:	Boone		
Site Latitude (degrees/minutes/seconds)	38.861409 N	Site Longitude (degrees/minutes/seconds)	84.604884

III. Site Activity Information

MS4 Operator Name:	SD1		
Receiving Water Body:	Cruises Creek		
Are there existing quantitative data?	Yes <input type="checkbox"/> If Yes, submit with this form. No <input checked="" type="checkbox"/>		
SIC or Designated Activity Code Primary	1611	2nd	1622
If this facility is a member of a Group Application, enter Group Application Number:			
If you have other existing KPDES Permits, enter Permit Numbers:			

IV. Additional Information Required FOR CONSTRUCTION ACTIVITIES ONLY

Project Start Date:		Completion Date:	
Estimated Area to be disturbed (in acres):	24		
Is the Storm Water Pollution Prevention Plan in Compliance with State and/or Local Sediment and Erosion Plans?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

V. Certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed or Typed Name:	Tom Schomaker		
Signature:		Date:	

- Comment [K1]:** The KYTC District 6 project control number that is assigned to this project. It will be added to the NOI either by the Division of Construction or by the District. This number is to be returned from the Division of Water on the permit letter. ... [1]
- Comment [K2]:** The name will be the project control number that is assigned to the permit. It will be added to the NOI either by the Division of Construction or by the District. This number is to be returned from the Division of Water on the permit letter. ... [2]
- Comment [K3]:** The address line will be the federal or state route number (if applicable) followed by the route number. This field is limited to 30 characters. ... [3]
- Comment [K4]:** This information is to be the Post Office address of the project location. Latitude/Longitude: It must be in the county administration's county name. ... [4]
- Comment [K5]:** The site latitude/longitude is to be the approximate center of the project in the nearest second. ... [5]
- Comment [K6]:** Site latitude/longitude is to be the approximate center of the project in the nearest second. ... [6]
- Comment [K7]:** Enter the name of the MS4 (s) when the project falls inside of an MS4 jurisdiction(s) and discharges storm water to the MS4 through a conveyance system (conduit, ditch, or channel). ... [7]
- Comment [K8]:** This field is to be filled in with the project name selected on the permit application. The receiving water body name selected should be the name of the water body, creek, river, or lake that describes the water body where the project is located. That is, it carries all of the storm water runoff from the project if the project is within ... [8]
- Comment [K9]:** The SIC code for linear highway projects is 1611. The code for a bridge is 1622. Projects that involve both linear work and bridge work ... [9]
- Comment [K10]:** This field will be filled in with the project name or other identifier for the project segment for example ... [10]
- Comment [K11]:** This field is to be completed by the permittee and will be the date when the construction of the project will begin. ... [11]
- Comment [K12]:** This field is to be completed by the District. This will be the projected completion date based on the project start date plus the contract duration. ... [12]
- Comment [K13]:** This is to be the total of the project's Disturbed Drainage Area (DDA). ... [13]
- Comment [K14]:** The design professional must be a registered professional engineer with a valid KYTC permit to practice engineering in the state of Kentucky. ... [14]
- Comment [K15]:** This field is to be completed by a registered professional engineer for KYTC. This will be the Chief District Engineer. This signature authority ... [15]

WHO MUST FILE A NOTICE OF INTENT (NOI) FORM

Federal law at 40 CFR Part 122 prohibits point source discharges of stormwater associated with industrial activity to a water body of the Commonwealth of Kentucky without a Kentucky Pollutant Discharge Elimination System (KPDES) permit. The operator of an industrial activity that has such a storm water discharge must submit a NOI to obtain coverage under the KPDES Storm Water General Permit. If you have questions about whether you need a permit under the KPDES Storm Water program, or if you need information as to whether a particular program is administered by the state agency, call the Storm Water Contact, Industrial Section, Kentucky Division of Water at (502) 564-3410.

WHERE TO FILE NOI FORM

NOIs must be sent to the following address:

Section Supervisor
Inventory & Data Management Section
KPDES Branch, Division of Water
Frankfort Office Park
14 Reilly Road
Frankfort, KY 40601

COMPLETING THE FORM

Type or print legibly in the appropriate areas only. If you have any questions regarding the completion of this form call the Storm Water Contact, Industrial Section, at (502) 564-3410.

SECTION I - FACILITY OPERATOR INFORMATION

Give the legal name of the person, firm, public organization, or any other entity that operates the facility or site described in this application. The name of the operator may or may not be the same as the name of the facility. The responsible party is the legal entity that controls the facility's operation, rather than the plant or site manager. Do not use a colloquial name. Enter the complete address and telephone number of the operator.

Enter the appropriate letter to indicate the legal status of the operator of the facility.

F = Federal M = Public (other than federal or state)
S = State P = Private

SECTION II - FACILITY/SITE LOCATION INFORMATION

Enter the facility's or site's official or legal name and complete street address, including city, state, and ZIP code.

SECTION III - SITE ACTIVITY INFORMATION

If the storm water discharges to a municipal separate storm sewer system (MS4), enter the name of the operator of the MS4 (e.g., municipality name, county name) and the receiving water of the discharge from the MS4. (A MS4 is defined as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is owned or operated by a state, city, town, borough, county, parish, district, association, or other public body which is designed or used for collecting or conveying storm water.)

If the facility discharges storm water directly to receiving water(s), enter the name of the receiving water.

Indicate whether or not the owner or operator of the facility has existing quantitative data that represent the characteristics and concentration of pollutants in storm water discharges. If data is available submit with this form.

List, in descending order of significance, up to four 4-digit standard industrial classification (SIC) codes that best describe the principal products or services provided at the facility or site identified in Section II of this application.

If the facility listed in Section II has participated in Part 1 of an approved storm water group application and a group number has been assigned, enter the group application number in the space provided.

If there are other KPDES permits presently issued for the facility or site listed in Section II, list the permit numbers.

SECTION IV - ADDITIONAL INFORMATION REQUIRED FOR CONSTRUCTION ACTIVITIES ONLY

Construction activities must complete Section IV in addition of Sections I through III. Only construction activities need to complete Section IV.

Enter the project start date and the estimated completion date for the entire development plan.

Provide an estimate of the total number of acres of the site on which soil will be disturbed (round to the nearest acre).

Indicate whether the storm water pollution prevention plan for the site is in compliance with approved state and/or local sediment and erosion plans, permits, or storm water management plans.

SECTION V - CERTIFICATION

Federal statutes provide for severe penalties for submitting false information on this application form. Federal regulations require this application to be signed as follows:

For a corporation: by a responsible corporate officer, which means: (i) president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions, or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

For a partnership or sole proprietorship: by a general partner or the proprietor; or

For a municipality, state, Federal, or other public facility: by either a principal executive officer or ranking elected official.

LETTING SEPTEMBER 2007

**KENTUCKY TRANSPORTATION CABINET
COMMUNICATING ALL PROMISES (CAP)**

BOONE COUNTY

6-1046.00

(NO CAPS INVOLVED IN PROJECT)

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

Any reference in the plans or proposal to the *Standard Specifications for Road and Bridge Construction, Edition of 2000*, and *Standard Drawings, Edition of 2000* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2004* and *Standard Drawings, Edition of 2003*.

Special Notes [SN] and Special Provisions [SP] marked with an asterisk * and listed under Part II of the Table of Contents within this proposal can be referenced in the *Standard Specifications for Road and Bridge Construction, Edition of 2004*. Special Notes and Special Provisions not marked with an asterisk will be attached to this proposal.

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2004 Edition**
(Effective with the July 27, 2007 Letting)

<p>SUBSECTION: 105.07 COOPERATION WITH UTILITIES. REVISION: In the last paragraph, replace “KRS 367 Sections 1 through 10” with “KRS 367.4901 through 367.4917”</p>
<p>SUBSECTION: 108.01 SUBCONTRACTING OF CONTRACT. REVISION: Replace the second and third sentence of the first paragraph with the following:</p> <p>When the Engineer gives such consent, the Engineer will allow the Contractor to subcontract a portion, but the Contractor must perform with his own organization work amounting to no less than 30 percent of the total Contract cost. The Department will not allow any subcontractor to exceed the percentage to be performed by the Contractor and will require the Contractor to maintain a supervisory role over the entire project.</p>
<p>SUBSECTION: 109.07 PRICE ADJUSTMENT. REVISION: Replace the section with the following:</p> <p>109.07 PRICE ADJUSTMENTS. Due to the fluctuating costs of petroleum products, the Department will adjust the compensation of specified liquid asphalt items and diesel fuel in contracts when contract quantity thresholds are met.</p> <p>109.07.01 Liquid Asphalt. The Department will compare the Kentucky Average Price Index (KAPI), for the month that the Contract is let, to the index for the month that the Contractor places the material on the project to determine the percent change. When the original contract quantity for asphalt items is equal to or greater than 3,000 tons and when the average price of the liquid asphalt products increases or decreases more than 5 percent, the Department will adjust the Contractor’s compensation. The KAPI is calculated monthly using the average price, per ton at the terminal, from the active suppliers of liquid asphalt.</p> <p><u>Adjustable Contract Items:</u></p> <ul style="list-style-type: none"> • Asphalt Curing Seal • Asphalt Material for Prime • Asphalt Base, All Classes • Asphalt Binder • Asphalt Surface, All Classes • Sand Asphalt Surface • Asphalt Open-Graded Surface • Asphalt Seal Coat • Asphalt Mixture for Leveling and Wedging • Drainage Blanket - Type II - Asphalt <p>The Department will determine the price adjustment using the following formulas:</p> <p><u>When PC is greater than PL</u> Asphalt Price Adjustment = $(Q \times A)/100 \times PL \times [(PC-PL)/PL - 0.05]$</p> <p><u>When PC is less than PL</u> Asphalt Price Adjustment = $(Q \times A)/100 \times PL \times [(PC-PL)/PL + 0.05]$</p> <p>Where: Q = Tons of material or mixture placed each month. A = Percent of material or mixture that is asphalt. PL = KAPI for the month that the Contract is let. PC = KAPI for the month that the Contractor places the material or mixture.</p> <p>The job-mix formula for asphalt base, binder, and surface mixtures determines “A”, which is the percent of asphalt. For recycled mixtures, the Department will determine the adjustment for the new asphalt cement only. The Department will consider materials for prime and seal as 100 percent asphalt.</p>

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Revision
Continued

109.07.02 Fuel. The Department will adjust the Contractor's compensation when the average price of diesel fuel increases or decreases more than 5 percent and the original Contract quantity for the item on which the fuel is consumed is equal to or greater than the threshold quantities listed in the following table.

<u>Item</u>	<u>Threshold Quantity</u>	<u>Fuel/Work</u>
Roadway Excavation	10,000 cubic yards	0.25
Embankment-in-Place	10,000 cubic yards	0.25
Borrow Excavation	10,000 cubic yards	0.25
DGA Base or Crushed Stone Base	5,000 tons	0.52
Stabilized Aggregate Base	5,000 tons	0.52
Drainage Blanket, Cement Treated or Untreated	5,000 tons	0.52
Drainage Blanket, Asphalt Treated	5,000 tons	3.00
Crushed Sandstone Base (Cement Treated)	5,000 tons	0.52
Hot-Mixed Asphalt Mixtures for Pavements or Shoulders	3,000 tons ⁽¹⁾	3.00
PCC Pavement, Base, or Shoulders	2,000 square yards ⁽²⁾	0.14

⁽¹⁾Total of all hot mixed asphalt Contract items.

⁽²⁾Total of all JPC pavement, JPC shoulder, and PCC base, Contract items.

The Department will determine the price adjustment using the following formulas:

When PC is greater than PL

$$\text{Fuel Price Adjustment} = Q \times F \times PL \times [(PC-PL)/PL - 0.05]$$

When PC is less than PL

$$\text{Fuel Price Adjustment} = Q \times F \times PL \times [(PC-PL)/PL + 0.05]$$

Where:

Q = Quantity for applicable item placed or performed that month.

F = The fuel to work unit ratio for each applicable item.

PL = Average reseller price of diesel fuel, excluding taxes, discounts, and superfund line items, in the Kentucky region for the month that the Contract is let.

PC = Average reseller price of diesel fuel, excluding taxes, discounts, and superfund line items, in the Kentucky region for the month that the Contractor uses the fuel on the project.

109.07.03 Payments and Deductions. When thresholds are met, the Department will adjust the Contractor's compensation for each eligible pay item, paid or deducted, monthly.

If later price decreases indicate that the Department made an overpayment, the Department will withhold the overpayment from succeeding pay estimates on the project, or the Contractor shall immediately refund the over payment to the Department.

When the Contractor places materials during any month after the month that the Contract time (including all approved time extensions) expires, the Department will use the average price for the month that the Contractor places the material or the average price for the last month of the Contract time; whichever is least.

The Department will not grant a time extension for any overrun in the Contract amount due to payments made according to this section. The Department will not make any additional compensation due to adjustments made according to this section.

