

**CONTRACT DOCUMENTS  
AND  
SPECIFICATIONS**

**DIVISION OF PARKS AND RECREATION**

**FOR**

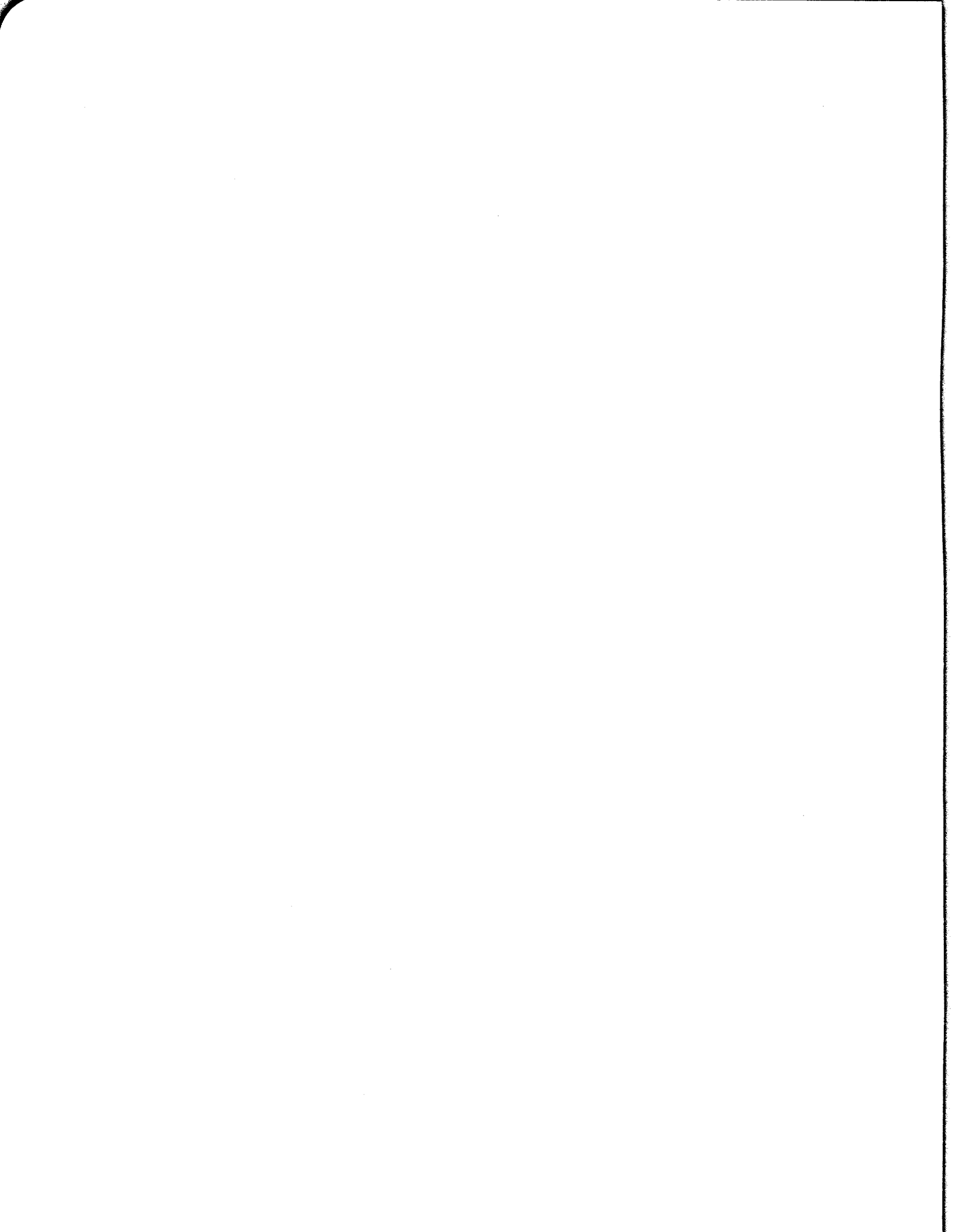
**RETENTION WALL REPAIR AT  
KEARNEY HILL GOLF LINKS**

**Bid No. 129-2016**

**PREPARED BY:**

**EA PARTNERS, PLC**

**JUNE, 2016**



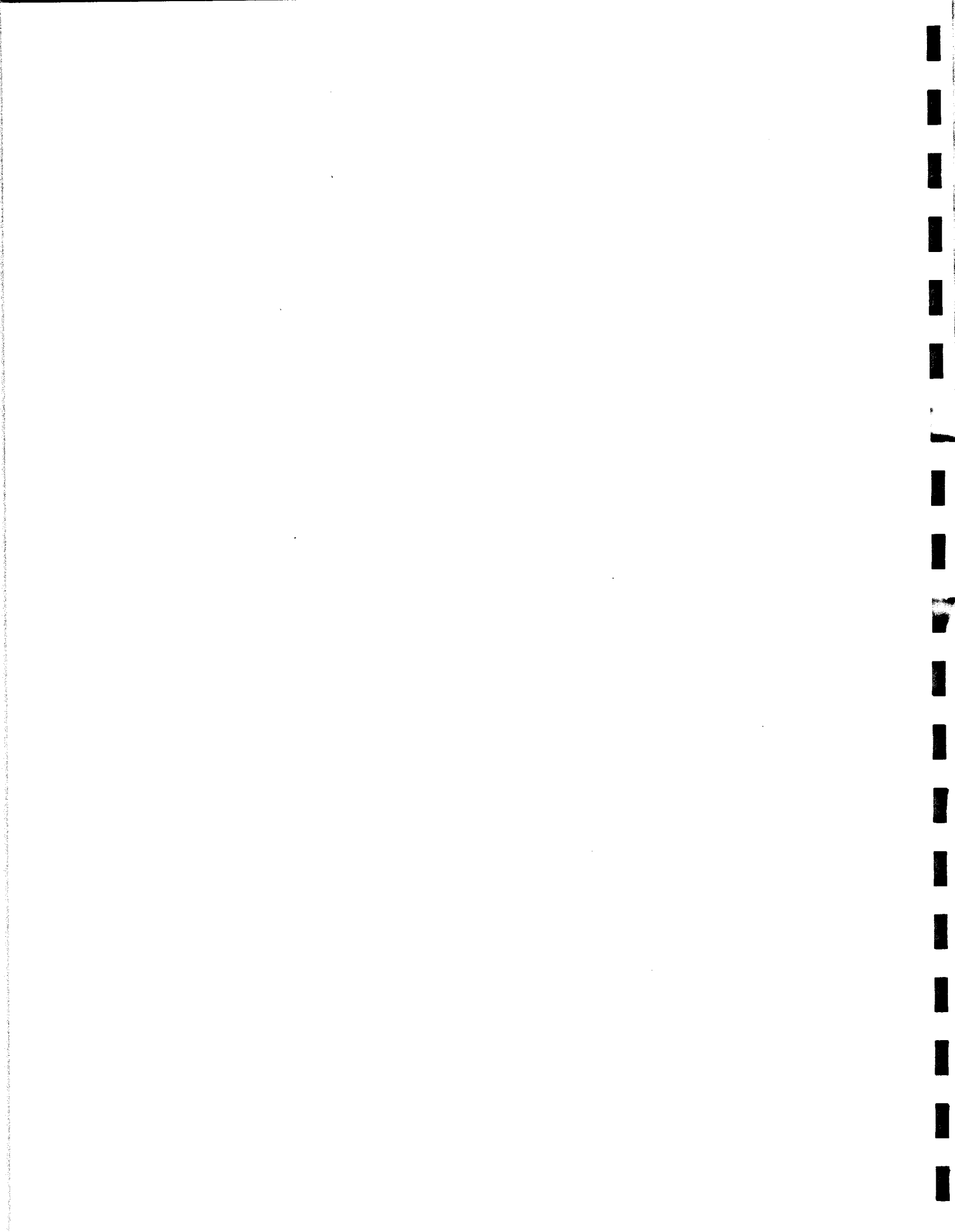
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**129-2016 Retention Wall Repair at Kearney Hill Golf Links**

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**PART 1**

**ADVERTISEMENT FOR BIDS**

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## ADVERTISEMENT FOR BIDS

### 1. INVITATION

Sealed proposals for the following work will be received by the Lexington-Fayette Urban County Government (LFUCG) until 2:00 p.m., local time, **October 4, 2016**, for furnishing all labor and/or materials and performing all work as set forth by this advertisement, conditions (general and special), specifications, and/or the drawings prepared by EA Partners, PLC for Lexington-Fayette Urban County Government, Division of Parks and Recreation. Immediately following the scheduled closing time for reception of bids, all proposals which have been submitted in accordance with the above will be publicly opened and read aloud.

### 2. DESCRIPTION OF WORK

Consisting of the construction and/or furnishing of items as listed in the Bid Schedule beginning on page P-6, Part III, Form of Proposal, of this document, for the Retention Wall Repair at Kearney Hill Golf Links, 3403 Kearney Road, Lexington-Fayette County, Kentucky.

### 3. OBTAINING PLANS, SPECIFICATIONS, AND BID DOCUMENTS

Plans, Specifications, and Contract Documents may be obtained from the official bid site <https://lexingtonky.ionwave.net> or examined at:

LFUCG  
Division of Central Purchasing  
200 East Main Street, Third Floor, Rm 338  
Lexington, Kentucky 40507  
(859) 258-3320

**4. METHOD OF RECEIVING BIDS**

Bids will be received from Prime Contracting firms on a **Lump Sum** for total Project. The Bidder must include a price for all bid items to be considered. Bids shall be submitted in the manner and subject to the conditions as set forth and described in the Instruction to Bidders and Special Conditions.

Sealed bids shall be clearly marked on the outside of the container as follows: Company Name and Address, Bid Invitation Number, and the Project Name. Bids are to remain sealed until official Bid closure time.

Mailed bids/proposals should be sent to the Director, Division of Central Purchasing, 200 East Main Street, Lexington, KY 40507.

**5. METHOD OF AWARD**

The Contract, if awarded, will be to the lowest, qualified responsible bidder for the total project whose qualifications indicate the award will be in the best interest of the OWNER and whose bid/proposal complies with all the prescribed requirements. No Notice of Award will be given until the OWNER has concluded such investigation as deemed necessary to establish the responsibility, qualifications and financial ability of Bidders to do the work in accordance with the Contract Documents to the satisfaction of the OWNER within the time prescribed. The OWNER reserves the right to reject the Bid of any Bidder who does not pass such investigation to the OWNER's satisfaction. In analyzing Bids, the OWNER may take into consideration alternate and unit prices, if requested by the Bid forms.

**6. BID WITHDRAWAL**

No bidder may withdraw his bid for a period of sixty (60) calendar days after the closing date for receipt of bids. Errors and omissions will not be cause for withdrawal of bid without forfeit of bid bond. Bids may be withdrawn in person prior to the closing date of receipt of bids.

**7. BID SECURITY**

If the bid is \$50,000 or greater, bid shall be accompanied by a certified /cashier's check or bid bond payable to the Lexington-Fayette Urban County Government in an amount not less than Five Percent (5%) of the base bid. Bid bond shall be executed by a Surety Company authorized to do business in the Commonwealth of Kentucky and countersigned by a licensed Kentucky Resident Agent, representing the Surety Company. Bid Bonds are not required for bids under \$50,000. A certified check or cashier's check is also acceptable forms of bid security.

**8. SUBMISSION OF BIDS**

CONTRACTORS shall submit their bids to the Lexington-Fayette Urban County Government, Division of Purchasing, Third Floor, 200 East Main Street, Lexington, Kentucky 40507. Bids shall be submitted in a sealed envelope not later than 2:00 p.m. local

time, **October 4, 2016**. Sealed proposals shall be clearly marked on the outside of the container as follows: Company Name and Address, Bid Invitation Number, and Project Name to be opened at 2:00 p.m. local time **October 4, 2016**. Bids are to remain sealed until official Bid closure time. Bids received after the scheduled closing time for receipt of bids will not be considered and will be returned unopened.

**9. RIGHT TO REJECT**

The Lexington-Fayette Urban County Government reserves the right to reject any and all bids and to waive all informalities and/or technicalities where the best interest of the Lexington-Fayette Urban County Government may be served.

**10. NOTIFICATION TO THE LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT FOR AFFIRMATIVE ACTION PLAN AND CURRENT WORKFORCE**

The successful bidder must submit with their bid the following items to the Lexington-Fayette Urban County Government:

1. Affirmative Action Plan for his/her firm.
2. Current Workforce Analysis Form.

Failure to submit these items as required herein may result in disqualification of the Bidder from the award of the contract.

All submissions should be directed to:

Lexington-Fayette Urban County Government  
Division of Purchasing  
200 East Main Street, 3<sup>rd</sup> Floor, Room 338  
Lexington, Kentucky 40507

**11. NOTICE CONCERNING MWD BE GOAL**

Notice of requirement for Affirmative Action to ensure Equal Employment Opportunities and Disadvantaged Business Enterprises (DBE) Contract participation. Disadvantaged Business Enterprises (DBE) consists of Minority-Owned Business Enterprises (MBE) and Woman-Owned Business Enterprises (WBE).

The Lexington-Fayette Urban County Government has set a goal that not less than ten percent (10%) of the total value of this Contract be subcontracted to Disadvantaged Business Enterprises, which is made up of MBEs and WBEs. The goal for the utilization of Disadvantaged Business Enterprises as subcontractors is a recommended goal. Contractor(s) who fail to meet such goal will be expected to provide written explanations to the Director of the Division of Purchasing of efforts they have made to accomplish the recommended goal, and the extent to which they are successful in accomplishing the



recommended goal will be a consideration in the procurement process. Depending on the funding source, other DBE goals may apply.

For assistance in locating Disadvantaged Business Enterprises Subcontractors contact:

Sherita Miller, Division of Central Purchasing  
Lexington-Fayette Urban County Government  
200 East Main Street, 3rd Floor, Room 338  
Lexington, Kentucky 40507  
859-258-3323  
[smiller@lexingtonky.gov](mailto:smiller@lexingtonky.gov)

**12. PRE-BID MEETING**

A non-mandatory pre-bid meeting will be held at 11:00 PM local time on September 27, 2016 at 3403 Kearney Road, Lexington, KY 40511.

END OF SECTION



**PART II**  
**INFORMATION FOR BIDDERS**

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**PART II**  
**INFORMATION FOR BIDDERS**

**1. RECEIPT AND OPENING OF BIDS**

The Lexington-Fayette Urban County Government (herein called the OWNER) invites bids from firms on the project described in the Advertisement for Bids. The OWNER will receive bids at the Division of Purchasing, at the time and in the manner set forth in the Advertisement for Bids, and the Bids will then be publicly opened and read aloud. The OWNER may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 60 days after the actual time and date of the bid opening, but OWNER may, in its sole discretion, release any bid and return the Bid Security prior to that date.