The Department will adjust the Contractor's compensation on the following months pay estimate and on the final pay estimate. The Department will make the final adjustment of the Contractor's compensation on the final estimate for the project.

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<p>SUBSECTION: 110.01 MOBILIZATION. REVISION: Replace the third paragraph with the following:</p>	<p>Do not bid an amount for Mobilization that exceeds 5 percent of the sum of the total amounts bid for all items in the Bid Proposal, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives. The Department will automatically adjust any bids in excess of this amount to 5 percent for bid comparisons. The Department will base the award on the maximum allowable bid of 5 percent. If any errors in unit bid prices for other Contract items in a Contractor's Bid Proposal are discovered after bid opening and such errors reduce the total amount bid for all other items, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives, so that the percent bid for Mobilization is larger than 5 percent, the Department will adjust the amount bid for Mobilization to 5 percent of the sum of the corrected total bid amounts.</p>						
<p>SUBSECTION: 110.02 DEMOBILIZATION. REVISION: Replace the first sentence of the third paragraph with the following:</p>	<p>Do not bid an amount for Demobilization that is less than 1.5 percent of the sum of the total amounts bid for all other items in the Bid Proposal, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives.</p>						
<p>SUBSECTION: 206.03.03 Compaction. REVISION: Replace "KM 64-412" with "KM 64-002"</p>							
<p>SUBSECTION: 206.04.01 Embankment-in-Place. REVISION: Replace the first sentence of the sixth paragraph with the following:</p>	<p>When payment is made for Embankment-in-Place, the Department will make payment for all embankment constructed on the project, including roadway embankment, refill in cuts, and embankment placed in embankment benches.</p>						
<p>SUBSECTION: 212.03.03 Permanent Seeding and Protection. PART: Delete Part C) and replace Parts A) and B) with the following: REVISION: A) Seed Mixtures for Permanent Seeding.</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding-left: 20px;">Seed Mix Type I:</td> <td> 30% Kentucky 31 Tall Fescue (<i>Festuca arundinacea</i>) 20% Creeping Red Fescue (<i>Festuca rubra</i>) 35% Hard Fescue (<i>Festuca (Festuca longifolia)</i>) 10% Ryegrass, Perennial (<i>Lolium perenne</i>) 5% White Dutch Clover (<i>Trifolium repens</i>) </td> </tr> <tr> <td style="padding-left: 20px;">Seed Mix Type II:</td> <td> 55% Kentucky 31 Tall Fescue (<i>Festuca arundinacea</i>) 15% Ryegrass, Perennial (<i>Lolium perenne</i>) 15% (based on pure live seed, PLS) Little Bluestem (<i>Schizachyrium scoparium</i>) 15% Crown Vetch (<i>coronilla varia</i>) </td> </tr> <tr> <td style="padding-left: 20px;">Seed Mix Type III:</td> <td> 40% Kentucky 31 Tall Fescue (<i>Festuca arundinacea</i>) 15% Perennial Ryegrass <i>Lolium perenne</i>) 20% Sericea Lespedeza (<i>Lespedeza cuneata</i>) 25% (based on pure live seed, PLS) Little Bluestem (<i>Schizachyrium scoparium</i>) </td> </tr> </table> <ol style="list-style-type: none"> 1) Permanent Seeding on Slopes 3:1 or Less. Apply seed mix Type I at a minimum application rate of 100 pounds per acre. 2) Permanent Seeding on Slopes Greater than 3:1 in Highway Districts 4, 5, 6, and 7. Apply seed mix Type II at a minimum application rate of 100 pounds per acre plus a nurse crop of either Cereal Rye or German Foxtail-Millet based on the time of year. During the months of June through August, apply 10 pounds of German Foxtail-Millet (<i>Setaria italica</i>). During the months of September through May, apply 56 pounds of Cereal Rye (<i>Secale cereale</i>). If adjacent to golf courses replace the crown vetch with Kentucky 31 Tall Fescue 	Seed Mix Type I:	30% Kentucky 31 Tall Fescue (<i>Festuca arundinacea</i>) 20% Creeping Red Fescue (<i>Festuca rubra</i>) 35% Hard Fescue (<i>Festuca (Festuca longifolia)</i>) 10% Ryegrass, Perennial (<i>Lolium perenne</i>) 5% White Dutch Clover (<i>Trifolium repens</i>)	Seed Mix Type II:	55% Kentucky 31 Tall Fescue (<i>Festuca arundinacea</i>) 15% Ryegrass, Perennial (<i>Lolium perenne</i>) 15% (based on pure live seed, PLS) Little Bluestem (<i>Schizachyrium scoparium</i>) 15% Crown Vetch (<i>coronilla varia</i>)	Seed Mix Type III:	40% Kentucky 31 Tall Fescue (<i>Festuca arundinacea</i>) 15% Perennial Ryegrass <i>Lolium perenne</i>) 20% Sericea Lespedeza (<i>Lespedeza cuneata</i>) 25% (based on pure live seed, PLS) Little Bluestem (<i>Schizachyrium scoparium</i>)
Seed Mix Type I:	30% Kentucky 31 Tall Fescue (<i>Festuca arundinacea</i>) 20% Creeping Red Fescue (<i>Festuca rubra</i>) 35% Hard Fescue (<i>Festuca (Festuca longifolia)</i>) 10% Ryegrass, Perennial (<i>Lolium perenne</i>) 5% White Dutch Clover (<i>Trifolium repens</i>)						
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Seed Mix Type III:	40% Kentucky 31 Tall Fescue (<i>Festuca arundinacea</i>) 15% Perennial Ryegrass <i>Lolium perenne</i>) 20% Sericea Lespedeza (<i>Lespedeza cuneata</i>) 25% (based on pure live seed, PLS) Little Bluestem (<i>Schizachyrium scoparium</i>)						

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revision continued	<p>3) Permanent Seeding on Slopes Greater than 3:1 in Highway Districts 1, 2, 3, 8, 9, 10, 11, and 12. Apply seed mix Type III at a minimum application rate of 100 pounds per acre plus a nurse crop of either Cereal Rye or German Foxtail-Millet based on the time of year. During the months of June through August, apply 10 pounds of German Foxtail-Millet (<i>Setaria italica</i>). During the months of September through May, apply 56 pounds of Cereal Rye (<i>Secale cereale</i>). If adjacent to crop land or golf course replace the <i>Sericea Lespedeza</i> with Kentucky 31 Tall Fescue.</p> <p>B) Procedures for Permanent Seeding. Include a seeding plan in the Best Management Practices plan (BMP) according to Section 213. Prepare a seedbed and incorporate fertilizer and agricultural limestone as needed. Do not apply dry agricultural Limestone when it may generate a traffic hazard. Remove all rock and dirt clods over 4 inches in diameter from the surface of the seedbed. Unless the Engineer directs otherwise, track all slopes 3:1 or greater. Ensure that tracking is performed up and down and not across. Native Grass seed should be calculated figuring seed on a pure live seed basis (PLS), using the least amount of inert matter available. Seed and mulch to produce a uniform vegetation cover using the seeding rates as indicated to each application. Mulch with clean, weed free straw. Place straw to an approximate 2-inch loose depth (2 tons per acre) and anchor it into the soil by mechanically crimping it into the soil surface or applying tackifier to provide a protective cover. For the periods of March 1 through May 15 and from September 1 through November 1, the Department will allow the option of using hydromulch at minimum rate of 1,500 pounds per acre in place of straw with tackifier. Regardless of materials used, ensure the protective cover holds until seeding is acceptably established according to part G) of this subsection.</p>
SUBSECTION: REVISION:	213.03.01 Best Management Practices (BMP). Replace the second and third sentence of the first paragraph with the following: Include erosion control for all off right of way work performed under a Department acquired permit. Ensure that the BMP provides storage for 3,600 cubic feet of water per surface acre disturbed.
SUBSECTION: REVISION:	213.03.02 Progress Requirements. Add the following after the first sentence of the third paragraph: Seed and mulch areas at final grade within 14 days. Temporary mulch areas not at final grade if work stops for longer than 21 days. Temporary mulch soil stock piles within 14 days of the last construction activity in that area.
SUBSECTION: REVISION:	213.03.03 Inspection and Maintenance Replace both "0.1-inch" references with "0.5-inch". Add the following sentence to the end of the second paragraph: Initiate corrective action within 24 hours of any reported deficiency.
SUBSECTION: PART: REVISION:	213.03.05 Temporary Control Measures. B) Silt Checks. B) Silt Checks. Use one of the following types: 1) Silt Check Type II - Crushed stone such as cyclopean stone riprap, quarry run stone, or other size material approved by the Engineer, dumped in place and shaped to the configuration required. 2) Silt Check Type III - Blasted or broken rock dumped in place and shaped to the configuration required. Remove and properly dispose of sediment deposited at silt checks as necessary. When no longer needed, remove the silt checks and dispose of surplus materials as excavated materials according to Section 204. Seed and protect the entire area disturbed, as directed. Do not leave silt checks in place after completion of the project unless allowed by the Engineer or specified in the Plans.

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<p>SUBSECTION: 213.03.05 Temporary Control Measures. PART: F) Temporary Seeding and Protection. REVISION: Replace the first sentence with the following:</p>	<p>Apply seed mix Type I at a minimum application rate of 100 pounds per acre plus a nurse crop of either Cereal Rye or German Foxtail-Millet based on the time of year. During the months of June through August, apply 10 pounds of German Foxtail-Millet (<i>Setaria italica</i>). During the months of September through May, apply 56 pounds of Cereal Rye (<i>Secale cereale</i>). Obtain the Engineer's approval for the seed before use.</p>
<p>SUBSECTION: 213.03.05 Temporary Control Measures. PART: G) Temporary Mulch. REVISION: Replace the last sentence with the following:</p>	<p>Place temporary mulch to an approximate 2-inch loose depth (2 tons per acre) and apply tackifier.</p>
<p>SUBSECTION: 213.04.15 Temporary Silt Ditch. REVISION: Replace with the following:</p>	<p>The Department will measure the quantity in linear feet.</p>
<p>SUBSECTION: 213.04 MEASUREMENT. REVISION: Add the following Subsection:</p>	<p>213.04.24 Clean Temporary Silt Ditch. The Department will measure the quantity in linear feet along the ditch line.</p>
<p>SUBSECTION: 213.05 PAYMENT. REVISION: Add the following lines:</p>	<p>20594 Temporary Silt Ditch Linear Foot 20601 Clean Temporary Silt Ditch Linear Foot</p>
<p>SUBSECTION: 303.03.01 Mixture PART: C) Cement Treated Mixture. REVISION: Delete the "For asphalt pavements" from the second paragraph.</p>	
<p>SUBSECTION: 303.03.01 Mixture PART: C) Cement Treated Mixture. REVISION: Delete requirement "2".</p>	
<p>SUBSECTION: 401.02.01 All Asphalt Mixing Plants. REVISION: Replace the third paragraph and numbers 1) and 2) with the following:</p>	<p>When plants are in operation, the Department will require one computer on the site of operations for the purpose of recording and submitting test data. Ensure Microsoft Office 2003 Professional, full installation, is installed on the computer and used for data submittal.</p>
<p>SUBSECTION: 402.03.02 Acceptance. PART: D) Testing Responsibilities. NUMBER: 4) Density. REVISION: Replace the first sentence of the third paragraph with the following:</p>	<p>For surface mixtures placed on driving lanes and ramps, furnish 2 cores per subplot to the nearest laboratory facility (Contractor or Department lab) for density determination by the Engineer.</p>
<p>SUBSECTION: 402.03.02 Acceptance. PART: H) Unsatisfactory Work. NUMBER: 1) Based on Lab Data. REVISION: Replace the "AASHTO MP2" references in the second paragraph with "AASHTO M 323".</p>	
<p>SUBSECTION: 402.04 MEASUREMENT. REVISION: Replace the last sentence with the following:</p>	<p>The Department will not measure construction of rolled rumble strips or pavement wedge texturing for payment and will consider them incidental to the asphalt mixture.</p>

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SUBSECTION:	402.04.01 Weight.												
REVISION:	Replace first sentence of the second paragraph with the following: The Department will determine the bulk, oven-dry specific gravity for the fine and coarse aggregates according to KM64-605 and AASHTO T 85, respectively.												
SUBSECTION:	402.04.02 Thickness on New Construction.												
REVISION:	Delete the third paragraph and add the following at the end of the subsection: The Department will not measure initial thickness check coring or coring of corrective work for payment and will consider it incidental to the asphalt mixture.												
SUBSECTION:	402.05.02												
PARTS:	Lot Pay Adjustment Schedule, Compaction Option A, Base and Binder Mixtures Lot Pay Adjustment Schedule, Compaction Option A, Surface Mixtures Lot Pay Adjustment Schedule, Compaction Option B Mixtures												
REVISION:	Replace the VMA table with the following:												
<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th colspan="2">VMA</th> </tr> <tr> <th>Pay Value</th> <th>Deviation From Minimum</th> </tr> </thead> <tbody> <tr> <td align="center">1.00</td> <td align="center">≤ 0.5 below min. VMA</td> </tr> <tr> <td align="center">0.95</td> <td align="center">0.6-1.0 below min.</td> </tr> <tr> <td align="center">0.90⁽²⁾</td> <td align="center">1.1-1.5 below min.</td> </tr> <tr> <td align="center">⁽¹⁾/₍₂₎</td> <td align="center">> 1.5 below min.</td> </tr> </tbody> </table>		VMA		Pay Value	Deviation From Minimum	1.00	≤ 0.5 below min. VMA	0.95	0.6-1.0 below min.	0.90 ⁽²⁾	1.1-1.5 below min.	⁽¹⁾ / ₍₂₎	> 1.5 below min.
VMA													
Pay Value	Deviation From Minimum												
1.00	≤ 0.5 below min. VMA												
0.95	0.6-1.0 below min.												
0.90 ⁽²⁾	1.1-1.5 below min.												
⁽¹⁾ / ₍₂₎	> 1.5 below min.												
SUBSECTION:	403.03.03 Preparation of Mixture.												
PART:	A) Mixture Composition.												
REVISION:	Replace the "AASHTO MP2" reference in the first paragraph with "AASHTO M 323". From the aggregate requirements list, delete 3) Type C.												
SUBSECTION:	403.03.03 Preparation of Mixture.												
PART:	C) Mix Design Criteria.												
REVISION:	Replace the "AASHTO MP2" references with "AASHTO M 323". Replace the "AASHTO PP28" references in the second paragraph with "AASHTO R 35".												
SUBSECTION:	403.03.03 Preparation of Mixture.												
PART:	C) Mix Design Criteria.												
NUMBER	1) Preliminary Mix Design.												
REVISION:	Add the following footnote to the table and associate it with the ESAL's field "<0.3": * For CL1 ASPH SURF 0.38D PG64-22 only.												
SUBSECTION:	403.03.06 Thickness Tolerances.												
PART:	B) New Construction.												
REVISION:	Replace the first paragraph with the following: Under the Engineer's supervision, perform coring for thickness checks according to KM 64-420, as soon as practical after completion of all, or a major portion, of the asphalt base. The Engineer will measure the cores. Fill all core holes either with compacted asphalt mixture or non-shrink grout. Complete all remedial overlay work before placing the final course.												

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SUBSECTION: 403.03.08 Rumble Strips.
REVISION: Replace with the following:

403.03.08 Shoulder Rumble Strips and Pavement Wedge Texturing.

A) Shoulder Rumble Strips.

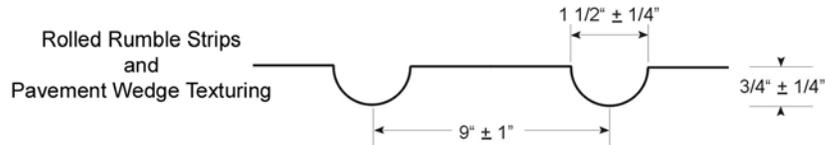
1) Interstates and Parkways. Construct sawed rumble strips on all mainline shoulders to the dimensions shown below. Do not place rumble strips on ramps.

2) Other Roads. Construct rolled rumble strips on shoulders of facilities with posted speed limits greater than 45 MPH. Unless specified in the plans or directed by the Engineer, do not construct rumble strips on facilities with posted speed limits of 45 MPH or less.

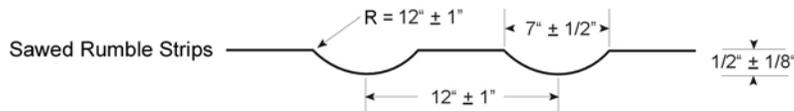
Construct rolled rumble strips on mainline shoulders to the dimensions shown below. On shoulders less than 3 feet wide, shorten the width and distance of the strips as the Engineer directs. Time the rolling operation so indentations are at the specified size and depth without causing unacceptable displacement of the asphalt mat. Correct unacceptable rolled rumble strips by sawing.

B) Pavement Wedge Texturing. Perform texturing on all pavement wedges constructed monolithically with the mainline or constructed using a surface mixture. When furnishing Asphalt Mixture for Pavement Wedge, binder, or a base mixture for the wedge, the Department will not require texturing.

Texture to the dimensions shown below. On wedges less than 3 feet, shorten the length and distance of the texturing as the Engineer directs. Time the rolling operation so indentations are at the specified size and depth without causing unacceptable displacement of the asphalt mat.



Place one foot out from the mainline pavement and to a width of 2 feet.



Place one foot out from the mainline pavement and to a width of 16 inches.

SUBSECTION: 403.04.03 Asphalt Mixtures.
REVISION: Replace the second sentence with the following:

The Department will not measure rolled rumble strips or pavement wedge texturing for payment and will consider them incidental to this bid item.

SUBSECTION: 403.04.07 Sawed Rumble Strips.
REVISION: Add the following subsection:

403.04.07 Sawed Rumble Strips. The Department will measure the quantity in linear feet. When rolled in rumble strips are specified, the Department will not measure sawed rumble strips for payment and will consider them incidental to the asphalt mixture.

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SUBSECTION:	403.05 PAYMENT						
REVISION:	Add the following bid item:						
	<table border="0"> <thead> <tr> <th align="left"><u>Code</u></th> <th align="left"><u>Pay Item</u></th> <th align="left"><u>Pay Unit</u></th> </tr> </thead> <tbody> <tr> <td>20362</td> <td>Shoulder Rumble Strips – Sawed</td> <td>Linear Foot</td> </tr> </tbody> </table>	<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>	20362	Shoulder Rumble Strips – Sawed	Linear Foot
<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>					
20362	Shoulder Rumble Strips – Sawed	Linear Foot					
SUBSECTION:	501.03.20 Opening to Public Traffic.						
REVISION:	Delete the last sentence of the first paragraph.						
SUBSECTION:	501.03.21 Tolerance in Pavement Thickness.						
REVISION:	Add the following: Core the pavement as the Engineer directs.						
SUBSECTION:	501.04.06 Thickness.						
REVISION:	Add the following: The Department will not measure coring for payment and will consider it incidental to the concrete pay items.						
SUBSECTION:	502.03 CONSTRUCTION.						
PART:	C) Curing and Protecting Pavement.						
NUMBER:	3)						
REVISION:	Replace the last sentence with the following: The Department will allow permanent removal of the cover when the concrete attains the required opening strength of 3,000 psi.						
SUBSECTION:	502.03 CONSTRUCTION.						
PART:	D) Strength Testing and Opening to Traffic.						
NUMBER:	2) Testing.						
REVISION:	Replace the second paragraph with the following: When the average compressive strength is 3,000 psi, the Department will allow the pavement to be opened to traffic and will test the remaining sets of cylinders at the required age. When the average compressive strength is less than 3,000 psi at the required age, do not open the pavement to traffic until the pavement has been in place for 7 days. The Engineer may accept the pavement based on additional testing.						
SUBSECTION:	503.03.09 Ride Quality.						
REVISION:	Replace parts 5) and 6) with the following: 5) Perform corrective work to achieve the required IRI by regrinding the entire width of the traffic lane at areas having a high IRI. The Engineer may exclude pavement areas where grinding alone will not correct deficiency. 6) The Department will create a strip chart when the test results show that the IRI is greater than 60 or upon request for lower IRI values.						
SUBSECTION:	601.03.02 Concrete Producer Responsibilities.						
REVISION:	Replace the first sentence with the following: Use a concrete producer from the List of Approved Materials when the quantity of concrete delivered to the project in a plastic condition is 250 cubic yards or more. Ensure that the concrete producer complies with the following requirements:						

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<p>SUBSECTION: 601.03.02 Concrete Producer Responsibilities. PART: C) Quality Control. REVISION: Replace the first paragraph with the following:</p> <p>Take full responsibility for the batch weight calculations and quality control of concrete mixtures at the plant. Ensure that the Level II concrete technician is present when work is in progress and is responsible for inspecting trucks, batch weight calculations, monitoring batching, making mixture adjustments, reviewing the slump, air content and unit weight tests, and monitoring the concrete temperature, all to provide concrete to the project conforming to specifications. A Level I concrete technician is responsible for testing production material for slump, entrained air, unit weight and temperature of the mixture. Ensure the technician performs all sampling and testing according to the appropriate Kentucky Methods.</p> <p>Delete the third paragraph.</p>
<p>SUBSECTION: 601.03.02 Concrete Producer Responsibilities. PART: F) Records. REVISION: Retain all concrete technician records, test results and batch tickets pertaining to concrete produced for a Department project for at least 3 years after formal acceptance of the project. Make all records available to the Engineer and the Contractor on the project for review upon request.</p>
<p>SUBSECTION: 601.03.02 Concrete Producer Responsibilities. PART: G) Mix Designs. REVISION: Replace the last sentence of the first paragraph with the following:</p> <p>Before producing any concrete for the project, submit a proposed mixture design to the Engineer and obtain the District Materials engineer's or the Central Office Material's approval. Submit the mix design electronically using Microsoft Office 2003 Professional, full installation, and the Concrete Mix Design Spreadsheet located on the Division of Materials Website.</p>
<p>SUBSECTION: 601.03.02 Concrete Producer Responsibilities. PART: G) Mix Designs. NUMBER: 1) New Mixture Designs. REVISION: Replace the first sentence with the following:</p> <p>Base the proposed mix design on standard Department methods unless the District Materials Engineer, or Central Office Materials approves otherwise.</p>
<p>SUBSECTION: 601.03.02 Concrete Producer Responsibilities. PART: G) Mix Designs. NUMBER: 1) New Mixture Designs. LETTER: b)</p>
<p>REVISION: Replace the second sentence with the following:</p> <p>The District Materials Engineer or Central Office Materials will provide an average value of the specific gravity aggregate absorption.</p>
<p>SUBSECTION: 601.03.02 Concrete Producer Responsibilities. PART: G) Mix Designs. NUMBER: 1) New Mixture Designs. LETTER: g) REVISION: Replace the fourth and fifth sentence with the following:</p> <p>Central Office Materials will observe all phases of the trial batches. Have the producer submit a report containing mix proportions and test results for slump, air content, water/cement ratio, unit weight, and compressive strength for each trial batch to the Engineer for Central Office Materials review and approval.</p>

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SUBSECTION: 601.03.02 Concrete Producer Responsibilities. PART: G) Mix Designs. NUMBER: 2) Approval. REVISION: Replace the first sentence with the following: The District Materials Engineer or Central Office Materials will base approval of the mixture design on the following criteria:
SUBSECTION: 601.03.02 Concrete Producer Responsibilities. PART: G) Mix Designs. NUMBER: 3) Changes in Approved Mix Designs. REVISION: Replace the first sentence with the following: Do not change the source of supply of the mixture ingredients without the District Materials Engineer's or Central Office Materials written permission. Replace the third sentence with the following: Upon the District Materials Engineer's or Central Office Materials written approval, the Department will allow the use of aggregate from the new source.
SUBSECTION: 601.03.03 Proportioning and Requirements. PART: A) Concrete. TABLE: INGREDIENT PROPORTIONS AND REQUIREMENTS FOR VARIOUS CLASSES OF CONCRETE REVISION: Under Class of Concrete replace "AAA ⁽⁹⁾ " with "AAA ⁽⁸⁾ "
SUBSECTION: 601.03.03 Proportioning and Requirements. PART: A) Concrete. FOOTNOTE: (6) REVISION: Add the following after the first sentence of the first paragraph: For products with voids, the slump may be increased to 7 inches. Replace the "0.3" requirement for Spring and Fall mix designs with "0.37".
SUBSECTION: 601.03.03 Proportioning and Requirements. PART: A) Concrete. FOOTNOTE: (7) REVISION: Replace with the following: The precast fabricator may increase the slump of Class A concrete to a maximum of 7 inches provided the fabricator uses a high range water reducer (Type F and G) and maximum water/cement ratio of 0.46.
SUBSECTION: 601.03.03 Proportioning and Requirements. PART: E) Measuring. NUMBER: 3) Water. REVISION: Delete the last sentence of the second paragraph.