The Lexington-Fayette Urban County Government assumes no responsibility for bids that are not addressed and delivered as indicated above. Bids that are not delivered to the Division of Central Purchasing by the stated time and date will be rejected.

**2. PREPARATION OF BID**

Each bid must be submitted on the prescribed Form of Proposal. All blank spaces for the bid prices must be filled in, either in ink or typewritten, for both unit prices and extensions. Totals for each bid item must be added to show the total amount of the bid. Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, their address, the name of the project, the invitation number and time and date for which the bid is submitted. Bids must be addressed to the Director of Purchasing, Lexington-Fayette Urban County Government, Third Floor, 200 East Main Street, Lexington, Kentucky 40507. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified above.

**3. SUBCONTRACTS**

The bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this Contract must be acceptable to the OWNER. All proposed subcontractors must be identified on the Form of Proposal. Prior to the award of Contract, the OWNER or the OWNER'S representative will advise the CONTRACTOR of the acceptance and approval thereof or of any action necessary to be taken. Should any Subcontractor be rejected by the OWNER, the CONTRACTOR shall present a new name and/or firm to the OWNER at no change in the Contract Price.

**4. QUALIFICATION OF BIDDER**

The OWNER may make such investigations as the OWNER deems necessary to determine the ability of the bidder to perform the Work, and the bidder shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the OWNER that such bidder is properly qualified to carry out the obligations of the Contract and to complete the Work contemplated therein. Conditional bids will not be accepted.

In evaluating Bids, OWNER shall consider the qualifications of the BIDDERS, whether or not the Bids comply with the prescribed requirements, and alternatives and unit prices, as requested. OWNER may consider maintenance requirements, performance data, and disruption or damage to private property. It is OWNER'S intent to accept alternatives, if requested by the bid forms, in the order in which they are listed in the Bid Form but OWNER may accept or decline them in any order or combination. The contract, if awarded, will be awarded to the lowest, qualified, responsible BIDDER based upon OWNER'S evaluation which indicates that the award will be in the best interest of OWNER and the general public.

In the event there is any question as to the bidder's qualifications and ability to complete the work, a final determination will be made in accordance with a fair evaluation by the Urban County Government of the above listed elements.

- A. If the OWNER requires filling out a detailed financial statement, the bidder may provide its current certified financial statement(s) for the required time interval.
- B. Corporate firms are required to be registered and in good standing with the requirements and provisions of the Office of the Secretary of State, Commonwealth of Kentucky.
- C. Good standing with Public Works Act - any CONTRACTOR and/or subcontractors in violation of any wage or work act provisions (KRS 337.510 to KRS 337.550) are prohibited by Statutory Act (KRS 337.990) from bidding on or working on any and all public works contracts, either in their name or in the name of any other company, firm or other entity in which he might be interested. No bid from a prime contractor in violation of the Act can be considered, nor will any subcontractor in violation of the Act be approved and/or accepted. The responsibility for the qualifications of the subcontractor is solely that of the prime contractor.
- D. Documents Required of CONTRACTOR - (1) A sworn statement signed by the President or owner of the Company regarding all current work in progress anywhere; (2) A document showing the percent of completion of each project and the total worth of each project; and (3) Documentation showing the percentage of the DBE employment levels on each project of the Bidder's current work force, and DBE participation levels for Subcontractors.

- E. Optional OWNER Requirements - The OWNER, at its discretion, may require the BIDDER/CONTRACTOR to provide: (1) a current detailed financial statement for a period including up to 3 prior years; (2) financial security or insurance in amounts and kinds acceptable to the OWNER to meet the financial responsibility requirements for the CONTRACTOR to indemnify the OWNER. (3) Additional information and/or DBE work force data, as well as DBE participation data.

**Each bidder agrees to waive any claim it has or may have against the Owner, the Consultant, and their respective employees, arising out of or in connection with the administration, evaluation, or recommendation of any bid.**

**5. BID SECURITY**

- A. Each bid must be accompanied by a bid bond prepared on a Form of Bid Bond and attached hereto, duly executed by the bidder as principal and having as surety thereon a surety company approved by the OWNER, in the amount of 5% of the bid. Such bid bond will be returned to the unsuccessful bidder(s) only upon written request to the Director of Central Purchasing within seven (7) days of opening of bids. Bid bond shall be made payable to the Lexington-Fayette Urban County Government. Bid security is not required for projects under \$50,000.
- B. Bonds shall be placed with an agent licensed in Kentucky with surety authorized to do business within the state. When the premium is paid for such coverage, the full commission payable shall be paid to such local agent who shall not divide such commission with any person other than a duly licensed resident local agent.

**6. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT**

The successful bidder, upon his failure or refusal to execute and deliver the Contract and bonds required within ten (10) days after he has received notice of the acceptance of his bid, shall forfeit to the OWNER, as liquidated damages for such failure or refusal, the security deposited with his bid.

**7. TIME OF COMPLETION AND LIQUIDATED DAMAGES**

Bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" from the OWNER and to fully complete the Project within the time as specified in the Contract. Bidder must agree also to pay **\$200.00** per day as liquidated damages, or the sum as specified in the Contract for each consecutive calendar day thereafter as hereinafter provided in the General Conditions.

**8. EXAMINATION OF CONTRACT DOCUMENTS AND SITE**

- A. It is the responsibility of each Bidder before submitting a Bid, to (a) examine the Contract Documents thoroughly, (b) visit the site(s) to become familiar with local conditions that may affect cost, progress, performance or furnishing of the work, (c) consider Federal, State and Local laws and regulations that may affect cost, progress, performance or furnishing of the work, (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify Consultant of all conflicts, errors or discrepancies in the Contract Documents.
  
- B. Bidders should examine the requirements of section 4 of the General Conditions for information pertaining to subsurface conditions, underground structures, underground facilities, and availability of lands, easements, and rights-of-way. The completeness of data, presented in the Contract Documents, pertaining to subsurface conditions, underground structures, and underground facilities for the purposes of bidding or construction is not assured. The Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information and data which pertain to the physical conditions (surface and subsurface) which may affect cost, progress, performance or furnishing of the Work and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents. On request in advance, OWNER will provide access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a bid. Bidder shall fill all holes, clean up and restore the site to its former condition upon completion of such explorations.
  
- C. The submission of a Bid will constitute an incontrovertible representation by the Bidder that Bidder has complied with every requirement of this paragraph 8; that without exception the Bid is premised upon furnishing and performing the Work required by the Contract Documents and such means, methods, techniques, sequences or procedures of construction as may be indicated in or required by the Contract Documents; and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

**9. ADDENDA AND INTERPRETATIONS**

No interpretation of the meaning of the Contract Documents will be made to any bidder orally. Every request for such interpretation should be in writing addressed to the Director of Central Purchasing, who in turn will have an Addendum issued for the Lexington-Fayette Urban County Government, and to be given consideration must be received prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications. Acknowledgement of the receipt of addenda must be included with all submitted bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the Contract Documents.

**10. SECURITY FOR FAITHFUL PERFORMANCE**

- A. Simultaneously with his delivery of the executed Contracts, the CONTRACTOR shall furnish a surety bond or bonds as security for the faithful performance of this Contract and for payment of all persons performing labor on the Project under this Contract and furnishing materials in connection with this Contract, as specified in the General Conditions. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the OWNER and authorized to do business in the Commonwealth of Kentucky.
- B. All bonds required by this Contract and laws of this State shall be placed with agents licensed in the State of Kentucky. When the premium is paid for such coverage's, the full commission shall be paid to such local agent who shall not divide such commission with any person other than a duly licensed resident local agent.
- C. **Contractor shall use standard Performance and Payment Bond forms such as documents provided with this contract book or AIA form A312-1984 (or later). Each document will be for 100% of the Contract Bid Amount.**

**11. POWER OF ATTORNEY**

Attorney-in-fact who signs bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

**12. TAXES AND WORKMEN'S COMPENSATION**

The CONTRACTOR and subcontractor will be required to accept liability for payment of all payroll taxes, sales and use tax, and all other taxes or deductions required by local, state or federal law, such as old age pension, social security, or annuities measured by wages. Each shall carry Workmen's Compensation Insurance to the full amounts as required by Statutes and shall include the cost of all foregoing items in the proposal. The CONTRACTOR will not otherwise be reimbursed or compensated for such tax payments. The CONTRACTOR is urged to ascertain at his own risk his actual tax liability in connection with the execution or performance of his Contract.

**13. LAWS AND REGULATIONS**

The bidder's attention is directed to the fact that all applicable state laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Contract throughout, and they will be deemed to be included in the contract, the same as though herein written out in full.

**14. EROSION AND SEDIMENT CONTROL AND PERMITS**

The CONTRACTOR and Subcontractors performing work on projects on behalf of the OWNER shall also comply with all applicable federal, state, and local environmental



regulations and all requirements and conditions set forth in "special" permits including but not limited to Corp of Engineers 404 permits, 401 Water Quality Certifications, Stream Crossing and Floodplain Encroachment Permits as described in Part 4 General Conditions Paragraph 5.17.

**15. PREVAILING WAGE LAW AND MINIMUM HOURLY RATES**

Federal or state wage rates and regulations, if required for this Project, will be as described in the Special Conditions.

**16. AFFIRMATIVE ACTION PLAN**

The successful Bidder must submit with their bid, the following items to the Urban County Government:

1. Affirmative Action Plan of the firm
2. Current Work Force Analysis Form
3. Good Faith Effort Documentation
4. List of Disadvantaged Business Enterprise Subcontractors and the Dollar Value of each Subcontract

A Work Force Analysis Form shall be submitted for each Contract. Failure to submit these items as required herein may result in disqualification of the Bidder from award of the Contract.

All submissions should be directed to:

Director, Division of Central Purchasing  
Lexington-Fayette Urban County Government  
200 East Main Street, Third Floor  
Lexington, KY 40507

**17. CONTRACT TIME**

The number of calendar days within which the Work is to be substantially completed and ready for final payment (the Contract Time) is set forth in the Form of Proposal and the Agreement.

**18. SUBSTITUTE OR "OR-EQUAL" ITEMS**

The Contract, if awarded, will be on the basis of materials and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or-equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or-equal" item of material or equipment may be furnished or used by the CONTRACTOR if acceptable to the CONSULTANT and

OWNER, application for such acceptance will not be considered by the CONSULTANT and OWNER until after the effective date of the Agreement. The procedure for submission of any such application by the CONTRACTOR and consideration by the CONSULTANT and OWNER is set forth in the General Conditions.

**19. ALTERNATE BIDS**

**Bidders shall submit alternate bids/proposals only if and when such alternate bids/proposals have been specifically requested in an Invitation for Bids.** If alternate bids/proposals are requested in an Invitation for Bids, the form of submission of such alternate bid and the conditions under which such alternate bids will be considered for award of a contract will be established in the Invitation.

Any Bidder who submits a bid incorporating an alternate proposal when alternate bids/proposals have not been requested in the Invitation for Bids shall have his/her bid rejected as non-responsive.

Any Bidder who submits a bid incorporating two (2) or more prices for an item or groups of items (unless such method of pricing is requested in the Invitation for Bids), or which imposes conditions for acceptance other than those established in the Invitation for Bids, shall have their bid rejected as non-responsive.

**20. SIGNING OF AGREEMENT**

When OWNER gives a Notice of Award to the successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within ten days thereafter, CONTRACTOR shall sign and deliver the required number of counterparts of the Agreement and attached documents to OWNER with the required Bonds, Certificate of Insurance, and Power of Attorney. The OWNER will deliver one fully signed counterpart to CONTRACTOR at such time as it has been signed by the Mayor.

**21. ASSISTANCE TO BE OFFERED TO DISADVANTAGED BUSINESS ENTERPRISE (MWDBE) CONTRACTORS**

**A. Outreach for MWDBE(s)**

The Lexington-Fayette Urban County Government (LFUCG) maintains a database of MWDBE contractors and organizations. When a LFUCG construction project is advertised for bidding, notices are sent to companies registered at <https://lexingtonky.ionwave.net>. The notices describe the project and indicate the deadline for submitting bids.

If you wish to be added to the LFUCG MWDBE contractor database, please contact:

Sherita Miller, Division of Central Purchasing  
Lexington-Fayette Urban County Government  
200 East Main Street, Room 338  
Lexington, Kentucky 40507  
[smiller@lexingtonky.gov](mailto:smiller@lexingtonky.gov)

**B. Bid Bond Assistance for MWDBE(s)**

For those MWDBE contractors who wish to bid on LFUCG project, bid bond assistance is available. This bid bond assistance is in the form of a "Letter of Certification" which is accepted by the LFUCG's Division of Purchasing, in lieu of a bid bond. The "Letter of Certification" must be included in the bid package when it is submitted to the Division of Purchasing. The "Letter of Certification" will reference the specific project for which the bid is being submitted, and the time and date on which the bid is due. Bid bond assistance must be requested from the Lexington-Fayette Urban County Government's Division of Central Purchasing.

**C. Eligibility for Bid Bond Assistance for MWDBE(s)**

In order to be eligible for any Bid bonding assistance, a MWDBE construction company must be owned or controlled at the level of 51% or more by a member or members of a minority group or females. Prior to receiving assistance, a statement providing evidence of ownership and control of the company by a member or members of a minority group or females must be signed by the Owner or corporate officer and by an attorney or accountant submitted to:

Sherita Miller, Division of Central Purchasing  
Lexington-Fayette Urban County Government  
200 East Main Street, Room 338  
Lexington, Kentucky 40507  
[smiller@lexingtonky.gov](mailto:smiller@lexingtonky.gov)

**D. MWDBE Subcontractors**

The LFUCG will, upon request, assist prime contractors in the procurement of eligible DBE subcontractors in an effort to achieve 10% minimum MWDBE goal.

For a list of eligible subcontractors, please contact:

Sherita Miller, Division of Central Purchasing  
Lexington-Fayette Urban County Government  
200 East Main Street, Room 338  
Lexington, Kentucky 40507  
[smiller@lexingtonky.gov](mailto:smiller@lexingtonky.gov)

## **22. LFUCG NON-APPROPRIATION CLAUSE**

Contractor acknowledges that the LFUCG is a governmental entity, and the contract validity is based upon the availability of public funding under the authority of its statutory mandate.

In the event that public funds are unavailable and not appropriated for the performance of the LFUCG's obligations under this contract, then this contract shall automatically expire without penalty to the LFUCG thirty (30) days after written notice to Contractor of the unavailability and non-appropriation of public funds. It is expressly agreed that the LFUCG shall not activate this non-appropriation provision for its convenience or to circumvent the requirements of this contract, but only as an emergency fiscal measure during a substantial fiscal crisis, which affects generally its governmental operations.