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SUBSECTION: 601.03.03 Proportioning and Requirements. PART: E) Measuring. NUMBER: 4) Measuring Admixtures. REVISION: Replace with the following: 4) Measuring Admixtures. Introduce liquid admixtures into the concrete batch along with, or as part of, the mixing water. Keep air-entraining admixtures completely separate from all other admixtures until introduction into the batch. Maintain and equip dispensing equipment to ensure no chlorides are introduced into any Department mix. Use approved dispensing equipment with a meter, gauge, or scale that can accurately be pre-set for the needed amount of admixture and can consistently deliver quantities of admixture to successive batches at any setting with satisfactory accuracy. The dispensing equipment must be visible to the batch operator if the actual dispensed amounts are not recorded on the computer batch ticket. Ensure admixture dispensers are inspected, calibrated and certified every 6 months. The Department may allow admixtures to be added, to the truck, at the project site provided the Engineer's approval is obtained first.
SUBSECTION: 601.03.04 Classes and Primary Uses. REVISION: Add the following part: R) Dry Cast. Precast units.
SUBSECTION: 601.03.05 Admixtures. REVISION: Replace the last sentence of the fourth paragraph with the following: Store admixtures where the liquid temperatures can be maintained between 32 and 110 °F.
SUBSECTION: 601.03.09 Placing Concrete. PART: D) Weather Limitations and Protection. REVISION: Delete the last sentence of paragraph two.
SUBSECTION: 605.03 CONSTRUCTION. REVISION: Insert the following sentence after the first sentence: Ensure all non-composite box beam concrete contains an approved corrosion inhibitor from the List of Approved Materials.
SUBSECTION: 605.03.03 Casting. REVISION: Delete the first sentence in the first paragraph. Add the following after the first sentence of the third paragraph: Do not vibrate Self-Consolidating Concrete (SCC).
SUBSECTION: 605.03.04 Tack welding. REVISION: Replace the first sentence with the following: When tack welding steel reinforcement, use ASTM A 706 steel and conform to the following conditions.
SUBSECTION: 605.03.04 Tack Welding. NUMBER: 3) REVISION: Replace the first sentence with the following: Tack weld only at intersections of bars except do not tack weld in any bend or within 2 bar diameters of a bend.
SUBSECTION: 605.03.04 Tack Welding. NUMBER: 5) REVISION: Replace the last sentence with the following: Each sample must meet the minimum requirement for elongation, ductility, tensile and yield strength of the bar stock.

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SUBSECTION:	605.03.04 Tack Welding.
NUMBER:	6)
REVISION:	Delete the last sentence.
SUBSECTION:	605.03.04 Tack Welding.
REVISION:	Change footnote "(4) (d)" to "(5)"
SUBSECTION:	605.03.07 Removal of Forms and Surface Finish.
REVISION:	Add the following sentence before the last sentence of the paragraph: Finish dry cast products according to the Precast/Prestressed Concrete Manual.
SUBSECTION:	611.02.01 Concrete.
REVISION:	Replace with the following: Conform to Subsections 601.02 and 601.03 and the Precast/Prestress Concrete Manual.
SUBSECTION:	611.03.02 Precast Unit Construction.
REVISION:	Replace "AASHTO C 1433" with "ASTM C 1433"
SUBSECTION:	611.03.02 Precast Unit Construction.
NUMBER:	2)
REVISION:	Replace with the paragraph with the following: Mark all box culverts sections with the following information on the inside top of each section with letters no less than 2 inches high: <ul style="list-style-type: none"> a) Span, rise, maximum and minimum design earth cover, and KY Table 3. b) Date of manufacture. c) Name and trademark of the manufacturer. For entrance and exit box sections, indent the required information. Mark interior sections by indenting or with waterproof paint.
SUBSECTION:	701.02.05 Backfill Materials.
PART:	A) Granular Backfill.
NUMBER:	1)
REVISION:	Remove "A2" from the list of acceptable materials.
SUBSECTION:	701.03.03 Pipe Bedding.
REVISION:	Replace with the following: 701.03.03 Pipe Bedding. A) Reinforced Concrete Pipe. Construct bedding according to the Standard Drawings and this section. <ul style="list-style-type: none"> 1) Type 1 Installation. When working on a rock foundation, place bedding to a depth of 6 inches or equal to $Bc/12$, the pipe diameter in inches divided by 12, whichever is greater. For all other foundations, place a minimum of 4 inches of bedding. Shape the bedding to conform to the invert shape throughout the entire width and length of the proposed structure. Compact the bedding, but leave the center third of the pipe diameter ($Bc/3$) uncompacted. Place and compact additional bedding material in lifts 6 inches or less to an elevation of 0.30 the culvert diameter. 2) Type 4 Installation. When working on a rock foundation, place bedding to a depth of 6 inches or equal to $Bc/12$, the pipe diameter in inches divided by 12, whichever is greater. For all other foundations, place a minimum of 4 inches of bedding. B) Corrugated Metal, Thermoplastic, and Structural Plate Pipe. Place and compact bedding to provide 4 inches of bedding below the outside invert of the pipe after shaping. Shape the bedding to conform to the invert shape throughout the entire width and length of the proposed structure. Place and compact additional bedding material in lifts 6 inches or less to an elevation of 0.30 the culvert diameter.

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<p>SUBSECTION: 701.03.06 Initial Backfill. PART: A) Reinforced Concrete REVISION: Replace with the following:</p>	<p>A) Reinforced Concrete Pipe.</p> <ol style="list-style-type: none"> 1) Type 1 Installation. When the top of the pipe is not within one pipe diameter of the subgrade, backfill with granular backfill, additional bedding material, or flowable fill from the top of the bedding to an elevation equal to 1/2 the pipe diameter, and either granular backfill, flowable fill, or embankment material in 6-inch lifts to an elevation of one-foot above the pipe. 2) Type 4 Installation. Backfill from the top of the bedding with granular backfill, flowable fill, or embankment material in 6-inch lifts to an elevation of one-foot above the pipe. The Department will allow Type 4 installations for median drains and pipe installations located 35 feet or more from the edge of shoulder, back of curb, or any paved surface.
<p>SUBSECTION: 701.05 PAYMENT. REVISION: Replace bid item “2599 Fabric-Geotextile, Type IV Square Yard” with “21433ES214 Fabric-Geotextile, Type IV for Pipe Square Yard⁽²⁾”</p>	<p>Replace foot note “** The unit bid price is \$2.00 per square yard for Geotextile Fabric, Type III” with “⁽²⁾The unit price is \$2.00 per square yard for Fabric-Geotextile, Type IV for Pipe”</p>
<p>SUBSECTION: 710.02.15 Plastic Adjusting Rings. REVISION: Replace this section with:</p>	<p>710.02.15 Plastic or Rubber Adjusting Rings. Provide plastic or rubber adjusting rings that are on the Department’s List of Approved Materials.</p>
<p>SUBSECTION: 710.03.03 Adjusted Small Drainage Structures. REVISION: Replace the last sentence of the first paragraph:</p>	<p>For plastic or rubber adjusting rings, install and seal according to the manufacturer’s recommendations.</p>
<p>SUBSECTION: 711.02 MATERIALS. REVISION: Replace with the following:</p>	<p>Conform to the Contract requirements.</p>
<p>SUBSECTION: 713.03 CONSTRUCTION. REVISION: Add the following after the third paragraph:</p>	<p>Offset longitudinal lines at least 2 inches from longitudinal pavement construction joints. Offset longitudinal lane lines on multi-lane highways 2 inches towards the median.</p>
<p>SUBSECTION: 714.03.06 Proving Period for Durable Markings. PART: B) Failure. REVISION: Replace the first sentence with the following:</p>	<p>During the proving period, the Department will consider markings defective when the retroreflectivity falls below the minimum required or the material fails to meet the other requirements of A) above. Additionally, when more than 10 percent of any one-mile section or individual gore area is defective, the Department will consider the entire section defective.</p>
<p>SUBSECTION: 716.03.08 Testing. REVISION: Replace “10 megohms” with “100 megohms”</p>	
<p>SUBSECTION: 721.03 CONSTRUCTION. REVISION: Replace the third paragraph with the following:</p>	<p>Install fence 18 inches inside the right-of-way line or in other locations specifically indicated.</p>
<p>SUBSECTION: 723.03 CONSTRUCTION. REVISION: Replace the first sentence of the fourth paragraph with the following:</p>	<p>Set right-of-way markers within 12 inches of the right-of-way line.</p>

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SUBSECTION:	724.02.01 Plants.
REVISION:	Replace the reference “American Association of Nurserymen” with “American Nursery and Landscape Association”.
SUBSECTION:	801.01 REQUIREMENTS.
REVISION:	Add the following sentence after the third sentence of the first paragraph: Mills must request and be approved by the Department to supply cement with an SO ₃ content above the value in Table 1 of ASTM C 150.
SUBSECTION:	804.01.03 Conglomerate Sand.
REVISION:	Replace second sentence of the paragraph with the following: Conglomerate sand may include some material which has been produced by crushing larger pieces of the parent material.
SUBSECTION:	804.02 Approval.
REVISION:	Replace first sentence of the second paragraph with the following: The Department will consider a source for inclusion on the Aggregate Source List when the aggregate producer complies with KM 64-608 and provides the following:
SUBSECTION:	804.03 Concrete.
REVISION:	Second sentence in first paragraph should be a separate paragraph immediately following the first and should read as follows: Provide natural, crushed, or conglomerate sand. The Department will allow any combination of natural, crushed, or conglomerate sand when the combination is achieved in the concrete plant weigh hopper. The Engineer may allow other sands. Use natural or conglomerate sands as fine aggregates in concrete intended as a wearing surface for traffic. Conform to the following:
SUBSECTION:	804.04.03 Polish-Resistant Aggregate.
REVISION:	Add the following paragraph: Provide a signed certification from the aggregate producer for the manufactured polish-resistant fine aggregate stating that the aggregate is supplied from the approved parent material as found on the Department’s List of Approved Materials, Polish-Resistant Aggregate Source List and Guidelines on the Division of Materials’ webpage.
SUBSECTION:	804.04.04 Requirements for Combined Aggregates.
PART:	D) Absorption.
REVISION:	Delete the first sentence and replace the second sentence with the following: Provide total combined fine aggregates having a water absorption of no more than 4.0 percent.
SUBSECTION:	804.11 Sampling and Testing.
REVISION:	For Absorption (Fine Aggregate), replace method “AASHTO T 84” with “KM 64-605”
SUBSECTION:	805.02 Approval.
REVISION:	Replace first sentence of the second paragraph with the following: The Department will consider a source for inclusion on the Aggregate Source List when the aggregate producer complies with KM 64-608 and provides the following:

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SUBSECTION:	805.04.01 JPC Base, JPC Pavement, JPC Shoulders, and Concrete for Bridge Decks.
REVISION:	Replace the subsection heading and first sentence with the following: 805.04.01 JPC Base, JPC Pavement, JPC Shoulders, Concrete for Bridge Decks, and Precast Products. Add the following paragraph: Provide a signed certification from the aggregate producer for the approved freeze-thaw coarse aggregate stating that the aggregate is supplied from the approved parent material as found on the Department's List of Approved Materials and Concrete Aggregate Restriction List.
SUBSECTION:	805.04.01 JPC Base, JPC Shoulders, and Concrete for Bridge Decks.
PART:	3)
REVISION:	Replace the "tests" with "test" in the last sentence.
SUBSECTION:	805.05.05 Polish-Resistant Aggregate.
REVISION:	Add the following paragraph: Provide a signed certification from the aggregate producer for the manufactured polish-resistant coarse aggregate stating that the aggregate is supplied from the approved parent material as found on the Department's List of Approved Materials, Polish-Resistant Aggregate Source List and Guidelines on the Division of Materials' webpage.
SUBSECTION:	805.13.01 Cyclopean Stone Riprap and Channel Lining Class III.
REVISION:	Replace the subsection with the following: 805.13.01 Cyclopean Stone Riprap and/or Channel Lining Class III. Provide material meeting the general requirements of Section 805. Ensure that 100 percent passes through a square opening of 16 inches by 16 inches, and no more than 20 percent passes through square openings of 8 inches by 8 inches. The Department may allow stones of smaller sizes for filling voids in the upper surface and dressing to the proper slope.
SUBSECTION:	806.03.01 General Requirements.
TEST:	Dynamic Shear
REVISION:	Replace the 100% pay range "5,000-5,500" with "0-5,500"
SUBSECTION:	806.03.03 Modification.
REVISION:	Replace the first sentence with the following: Use only styrene-butadiene (SB) or styrene-butadiene-styrene (SBS) modifiers.
SUBSECTION:	810.02 APPROVAL.
REVISION:	Replace reference "KM 114" with "KM 115".
SUBSECTION:	810.03.06 Identification and Markings.
REVISION:	Delete the following text from the first paragraph: "When the manufacturer has more than one plant, include the plant letter assigned by the Division of Materials after the date of manufacture as follows: L-Louisville N-London" Delete the following paragraph: "The Department will not require the certification on the shipment approval form to be notarized. The Department will not require the information under "Pipe Data" on the approval form when the manufacture's shipment ticket is attached and contains the necessary information."

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SUBSECTION: 811.02.01 Requirements. REVISION: Replace the subsection with the following: Furnish bar reinforcement for bridges, cast-in-place culverts, and cast-in-place retaining walls that conforms to ASTM A 615 (billet) or ASTM A 996 (rail). ASTM A 706 steel is acceptable with prior approval of the Division of Materials. Do not weld any steel bar reinforcement unless it is ASTM A 706 rebar. The Engineer will accept rail steel bar reinforcement in straight lengths only. Do not use rail steel reinforcement where field bending is allowed or required.
SUBSECTION: 811.09.02 Dowel Bars. REVISION: Replace the reference to "ASTM A 616" with "ASTM A 996" Insert the following sentence between the third and fourth sentence of the first paragraph: Broken or sheared ends are acceptable with prior approval of the Division of Materials.
SUBSECTION: 811.06 BAR MATS. REVISION: Replace the subsection with the following: Conform to ASTM A 184 and fabricate by welding deformed Grade 60 weldable bars.
SUBSECTION: 811.09.02 Dowel Bars. REVISION: Replace the first paragraph with the following: Furnish dowel bars that are plain round bars conforming to ASTM A 706, A 615, A 996, or A 617 with respect to mechanical properties only. Provide either Grade 40, 50 or 60 steel. Saw cut the free ends of the dowels and ensure that they are free of burrs or projections. Broken or sheared ends are acceptable with prior approval of the Division of Materials. Coat dowel bars according to AASHTO M 254 with the following exceptions for Type B coatings:
SUBSECTION: 811.10.02 Epoxy Coating Material. REVISION: Replace both the reference to "ASTM D 3963 Annex" and "ASTM D 3963" with "AASHTO M 284".
SUBSECTION: 812.01.02 Hot-Rolled Carbon Steel Sheets and Strip of Structural Quality, Grade 33 (Corrugated Steel Plank for Bridge Floors). REVISION: Replace the reference to "ASTM A 570" with "ASTM A 1011"

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SUBSECTION: 827.04 SEED.

REVISION: Replace with the following:

827.04 SEED. Conform to the requirements outlined in the “Kentucky Seed Law and Provisions for Seed Certification in Kentucky” and the “Regulations under the Kentucky Seed Law”, with following exceptions:

- 1) Obtain seed only through registered dealers that are permitted for labeling of seed.
- 2) Ensure all deliveries and shipments of premixed seed are accompanied with a master blend sheet.
- 3) Ensure all bags and containers have an acceptable seed tag attached.
- 4) The Department may sample the seed at the job site at any time.

Do not use seed (grasses, native grasses, and legumes) if the weed seed is over one percent, total germination (including hard seed) is less than 80 percent, if the seed test date is over 9 months old exclusive of the month tested, or if the limits of noxious weed seed is exceeded.

Ensure that noxious weed seeds contained in any seed or seed mixture does not exceed the maximum permitted rate of occurrence per pound.

<u>Name of Kind</u>	<u>Max. No. Seeds (per pound)*</u>
Balloon Vine (<i>Cardiospermum halicacabum</i>)	0
Purple Moonflower (<i>Ipomoea turbinata</i>)	0
Canada Thistle (<i>Cirsium Arvense</i>)	0
Johnsongrass (<i>Sorghum halepense</i> and <i>Sorghum almum</i> and perennial rhizomatous derivatives of these species)	0
Quackgrass (<i>Elytrigia Repens</i>)	0
Annual Bluegrass (<i>Poa annua</i>)	120
Buckhorn Plantain (<i>Plantago lanceolata</i>)	120
Corncockle (<i>Agrostemma githago</i>)	18
Dodder (<i>Cuscuta</i> spp.)	18
Giant Foxtail (<i>Setaria faberii</i>)	18
Oxeye Daisy (<i>Chrysanthemum leucanthemum</i>)	120
Sorrel (<i>Rumex acetosella</i>)	120
Wild Onion and Wild Garlic (<i>Allium</i> spp.)	18

* Seed or seed mixtures that contain in excess of 120 total noxious seeds per pound is prohibited

Wildflower seed shall not be planted until approved by the MCL.

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	Purity (Min. %)	Germination (Min. %) Including Hard Seed and Dormant Seed	Hard Seed (Max. %) Allowed in Germination
Grasses			
Bentgrass (<i>Argrostis palustris</i>)	98	85	-
Bermudagrass, common (<i>Cynodon dactylon</i>)	97	85	-
Bluegrass, Kentucky (<i>Poa pratensis</i>)	98	85	-
Brome, smooth (<i>Bromus inermis</i>)	95	80	-
Canarygrass, reed (<i>Phalaris arundinacea</i>)	95	80	-
Fescue, chewings (<i>Festuca rubra</i> var. <i>commutata</i>)	97	85	-
Fescue, hard (<i>Festuca trachyphlla</i>)	97	85	-
Fescue, meadow (<i>Festuca elatior</i>)	97	85	-
Fescue, red (<i>Festuca rubra</i>)	97	85	-
Fescue, tall (<i>Festuca arundinacea</i>)	97	85	-
Orchardgrass (<i>Dactylis glomerata</i>)	97	85	-
Redtop (<i>Agrostis alba</i>)	95	80	-
Ryegrass, annual, common or Italian (<i>Lolium multiflorum</i>)	97	85	-
Ryegrass, perennial (<i>Lolium perenne</i>)	97	85	-
Lovegrass, Weeping (<i>Eragrostis curvula</i>)	96	80	-
Oat (<i>Avena Sativa</i>)	98	85	-
Rye (<i>Secale cereale</i>)	98	85	-
Timothy (<i>Phleum pratense</i>)	98	85	-
Wheat, common (<i>Triticum aestivum</i>)	98	85	-
Legumes			
Alfalfa (<i>Medicago sativa</i>)	98	85	25
Clover, alsike (<i>Trifolium hybridum</i>)	97	85	25
Clover, ladino (<i>Trifolium repens</i>)	98	85	25
Clover, white (<i>Trifolium repens</i>)	98	85	25
Crownvetch (<i>Coronilla varia</i>)	97	85	25
Lespedeza, Korean (<i>Lespedeza stipulacea</i>)	97	85	20
Lespedeza, Sericea (<i>Lespedeza cuneata</i>)	97	85	20
Sweetclover, white (<i>Melilotus alba</i>)	98	85	25
Sweetclover, yellow (<i>Melilotus officinalis</i>)	98	85	25
Trefoil, birdsfoot (<i>Lotus corniculatus</i>)	97	85	25
Native Grasses			
Little Bluestem (<i>Schizachyrium scoparium</i>)	85	80	-
Big Blustem (<i>Andropogon gerardii</i>)	85	80	-
Indian Grass (<i>Sorghastrum nutans</i>)	85	80	-
Switchgrass (<i>Panicum virgatum</i>)	85	80	-

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SUBSECTION: REVISION:	827.07 EROSION CONTROL BLANKET. Replace the subsection with the following: 827.07 EROSION CONTROL BLANKET. Use a blanket from the Department's List of Approved Materials. Blankets must be machine constructed with two-sided netting filled with curled wood fiber mat, straw, or a straw and coconut fiber combination. Ensure the blanket is smolder resistant without the use of chemical additives. A) Dimensions. Furnish in strips with a minimum width of 4 feet and length of 50 feet. B) Weight. 1) Curled Wood Fiber. Ensure a minimum mass per unit area of 7.25 ounce per square yard according to ASTM D 6475. 2) Straw. Ensure a minimum mass per unit area of 7.5 ounce per square yard according to ASTM D 6475. 3) Straw/Coconut Fiber. Ensure a minimum mass per unit area of 6.75 pounds per square yard according to ASTM D 6475. C) Fill. Ensure the fill is evenly distributed throughout the blanket. 1) Curled Wood Fiber. Use curled wood fiber of consistent thickness with at least 80 percent of its fibers 6 inches or longer in length. 2) Straw. Use only weed free agricultural straw. 3) Straw/Coconut Fiber. Conform to the straw requirements above and ensure the coconut fiber is evenly distributed throughout the blanket and accounts for 30% or more of the fill. D) Netting. Use photodegradable extruded plastic mesh or netting, with a maximum spacing width of one inch square, on both sides of the blanket. Secure the netting by stitching or other method to ensure the blanket retains its integrity. E) Staples. Use steel wire U-shaped staples with a minimum diameter of 0.09 inches (11 gauge), a minimum width of one inch, and a minimum length of 6 inches. Use a heavier gauge when working in rocky or clay soils and longer lengths in sandy soils. Provide staples with colored tops when requested by the Engineer. F) Performance. 1) C-Factor. Ensure the ratio of soil loss from protected slope to ratio of soil loss from unprotected is ≤ 0.15 for a slope of 3:1 when tested according to ECTC method 2. 2) Shear Stress. Ensure the blanket can sustain a minimum shear stress of 1.75 pounds per square foot without physical damage or excess erosion (> 0.5 inches soil loss) when tested according to ECTC Method 3.
SUBSECTION: REVISION:	828.02 APPROVAL. Add the following: The Department will continue to include the masonry coatings on the list contingent upon receiving an annual certification containing the following information: 1) A statement that the masonry coating to be furnished during the particular calendar year is of the same composition as that previously approved for inclusion on the approved list. 2) A statement that the masonry coating conforms to the appropriate requirements of the Kentucky Standard Specifications for Road and Bridge Construction. 3) A statement that notification will be made to the Division of Materials of any changes in composition for review and approval before furnishing the material to projects.
SUBSECTION: TABLE: REVISION:	843.01.02 Acceptance Procedures for Non-Specification Fabric. GRAB STRENGTH PAYMENT REDUCTION Add the following note: The Department will use the lowest value of MACHINE and CROSS for the reduction calculation.

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SUBSECTION: 844.02.01 Fly Ash. PART: 1) REVISION: Delete the last sentence.
SUBSECTION: 844.02.01 Fly Ash. REVISION: Replace the subsection with the following: 844.02.01 Fly Ash. Select from the Department's List of Approved Materials for fly ash sources. To be placed on the list, furnish samples and ASTM C 618 test data developed over the previous 3 months, and confirm to the requirements in KM 64-325.

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

This Special Provision will apply when indicated on the plans or in the proposal. Section references herein are to the Department's 2004 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Construct a soil, granular, or rock embankment with granular or cohesive pile core and place structure granular backfill, as the Plans require. Construct the embankment according to the requirements of this Special Provision, the Plans, Standard Drawing RGX 100 and 105, and the 2004 Standard Specifications.

2.0 MATERIALS.

2.1 Granular Embankment. Conform to Subsection 805.10. When Granular Embankment materials are erodible or unstable according to Subsection 805.03.04, use the Special Construction Methods found in 3.2 of the Special Provision.

2.2 Rock Embankment. Provide durable rock from roadway excavation that consists principally of Unweathered Limestone, Durable Shale (SDI equal to or greater than 95 according to KM 64-513), or Durable Sandstone.

2.3 Granular Pile Core. Select a gradation of durable rock to facilitate pile driving that conforms to Subsection 805.11. If granular pile core material hinders pile driving operations, take appropriate means necessary to reach the required pile tip elevation, at no expense to the Department.

2.4 Cohesive Pile Core. Conform to Section 206 of the Standard Specifications and use soil with at least 50 percent passing a No. 4 sieve having a minimum Plasticity Index (PI) of 10. In addition, keep the cohesive pile core free of boulders, larger than 6 inches in any dimension, or any other obstructions, which would interfere with drilling operations. If cohesive pile core material interferes with drilling operations, take appropriate means necessary to maintain excavation stability, at no expense to the Department.

2.5 Structure Granular Backfill. Conform to Subsection 805.11

2.6 Geotextile Fabric. Conform to Type I or Type IV in Section 214 and 843 as required in the plans.

3.0 CONSTRUCTION.

3.1 General. Construct roadway embankments at end bents according to Section 206 and in accordance with the Special Provision, the Plans, and Standard Drawings for the full embankment section. In some instances, granular or rock embankment will be required for embankment construction for stability purposes, but this special provision does not prevent the use of soil when appropriate. Refer to the plans for specific details regarding material requirements for embankment construction.

Place and compact granular or cohesive pile core, soil, granular or rock embankment, and structure granular backfill according to the applicable density requirements for the project. When constructing granular or rock embankments, use granular pile core for driven pile foundations and use cohesive pile core for pre-drilled pile or drilled shaft foundations. Place geotextile fabric, Type IV between cohesive pile core and structure granular backfill and granular or rock embankment.

When granular or rock embankment is required for embankment construction, conform to the general requirements of Subsection 206.03.02 B). In addition, place the material in no greater than 2-foot lifts and compact with a vibrating smooth wheel roller capable of producing a minimum centrifugal force of 15 tons. Apply these requirements to the full width of the embankment for a distance of twice the embankment height or 50 feet, whichever is less, as shown on Standard Drawing RGX-105.

When using granular pile core, install 8-inch perforated underdrain pipe at or near the elevation of the original ground in the approximate locations depicted on the standard drawing, and as the Engineer directs, to ensure positive drainage of the embankment. Wrap the perforated pipe with a fabric of a type recommended by the pipe manufacturer.

After constructing the embankment, excavate for the end bent cap, drive piling or install shafts, place the mortar bed, construct the end bent, and complete the embankment to finish grade according to the construction sequence shown on the Plans or Standard Drawings and as specified hereinafter.

After piles are driven or shafts installed (see design drawings), slope the bottom of the excavation towards the ends of the trench as noted on the plans for drainage. Using a separate pour, place concrete mortar, or any class concrete, to provide a base for forming and placing the cap. Place side forms for the end bent after the mortar has set sufficiently to support workmen and forms without being disturbed.