In the event of a change in the LFUCG's statutory authority, mandate and mandated functions, by state and federal legislative or regulatory action, which adversely affects the LFUCG's authority to continue its obligations under this contract, then this contract shall automatically terminate without penalty to the LFUCG upon written notice to Contractor of such limitation or change in the LFUCG's legal authority.

**PART III**

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**PART III**

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**Invitation to Bid No. 129-2016**

**Retention Wall Repair at Kearney Hill Golf Links**

**1. FORM OF PROPOSAL**

Place: \_\_\_\_\_

Date: Oct. 18, 2016

The following Form of Proposal shall be followed exactly in submitting a proposal for this Work.

This Proposal Submitted by E.C. Matthews Co., Inc.

2265 Harrodsburg Rd. Lexington, KY 40504

(Name and Address of Bidding Contractor)

(Hereinafter called "Bidder"), organized and existing under the laws of the State of  
KY, doing business as a Corporation  
\_\_\_\_\_ "a corporation," "a partnership", or an "individual" as applicable.

To: Lexington-Fayette Urban County Government  
(Hereinafter called "OWNER")  
Office of the Director of Purchasing  
200 East Main Street, 3rd Floor  
Lexington, KY 40507

Gentlemen:

The Bidder, in compliance with your Invitation for Bids for **Retention Wall Repair at Kearney Hill Golf Links** having examined the Plans and Specifications with related documents, having examined the site for proposed Work, and being familiar with all of the conditions surrounding the construction of the proposed Project, including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies, and to construct the Project in accordance with the Contract Documents, within the time set forth therein, and at the lump sum and/or unit prices stated hereinafter. These prices are to cover all expenses incurred in performing the Work required under the Contract Documents, of which this proposal is a part. The OWNER will issue work orders for work to be performed under this Contract.

BIDDER hereby agrees to commence work under this contract on or before a date to be specified in the Notice to Proceed and to fully complete the project within the time provided in the

Purchase Order or Work Orders issued by the OWNER. BIDDER further agrees to pay liquidated damages, the sum of \$200.00 for each consecutive calendar day thereafter.

The Bidder hereby acknowledges receipt of the following addenda:

Addendum No.   1   Date   09/29/16  

Addendum No.   2   Date   10/03/16  

Addendum No.   3   Date   10/07/16  

Addendum No.      Date                   

Addendum No.      Date                   

Addendum No.      Date                   

Addendum No.      Date                   

Addendum No.      Date                   

Insert above the number and the date of any Addendum issued and received. If none has been issued and received, the word "NONE" should be inserted.

MAYOR JIM GRAY



**LEXINGTON**

TODD SLATIN  
DIRECTOR  
CENTRAL PURCHASING

**ADDENDUM #1**

**Bid Number:** 129-2016

**Date:** September 29, 2016

**Subject:** Retention Wall Repair at Kearney Hill Golf Links

Please address inquiries to:

Conni Hayes, Buyer  
(859) 258-3320

**TO ALL PROSPECTIVE BIDDERS:**

Please be advised of the following clarifications to the above referenced bid:

- 1) Attached, please find the sign-in sheet for the pre-bid meeting held on September 27, 2016.

\_\_\_\_\_  
Todd Slatin, Director  
Division of Central Purchasing

All other terms and conditions of the Bid and specifications are unchanged. This letter should be signed, attached to and become a part of your Bid.

**COMPANY NAME:** E.C. Matthews Co., Inc.

**ADDRESS:** 2265 Harrodsburg Rd. Lex KY 40504

**SIGNATURE OF BIDDER:**





MAYOR JIM GRAY



**LEXINGTON**

TODD SLATIN  
DIRECTOR  
CENTRAL PURCHASING

**ADDENDUM #2**

Bid Number: 129-2016

Date: October 3, 2016

Subject: Retention Wall Repair at Kearney Hill Golf Links

Please address inquiries to:

Conni Hayes, Buyer  
(859) 258-3320

**TO ALL PROSPECTIVE BIDDERS:**

Please be advised of the following clarifications to the above referenced bid:

- 1) The bid opening date has changed from Tuesday, October 4, 2016 to Tuesday, October 11, 2016. The time of the opening remains the same – 2:00 pm.

\_\_\_\_\_  
Todd Slatin, Director  
Division of Central Purchasing

All other terms and conditions of the Bid and specifications are unchanged. This letter should be signed, attached to and become a part of your Bid.

COMPANY NAME: E.C. Matthews Co., Inc.

ADDRESS: 2265 Harrodsburg Rd., Lex KY 40504

SIGNATURE OF BIDDER:



MAYOR JIM GRAY



**LEXINGTON**

TODD SLATIN  
DIRECTOR  
CENTRAL PURCHASING

**ADDENDUM #3**

Bid Number: 129-2016

Date: October 7, 2016

Subject: Retention Wall Repair at Kearney Hill Golf Links

Please address inquiries to:

Conni Hayes, Buyer  
(859) 258-3320

**TO ALL PROSPECTIVE BIDDERS:**

Please be advised of the following clarifications to the above referenced bid:

- 1) The bid opening date has changed from Tuesday, October 11, 2016 to Tuesday, October 18, 2016. The time of the opening remains the same – 2:00 pm.
- 2) Please review the questions from E. C. Matthews and the answers from Tom Hatfield EA Partners below.

Connie-

We were trying to get this job put together this week (bids next Tuesday) and noted a few conflicts. We believe it would be in the UCG's best interest to clarify them.

The section notes state that the Contractor is to drill, set, and concrete the HPs. The notes also say the railroad ties and stone will be furnished by the Owner. This section was prepared in 2001 and even includes the items added by Addendum 1 in 2001. That first bid (which we located in our archives) had those same notes but had two alternates ... one for the contractor to provide the wood and one for the contractor to install the wood.

Fast forward to 2016. We were provided the same section with the same notes about the Owner adding "railroad ties" and stone. However, the specs for this (2016) project describe the wood as "pressure treated pine" and the bid form itself (P-6) says "oak timbers". (Note: if you elect to change the bid form you may want to change "I-beams" to "HP shapes"). In any case, we have these questions:

Q1: Please clarify who provides and installs the wood under this contract (base bid and alternates).



My plans do not say anything about the owner providing any of the materials. Contractor to provide and install all work.

Q2: If the Contractor is to provide the wood, please clarify what type of wood is desired? We suggest 8x8 P.T. SYP. Oak would last as long and is prohibitively expensive in 8x8 size, and we don't think railroad ties would be a good choice for a number of reasons.

The timbers provided should meet Category UC4B for pressure treated wood which allows for southern pine.

Q3: The base bid and both alternates are to replace various lengths of wall per the bid form. Please confirm that we can we install the new wall in front of the old wall as shown on the section provided from 2001.

See detail on Sheet 4.

Q4: The drawing done on the Google Earth image includes a description of wall materials that is unlike the walls as described on the unit price bid schedule. Please clarify if some different section is required for any part of this project and provide that wall section for reference.

I do not have this drawing to comment.



Todd Slatin, Director  
Division of Central Purchasing

All other terms and conditions of the Bid and specifications are unchanged. This letter should be signed, attached to and become a part of your Bid.

COMPANY NAME: E.C. Matthews Co., Inc.

ADDRESS: 2265 Harrodsburg Rd., Lex KY 40504

SIGNATURE OF BIDDER: Thomas Per



**2. LEGAL STATUS OF BIDDER**

Bidder E.C. Matthews Co., Inc

Date Oct. 18, 2016

\*1. A corporation duly organized and doing business under the laws of the State of KY, for whom Thomas M. Matthews, bearing the official title of President, whose signature is affixed to this Bid/Proposal, is duly authorized to execute contracts.

\*2. A Partnership, all of the members of which, with addresses are: (Designate general partners as such)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\*3. An individual, whose signature is affixed to this Bid/Proposal (please print name)

\_\_\_\_\_  
\_\_\_\_\_

\*(The Bidder shall fill out the appropriate form and strike out the other two.)

3. **BIDDERS AFFIDAVIT**

Comes the Affiant, Thomas M. Matthews, and after being first duly sworn, states under penalty of perjury as follows:

1. His/her name is Thomas M. Matthews and he/she is the individual submitting the bid or is the authorized representative of E.C. Matthews Co., Inc., the entity submitting the bid (hereinafter referred to as "Bidder").
  2. Bidder will pay all taxes and fees, which are owed to the Lexington-Fayette Urban County Government at the time the bid is submitted, prior to award of the contract and will maintain a "current" status in regard to those taxes and fees during the life of the contract.
  3. Bidder will obtain a Lexington-Fayette Urban County Government business license, if applicable, prior to award of the contract.
  4. Bidder has authorized the Division of Central Purchasing to verify the above-mentioned information with the Division of Revenue and to disclose to the Urban County Council that taxes and/or fees are delinquent or that a business license has not been obtained.
  5. Bidder has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky within the past five (5) years and the award of a contract to the Bidder will not violate any provision of the campaign finance laws of the Commonwealth.
  6. Bidder has not knowingly violated any provision of Chapter 25 of the Lexington-Fayette Urban County Government Code of Ordinances, known as the "Ethics Act."
  7. Bidder acknowledges that "knowingly" for purposes of this Affidavit means, with respect to conduct or to circumstances described by a statute or ordinance defining an offense, that a person is aware or should have been aware that his conduct is of that nature or that the circumstance exists.
- Further, Affiant sayeth naught.

Thomas M. Matthews

(Affiant)

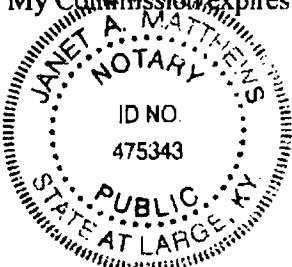
STATE OF KY

COUNTY OF Fayette

The foregoing instrument was subscribed, sworn to and acknowledged before me by

Thomas M. Matthews on this the 18 day of Oct, 2016.

My Commission expires: Oct. 21, 2020



Janet Matthews  
NOTARY PUBLIC, STATE AT LARGE

**4. BID SCHEDULE – SCHEDULE OF VALUES**

The Bidder agrees to perform all the Work described in the Specifications and shown on the Plans for the following proposed lump sum and/or unit prices, if applicable, which shall include the furnishing of all labor, materials, supplies, equipment and/or vehicle usage, services, all items of cost, overhead, taxes (federal, state, local), and profit for the Contractor and any Subcontractor involved, within the time set forth herein. If unit prices are applicable, Bidder must make the extensions and additions showing the total amount of bid.

Form of proposal must include unit bid prices written in words, unit price written in numbers and total amount bid (unit price x quantity) per line item OR bid may be considered non-responsive. In case of price discrepancy, unit bid price written in words will prevail followed by unit price written in numbers then total amount bid per line item.

If a discrepancy between the unit price and the item total exists, the unit price prevails except:

If the unit price is illegible, omitted, or the same as the item total, item total prevails and the unit price is the quotient of the item total and the quantity.

If the unit price and the item total are illegible or are omitted, the bid may be determined nonresponsive. If a lump sum total price is illegible or is omitted, the bid may be determined nonresponsive.

For a lump sum based bid, the item total is the bid amount the Division uses for bid comparison.

For a unit price based bid, the sum of the item totals is the bid amount the Division uses for bid comparison.

The LFUCG reserves the right to accept alternates in any order.

The LFUCG's decision on the bid amount is final.

Item No.	Description w/Unit Bid Price Written in Words	Unit	Total Bid Amount
1.	Base Bid: Replace approximately 150 feet of existing wall with steel I beams and oak timbers on the 16th green. <u>Seventy - one thousand five hundred thirty</u> Dollars <u>no</u> Cents	LS	\$ <u>71,530-</u>
2.	Alternate 1 - Replace approximately 800 feet of existing wall on the 16th fairway with steel I beams and oak timbers. <u>One hundred seventy-eight thousand one hundred</u> Dollars <u>no</u> Cents	LS	\$ <u>178,100-</u>
3.	Alternate 2 - Replace approximately 200 feet of existing wall on the 15th green with steel I beams and oak timbers. <u>Seventy-eight thousand four hundred</u> Dollars <u>no</u> Cents	LS	\$ <u>78,400-</u>

TOTAL OF ALL BID PRICES FOR Retention Wall Repair at Kearney Hill Golf Links in words and figures.  
In case of discrepancy, the amount shown in words will govern.

Three hundred twenty-eight thousand thirty dollars  
(\$ 328,030 - )

Submitted by: E.C. Matthews Co., Inc.  
*Firm*  
2265 Harrodsburg Rd.  
*Address*  
Lexington, KY 40504  
*City, State & Zip*  
*Thomas M. Matthews*  
***Signature of Authorized Company Representative – Title***

***Bid must be signed:  
(original signature)***

Thomas M. Matthews  
*Representative/s Name (Typed or Printed)*  
859-278-3131                      859-277-7903  
*Area Code – Phone – Extension*                      *Fax #*  
tmatthews@ecmatthews.com  
*E-Mail Address*

**OFFICIAL ADDRESS:**  
2265 Harrodsburg Rd.  
Lexington, KY 40504

\_\_\_\_\_ (Seal if Bid is by Corporation)

**By signing this form you agree to ALL terms, conditions, and associated forms in this bid package**



5. STATEMENT OF BIDDER'S QUALIFICATIONS

The following statement of the Bidder's qualifications is required to be filled in, executed, and submitted with the Proposal:

- 1. Name of Bidder: E.C. Matthews Co., Inc.
- 2. Permanent Place of Business: 2265 Harrodsburg Rd. Lexington, KY 40504
- 3. When Organized: Oct. 1986
- 4. Where Incorporated: KY

5. Construction Plant and Equipment Available for this Project:

Tractor & auger, sky tracks, steel shop equipment,  
concrete equipment, dump trucks, flatbeds

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(Attach Separate Sheet If Necessary)

6. Financial Condition:

If specifically requested by the OWNER, the apparent low Bidder is required to submit its latest three (3) years audited financial statements to the OWNER'S Division of Central Purchasing within seven (7) calendar days following the bid opening.