Install 4-inch perforated pipe in accordance with the plans and Standard Drawings. In the event slope protection extends above the elevation of the perforated pipe, extend the pipe through the slope protection.

After placing the end bent cap and removing adjacent forms, fill the excavation

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with structure granular backfill material to the level of the berm prior to placing beams for the bridge. For soil embankments, place Type IV geotextile fabric between embankment material and structure granular backfill. After completing the end bent backwall, or after completing the span end wall, place the structure granular backfill to subgrade elevation. If the original excavation is enlarged, fill the entire volume with compacted structure granular backfill at no expense to the Department. Do not place backfill before removing adjacent form work. Place structure granular backfill material in trench ditches at the ends of the excavation. Place Geotextile Fabric, Type IV over the surface of structure granular backfill prior to placing aggregate base course.

Tamp the backfill with hand tampers, pneumatic tampers, or other means the Engineer approves. Thoroughly compact the backfill under the overhanging portions of the structure to ensure that the backfill is in intimate contact with the sides of the structure.

Do not apply seeding, sodding, or other vegetation to the exposed granular embankment.

3.2 Special Construction Methods. Erodible or unstable materials may erode even when protected by riprap or channel lining; use the special construction method described below when using these materials.

Use fine aggregates or friable sandstone granular embankment at “dry land” structures only. Do not use them at stream crossings or locations subject to flood waters.

For erodible or unstable materials having 50 percent or more passing the No. 4 sieve, protect with geotextile fabric. Extend the fabric from the original ground to the top of slope over the entire area of the embankment slopes on each side of, and in front of, the end bent. Cover the fabric with at least 12 inches of non-erodible material.

For erodible or unstable materials having less than 50 percent passing a No. 4 sieve, cover with at least 12 inches of non-erodible material.

Where erodible or unstable granular embankment will be protected by riprap or channel lining, place geotextile fabric between the embankment and the specified slope protection.

4.0 MEASUREMENT.

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

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

specified or permitted.

4.2 Rock Embankment. The Department will not measure for payment any rock embankment and will consider it incidental to roadway excavation or embankment in place, as applicable. (embankments requiring rock with none present within project excavation limits will be constructed using granular embankment)

4.3 Granular Pile Core. The Department will measure the quantity in cubic yards using the plan quantity, increased or decreased by authorized adjustments as specified in Section 204. The Department will not measure for payment furnishing and placing 8-inch perforated underdrain pipe and will consider it incidental to the Granular pile core. The Department will not measure for payment any granular pile core that is necessary because the contractor elects to use granular or rock embankment when it is not specified in the plans.

4.4 Cohesive Pile Core. The Department will measure the quantity in cubic yards using the plan quantity, increased or decreased by authorized adjustments as specified in Section 204.

4.5 Structure Granular Backfill. The Department will measure the quantity in cubic yards using the plan quantity, increased or decreased by authorized adjustments as specified in Section 204. The Department will not measure any additional material required for backfill outside the limits shown on the Plans and Standard Drawings for payment and will consider it incidental to the work.

When following construction sequence "A", as shown on the Standard Drawings, the Department will not measure structure excavation at the end bent for payment and will consider it incidental to Structure Granular Backfill.

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

4.4 4.6 Geotextile Fabric. The Department will measure the quantities as specified in Section 214. The Department will not measure the quantity of fabric used for separating granular or rock embankment and cohesive pile core and will consider it incidental to cohesive pile core.

4.7 End Bent. The Department will measure the quantities according to the Contract. The Department will not measure furnishing and placing the 2-inch mortar or concrete bed for payment and will consider it incidental to the end bent construction.

5.0 PAYMENT. The Department will make payment for the completed and

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accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
2223	Granular Embankment	Cubic Yards
20209EP69	Granular Pile Core	Cubic Yards
20210EP69	Cohesive Pile Core	Cubic Yards
2231	Structure Granular Backfill	Cubic Yards
2596, 2599	Geotextile Fabric, Type	See Section 214

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

January 10, 2005

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

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ATTACHMENTS

- A. Employment Preference for Appalachian Contracts
(included in Appalachian contracts only)

I. GENERAL

1. 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.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

- Section I, paragraph 2;
- Section IV, paragraphs 1, 2, 3, 4, and 7;
- Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 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 DOL, or the contractor's employees or their representatives.

6. **Selection of Labor:** During the performance of this contract, the contractor shall not:

a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

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 (28 CFR 35, 29 CFR 1630 and 41 CFR 60) 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 Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 *et seq.*) set forth under 28 CFR 35 and 29 CFR 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 State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The contractor will accept as his 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, 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, preapprenticeship, and/or on-the-job training."

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

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 minority group employees.

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 minority groups 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 minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group 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, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group 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, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure 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 his 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 his avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

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. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

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 minority group and women employees 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 his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. 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 best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best 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, 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 SHA 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 minority and women 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, national origin,

age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) 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 SHA.

8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. 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 completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

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

(1) The number 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;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA 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. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

a. All mechanics and laborers employed or working upon the site of the work 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 (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall 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. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, 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

shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. 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.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification 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 shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour 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.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional 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 shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said 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

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

a. 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 or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a 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, 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.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in 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 the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall 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 for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under an approved definition, shall be paid not less than the applicable wage rate on the wagedetermination for the classification of work actually performed.

5. 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. 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 journeymen shall not be greater than permitted by the terms of the particular program.

6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, 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.

7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation:

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. 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, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages:

The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or 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, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any

liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3):

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. Payrolls and Payroll Records:

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found 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 Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed 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 the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions 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 may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:

a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

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 State. 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).

a. "Its own organization" shall be construed to include only workers employed and paid directly 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, assignee, or agent of the prime contractor.

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 on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII 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. 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 SHA 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 SHA 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 SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

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 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA 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.

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 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. 333).

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. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

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, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

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 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

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

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary 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 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 primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which

this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary 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.

g. The prospective primary 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 Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

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. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. 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.

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.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgement 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;

c. 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 1b of this certification; and

d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

2. Instructions for Certification - Lower Tier Covered Transactions:

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

a. By signing and submitting this proposal, the prospective lower tier 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.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

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.

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.

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 may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

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.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

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

* * * * *

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

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 his or her bid or proposal that he or she 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.

**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 (between forty and seventy); 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 (between forty and seventy). 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, disability or age (between forty and seventy), except that such notice or advertisement may indicate a preference, limitation, or specification based on religion, or national origin when religion, or national origin 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 (between forty and seventy), 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: 12-3-92

EXECUTIVE BRANCH CODE OF ETHICS

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

KRS 11A.040 (6) provides:

No present or former public servant shall, within six (6) months of following termination of his office or employment, accept employment, compensation or other economic benefit from any person or business that contracts or does business with the state in matters in which he was directly involved during 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, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved 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.

KRS 11A.040 (8) states:

A former public servant shall not represent a person in a matter before a state agency in which the former public servant was directly involved, for a period of one (1) year after the latter of:

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

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

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

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

In case of doubt, the law permits you to request an advisory opinion from the Executive Branch Ethics Commission, Room 136, Capitol Building, 700 Capitol Avenue, Frankfort, Kentucky 40601; telephone (502) 564-7954.

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

HIGHWAY BASIC HOURLY RATES	FRINGE BENEFIT PAYMENTS COMBINED
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CRAFTS:

Boone, Campbell, Kenton and Pendleton Counties:

Bricklayers	25.86	9.49
Carpenters and Piledrivermen	22.42	4.73
Divers	33.63	4.73
Millwrights	21.90	7.92
Cement Masons	24.53	7.95
Electricians	24.24	9.34
Sound & Communication Technician:		
Installer	18.00	3.475
Cable Puller	9.00	2.64

Ironworkers:

Reinforcing: Up to and including 30- mile radius of Hamilton County, Ohio Courthouse	23.70	14.00
Beyond 30- mile radius of Hamilton County, Ohio Courthouse	23.95	14.00
Structural	25.02	15.35
Fence Erector	22.52	15.35

Painters:

(Heavy and Highway Bridges-
Guardrails-Lightpoles-Striping):

Bridge/Equipment Tender and/or Containment Builder	20.40	6.30
Brush and Roller	23.00	6.30
Elevated Tanks; Steeplejack Work; Bridge &		
Lead Abatement	24.00	6.30
Sandblasting and Water		
Blasting	23.75	6.30
Spray	23.50	6.30
Plumbers	26.93	12.61

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

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

LABORERS:

Pendleton County:

GROUP 1 - Aging and Curing of Concrete, Asbestos Abatement Worker, Asphalt Plant, Asphalt, Batch Truck Dump, Carpenter Tender, Cement Mason Tender, Cleaning Of Machines, Concrete, Demolition, Dredging, Drill Tender, Environmental -- Nuclear, Radiation, Toxic and Hazardous Waste - Level D, Flagperson, Grade Checker, Hand Digging and Hand Back Filling, Highway Marker Placer, Landscaping, Mesh Handler and Placer, Puddler, Railroad, Rip-Rap and Grouter, Right-Of-Way, Sign, Guardrail and Fence Installer, Signal Person, Sound Barrier Installer, Storm and Sanitary Sewer, Swamper, Truck Spotter and Dumper and Wrecking of Concrete Forms, General Cleanup.

BASE RATE19.33
FRINGE BENEFITS9.18

GROUP 2 - Batter Board Man (Sanitary and Storm Sewer), Brickmason Tender, Mortar Mixer Operator, Scaffold Builder, Burner and Welder, Bushhammer, Chain Saw Operator, Concrete Saw Operator, Deckhand Scow Man, Dry Cement Handler, Environmental - Nuclear, Radiation, Toxic and Hazardous Waste - Level C, Forklift Operator For Masonary, Form Setter, Green Concrete Cutting, Hand Operated Grouter and Grinder Machine Operator, Jackhammer, Pavement Breaker, Paving Joint Machine, Pipelayer, Plastic Pipe Fusion, Power Driven Georgia Buggy and Wheel Barrow, Power Post Hole Digger, Precast Manhole Setter, Walk-Behind Tamper, Walk-Behind Trencher, Sand Blaster, Concrete Chipper, Surface Grinder, Vibrator Operator and Wagon Driller.

BASE RATE19.58
FRINGE BENEFITS9.18

GROUP 3 - Asphalt Luteman and Raker, Gunnite Nozzleman, Gunnite Operator and Mixer, Grout Pump Operator, Side Rail Setter, Rail Paved Ditch, Screw Operator, Tunnel (free air) and Water Blaster.

BASE RATE19.63
FRINGE BENEFITS9.18

GROUP 4 - Caisson Worker (free air), Cement Finisher, Environmental - Nuclear, Radiation, Toxic and Hazardous Waste - Levels A and B, Miner and Driller (free air), Tunnel Blaster and Tunnel Mucker (free air), Directional & Horizontal Boring, Air Track Driller (all types), Powderman & Blaster, Troxler & Concrete Tester if laborer is utilized.

BASE RATE20.23
FRINGE BENEFITS9.18

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

LABORERS: (continued)

Boone, Campbell and Kenton Counties:

Group 1

Asphalt Laborer, Carpenter Tender, Concrete Curing Applicator, Dump Man (Batch Truck), Guardrail And Fence Installer, Joint Setter, Laborer (Construction), Landscape Laborer, Highway Lighting Worker, Signalization Worker, Mesh Handlers And Placer, Right-Of-Way Laborer, Riprap Laborer And Grouter, Scaffold Erector, Seal Coating, Surface Treatment Or Road Mix Laborer, Sign Installer, Slurry Seal, Utility Man, Bridgeman, Handyman, Waterproofing Laborer, Flagperson, Hazardous Waste (Level D), Diver Tender, Zone Person & Traffic Control.

BASE RATE24.12
FRINGE BENEFITS6.70

GROUP 2

Skidsteer, Asphalt Raker, Concrete Puddler, Kettle Man (Pipeline), Machine Driven Tools (Gas, Electric, Air), Mason Tender, Brick Paver, Mortar Mixer, Power Buggy or Power Wheelbarrow, Sheeting & Shoring Man, Surface Grinder Man, Plastic Fusing Machine Operator, Pug Mill Operator, & Vacuum Devices (wet or dry), Rodding Machine Operator, Diver, Screw Man or Paver, Screed Person, Water Blast, Hand Held Wand, Pumps 4" and under (gas, air or electric), Hazardous Waste (Level C), Air Track and Wagon Drill, Bottom Person, Cofferdam (below 25 ft. deep), Concrete Saw Person, cutting with Burning Torch, Form Setter, Hand Spiker (Railroad), Pipelayer, Tunnel Laborer (without air) & Caisson, Underground Person (working in sewer and waterline, cleaning, repairing and reconditioning), Sandblaster Nozzleperson and Hazardous Waste (Level B).

BASE RATE24.29
FRINGE BENEFITS6.70

GROUP 3

Blaster, Mucker, Powder Person, Top Lander, Wrencher (Mechanical Joints and Utility Pipeline), Yarner, Hazardous Waste (Level A), Concrete Specialist, Concrete Crew in Tunnels (with air pressurized \$1.00 premium), Curb Setter & Cutter, Grade Checker, Utility Pipeline Tapper, Waterline, and Caulker.

BASE RATE24.62
FRINGE BENEFITS6.70

GROUP 4

Miner, Tunnel Laborer (with air-pressurized add \$1.00 to Base Rate) and Gunnite Nozzle Person.

BASE RATE25.07
FRINGE BENEFITS6.70

Signal person will receive the rate equal to the rate paid the labor classification for which he or she is signaling.

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

TEAMSTERS:

Drivers

BASE RATE15.85
FRINGE BENEFITS4.60

Euclid Wagon, End Dump, Low-Boy, Heavy Duty Equipment, Tractor-Trailer Combination & Drag.

BASE RATE16.29
FRINGE BENEFITS4.60

OPERATING ENGINEERS:

Master Mechanic

BASE RATE27.59
FRINGE BENEFITS 9.31

Air Compressor on Steel Erection; Barrier Moving Machine; Boiler Operator on Compressor or Generator when mounted on a Rig; Cableway; Combination Concrete Mixer & Tower; Concrete Plant (over 4 yd. Capacity); Concrete Pump; Crane (All Types, Including Boom Truck, Cherry Picker); Crane-Compact, Track or Rubber over 4,000 lbs. Capacity; Cranes-Self Erecting, Stationary, Track or Truck (All Configurations); Derrick; Dragline; Dredge (Dipper, Clam or Suction); Elevating Grader or Euclid Loader; Floating Equipment (All Types); Gradall; Helicopter Crew (Operator-Hoist or Winch); Hoe (all types); Hoisting Engine on Shaft or Tunnel Work; Horizontal Directional Drill (over 500,000 ft. lbs. thrust); Hydraulic Gantry (Lifting System); Industrial-Type Tractor; Jet Engine Dryer (D8 or D9) Diesel Tractor; Locomotive (Standard Gauge); Maintenance Operator Class A; Mixer, Paving (Single or Double Drum); Mucking Machine; Multiple Scraper; Piledriving Machine (All Types); Power Shovel; Prentice Loader; Quad 9 (Double Pusher); Rail Tamper (with auto lifting & aligning device); Refrigerating Machine (Freezer Operation); Rotary Drill, on Caisson work; Rough Terrain Fork Lift with Winch/Hoist; Side-Boom; Slip-Form Paver; Tower Derrick; Tree Shredder; Trench Machine (Over 24" wide); Truck Mounted Concrete Pump; Tug Boat; Tunnel Machine and/or Mining Machine; & Wheel Excavator

BASE RATE 27.34
FRINGE BENEFITS9.31

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

OPERATING ENGINEERS: (continued)

Asphalt Paver; Automatic Subgrader Machine, Self-Propelled (CMI Type); Bobcat Type and/or Skid Steer Loader with Hoe Attachment Greater than 7,000 lbs.; Boring Machine More than 48"; Bulldozer; Endloader; Hydro Milling Machine; Kolman-type Loader (production type-Dirt); Lead Greaseman; Lighting & Traffic Signal Installation Equipment (includes all groups or classifications); Material Transfer Equipment (Shuttle Buggy) Asphalt; Pettibone-Rail Equipment; Power Grader; Power Scraper; Push Cat; Rotomill (all), Grinders & Planers of All types; Trench Machine (24" wide & under); & Vermeer type Concrete Saw

BASE RATE27.22
FRINGE BENEFITS9.31

A-Frame; Air Compressor on Tunnel Work (low pressure); Asphalt Plant Engineer; Bobcat-type and/or Skid Steer Loader with or without Attachments; Highway Drills (all types); Locomotive (narrow gauge); Material Hoist/Elevator; Mixer, Concrete (more than one bag capacity); Mixer, one bag capacity (Side Loader); Power Boiler (Over 15 lbs. Pressure) Pump Operator installing & operating Well Points; Pump (4" & over discharge); Roller, Asphalt; Rotovator (lime soil stabilizer); Switch & Tie Tampers (without lifting & aligning device); Utility Operator (Small equipment); & Welding Machines.

BASE RATE26.18
FRINGE BENEFITS 9.31

Backfiller; Ballast Re-locator; Bars, Joint & Mesh Installing Machine; Batch Plant; Boring Machine Operator (48" or less); Bull Floats; Burlap & Curing Machine; Concrete Plant (capacity 4 yd. & under); Concrete Saw (Multiple); Conveyor (Highway); Crusher; Deckhand; Farm-type Tractor with attachments (highway) except Masonry); Finishing Machine; Fireperson, Floating Equipment (all types); Fork Lift (highway); Form Trencher; Hydro Hammer; Hydro Seeder; Pavement Breaker; Plant Mixer; Post Driver; Post Hole Digger (Power Auger); Power Brush Burner; Power Form Handling Equipment; Road Widening Trencher; Roller (Brick, Grade & Macadam); Self-Propelled Power Spreader; Self-Propelled Power Subgrader; Steam Fireperson; Tractor (Pulling Sheepfoot, Roller or Grader); & Vibratory Compactor with Integral Power.

BASE RATE25.00
FRINGE BENEFITS 9.31

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

OPERATING ENGINEERS: (continued)

Compressor (Portable, Sewer, Heavy & Highway); Drum Fireperson (Asphalt); Generator; Masonry fork Lift; Inboard-Outboard Motor Boat Launch; Masonry Fork Lift; Oil Heater (asphalt plant); Oiler; Power Driven Heater; Power Sweeper & Scrubber; Pump (under 4” discharge); Signalperson; Tire Repairperson; & VAC/ALLS.

BASE RATE19.54
FRINGE BENEFITS9.31

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

These rates are listed pursuant to Kentucky Determination No. CR-05-IV HWY dated May 16, 2006 and/or Federal Decision No. KY20070028 dated February 9, 2007, modification #1 dated June 1, 2007 and modification #2 dated July 6, 2007.

No laborer, workman or mechanic shall be paid at a rate less than that of the General Laborer 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.

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

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 after an employee works eight (8) hours a day or forty (40) hours a week, whichever gives the employee the greater wages. At least time and one-half the base rate is required for all overtime. A laborer, workman or mechanic and an employer may enter into a written agreement or a collective bargaining agreement to work more than eight (8) hours a calendar day but not more than ten (10) hours a calendar day for the straight time hourly rate. Wage violations or questions should be directed to the designated Engineer or the undersigned.

Steve Waddle, Director
Division of Construction Procurement
Frankfort, Kentucky 40622

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(Executive Order 11246)**

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

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE	GOALS FOR FEMALE PARTICIPATION IN EACH TRADE
11.0%	6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4, 3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of \$10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed. The notification shall be mailed to:

**Evelyn Teague, Regional Director
Office of Federal Contract Compliance Programs
61 Forsyth Street, SW, Suite 7B75
Atlanta, Georgia 30303-8609**

4. As used in this Notice, and in the contract resulting from this solicitation, the "**covered area**" is Boone County.

PART IV
INSURANCE

INSURANCE
(Railroad Involvement)

The Contractor shall carry the following insurance in addition to the insurance required by law:

1. Contractor's Public Liability Insurance not less than \$100,000.00 for damages arising out of bodily injuries to or death to one person. Not less than \$300,000.00 for damages arising out of bodily injuries to or death to two or more persons.
2. Contractor's Property Damages Liability Insurance. Not less than \$100,000.00 for all damages arising out of injury or destruction of property in any one accident. Not less than \$300,000.00 for all damages during the policy period.
3. Contractor's Protective Public Liability and Property Damage Insurance. The contractor shall furnish evidence with respect to operations performed for him by subcontractors that he carries in his own behalf for the above stipulated amounts.
4. The insurance required above must be evidenced by a Certificate of Insurance and this Certificate of Insurance must contain one of the following statements:
 - a. "policy contains no deductible clauses."
 - b. "policy contains _____ (amount) deductible property damage clause but company will pay claim and collect the deductible from the insured."
5. WORKMEN'S COMPENSATION INSURANCE. The contractor shall furnish evidence of coverage of all his employees or give evidence of self-insurance by submitting a copy of a certificate issued by the Workmen's Compensation Board.
6. RAILROAD PROTECTIVE LIABILITY INSURANCE. The policy shall name the railroad as the Named Insured and the limit of liability shall be not less than \$5,000,000 combined single limit for Bodily Injury and Property Damage per occurrence, subject to a \$10,000,000 aggregate limit per annual policy period. If the project involves a rail facility where passenger trains operate, the insurance limits required that are not less than a combined single limit of \$5,000,000 each occurrence and \$10,000,000 in the aggregate applying separately to each annual period. The original of this policy must be submitted for the railroad's approval and filing prior to the commencement of work on this project.

PART V

STATEMENT OF INCOMPLETE WORK

PART VI

BID ITEMS

TRANSPORTATION CABINET

Department of Highways

FRANKFORT, KY 40622

Sheet No: 1

Contract ID: 07-1053

BOONE COUNTY

BRZ 0603(207)

Letting: 9/28/07

THE BIDDER MUST MAKE THE EXTENSIONS AND ADDITIONS
SHOWING TOTAL AMOUNT BID USING FIGURES ONLY

Item No.	Code No.	Item	Approximate Quantity	Unit	Unit Price Dollars	Amount Dollars
		ROADWAY			.	.
0010	00001	DGA BASE	260.00	TON	.	.
0020	00003	CRUSHED STONE BASE	3,504.00	TON	.	.
0030	00078	CRUSHED AGGREGATE SIZE NO 2	6,221.00	TON	.	.
0040	00190	LEVELING & WEDGING PG64-22	196.00	TON	.	.
0050	00221	CL2 ASPH BASE 0.75D PG64-22	3,783.00	TON	.	.
0060	00301	CL2 ASPH SURF 0.38D PG64-22	916.00	TON	.	.
0070	00470	CULVERT PIPE-48 INCH	520.00	LF	.	.
0080	00521	STORM SEWER PIPE-15 INCH	424.00	LF	.	.
0090	00522	STORM SEWER PIPE-18 INCH	352.00	LF	.	.
0100	00524	STORM SEWER PIPE-24 INCH	452.00	LF	.	.
0110	00528	STORM SEWER PIPE-36 INCH	36.00	LF	.	.
0120	00530	STORM SEWER PIPE-48 INCH	116.00	LF	.	.
0130	01314	PLUG PIPE	1.00	EACH	.	.
0140	01456	CURB BOX INLET TYPE A	19.00	EACH	.	.
0150	01490	DROP BOX INLET TYPE 1	1.00	EACH	.	.
0160	01584	CAP DROP BOX INLET	5.00	EACH	.	.
0170	01634	CAP CURB BOX INLET	1.00	EACH	.	.
0180	01719	ADJUST INLET	1.00	EACH	.	.
0190	01791	ADJUST MANHOLE FRAME TO GRADE	4.00	EACH	.	.
0200	01810	STANDARD CURB AND GUTTER	4,927.30	LF	.	.
0210	01923	STANDARD BARRIER MEDIAN TYPE 5	7.10	SQYD	.	.
0220	02084	JPC PAVEMENT-8 INCH	448.00	SQYD	.	.
0230	02101	CEM CONC ENT PAVEMENT-8 INCH	234.00	SQYD	.	.
0240	02159	TEMPORARY DITCH	2,709.00	LF	.	.
0250	02223	GRANULAR EMBANKMENT	3,663.00	CUYD	.	.
0260	02230	EMBANKMENT IN PLACE	80,953.00	CUYD	.	.