7. In the event the Contract is awarded to the undersigned, surety bonds will be furnished by:

Western (Surety)

Signed: \_\_\_\_\_ (Representative of Surety)

8. The following is a list of similar projects performed by the Bidder: (Attach separate sheet if necessary).

<u>NAME</u>	<u>LOCATION</u>	<u>CONTRACT SUM</u>
<u>Retaining Wall</u>	<u>Kearney</u>	<u>\$78 k</u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>

9. The Bidder has now under contract and bonded the following projects:

<u>NAME</u>	<u>LOCATION</u>	<u>CONTRACT SUM</u>
<u>Northpoint Sallyport</u>	<u>Danville</u>	<u>180,964</u>
<u>Chandler Sewer Rep.</u>	<u>Lexington</u>	<u>457,673</u>
<u>UK Research Bldg #2</u>	<u>Lexington</u>	<u>1,677,221</u>
<u>UK Student Center</u>	<u>Lexington</u>	<u>8,841,167</u>
<u> </u>	<u> </u>	<u> </u>

10. List Key Bidder Personnel who will work on this Project.

<u>NAME</u>	<u>POSITION DESCRIPTION</u>	<u>NO. OF YEARS WITH BIDDER</u>
<u>Thomas M. Matthews</u>	<u>President</u>	<u>30+</u>
<u>Danny Price</u>	<u>General Supt.</u>	<u>25+</u>
<u>Doug Sherwood</u>	<u>Project Mgr.</u>	<u>11</u>
<u>Jack Matthews</u>	<u>Engineer</u>	<u>3</u>
<u> </u>	<u> </u>	<u> </u>

11. DBE Participation on current bonded projects under contract:

<u>SUBCONTRACTORS</u> <u>(LIST)</u>	<u>PROJECT</u> <u>(SPECIFIC TYPE)</u>	<u>DBE</u>	<u>% of WORK</u>
S & D Const.	Patterson	✓ (AA)	18%
"	UK Research Bldg #2	✓	22%
"	UK Student Ctr	✓	5.5%

(USE ADDITIONAL SHEETS IF NECESSARY)

12. We acknowledge that, if we are the apparent low Bidder, we may be required to submit to the OWNER within 7 calendar days following the Bid Opening, a sworn statement regarding all current work on hand and under contract, and a statement on the OWNER'S form of the experience of our officers, office management and field management personnel. Additionally, if requested by the OWNER, we will within 7 days following the request submit audited financial statements and loss history for insurance claims for the 3 most recent years (or a lesser period stipulated by the OWNER).

**6. LIST OF PROPOSED SUBCONTRACTORS**

The following list of proposed subcontractors is required by the OWNER to be executed, completed and submitted with the BIDDER'S FORM OF PROPOSAL. All subcontractors are subject to approval of the Lexington-Fayette Urban County Government. Failure to submit this list completely filled out may be cause for rejection of bid.

<u>BRANCH OF WORK - LIST EACH MAJOR ITEM</u> Such as: Grading, bituminous paving, concrete, seeding and protection, construction staking, etc.	<u>SUBCONTRACTOR</u>	<u>DBE</u> <u>Yes/No</u>	<u>% of Work</u>
1. <u>Lumber install</u>	Name: <u>S&amp;D</u>	<u>Y</u>	<u>21%</u>
	Address: <u>N Upper St</u>		
2. _____	Name: _____	_____	_____
	Address: _____		
3. _____	Name: _____	_____	_____
	Address: _____		
4. _____	Name: _____	_____	_____
	Address: _____		
5. _____	Name: _____	_____	_____
	Address: _____		
6. _____	Name: _____	_____	_____
	Address: _____		
7. _____	Name: _____	_____	_____
	Address: _____		

(Attach additional sheet(s) if necessary.)

**7. LEXINGTON FAYETTE URBAN COUNTY GOVERNMENT MWDBE PARTICIPATION GOALS, FORMS, AND GOOD FAITH EFFORTS**

**A. GENERAL**

- 1) The LFUCG request all potential contractors to make a concerted effort to include Minority-Owned (MBE), Woman-Owned (WBE), Disadvantaged (DBE) and Veteran-Owned Small Business (VOSB) Enterprises as subcontractors or suppliers in their bids.
- 2) Toward that end, the LFUCG has established 10% of total procurement costs as a Goal for participation of Minority-Owned, Woman-Owned and Disadvantaged Businesses on this contract.
- 3) The LFUCG has also established a 3% of total procurement costs as a Goal for participation of Veteran-Owned Small Businesses.
- 4) **It is therefore a request of each Bidder to include in its bid, the same goal (10%) for MWDBE participation and other requirements as outlined in this section.**

**B. PROCEDURES**

- 1) The successful bidder will be required to report to the LFUCG, the dollar amounts of all payments submitted to Minority-Owned, Woman-Owned subcontractors or Veteran-Owned and suppliers for work done or materials purchased for this contract. (See Subcontractor Monthly Payment Report)
- 2) Replacement of a Minority-Owned, Woman-Owned or Veteran-Owned subcontractor or supplier listed in the original submittal must be requested in writing and must be accompanied by documentation of Good Faith Efforts to replace the subcontractor / supplier with another MWDBE Firm; this is subject to approval by the LFUCG. (See LFUCG MWDBE Substitution Form)
- 3) For assistance in identifying qualified, certified businesses to solicit for potential contracting opportunities, bidders may contact:
  - a) The Lexington-Fayette Urban County Government, Division of Central Purchasing (859-258-3320)
- 4) The LFUCG will make every effort to notify interested MWDBE subcontractors and suppliers of each Bid Package, including information on the scope of work, the pre-bid meeting time and location, the bid date, and all other pertinent information regarding the project.

**C. DEFINITIONS**

- 1) A Minority-Owned Business Enterprise (MBE) is defined as a business which is certified as being at least 51% owned and operated by persons of African American, Hispanic, Asian, Pacific Islander, American Indian or Alaskan Native Heritage.

- 2) A Woman-Owned Business Enterprise (WBE) is defined as a business which is certified as being at least 51% owned and operated by one or more Non-Minority Females.
- 3) A Disadvantaged Business (DBE) is defined as a business which is certified as being at least 51% owned and operated by a person(s) that are economically and socially disadvantaged.
- 4) A Veteran-Owned Small Business (VOSB) is defined as a business which is certified as being at least 51% owned and operated by a veteran and/or a service disabled veteran.
- 5) Good Faith Efforts are efforts that, given all relevant circumstances, a bidder or proposer actively and aggressively seeking to meet the goals, can reasonably be expected to make. In evaluating good faith efforts made toward achieving the goals, whether the bidder or proposer has performed the efforts outlined in the Obligations of Bidder for Good Faith Efforts outlined in this document will be considered, along with any other relevant factors.

**D. OBLIGATION OF BIDDER FOR GOOD FAITH EFFORTS**

- 1) **The bidder shall make a Good Faith Effort to achieve the Participation Goal for MWDBE and Veteran-Owned subcontractors/suppliers. The failure to meet the goal shall not necessarily be cause for disqualification of the bidder; however, bidders not meeting the goal are required to furnish with their bids written documentation of their Good Faith Efforts to do so.**
- 2) Award of Contract shall be conditioned upon satisfaction of the requirements set forth herein.
- 3) The Form of Proposal includes a section entitled "MWDBE Participation Form". The applicable information must be completed and submitted as outlined below.
- 4) **Failure to submit this information as requested may be cause for rejection of bid or delay in contract award.**

**E. DOCUMENTATION REQUIRED FOR GOOD FAITH EFFORTS**

- 1) Bidders reaching the Goal are required to submit only the MWDBE Participation Form." The form must be fully completed including names and telephone number of participating MWDBE firm(s); type of work to be performed; estimated value of the contract and value expressed as a percentage of the total Lump Sum Bid Price. The form must be signed and dated, and is to be submitted with the bid.
- 2) Bidders not reaching the Goal must submit the "MWDBE Participation Form", the "Quote Summary Form" and a written statement documenting their Good Faith Effort to do so. If bid includes no MWDBE and/or Veteran participation, bidder shall enter "None" on the subcontractor / supplier form). In addition, the bidder must submit written proof of their Good Faith Efforts to meet the Participation Goal:

- a. Advertised opportunities to participate in the contract in at least two (2) publications of general circulation media; trade and professional association publications; small and minority business or trade publications; and publications or trades targeting minority, women and disadvantaged businesses not less than fifteen (15) days prior to the deadline for submission of bids to allow MWDBE firms and Veteran-Owned businesses to participate.
- b. Included documentation of advertising in the above publications with the bidders good faith efforts package
- c. Attended LFUCG Central Purchasing Economic Inclusion Outreach event
- d. Attended pre-bid meetings that were scheduled by LFUCG to inform MWDBEs and/or Veteran-Owned Businesses of subcontracting opportunities
- e. Sponsored Economic Inclusion event to provide networking opportunities for prime contractors and MWDBE firms and Veteran-Owned businesses.
- f. Requested a list of MWDBE and/or Veteran subcontractors or suppliers from LFUCG Economic Engine and showed evidence of contacting the companies on the list(s).
- g. Contacted organizations that work with MWDBE companies for assistance in finding certified MWDBE firms and Veteran-Owned businesses to work on this project. Those contacted and their responses should be a part of the bidder's good faith efforts documentation.
- h. Sent written notices, by certified mail, email or facsimile, to qualified, certified MWDBEs soliciting their participation in the contract not less than seven (7) days prior to the deadline for submission of bids to allow them to participate effectively.
- i. Followed up initial solicitations by contacting MWDBEs and Veteran-Owned businesses to determine their level of interest.
- j. Provided the interested MWDBE firm and/or Veteran-Owned businesses with adequate and timely information about the plans, specifications, and requirements of the contract.
- k. Selected portions of the work to be performed by MWDBE firms and/or Veteran-Owned businesses 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 MWDBE and Veteran participation, even when the prime contractor may otherwise perform these work items with its own workforce
- l. Negotiated in good faith with interested MWDBE firms and Veteran-Owned businesses 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.

m. Included documentation of quotations received from interested MWDBE firms and Veteran-Owned businesses which were not used due to uncompetitive pricing or were rejected as unacceptable and/or copies of responses from firms indicating that they would not be submitting a bid.

n. Bidder has to submit sound reasons why the quotations were considered 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 MWDBE and/or Veteran-Owned business's quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy MWDBE and Veteran goals.

o. Made an effort to offer assistance to or refer interested MWDBE firms and Veteran-Owned businesses to obtain the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal

p. Made efforts to expand the search for MWBE firms and Veteran-Owned businesses beyond the usual geographic boundaries.

q. Other--any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include MWDBE and Veteran participation.

**NOTE: Failure to submit any of the documentation requested in this section may be cause for rejection of bid. Bidders may include any other documentation deemed relevant to this requirement which is subject to review by the MBE Liaison. Documentation of Good Faith Efforts must be submitted with the Bid, if the participation Goal is not met.**





## MINORITY BUSINESS ENTERPRISE PROGRAM

Sherita Miller  
Minority Business Enterprise Liaison  
Division of Central Purchasing  
Lexington-Fayette Urban County Government  
200 East Main Street  
Lexington, KY 40507  
[smiller@lexingtonky.gov](mailto:smiller@lexingtonky.gov)  
859-258-3323

OUR MISSION: The mission of the Minority Business Enterprise Program is to facilitate the full participation of minority and women owned businesses in the procurement process and to promote economic inclusion as a business imperative essential to the long term economic viability of Lexington-Fayette Urban County Government.

To that end the city council adopted and implemented resolution 167-91—Disadvantaged Business Enterprise (DBE) 10% Goal Plan in July of 1991. The resolution states in part (a full copy is available in Central Purchasing):

*"A Resolution supporting adoption of the administrative plan for a ten percent (10%) Minimum goal for disadvantaged business enterprise participation in Lexington-Fayette Urban County Government construction and professional services contracts; Providing that as part of their bids on LFUCG construction contracts, general Contractors shall make a good faith effort to award at least ten percent (10%) of All subcontracts to disadvantaged business enterprises; providing that divisions of LFUCG shall make a good faith effort to award at least ten percent of their Professional services and other contracts to disadvantaged business enterprises..."*

A Disadvantaged Business Enterprise is defined as a business that has been certified as being at least 51% owned, operated and managed by a U.S. Citizen of the following groups:

- African-American
- Hispanic-American
- Asian/Pacific Islander
- Native American/Native Alaskan
- Non-Minority Female
- Economically and Socially Disadvantaged

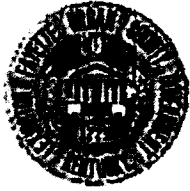
In addition, to that end the city council also adopted and implemented resolution 167-91—Veteran-owned Businesses, 3% Goal Plan in July of 2015. The resolution states in part (a full copy is available in Central Purchasing):

*"A resolution adopting a three percent (3%) minimum goal for certified veteran-owned small businesses and service disabled veteran-owned businesses for certain of those Lexington-Fayette Urban County contracts related to construction for*

*professional services, and authorizing the Division of Purchasing to adopt and implement guidelines and/or policies consistent with the provisions and intent of this resolution by no later than July 1, 2015."*

We have compiled the list below to help you locate certified MBE, WBE and DBE certified businesses. Below is a listing of contacts for LFUCG Certified MWDBEs in Economic Engine (<https://lfucg.economicengine.com>)

<b>Business</b>	<b>Contact</b>	<b>Email Address</b>	<b>Phone</b>
<b>LFUCG</b>	Sherita Miller	<a href="mailto:smiller@lexingtonky.gov">smiller@lexingtonky.gov</a>	859-258-3323
<b>Commerce Lexington – Minority Business Development</b>	Tyrone Tyra	<a href="mailto:tyra@commercelexington.com">tyra@commercelexington.com</a>	859-226-1625
<b>Tri-State Minority Supplier Diversity Council</b>	Sonya Brown	<a href="mailto:sbrown@tsmsdc.com">sbrown@tsmsdc.com</a>	502-625-0137
<b>Small Business Development Council</b>	Dee Dee Harbut UK SBDC	<a href="mailto:dhacbut@uky.edu">dhacbut@uky.edu</a>	
	Shiree Hawkins	<a href="mailto:smack@uky.edu">smack@uky.edu</a>	
<b>Community Ventures Corporation</b>	Phyllis Alcorn	<a href="mailto:palcorn@cvky.org">palcorn@cvky.org</a>	859-231-0054
<b>KY Department of Transportation</b>	Melvin Bynes	<a href="mailto:Melvin.bynes@ky.gov">Melvin.bynes@ky.gov</a>	502-564-3601
	Shella Eagle	<a href="mailto:Shella.Eagle@ky.gov">Shella.Eagle@ky.gov</a>	502-564-3601
<b>Ohio River Valley Women's Business Council (WBENC)</b>	Rea Waldon	<a href="mailto:rwaldon@rcul.org">rwaldon@rcul.org</a>	513-487-6534
<b>Kentucky MWBE Certification Program</b>	Yvette Smith, Kentucky Finance Cabinet	<a href="mailto:Yvette.Smith@ky.gov">Yvette.Smith@ky.gov</a>	502-564-8099
<b>National Women Business Owner's Council (NWBOC)</b>	Janet Harris-Lange	<a href="mailto:janet@nwbo.org">janet@nwbo.org</a>	800-675-5066
<b>Small Business Administration</b>	Robert Coffey	<a href="mailto:robertcoffey@sba.gov">robertcoffey@sba.gov</a>	502-582-5971
<b>LaVoz de Kentucky</b>	Andres Cruz	<a href="mailto:lavozekey@yahoo.com">lavozekey@yahoo.com</a>	859-621-2106
<b>The Key News Journal</b>	Patrice Muhammad	<a href="mailto:paatricem@keynewsjournal.com">paatricem@keynewsjournal.com</a>	859-373-9428



**LFUCG MWDBE PARTICIPATION FORM**  
Bid/RFP/Quote Reference # 129-2016

The MWDBE and/or veteran subcontractors listed have agreed to participate on this Bid/RFP/Quote. If any substitution is made or the total value of the work is changed prior to or after the job is in progress, it is understood that those substitutions must be submitted to Central Purchasing for approval immediately. Failure to submit a completed form may cause rejection of the bid.