TRANSPORTATION CABINET

Department of Highways

FRANKFORT, KY 40622

Sheet No: 2

Contract ID: 07-1053

BOONE COUNTY

BRZ 0603(207)

Letting: 9/28/07

THE BIDDER MUST MAKE THE EXTENSIONS AND ADDITIONS
SHOWING TOTAL AMOUNT BID USING FIGURES ONLY

Item No.	Code No.	Item	Approximate Quantity	Unit	Unit Price Dollars	Amount Dollars
0270	02231	STRUCTURE GRANULAR BACKFILL	347.00	CUYD	.	.
0280	02242	WATER	500.00	MGAL	.	.
0290	02351	GUARDRAIL-STEEL W BEAM-S FACE	30.00	LF	.	.
0300	02360	GUARDRAIL TERMINAL SECTION NO 1	4.00	EACH	.	.
0310	02438	R/W MARKER MUNICIPAL TYPE 2	25.00	EACH	.	.
0320	02483	CHANNEL LINING CLASS II	563.30	TON	.	.
0330	02484	CHANNEL LINING CLASS III	444.30	TON	.	.
0340	02545	CLEARING AND GRUBBING 23.6 ACRES	1.00	LS	.	.
0350	02585	EDGE KEY	152.00	LF	.	.
0360	02596	FABRIC-GEOTEXTILE TYPE I	1,438.80	SQYD	.	.
0370	02599	FABRIC-GEOTEXTILE TYPE IV	15,884.00	SQYD	.	.
0380	02650	MAINTAIN & CONTROL TRAFFIC	1.00	LS	.	.
0390	02676	MOBILIZATION FOR MILL & TEXT	1.00	LS	.	.
0400	02677	ASPH PAVE MILLING & TEXTURING	154.00	TON	.	.
0410	02690	SAFELOADING	76.60	CUYD	.	.
0420	02701	TEMPORARY SILT FENCE	2,709.00	LF	.	.
0430	02703	SILT TRAP TYPE A	24.00	EACH	.	.
0440	02704	SILT TRAP TYPE B	24.00	EACH	.	.
0450	02706	CLEAN SILT TRAP TYPE A	144.00	EACH	.	.
0460	02707	CLEAN SILT TRAP TYPE B	144.00	EACH	.	.
0470	02709	CLEAN TEMPORARY SILT FENCE	2,709.00	LF	.	.
0480	02720	SIDEWALK-4 INCH CONCRETE	1,951.50	SQYD	.	.
0490	02726	STAKING	1.00	LS	.	.
0500	05950	EROSION CONTROL BLANKET	4,266.60	SQYD	.	.
0510	05952	TEMPORARY MULCH	11,380.00	SQYD	.	.
0520	05953	TEMP SEEDING AND PROTECTION	8,535.00	SQYD	.	.

TRANSPORTATION CABINET

Department of Highways

FRANKFORT, KY 40622

Sheet No: 3

Contract ID: 07-1053

BOONE COUNTY

BRZ 0603(207)

Letting: 9/28/07

THE BIDDER MUST MAKE THE EXTENSIONS AND ADDITIONS
SHOWING TOTAL AMOUNT BID USING FIGURES ONLY

Item No.	Code No.	Item	Approximate Quantity	Unit	Unit Price Dollars	Amount Dollars
0530	05966	TOPDRESSING FERTILIZER	5.90	TON	.	.
0540	05985	SEEDING AND PROTECTION	47,244.00	SQYD	.	.
0550	05989	SPECIAL SEEDING CROWN VETCH	11,765.00	SQYD	.	.
0560	05990	SODDING	69.10	SQYD	.	.
0570	06522	PAVE STRIPING-WB PAINT-6 IN W	1.41	MILE	.	.
0580	06523	PAVE STRIPING-WB PAINT-6 IN Y	1.17	MILE	.	.
0590	06526	PAVE STRIPING-WB PAINT-12 IN W	0.08	MILE	.	.
0600	06566	PAVE MARKING-THERMO X-WALK-12 IN	785.98	LF	.	.
0610	06567	PAVE MARKING-THERMO STOP BAR-12IN	167.42	LF	.	.
0620	06589	PAVEMENT MARKER TYPE V-MW	6.00	EACH	.	.
0630	08100	CONCRETE-CLASS A	25.27	CUYD	.	.
0640	08150	STEEL REINFORCEMENT	1,486.00	LB	.	.
0650	10000NS	LOT PAY ADJUSTMENT	9,790.00	DOLL	1.0000	9,790.00
0660	10020NS	FUEL ADJUSTMENT	11,598.00	DOLL	1.0000	11,598.00
0670	10030NS	ASPHALT ADJUSTMENT	8,811.00	DOLL	1.0000	8,811.00
0680	20210EP69	COHESIVE PILE CORE	225.00	CUYD	.	.
0690	20496NS843	SILT TRAP TYPE C	24.00	EACH	.	.
0700	20497NS843	CLEAN SILT TRAP TYPE C	144.00	EACH	.	.
0710	20588NC	INSTALL PROJECT IDENTIFICATION SIGNS	2.00	EACH	.	.
0720	20597EC	DITCH EXCAVATION	534.50	CUYD	.	.
0730	20782NS714	PAVE MARKING THERMO-BIKE	12.00	EACH	.	.
0740	21433ES214	FABRIC GEOTEXTILE TY IV FOR PIPE	4,228.00	SQYD	2.0000	8,456.00
0750	21661ES706	BORE AND JACK PIPE	148.00	LF	.	.
0760	22670NN	MAINTAIN AND CONTROL RAIL TRAFFIC	1.00	LS	.	.
0770	22690NN	JUNCTION BOX-144 IN X 72 IN	1.00	EACH	.	.
		BRIDGE			.	.

TRANSPORTATION CABINET

Department of Highways

FRANKFORT, KY 40622

Sheet No: 4

Contract ID: 07-1053

BOONE COUNTY

BRZ 0603(207)

Letting: 9/28/07

THE BIDDER MUST MAKE THE EXTENSIONS AND ADDITIONS
SHOWING TOTAL AMOUNT BID USING FIGURES ONLY

Item No.	Code No.	Item	Approximate Quantity	Unit	Unit Price Dollars	Amount Dollars
0780	01093	DUCTILE IRON PIPE-6 INCH	681.00	LF	.	.
0790	02231	STRUCTURE GRANULAR BACKFILL	522.00	CUYD	.	.
0800	02998	MASONRY COATING	686.00	SQYD	.	.
0810	08003	FOUNDATION PREPARATION	1.00	LS	.	.
0820	08016	REINF CONC SLOPE WALL-6 INCH	430.00	SQYD	.	.
0830	08033	TEST PILES	69.00	LF	.	.
0840	08046	PILES-STEEL HP12X53	1,567.00	LF	.	.
0850	08094	PILE POINTS-12 INCH	52.00	EACH	.	.
0860	08104	CONCRETE-CLASS AA	381.00	CUYD	.	.
0870	08150	STEEL REINFORCEMENT	26,527.00	LB	.	.
0880	08151	STEEL REINFORCEMENT-EPOXY COATED	73,603.00	LB	.	.
0890	08160	STRUCTURAL STEEL	1.00	LS	.	.
		834,000 LB				
0900	08170	SHEAR CONNECTORS	1.00	LS	.	.
		2572 LB				
0910	08269	ELECTRICAL CONDUIT	1.00	LS	.	.
0920	20743ED	DRILLED SHAFT 54 IN-SOLID ROCK	112.00	LF	.	.
0930	20745ED	ROCK SOUNDINGS	236.80	LF	.	.
0940	20746ED	ROCK CORINGS	220.00	LF	.	.
0950	21777EN	DRILLED SHAFT COMMON-54 IN	236.80	LF	.	.
0960	22006EN	CONC CLASS AA-SUPERSTRUCTURE	208.00	CUYD	.	.
0970	22046NN	DECK WATERPROOFING	1.00	LS	.	.
0980	22510EN	FENCE-HANDRAIL	433.30	LF	.	.
		SIGNING			.	.
0990	06406	SBM ALUM SHEET SIGNS .080 INCH	125.00	SQFT	.	.
1000	06407	SBM ALUM SHEET SIGNS .125 INCH	30.00	SQFT	.	.
1010	06411	STEEL POST TYPE 2	300.00	LF	.	.

TRANSPORTATION CABINET

Department of Highways

FRANKFORT, KY 40622

Sheet No: 5

Contract ID: 07-1053

BOONE COUNTY

BRZ 0603(207)

Letting: 9/28/07

THE BIDDER MUST MAKE THE EXTENSIONS AND ADDITIONS
SHOWING TOTAL AMOUNT BID USING FIGURES ONLY

Item No.	Code No.	Item	Approximate Quantity	Unit	Unit Price Dollars	Amount Dollars
		WATERLINE RELOCATION			.	.
1020	01095	DUCTILE IRON PIPE-8 INCH	180.00	LF	.	.
1030	03433	RELOCATE FIRE HYDRANT	1.00	EACH	.	.
1040	03526	GATE VALVE-6 INCH	1.00	EACH	.	.
1050	20555NC	BEND AND BLOCK-8 IN	4.00	EACH	.	.
1060	20784ND	ANCHOR TEE AND BLOCK 8IN X 8IN X 6 IN	1.00	EACH	.	.
1070	20792ND	ADJUST WATER VALVE BOXES	2.00	EACH	.	.
1080	22447NN	CONNECT TO 8 IN	3.00	EACH	.	.
		DEMOBILIZATION &/OR MOBILIZATION			.	.
1090	02568	MOBILIZATION	1.00	LS	.	.
1100	02569	DEMOBILIZATION	1.00	LS	.	.
TOTAL BID					\$.

PART VII
CERTIFICATIONS

PROVISIONS RELATIVE TO SENATE BILL 258 (1994)

During the performance of the contract, the contractor agrees to comply with applicable provisions of:

1. KRS 136 Corporation and Utility Taxes
2. KRS 139 Sale and Use Taxes
3. KRS 141 Income Taxes
4. KRS 337 Wages and Hours
5. KRS 338 Occupational Safety and Health of Employees
6. KRS 341 Unemployment Compensation
7. KRS 342 Workers Compensation

Any final determinations of a violation by the contractor within the previous five (5) years pursuant to the applicable statutes above are revealed as follows:

NON-COLLUSION CERTIFICATION

COMMONWEALTH OF KENTUCKY

COUNTY _____

PROJECT NO. _____

I, _____, _____, under
(Name of officer signing certification) (Title)

penalty of perjury under the laws of the United States, do hereby certify that

(Insert name of Individual, Joint Venture, Co-partnership, or Corporation submitting bid)

its agent, officers or employees have not directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding in connection with this proposal.

(Signature)

(Title)

REVISED: 8-23-89

NON-COLLUSION CERTIFICATION

COMMONWEALTH OF KENTUCKY

COUNTY _____

PROJECT NO. _____

I, _____, _____, under
(Name of officer signing certification) (Title)

penalty of perjury under the laws of the United States, do hereby certify that

(Insert name of Individual, Joint Venture, Co-partnership, or Corporation submitting bid)

its agent, officers or employees have not directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding in connection with this proposal.

(Signature)

(Title)

REVISED: 8-23-89

CERTIFICATION OF ORGANIZATION(S)

COMMONWEALTH OF KENTUCKY

COUNTY _____

PROJECT NO. _____

I, _____, _____, under penalty
(President or Authorized Official of Bidder) (Title)

perjury under the laws of the United States, do hereby certify that, except as noted below,

(Insert name of individual, Joint Venture, Co-Partnership or Corporation Submitting Bid)

any person associated therewith in the capacity of (owner, partner, director, officer, principal investigator, project director, manager, auditor, or any position involving the Administration of Federal Funds): is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency; has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal agency within the past 3 years; does not have a proposed debarment pending; and has not been indicted, convicted, or had a civil judgement rendered against (it) by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

Please list below any exceptions to the foregoing, to whom it applies, initiating agency and dates of action.

Exceptions: _____

(Signature)

(Title)

CERTIFICATION OF PERFORMANCE

Certification with regard to the Performance of Previous Contracts or Subcontracts subject to the Equal Opportunity Clause and the filing of Required Reports.

The bidder _____, proposed subcontractor _____, hereby certifies that he has _____, has not _____, participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114, or 11246, and that he has _____, has not _____, filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the Former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

(Company)

By: _____

(Title)

Date: _____

NOTE: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b) (1)), and must be submitted by bidders and proposed subcontractors only in connection with the contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders of their implementing regulation.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed reports should note that 41 CFR 60-1.7(b) (1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

CERTIFICATION FOR FEDERAL-AID CONTRACT

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

1. 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 agent.
2. 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.

This certification is a material representation of fact 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 Section 1352, Title 31, U.S. Code. 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.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such subrecipients shall certify and disclose accordingly.

(Insert name of Individual, Joint Venture, Co-partnership, or Corporation submitting bid)

(Signature)

(Title)

CERTIFICATION OF BID PROPOSAL / DBE

We (I) propose to furnish all labor, equipment and materials necessary to construct and/or improve the subject project in accordance with the plans, the Transportation Cabinet's Standard Specifications for Road and Bridge Construction, current edition, special provisions, notes applicable to the project as indicated herein and all addenda issued on this project subsequent to purchase of proposal.

We (I) attach a bid proposal guaranty as provided in the special provisions in an amount not less than 5% of the total bid. We agree to execute a contract in accordance with this bid proposal within 15 calendar days after the receipt of the notice of award for the project.

We (I) have examined the site of proposed work, project plans, specifications, special provisions, and notes applicable to the project referred to herein. We understand that the quantities shown herein are estimated quantities subject to increase or decrease as provided in the specifications.

We (I) acknowledge receipt of all addendum(s) (if applicable) and have made the necessary revisions to the bid proposal. We have considered all addendum(s) in the calculation of the submitted bid and applied the updated bid items, which are included.

- No Addendum(s) have been posted

“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.”

Name of Contracting Firm

BY: _____
Authorized Agent (Signature) Title

Address City State Zip Code

Telephone Number

When two or more organizations bid as a joint venture, enter names of each organization and an authorized agent for each organization must sign above.