MWDBE Company, Name, Address, Phone, Email	Work to be Performed	Total Dollar Value of the Work	% Value of Total Contract
1. S&D Construction	Lumber Install	\$15,900	21%
2.			
3.			
4.			

The undersigned company representative submits the above list of MWDBE firms to be used in accomplishing the work contained in this Bid/RFP/Quote. Any misrepresentation may result in the termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

E.C. Matthews Co., Inc.

Company

Oct. 18, 2016

Date

Company Representative

President

Title

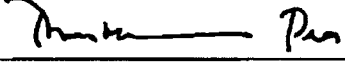


**LFUCG MWDBE SUBSTITUTION FORM**  
**Bid/RFP/Quote Reference # 129-2016**

The substituted MWDBE and/or Veteran subcontractors listed below have agreed to participate on this Bid/RFP/Quote. These substitutions were made prior to or after the job was in progress. These substitutions were made for reasons stated below and are now being submitted to Central Purchasing for approval. By the authorized signature of a representative of our company, we understand that this information will be entered into our file for this project. Failure to submit this form may cause rejection of the bid.

SUBSTITUTED MWDBE Company Name, Address, Phone, Email	MWDBE Formally Contracted/ Name, Address, Phone, Email	Work to Be Performed	Reason for the Substitution	Total Dollar Value of the Work	% Value of Total Contract
1.					
2.					
3.					
4.					

The undersigned acknowledges that any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

<u>E.C. Matthews Co., Inc.</u>	
Company	Company Representative
<u>Oct. 18, 2016</u>	<u>President</u>
Date	Title



**MWDBE QUOTE SUMMARY FORM**  
 Bid/RFP/Quote Reference # 129-2016

The undersigned acknowledges that the minority and/or veteran subcontractors listed on this form did submit a quote to participate on this project.

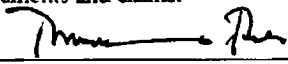
Company Name <u>E.C. Matthews Co., Inc.</u>	Contact Person <u>Thomas M. Matthews</u>
Address/Phone/Email <u>2265 Harrodsburg Rd Lex 40504</u> <u>859-278-3131</u> <u>tmatthews@ecmatthews.com</u>	Bid Package / Bid Date <u>129-2016</u> <u>Oct. 18, 2016</u>

MWDBE Company Address	Contact Person	Contact Information (work phone, Email, cell)	Date Contacted	Services to be performed	Method of Communication (email, phone meeting, ad, event etc)	Total dollars \$\$ Do Not Leave Blank (Attach Documentation)	MBE * AA HA AS NA Female

(MBE designation / AA=African American / HA= Hispanic American/AS = Asian American/Pacific Islander/ NA= Native American)

The undersigned acknowledges that all information is accurate. Any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and claims.

E.C. Matthews Co., Inc.  
 Company  
Oct. 18, 2016  
 Date

  
 Company Representative  
President  
 Title



## LFUCG SUBCONTRACTOR MONTHLY PAYMENT REPORT

The LFUCG has a 10% goal plan adopted by city council to increase the participation of minority and women owned businesses in the procurement process. The LFUCG also has a 3% goal plan adopted by cited council to increase the participation of veteran owned businesses in the procurement process. In order to measure that goal LFUCG will track spending with MWDBE and Veteran vendors on a monthly basis. By the signature below of an authorized company representative, you certify that the information is correct, and that each of the representations set forth below is true. Any misrepresentation may result in termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims. Please submit this form monthly to the Division of Central Purchasing/ 200 East Main Street / Room 338 / Lexington, KY 40507.

Bid/RFP/Quote # \_\_\_\_\_  
 Total Contract Amount Awarded to Prime Contractor for this Project \_\_\_\_\_

<b>Project Name/ Contract #</b>	<b>Work Period/ From: To:</b>
<b>Company Name:</b>	<b>Address:</b>
<b>Federal Tax ID:</b>	<b>Contact Person:</b>

Subcontractor Vendor ID (name, address, phone, email)	Description of Work	Total Subcontract Amount	% of Total Contract Awarded to Prime for this Project	Total Amount Paid for this Period	Purchase Order number for subcontractor work (please attach PO)	Scheduled Project Start Date	Scheduled Project End Date

By the signature below of an authorized company representative, you certify that the information is correct, and that each of the representations set forth below is true. Any misrepresentations may result in the termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims.

\_\_\_\_\_  
 Company

\_\_\_\_\_  
 Company Representative

\_\_\_\_\_  
 Date

\_\_\_\_\_  
 Title

**LFUCG STATEMENT OF GOOD FAITH EFFORTS**

**Bid/RFP/Quote # 129-2016**

By the signature below of an authorized company representative, we certify that we have utilized the following Good Faith Efforts to obtain the maximum participation by MWDBE and Veteran-Owned business enterprises on the project and can supply the appropriate documentation.

       Advertised opportunities to participate in the contract in at least two (2) publications of general circulation media; trade and professional association publications; small and minority business or trade publications; and publications or trades targeting minority, women and disadvantaged businesses not less than fifteen (15) days prior to the deadline for submission of bids to allow MWDBE firms and Veteran-Owned businesses to participate.

       Included documentation of advertising in the above publications with the bidders good faith efforts package

  ✓   Attended LFUCG Central Purchasing Economic Inclusion Outreach event

  ✓   Attended pre-bid meetings that were scheduled by LFUCG to inform MWDBEs and/or Veteran-Owned Businesses of subcontracting opportunities

       Sponsored Economic Inclusion event to provide networking opportunities for prime contractors and MWDBE firms and Veteran-Owned businesses

  ✓   requested a list of MWDBE and/or Veteran subcontractors or suppliers from LFUCG Economic Engine and showed evidence of contacting the companies on the list(s).

       Contacted organizations that work with MWDBE companies for assistance in finding certified MWBDE firms and Veteran-Owned businesses to work on this project. Those contacted and their responses should be a part of the bidder's good faith efforts documentation.

  ✓   Sent written notices, by certified mail, email or facsimile, to qualified, certified MWDBEs soliciting their participation in the contract not less than seven (7) days prior to the deadline for submission of bids to allow them to participate effectively.

  ✓   Followed up initial solicitations by contacting MWDBEs and Veteran-Owned businesses to determine their level of interest.

  ✓   Provided the interested MWBDE firm and/or Veteran-Owned business with adequate and timely information about the plans, specifications, and requirements of the contract.

       Selected portions of the work to be performed by MWDBE firms and/or Veteran-Owned businesses 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 MWDBE and Veteran participation, even when the prime contractor may otherwise perform these work items with its own workforce

       Negotiated in good faith with interested MWDBE firms and Veteran-Owned businesses 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.

       Included documentation of quotations received from interested MWDBE firms and Veteran-Owned businesses which were not used due to uncompetitive pricing or were rejected as unacceptable and/or copies of responses from firms indicating that they would not be submitting a bid.

       Bidder has to submit sound reasons why the quotations were considered 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 MWDBE and/or Veteran-Owned business's quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy MWDBE and Veteran goals.

Made an effort to offer assistance to or refer interested MWDBE firms and Veteran-Owned businesses to obtain the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal

       Made efforts to expand the search for MWBE firms and Veteran-Owned businesses beyond the usual geographic boundaries.

Other--any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include MWDBE and Veteran participation.

**NOTE: Failure to submit any of the documentation requested in this section may be cause for rejection of bid. Bidders may include any other documentation deemed relevant to this requirement which is subject to approval by the MBE Liaison. Documentation of Good Faith Efforts must be submitted with the Bid, if the participation Goal is not met.**

The undersigned acknowledges that all information is accurate. Any misrepresentations may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and claims.

E.C. Matthews Co., Inc.



Company  
Oct. 18, 2016

Company Representative  
President

Date

Title



8. **AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION, NON-CONFLICT OF INTEREST**

I hereby swear (or affirm) under the penalty for false swearing:

1. That I am the Bidder (if the Bidder is an individual), a partner of the Bidder (if the Bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the Bidder is a corporation);
2. That the attached bid has been arrived at by the Bidder independently, and has been submitted without collusion with, and without any agreement, understanding or planned common course of action, with any other contractor, vendor of materials, supplies, equipment or services described in the Invitation to Bid, designed to limit independent bidding or competition;
3. That the contents of the bid or bids have not been communicated by the Bidder or its employees or agents to any person not an employee or agent of the Bidder or its surety on any bond furnished, with the bid or bids, and will not be communicated to any such person, prior to the official opening of the bid or bids;
4. That the Bidder is legally entitled to enter into the contracts with the Lexington-Fayette Urban County Government, and is not in violation of any prohibited conflict of interest;
5. (Applicable to corporation only) That as a foreign corporation, we are registered with the Secretary of State, Commonwealth of Kentucky, and authorized to do business in the State \_\_\_\_\_ or, that as a domestic corporation, we are in good standing with the Secretary of State, Commonwealth of Kentucky XX. Check the statement applicable.
6. This offer is for 60 calendar days from the date this bid is opened. In submitting the above, it is expressly agreed that, upon proper acceptance by the Lexington-Fayette Urban County Government of any or all items bid above, a contract shall thereby be created with respect to the items accepted.
7. That I have fully informed myself regarding the accuracy of the statements made in this statement.
8. That I certify that Subcontractors have not and will not be awarded to any firm(s) that have been debarred from noncompliance with the Federal Labor Standards, Title VI of the Civil Rights Act of 1964 As Amended, Executive Order 11246 As Amended or any other Federal Law.

9. **STATEMENT OF EXPERIENCE**

NAME OF INDIVIDUAL: See attached resumes



POSITION/TITLE: \_\_\_\_\_

STATEMENT OF EXPERIENCE: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

NAME OF INDIVIDUAL: \_\_\_\_\_

POSITION/TITLE: \_\_\_\_\_

STATEMENT OF EXPERIENCE: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

NAME OF INDIVIDUAL: \_\_\_\_\_

POSITION/TITLE: \_\_\_\_\_

STATEMENT OF EXPERIENCE: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

NAME OF INDIVIDUAL: \_\_\_\_\_

POSITION/TITLE: \_\_\_\_\_

STATEMENT OF EXPERIENCE: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Thomas M. Matthews, President**

Education: University of Kentucky, B.S. Mechanical Engineering, 1983  
Postgraduate courses, UK College of Business

Experience: Mr. Matthews has worked in the construction industry for over 35 years, having first worked for a multi-discipline A/E firm. After holding positions in a variety of companies specializing in heavy/highway and utility construction, power plant work, and commercial and industrial construction, he incorporated E.C. Matthews Co. as a Kentucky corporation in 1986 with offices in Lexington, Kentucky. As the president he is responsible for overall project coordination, administration, and technical assistance.

**Douglas Sherwood, Project Manager**

Education: University of Kentucky, BS, Accounting, 1981  
University of Kentucky, MBA, 1982

Experience: Mr. Sherwood has worked in the construction industry since 1984. He formerly worked with Daniel Adkins Homes, Harney Construction and Engle Construction and has been with E.C. Matthews Co. since 2004 after six years as owner and operator of Sherwood Construction, Inc. Mr. Sherwood is well versed in all aspects of Project Management and has participated in multiple contracts of this nature.

**Danny Price, General Superintendent**

Education: University of Kentucky, course work in Business Administration  
American Concrete Institute, OSHA training (multiple courses), and numerous technical seminars.

Experience: Mr. Price has worked in the construction industry for over 40 years with an emphasis on heavy and commercial work, and has been employed by E.C. Matthews Co. since 1990, now serving as Vice President. As a General Superintendent for E.C. Matthews Co., Mr. Price is our principal problem solver and is in charge of field operations including our shop, and is responsible for worker safety and quality control.

**John A. Matthews, Field Engineer**

Education: University of Kentucky, B.S. Mechanical Engineering, 2013

Experience: Mr. Matthews has worked in the construction industry since 2009, most recently as a Project Engineer for the UK Commonwealth Stadium Expansion, and later joined our office staff. As Project Engineer he, provides technical assistance, interprets specification requirements for material selection, directs layout operations, and administers various quality programs.

**Steve Brown, Project Superintendent**

**Education:** Montgomery Co. High School  
Various technical courses pertaining to construction

**Experience:** Mr. Brown has been employed by E.C. Matthews Co. since 1995 upon his honorable discharge from the United States Marine Corp. As superintendent he is responsible for directing field operations on his projects including quality control, implementing the schedule, directing and inspecting subcontractors, assistance with procurement of material, and safety.

NAME OF INDIVIDUAL: \_\_\_\_\_

POSITION/TITLE: \_\_\_\_\_

STATEMENT OF EXPERIENCE: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

NAME OF INDIVIDUAL: \_\_\_\_\_

POSITION/TITLE: \_\_\_\_\_

STATEMENT OF EXPERIENCE: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\* Include all officers, office management's, Affirmative Action officials, and field management personnel. (Attach separate sheets if necessary.)

**10. EQUAL OPPORTUNITY AGREEMENT**

The Law

- \* Title VII of the Civil Rights Act of 1964 (amended 1972) states that it is unlawful for an employer to discriminate in employment because of race, color, religion, sex, age (40-70 years) or national origin.
- \* Executive Order No. 11246 on Nondiscrimination under Federal contract prohibits employment discrimination by contractor and subcontractor doing business with the Federal Government or recipients of Federal funds. This order was later amended by Executive Order No. 11375 to prohibit discrimination on the basis of sex.
- \* Section 503 of the Rehabilitation Act of 1973 States:  
*The Contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap.*
- \* Section 2012 of the Vietnam Era Veterans Readjustment Act of 1973 requires Affirmative Action on behalf of disabled veterans and veterans of the Vietnam Era by contractors having Federal Contracts.

- \* Section 206 (A) of Executive Order 12086, Consolidation of Contract Compliance Functions for Equal Employment Opportunity, states:

*The Secretary of Labor may investigate the employment practices of any Government contractor or sub-contractor to determine whether or not the contractual provisions specified in Section 202 of this order have been violated.*

The Lexington-Fayette Urban County Government practices Equal Opportunity in recruiting, hiring and promoting. It is the Government's intent to affirmatively provide employment opportunities for those individuals who have previously not been allowed to enter into the mainstream of society. Because of its importance to the local Government, this policy carries the full endorsement of the Mayor, Commissioners, Directors, and all supervisory personnel. In following this commitment to Equal Employment Opportunity and because the Government is the benefactor of the Federal funds, it is both against the Urban County Government policy and illegal for the Government to let contracts to companies which knowingly or unknowingly practice discrimination in their employment practices. Violation of the above mentioned ordinances may cause a contract to be canceled and the contractor may be declared ineligible for future consideration.

Please sign this statement in the appropriate space acknowledging that you have read and understand the provisions contained herein. Return this document as part of your application packet.

Bidders

I/We agree to comply with the Civil Rights Laws listed above that govern employment rights of minorities, women, Vietnam veterans, handicapped, and aged persons.

*Thomas P. Pearson*

E.C. Matthews Co., Inc.

Signature

Name of Business

The Entity (regardless of whether construction contractor, non-construction contractor or supplier) agrees to provide equal opportunity in employment for all qualified persons, to prohibit discrimination in employment because of race, color, creed, national origin, sex or age, and to promote equal employment through a positive, continuing program from itself and each of its sub-contracting agents. This program of equal employment opportunity shall apply to every aspect of its employment policies and practices.

The Kentucky equal Employment Opportunity Act of 1978 (KRS 45.560-45.640) requires that any count, city, town, school district, water district, hospital district, or other political subdivision of the state shall include in directly or indirectly publicly funded contracts for supplies, materials, services, or equipment hereinafter entered into the following provisions:

During the performance of this contract, the contractor agrees as follows:

- (1) *The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, age or national origin;*
- (2) *The contractor will state in all solicitations or advertisements for employees placed by or on behalf of the contractors that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age or national origin;*

- (3) *The contract will post notices in conspicuous places, available to employees and applicants for employment, setting forth the provisions of the non-discrimination clauses required by this section; and*
- (4) *The contractor will send a notice to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding advising the labor union or workers' representative of the contractor's commitments under the nondiscrimination clauses.*

The Act further provides:

**KRS 45.610. Hiring minorities – Information required**

- (1) *For the length of the contract, each contractor shall hire minorities from other sources within the drawing area, should the union with which he has collective bargaining agreements be unwilling to supply sufficient minorities to satisfy the agreed upon goals and timetable.*
- (2) *Each contractor shall, for the length of the contract, furnish such information as required by KRS 45.560 to KRS 45.640 and by such rules, regulations and orders issued pursuant thereto and will permit access to all books and records pertaining to his employment practices and work sites by the contracting agency and the department for purposes of investigation to ascertain compliance with KRS 45.560 to 45.640 and such rules, regulations and orders issued pursuant thereto.*

**KRS 45.620. Action against contractor – Hiring of minority contractor or subcontractor**

- (1) *If any contractor is found by the department to have engaged in an unlawful practice under this chapter during the course of performing under a contract or subcontract covered under KRS 45.560 to 45.640, the department shall so certify to the contracting agency and such certification shall be binding upon the contracting agency unless it is reversed in the course of judicial review.*
- (2) *If the contractor is found to have committed an unlawful practice under KRS 45.560 to 45.640, the contracting agency may cancel or terminate the contract, conditioned upon a program for future compliance approved by the contracting agency and the department. The contracting agency may declare such a contractor ineligible to bid on further contracts with that agency until such time as the contractor complies in full with the requirements of KRS 45.560 – 45.640.*
- (3) *The equal employment provisions of KRS 45.560 to 45.640 may be met in part by a contractor by subcontracting to a minority contractor or subcontractor. For the provisions of KRS 45.560 to 45.640, a minority contractor or subcontractor shall mean a business that is owned and controlled by one or more persons disadvantaged by racial or ethnic circumstances.*

**KRS 45.630 Termination of existing employee not required, when**

*Any provision of KRS 45.560 to 45.640 notwithstanding, no contractor shall be required to terminate an existing employee upon proof that that employee was employed prior to the date of the contract.*

**KRS 45.640 Minimum skills**

*Nothing in KRS 45.560 to 45.640 shall require a contractor to hire anyone who fails to demonstrate the minimum skills required to perform a particular job.*

It is recommended that all of the provisions quoted above to be included as special conditions in each contract. In the case of a contract exceeding \$250,000, the contractor is required to furnish evidence that his work-force in Kentucky is representative of the available work-force in the area from which he draws employees, or to supply an Affirmative Action plan which will achieve such representation during the life of the contract.



11. **EQUAL EMPLOYMENT OPPORTUNITY AFFIRMATIVE ACTION POLICY**

It is the policy of E.C. Matthews Co., Inc.

to assure that all applicants for employment and all employees are treated on a fair and equitable basis without regard to their race, religion, sex, color, handicap, natural origin or age.

Such action shall include employment, promotion, demotion, recruitment or recruitment advertising, layoff or termination, rates of pay and other forms of compensation, and selection for training, whether apprenticeship and/or on-the-job-training.

Furthermore, this company agrees to make special recruitment efforts to hire the protected class whenever feasible. This company also agrees to adhere to all applicable federal, state, and local laws relating to Equal Employment Opportunity for all individuals.

12. **WORKFORCE ANALYSIS FORM**

Name of Organization: E.C. Matthews Co., Inc.

Categories	Total	White (Not Hispanic or Latino)		Hispanic or Latino		Black or African-American (Not Hispanic or Latino)		Native Hawaiian and Other Pacific Islander (Not Hispanic or Latino)		Asian (Not Hispanic or Latino)		American Indian or Alaskan Native (not Hispanic or Latino)		Two or more races (Not Hispanic or Latino)		Total	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Administrators	1	1															1
Professionals	2	2															2
Superintendents	4	4															4
Supervisors																	
Foremen																	
Technicians																	
Protective Service																	
Para-Professionals																	
Office/Clerical	3		3														3
Skilled Craft	5	5															5
Service/Maintenance	31	28	1	2													30 1
<b>Total:</b>	<b>46</b>	<b>40</b>	<b>4</b>	<b>2</b>													<b>42 4</b>

Prepared by: *J. Tamateken*  
 (Name and Title)

Date: 10/18/16  
 Revised 2015-Dec-15



**13. EVIDENCE OF INSURABILITY**

**LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT CONSTRUCTION PROJECT**  
(Use separate form for each Agency or Brokerage agreeing to provide coverage)

Names Insured: \_\_\_\_\_

Employee ID \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Project to be insured: \_\_\_\_\_

In lieu of obtaining certificates of insurance at this time, the undersigned agrees to provide the above Named Insured with the minimum coverage listed below. These are outlined in the Insurance and Risk Management of Part V (Special Conditions), including all requirements, and conditions:

Section Items	Coverage	Minimum Limits and Policy Requirements	Limits Provided To Insured	Name of Insurer	A.M. Best's	
					Code	Rating
SC-3, Section 2, Part 4.1 - see provisions	CGL	\$1,000,000 per occ. And \$2,000,000 aggregate	\$			
SC-3, Section 2, Part 4.1 - see provisions	AUTO	\$2,000,000/per occ.	\$			
SC-3, Section 2, Part 4.1 - see provisions	WC	Statutory w /endorsement as noted	\$			

Section 2 includes required provisions, statements regarding insurance requirements, and the undersigned agrees to abide by all provisions for the coverage's checked above unless stated otherwise when submitting.

Agency or Brokerage \_\_\_\_\_

Name of Authorized Representative \_\_\_\_\_

Street Address \_\_\_\_\_

Title \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Authorized Signature \_\_\_\_\_

Telephone Number \_\_\_\_\_

Date \_\_\_\_\_



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
06/27/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

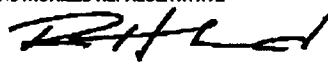
<b>PRODUCER</b> Roeding Group Companies, Inc PO Box 17900 Crestview Hills, KY 41017 Rob Hoenscheid	<b>CONTACT NAME:</b> _____	
	<b>PHONE (A/C, No, Ext):</b> _____	<b>FAX (A/C, No):</b> _____
<b>E-MAIL ADDRESS:</b> _____		
<b>INSURER(S) AFFORDING COVERAGE</b>		<b>NAIC #</b>
<b>INSURER A: AGC KY ASSOC GEN CONT</b>		
<b>INSURED</b> E.C. Matthews Company, Inc. Thomas & Janet Matthews 2265 Harrodsburg Rd Lexington, KY 40504	<b>INSURER B: OHIO CASUALTY</b>	
	<b>INSURER C:</b>	
	<b>INSURER D:</b>	
	<b>INSURER E:</b>	
	<b>INSURER F:</b>	

**COVERAGES**                      **CERTIFICATE NUMBER:**                      **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN. THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR (INSR / WVD)	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
B	<input checked="" type="checkbox"/> GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR		CBP8815934	07/01/2016	07/01/2017	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMPOP AGG \$ 2,000,000 _____ \$ _____
	GENL AGGREGATE LIMIT APPLIES PER <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC					
B	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS		BA8817934	07/01/2016	07/01/2017	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ _____ BODILY INJURY (Per accident) \$ _____ PROPERTY DAMAGE (PER ACCIDENT) \$ _____ _____ \$ _____
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 10,000		CU8818634	07/01/2016	07/01/2017	EACH OCCURRENCE \$ 10,000,000 AGGREGATE \$ 10,000,000 _____ \$ _____
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input type="checkbox"/> N/A	7461	01/01/2016	01/01/2017	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E L EACH ACCIDENT \$ 4,000,000 E L DISEASE - EA EMPLOYEE \$ 4,000,000 E L DISEASE - POLICY LIMIT \$ 4,000,000
B	Leased Equipment		CBP8815934	07/01/2016	07/01/2017	380,000
B	Installation		CBP8815934	07/01/2016	07/01/2017	500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)  
Registration #10391

<b>CERTIFICATE HOLDER</b>  LFCUGCO  LEXINGTON FAYETTE URBAN COUNTY GOVERNMENT CONTRACTORS REGISTRATION 200 EAST MAIN STREET LEXINGTON, KY 40507	<b>CANCELLATION</b>  SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE 
--	--

14. DEBARRED FIRMS

PROJECT NAME: Retention Wall Repair at  
Kearney Hill Golf Links

BID NUMBER: 129-2016

**LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT  
LEXINGTON, KY**

All prime Contractors shall certify that Subcontractors have not and will not be awarded to any firms that has been debarred for noncompliance with the Federal Labor Standards, Title VI of the Civil Rights Act of 1964 As Amended, Executive Order 11246 As Amended or any other Federal Law.

All bidders shall complete the attached certification in duplicate and submit both copies to the Owner with the bid proposal. The Owner (grantee) shall transmit one copy to the Lexington-Fayette Urban County Government, Division of Community Development, within fourteen (14) days after bid opening.

The undersigned hereby certifies that the firm of E.C. Matthews Co., Inc. has not and will not award a subcontract, in connection with any contract award to it as the result of this bid, to any firm that has been debarred for noncompliance with the Federal labor Standards, Title VI of the civil Rights Act of 1964, Executive Order 11246 as amended or any Federal Law.

E.C. Matthews Co., Inc.  
Name of Firm Submitting Bid

  
Signature of Authorized Official

President  
Title

Oct. 18, 2016  
Date

**15. DEBARMENT CERTIFICATION**

All contractors/subcontractors shall complete the following certification and submit it with the bid proposal.


The contractor/subcontractor certifies in accordance with Executive Order 12549 (Debarment and Suspension 2/18/86) that to the best of its knowledge and belief, that it and its principals:

- 1) Are not presently debarred, suspended, proposed for debarment, declared negligible, or voluntarily excluded from covered transactions or contract by any Federal department or agency for noncompliance with the Federal Labor Standards, Title VI of the Civil Rights Act of 1964 as amended, Executive Order 11246 as amended or any other Federal law;
  - a) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
  - b) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(a) of this certification; and
  - c) Have not within a three year period preceding this bid has one or more public (Federal, State or local) transactions or contracts terminated for cause or default.
- 2) Where the contractor is unable to certify to any of the statements in this certification, such prospective contractors shall attach an explanation to this certification form.

Firm Name: E.C. Matthews Co., Inc.

Project: Retention Wall Repair at  
Kearney Hill Golf Links

Printed Name and Title of Authorized Representative: Thomas M. Matthews

Signature: 

Date: Oct. 18, 2016

END OF SECTION

THE AMERICAN INSTITUTE OF ARCHITECTS



AIA Document A310

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we E. C. Matthews Company Inc., 2265 Harrodsburg Road, Lexington, KY 40504

as Principal, hereinafter called the Principal, and Western Surety Company, 333 S. Wabash Avenue, 41<sup>st</sup> Floor, Chicago, IL 60604.

a corporation duly organized under the laws of the State of South Dakota

as Surety, hereinafter called the Surety, are held and firmly bound to the Lexington Fayette Urban County Government, 200 East Main Street, 3rd Floor, Lexington KY 40507.

as Obligee, hereinafter called the Obligee, in the sum of 5% of bid amount Dollars (\$) ) for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for Bid No. 1029-2016 Retention Wall Repair at Kearney Hill Golf Links.

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this 18th day of October, 2016.

[Signature] (Witness)

E. C. Matthews Company Inc. (Principal) (Seal) [Signature] Pres (Title)

[Signature] (Witness)

Western Surety Company (Surety) (Seal) [Signature] Tonia C. Kennedy (Title) Attorney-In-Fact



# Western Surety Company

## POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

**Steve Roeding, Rob Hoenscheid, Tonia C Kennedy, Daniel L Scherff, Individually**

of Lexington, KY, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

**- In Unlimited Amounts -**

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation.

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 12th day of February, 2016.

WESTERN SURETY COMPANY



Paul T. Bruflat  
Paul T. Bruflat, Vice President

State of South Dakota }  
County of Minnehaha } ss

On this 12th day of February, 2016, before me personally came Paul T. Bruflat, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is the Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires

June 23, 2021



J. Mohr  
J. Mohr, Notary Public

CERTIFICATE

I, L. Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 18th day of October, 2016.



WESTERN SURETY COMPANY

L. Nelson  
L. Nelson, Assistant Secretary

**Authorizing By-Law**

**ADOPTED BY THE SHAREHOLDERS OF WESTERN SURETY COMPANY**

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the shareholders of the Company.

Section 7. All bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, and Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or agents who shall have authority to issue bonds, policies, or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile.

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**GENERAL CONDITIONS**  
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END OF SECTION

**PART IV**  
**GENERAL CONDITIONS**

**1. DEFINITIONS**

Wherever used in these General Conditions or the other Contract Documents, the following terms have the meanings indicated which are applicable to both the singular and plural thereof.

**1.1 Addenda**

Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bid Documents or the Contract Documents.

**1.2 Agreement**

The written agreement between OWNER and CONTRACTOR covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided therein.

**1.3 Application for Payment**

The form accepted by CONSULTANT which is to be used by CONTRACTOR in requesting progress or final payments and which is to include such supporting documentation as is required by the Contract Documents.

**1.4 Bid**

The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

**1.5 Bidder**

An individual, partnership, or corporation, who submit a Bid for a prime contract with the OWNER, for the Work described in the proposed Contract Documents.

**1.6 Bonds**

Bid, performance and payment bonds and other instruments of security.

**1.7 Calendar Day**

A calendar day of twenty-four hours measured from midnight to the next midnight shall constitute a day.

**1.8 Change Order**

A document recommended by CONSULTANT, which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Time, issued on or after the Effective Date of the Agreement.



**1.9 Contract Documents**

The Advertisement for Bidders, Information for Bidders, Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR'S Bid (including documentation accompanying the Bid and any post-bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Bonds, these General Conditions, the Special Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all amendments, modifications and supplements.

**1.10 Contract Unit Price**

The monies payable by OWNER to CONTRACTOR under the Contract Documents as stated in the Agreement. Unit Prices are to be firm for the term of this Contract.

**1.11 Contract Time**

The number of consecutive calendar days between the date of issuance of the Notice to Proceed and the contract completion date.

**1.12 CONTRACTOR**

The person, firm or corporation with whom OWNER has entered into the Agreement.

**1.13 Defective**

An adjective which when modifying the word Work refers to Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to CONSULTANT'S recommendation of final payment (unless responsibility for the protection thereof has been assumed by OWNER).

**1.14 Drawings**

The drawings which show the character and scope of the Work to be performed and which have been prepared or approved by CONSULTANT and are referred to in the Contract Documents.

**1.15 Effective Date of the Agreement**

The date indicated in the Agreement on which it becomes effective.

**1.16 CONSULTANT**

The Lexington-Fayette Urban County Government or its authorized representative.

**1.17 Field Order**

A documented order issued by CONSULTANT which orders minor changes in the Work, but which does not involve a change in the Contract Price or the Contract Time.

- 1.18 Giving Notice**  
Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.
- 1.19 Laws and Regulations**  
Laws, rules, regulations, ordinances, codes and/or orders.
- 1.20 Notice of Award**  
The written notice by OWNER to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions enumerated therein, within the time specified, OWNER will sign and deliver the Agreement.
- 1.21 Notice to Proceed**  
A written notice given by OWNER to CONTRACTOR fixing the date on which the Contract Time will commence to run and on which CONTRACTOR shall start to perform CONTRACTOR'S obligations under the Contract Documents.
- 1.22 OWNER**  
The Lexington-Fayette Urban County Government.
- 1.23 Partial Utilization**  
Placing a portion of the Work in service for the purpose for which it is intended (or related purpose) before reaching Completion for all the Work.
- 1.24 Project**  
The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.
- 1.25 Inspector**  
The authorized representative who is assigned to the site or any part thereof.
- 1.26 Shop Drawings**  
All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for CONTRACTOR to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by CONTRACTOR to illustrate material or equipment for some portion of the Work.
- 1.27 Specifications**  
Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and

workmanship as applied to the Work and certain administrative details applicable thereto.

**1.28 Standard Specifications**

The "Standard Specifications for Road and Bridge Construction", Transportation Cabinet, Department of Highways, Commonwealth of Kentucky, current edition. MUTCD shall refer to the "Manual of Uniform Traffic Control Devices.

**1.29 Subcontractor**

An individual, firm or corporation having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the site.

**1.30 Special Conditions**

The part of the Contract Documents which amends or supplements these General Conditions.

**1.31 Supplier**

A manufacturer, fabricator, supplier, distributor, materialman or vendor.

**1.32 Underground Facilities**

All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

**1.33 Unit Price Work**

Not applicable

**1.34 Work**

The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.

**1.35 Time Period**

When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

## **2. PRELIMINARY MATTERS**

### **2.1 Delivery of Bonds**

When the CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER, such Bonds, Insurance Certificate, and Power of Attorney as CONTRACTOR may be required to furnish.

### **2.2 Copies of Documents**

Owner shall furnish to CONTRACTOR up to three copies (unless otherwise specified in the Special Conditions) of the Contract Documents as are reasonably necessary for the execution of the Work. Additional copies will be furnished, upon request, at the cost of reproduction.

### **2.3 Commencement of Contract Time; Notice to Proceed**

The Contract Time will commence to run on the day specified in the Notice to Proceed.

### **2.4 Starting the Project**

CONTRACTOR shall start to perform the Work on the date when the Contract Time commences to run, but no Work shall be done at the site prior to the date on which the Contract Time commences to run.

### **2.5 Before Starting Construction**

Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. CONTRACTOR shall promptly report in writing to CONSULTANT any conflict, error or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from CONSULTANT before proceeding with any Work affected thereby; however, CONTRACTOR shall not be liable to OWNER or CONSULTANT for failure to report any conflict, error or discrepancy in the Contract Documents, unless CONTRACTOR had actual knowledge thereof or should reasonably have known thereof.

### **2.6 Submittal of Schedules**

Within ten days after the effective date of the Agreement (unless otherwise specified) CONTRACTOR shall submit to CONSULTANT for review:

**2.6.1** an estimated progress schedule indicating the starting and completion dates of the various stages of the Work;

**2.6.2** a preliminary schedule of Shop Drawing submissions; and

**2.6.3** a preliminary schedule of values for all of the Work which will include quantities and prices of items aggregating the Contract Price and will subdivide the Work into costs per labor and materials by specification

section to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work which will be confirmed in writing by CONTRACTOR at the time of submission. Schedule of values shall be submitted on AIA G702/703 forms, or approved equal.

**2.7 Preconstruction Conference**

Before CONTRACTOR starts the Work at the proposed site, a conference attended by CONTRACTOR, CONSULTANT, EEO-Affirmative Action Officer, and other appropriate parties will be held to discuss the following issues: (1) The scheduling of the Work to be completed; (2) The procedures for handling shop drawings and other submittals; (3) The processing of applications for payment; (4) The establishment of an understanding among the involved parties in regard to the proposed project; and (5) The establishment of procedures for effectively implementing the LFUCG's 10% minimum DBE goals.

**2.8 Finalizing Schedules**

At least ten days before submission of the first Application for Payment a conference attended by CONTRACTOR, CONSULTANT and others as appropriate will be held to finalize the schedules submitted in accordance with paragraph 2.6. The finalized progress schedule will be acceptable to CONSULTANT as providing orderly progression of the Work to completion within the Contract Time, but such acceptance will neither impose on CONSULTANT responsibility for the progress or scheduling of the Work nor relieve CONTRACTOR from full responsibility thereof. The finalized schedule of Shop Drawing submissions will be acceptable to CONSULTANT as providing a workable arrangement for processing the submissions. The finalized schedule of values will be acceptable to CONSULTANT as to form and substance.

**3. CONTRACT DOCUMENTS: INTENT, CONFLICTS, AMENDING AND REUSE**

**3.1 General**

The Contract Documents comprise the entire agreement between OWNER and CONTRACTOR concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the place of the Project.

**3.2 Intent**

It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result will be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe Work, materials or equipment such words shall be

interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or laws or regulations in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of OWNER, CONTRACTOR or CONSULTANT, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to CONSULTANT, or any of CONSULTANT'S consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 8.12.3 or 8.12.4. Clarifications and interpretations of the Contract Documents shall be issued by CONSULTANT as provided in paragraph 8.4.

### **3.3 Conflicts**

If, during the performance of the Work, CONTRACTOR finds a conflict, error or discrepancy in the Contract Documents, CONTRACTOR shall so report to CONSULTANT in writing at once and before proceeding with the Work affected thereby shall obtain a written interpretation or clarification from CONSULTANT; however, CONTRACTOR shall not be liable to OWNER or CONSULTANT for failure to report any conflict, error or discrepancy in the Contract Documents unless CONTRACTOR had actual knowledge thereof or should reasonably have known thereof.

In resolving such conflicts, errors and discrepancies, the documents shall be given precedence in the following order:

1. Agreement
2. Field and Change Orders
3. Addenda
4. Special Conditions
5. Instruction to Bidders
6. General Conditions
7. Specifications and Drawings

Figure dimension on drawings shall govern over scale dimensions and detailed Drawings shall govern over general Drawings.

**3.4 Amending and Supplementing Contract Documents**

The Contract Documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof by means of a Change Order or a Field Order. Contract Price and Contract Time may only be changed by a Change Order.

**3.5 Reuse of Documents**

Neither CONTRACTOR nor any Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with OWNER shall have or acquire any title to or ownership rights in any of the Drawings, Specifications or other documents (or copies of any thereof) prepared by or bearing the seal of CONSULTANT; and they shall not reuse any of them on extensions of the Project or any other project without written consent of OWNER and CONSULTANT and specific written verification or adaptation by CONSULTANT.

**4. AVAILABILITY OF LANDS; PHYSICAL CONDITIONS, REFERENCE POINTS**

**4.1 Availability of Lands**

OWNER shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by OWNER, unless otherwise provided in the Contract Documents. If CONTRACTOR believes that any delay in OWNER'S furnishing these lands, rights-of-way or easements entitles CONTRACTOR to an extension of the Contract Time, CONTRACTOR may make a claim therefor as provided in Article 11. CONSULTANT shall determine if the claim is legitimate or not. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

**4.2 Physical Conditions**

**4.2.1 Explorations and Reports**

Reference is made to the Special Conditions for identification of those reports of explorations and tests of subsurface conditions at the site that have been utilized by CONSULTANT in preparation of the Contract Documents. CONTRACTOR may rely upon the accuracy of the technical data contained in such reports, but not upon non-technical data, interpretations or opinions contained therein or for the completeness thereof for CONTRACTOR'S purposes. Except as indicated in the immediately preceding sentence and in paragraph 4.2.6, CONTRACTOR shall have full responsibility with respect to subsurface conditions at the site.

**4.2.2 Existing Structures**

Reference is made to the Special Conditions for identification of those drawings of physical conditions in or relating to existing surface and

subsurface structures (except Underground Facilities referred to in paragraph 4.3 which are at or contiguous to the site that have been utilized by CONSULTANT in preparation of the Contract Documents. CONTRACTOR may rely upon the accuracy of the technical data contained in such drawings, but not for the completeness thereof for CONTRACTOR'S purposes. Except as indicated in the immediately preceding sentence and in paragraph 4.2.6, CONTRACTOR shall have full responsibility with respect to physical conditions in or relating to such structures.

4.2.3 Report of Differing Conditions  
If CONTRACTOR believes that:

4.2.3.1 any technical data on which CONTRACTOR is entitled to rely as provided in paragraphs 4.2.1 and 4.2.2 is inaccurate, or

4.2.3.2 any physical conditions uncovered or revealed at the site differ materially from that indicated, reflected or referred to in the Contract Documents,

CONTRACTOR shall, promptly after becoming aware thereof and before performing and WORK in connection therewith (except in an emergency) notify OWNER and CONSULTANT in writing about the inaccuracy or difference.

4.2.4 CONSULTANT'S Review

CONSULTANT will promptly review the pertinent conditions, determine the necessity of obtaining additional explorations or tests with respect thereto and advise CONTRACTOR of CONSULTANT'S findings and conclusions.

4.2.5 Possible Document Change

If CONSULTANT concludes that there is a material error in the Contract Documents or that because of newly discovered conditions a change I the Contract Documents is required, a Change Order will be issued as provided in Article 10 to reflect and document the consequences of the inaccuracy or difference.

4.2.6 Possible Price and Time Adjustments

In each such case, an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, or any combination thereof, will be allowable to the extent that they are attributable to any such inaccuracy or difference.

**4.3 Physical Conditions-Underground Facilities**

4.3.1 Shown or Indicated

The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is



based on information and data furnished to OWNER or CONSULTANT by the owners of such underground facilities or by others. Unless it is otherwise expressly provided in the Special Conditions:

4.3.1.1 OWNER and CONSULTANT shall not be responsible for the accuracy or completeness of any such information or data; and,

4.2.1.2 CONTRACTOR shall have full responsibility for reviewing and checking all such information and data; for locating all underground facilities shown or indicated in the Contract Documents; for coordination of the Work with the owners of such underground facilities during construction; and for the safety and protection thereof and repairing any damage thereto resulting from the Work, the cost of all of which will be considered as having been included in the Contract Price.

4.3.2 Not Shown or Indicated

If an underground facility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Contract Documents and which CONTRACTOR could not reasonably have been expected to be aware of, CONTRACTOR shall, promptly after becoming aware thereof and before performing any Work affected thereby (except in an emergency), identify the owner of such Underground Facility and give written notice thereof to that owner and to OWNER and CONSULTANT. CONSULTANT will promptly review the underground facility to determine the extent to which the Contract Documents should be modified to reflect and document the consequences of the existence of the Underground Facility, and the Contract Documents will be amended or supplemented to the extent necessary. During such time, CONTRACTOR shall be responsible for the safety and protection of such underground facility. CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, to the extent that they are attributable to the existence of any underground facility that was not shown or indicated in the Contract Documents and which CONTRACTOR could not reasonably have been expected to be aware of.

**4.4 Reference Points**

OWNER shall provide engineering surveys to establish reference points for construction which in CONSULTANT'S judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work (unless otherwise specified), shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of OWNER. CONTRACTOR shall report to CONSULTANT whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points by a Registered Land Surveyor.

## **5. CONTRACTOR'S RESPONSIBILITIES**

### **5.1 Supervision**

CONTRACTOR shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall assure that all CONTRACTOR personnel (including subcontractors, etc.) conduct themselves in a courteous and respectful manner toward the CONSULTANT and the general public. CONTRACTOR shall keep at the Project Site during the progress of the Work a competent project manager/superintendent and all necessary assistants, all of whom shall be satisfactory to OWNER. OWNER reserves the right to reject CONTRACTOR'S construction superintendent and project management personnel if they are unsatisfactory to OWNER and upon such rejection CONTRACTOR shall designate and provide competent successors. Failure to comply with this condition of the Contract will result in immediate suspension of the Work. Following a review by the Commissioner of Public Works, the Contract may be terminated (see GC section 14). CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. CONTRACTOR shall be responsible to see that the finished Work complies accurately with the Contract Documents.

### **5.2 Superintendence**

CONTRACTOR shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to OWNER and CONSULTANT except under extraordinary circumstances. The superintendent will be CONTRACTOR'S representative at the site and shall have authority to act on behalf of CONTRACTOR. All communications given to the superintendent shall be as binding as if given to CONTRACTOR.

### **5.3 Labor**

CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the site. OWNER reserves the right to require CONTRACTOR to remove from the Project any of it's personnel, or subcontractor's personnel for violating LFUCG Policies, Rules or Regulations. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday or any legal holiday without OWNER'S written consent given after prior written notice to CONSULTANT.

### **5.4 Start-Up and Completion of Work**

Unless otherwise specified, CONTRACTOR shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.

**5.5 Materials and Equipment**

All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by CONSULTANT, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable supplier except as otherwise provided in the Contract Documents; but no provision of any such instructions will be effective to assign to CONSULTANT, or any of CONSULTANT'S consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 8.12.3 or 8.12.4.

**5.5.1 Not Clearly Specified or Indicated**

In all instances where materials specified are obtainable in different sizes, weights, trade grades, qualities or finishes, etc., whose weights, trade grades, qualities or finishes, etc., are not clearly specified or indicated on the Drawings, the CONTRACTOR shall notify the CONSULTANT of all such instances at least five (5) days in advance of receiving the proposals. The CONSULTANT will then determine which size, weight, trade grade, quality, finish, etc., is required.

**5.5.2 Coordination of Work**

The CONTRACTOR shall see that for his own Work and for the work of each subcontractor, proper templates and patterns necessary for the coordination of the various parts of the Work are prepared. The CONTRACTOR shall furnish or require the Subcontractor to furnish such duplicates as will enable the Subcontractors to fit together and execute fully their respective portions of the Work.

**5.6 Adjusting Progress Schedule**

CONTRACTOR shall submit to CONSULTANT for acceptance (to the extent indicated in paragraph 2.8) adjustments in the progress schedule to reflect the impact thereon of new developments; these will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the Contract Documents applicable thereto.

**5.7 Substitutes or "Or-Equal" Items**

5.7.1 General

Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular supplier, the naming of the item is intended to establish the type, function, and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other Suppliers may be accepted by OWNER/CONSULTANT if sufficient information is submitted by CONTRACTOR to allow OWNER/CONSULTANT to determine that the material or equipment proposed is equivalent or equal to that named. The procedure for review by OWNER/CONSULTANT will include the following. Requests for review of substitute items of material and equipment will not be accepted by OWNER/CONSULTANT from anyone, other than CONTRACTOR. If CONTRACTOR wishes to furnish or use a substitute item of material or equipment, CONTRACTOR shall make written application to OWNER/CONSULTANT for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application will state that the evaluation and acceptance of the proposed substitute will not prejudice CONTRACTOR'S achievement of completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by OWNER/CONSULTANT in evaluating the proposed substitute. OWNER/CONSULTANT may require CONTRACTOR to furnish at CONTRACTOR'S expense additional data about the proposed substitute.

5.7.2 Substitutes

If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to OWNER/CONSULTANT, if CONTRACTOR submits sufficient information to allow OWNER/CONSULTANT to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedure for review by OWNER/CONSULTANT will be

similar to that provided in paragraph 5.7.1 as applied by OWNER/CONSULTANT.

**5.7.3 OWNER/CONSULTANT'S Approval**

OWNER/CONSULTANT will be allowed a reasonable time within which to evaluate each proposed substitute. OWNER/CONSULTANT will be the sole judge of acceptability, and no substitute will be ordered, installed or utilized without OWNER/CONSULTANT'S prior written acceptance which will be evidenced by either a Change Order or an approved Shop Drawing. OWNER may require CONTRACTOR to furnish at CONTRACTOR'S expense a special performance guarantee or other surety with respect to any substitute. OWNER/CONSULTANT will record time required by OWNER/CONSULTANT and OWNER/CONSULTANT'S consultants in evaluating substitutions proposed by CONTRACTOR and in making changes in the Contract Documents occasioned thereby. Whether or not OWNER/CONSULTANT accepts a proposed substitute, CONTRACTOR shall reimburse OWNER for the charges of OWNER/CONSULTANT and OWNER/CONSULTANT'S consultants for evaluating each proposed substitute.

**5.8 Subcontractors, Suppliers, and Others**

**5.8.1 Acceptable to CONSULTANT**

CONTRACTOR shall not employ any Subcontractor, Supplier or other person or organization (including those acceptable to OWNER and CONSULTANT as indicated in paragraph 5.8.2), whether initially or as a substitute, against whom OWNER or CONSULTANT may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier or other person or organization to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

**5.8.2 Objection After Due Investigation**

If the Contract Documents require the identity of certain Subcontractors, Suppliers or other persons or organizations (including those who are to furnish the principal items of materials and equipment) to be submitted to OWNER in advance of the specified date prior to the Effective Date of the Agreement for acceptance by OWNER and CONSULTANT and if CONTRACTOR has submitted a list thereof, OWNER'S or CONSULTANT'S acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the bidding documents or the Contract Documents) of any such Subcontractor, Supplier or other person or organization so identified may be revoked on the basis of reasonable objection after due investigation, in which case CONTRACTOR shall submit an acceptable substitute. No acceptance by OWNER or CONSULTANT of any such Subcontractor, Supplier or other

person or organization shall constitute a waiver of any right of OWNER or CONSULTANT to reject defective Work.

5.8.3 Contractor Responsible for Acts of Subcontractors

The CONTRACTOR shall perform on the site, and with its own organization, work equivalent to at least fifty (50) percent of the total amount of Work to be performed under the Contract. This percentage may be reduced by a supplemental agreement to this Contract if, during performing the Work, the CONTRACTOR requests a reduction and the Urban County project manager determines that the reduction would be to the advantage of the Urban County Government.

The CONTRACTOR shall, at the time he submits his proposal for the Contract, notify the OWNER in writing of the names of Subcontractors proposed for the Work. He shall not employ any Subcontractor without the prior written approval of the OWNER.

CONTRACTOR shall be fully responsible to OWNER and CONSULTANT for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR just as CONTRACTOR is responsible for CONTRACTOR'S own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between OWNER or CONSULTANT and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of OWNER or CONSULTANT to pay or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.

5.8.4 Division of Specifications

The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

5.8.5 Agreement Between Contractor and Subcontractors

All Work performed for CONTRACTOR by a Subcontractor will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and CONSULTANT.

5.8.6 Statements and Comments by CONTRACTOR

Neither the CONTRACTOR, his employees, nor his subcontractors shall at any time make any statement or comment as to the project scope, nature, intention, design, or construction

method to any third party or parties without the explicit written consent of the OWNER.

Any third party requesting such information shall be referred to the OWNER or his representative.

Should there be any change from the original intent of the project as a result of any statement or comment by the contractor, his employees or subcontractors, contractor shall be held liable for any change in the scope, nature, design, or construction method and shall bear the full cost for the previously mentioned changes.

**5.9 Patent Fees and Royalties**

CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others.

**5.10 Permits**

Unless otherwise provided in the Special conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids, or if there are no Bids on the Effective Date of the Agreement. CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall pay all charges of such utility owners for capital costs related thereto such as plant investment fees.

## **5.11 Laws and Regulations**

### **5.11.1 CONTRACTOR to Comply**

CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither OWNER nor CONSULTANT shall be responsible for monitoring CONTRACTOR'S compliance with any Laws and Regulations.

### **5.11.2 Specifications and Drawings at Variance**

If CONTRACTOR observes that the Specifications or Drawings are at variance with any Laws or Regulations, CONTRACTOR shall give CONSULTANT prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated in paragraph 3.4. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to such Laws, or Regulations, and without such notice to CONSULTANT, CONTRACTOR shall bear all costs arising therefrom; however, it shall not be CONTRACTOR'S primary responsibility to make certain that the Specifications and Drawings are in accordance with such Laws and Regulations.

Any party, firm or individual submitting a proposal pursuant to invitation must have paid all taxes owed to the Lexington-Fayette Urban County Government at the time the proposal is submitted, and must maintain a "current" status in regard to those taxes throughout the Contract. If applicable, business must be licensed in Fayette County.

## **5.12 Taxes**

CONTRACTOR shall pay all sales, consumer, use and other similar taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work. Any party, firm or individual submitting a proposal pursuant to invitation must have paid all taxes owed to the Lexington-Fayette Urban County Government at the time the proposal is submitted, and must maintain a "current" status in regard to those taxes throughout the Contract. If applicable, business must be licensed in Fayette County.

## **5.13 Use of Premises**

### **5.13.1 Project Site**

CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workers to the staging areas or work site areas identified in and permitted by the Contract Documents and other land and areas permitted by Laws and Regulations, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such



land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against OWNER or CONSULTANT by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold OWNER and CONSULTANT harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any such other party against OWNER or CONSULTANT to the extent based on a claim arising out of CONTRACTOR'S performance of the Work.

**5.13.2 Clean UP**

During the progress of the Work, CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work, CONTRACTOR shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by OWNER. CONTRACTOR shall restore to original condition all property not designated for alteration by the Contract Documents.

**5.13.1 Loading of Structures**

CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

**5.14 Record Drawings**

CONTRACTOR shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Change Orders, Field Orders and written interpretations and clarifications (issued pursuant to paragraph 9.4) in good order and annotated to show all changes made during construction. These record documents together with all approved samples and a counterpart of all approved Shop Drawings will be available to CONSULTANT for reference. Upon completion of the Work, these record documents, samples and Shop Drawings will be delivered to CONSULTANT for OWNER.

**5.15 Shop Drawings and Samples**

**5.15.1 Shop Drawing Submittals**

After checking and verifying all field measurements and after complying

with applicable procedures specified, CONTRACTOR shall submit to CONSULTANT for review and approval in accordance with the accepted schedule of Shop Drawing submissions (see paragraph 2.8), or for other appropriate action if so indicated in the Special Conditions, five copies (unless otherwise specified) of all Shop Drawings, which will bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR'S responsibilities under the Contract Documents with respect to the review of the submission. All submissions will be identified as CONSULTANT may require. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable CONSULTANT to review the information as required.

5.15.2 Sample Submittals

CONTRACTOR shall also submit to CONSULTANT for review and approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and accompanied by a specific written indication that CONTRACTOR has satisfied CONTRACTOR'S responsibilities under the Contract Documents with respect to the review of the submission and will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended.

5.15.3 Review by CONTRACTOR

Before submission of each Shop Drawing or sample CONTRACTOR shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples and with the requirements of the Work and the Contract Documents.

5.15.4 Notice of Variation

At the time of each submission, CONTRACTOR shall give CONSULTANT specific written notice of each variation that the Shop Drawings or samples may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation to be made on each Shop Drawing submitted to CONSULTANT for review and approval of each such variation.

5.15.5 CONSULTANT'S Approval

CONSULTANT will review and approve with reasonable promptness Shop Drawings and samples, but CONSULTANT'S review and approval will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or

procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. CONTRACTOR shall make corrections required by CONSULTANT, and shall return the required number of corrected copies of Shop Drawings and submit, as required, new samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by CONSULTANT on previous submittals.

**5.15.6 Responsibility for Errors and Omissions**

CONSULTANT'S review and approval of Shop Drawings or samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called CONSULTANT'S attention to each such variation at the time of submission as required by paragraph 5.15.4 and CONSULTANT has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample approval; nor will any approval by CONSULTANT relieve CONTRACTOR from responsibility for errors or omissions in the Shop Drawings or from responsibility for having complied with the provisions of paragraph 5.15.3.

**5.15.7 Cost of Related Work**

Where a Shop or sample is required by the Specifications, any related Work performed prior to CONSULTANT'S review and approval of the pertinent submission will be the sole expense and responsibility of CONTRACTOR.

**5.16 Continuing the Work**

CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolutions of any disputes or disagreements, except as permitted by paragraph 14.5 or as CONTRACTOR and OWNER may otherwise agree in writing.

**5.17 Erosion and Sediment Control**

**5.17.1 General Environmental Requirements**

The CONTRACTOR and Subcontractors performing work on projects on behalf of the OWNER shall comply with all applicable federal, state, and local environmental regulations and all requirements and conditions set forth in "special" permits including but not limited to Corp of Engineers 404 permits, 401 Water Quality Certifications, Stream Crossing and Floodplain Encroachment Permits.

Any fines or penalties resulting from the failure to comply with the terms of the federal, state or local permits or perform necessary corrective action are solely the obligation of the CONTRACTOR.

5.17.2 Stormwater Pollution Prevention

A. The CONTRACTOR shall exercise due care to prevent or minimize any damage to any stream or wetland from pollution by debris, sediment or other material. The operation of equipment and/or materials in a jurisdictional wetland is expressly prohibited. Water that has been used for washing or processing, or that contains oils, sediments or other pollutants shall not be discharged from the job site. Such waters shall be collected and properly disposed of by the CONTRACTOR in accordance with applicable local, state and federal law.

B. The CONTRACTOR is solely responsible for securing all required state and local permits associated with stormwater discharges from the project including, but not necessarily limited to the KY Notice of Intent to Disturb (NOI) for Coverage of Storm Water Discharges Associated with Construction Activities under the KPDES Storm Water General Permit KYR100000 and the LFUCG, Land Disturbance Permit. Permit application preparation and all required documentation are the responsibility of the CONTRACTOR. The CONTRACTOR is solely responsible for maintaining compliance with the stormwater pollution prevention plan or erosion and sediment control plan and ensuring the following:

- a. That the Stormwater Pollution Prevention Plan (SWPPP) or erosion control plan is current and available for review on site;
- b. That any and all stormwater inspection reports required by the permit are conducted by qualified personnel and are available for review onsite; and
- c. That all best management practices (BMPs) are adequately maintained and effective at controlling erosion and preventing sediment from leaving the site.

C. The CONTRACTOR shall provide the necessary equipment and personnel to perform any and all emergency measures that may be required to contain any spillage or leakage and to remove materials, soils or liquids that become contaminated. The collected spill material shall be properly disposed at the CONTRACTOR's expense.

D. Upon completion of the work and with the concurrence of the OWNER, the CONTRACTOR must file a Notice of Termination (NOT) of Coverage Under the KPDES General Permit for Storm Water Discharges Associated with Construction Activity with the appropriate local and state authorities.

E. Any fines or penalties resulting from the failure to comply with the terms of the state or local stormwater permits or perform necessary corrective action are solely the obligation of the CONTRACTOR.

**6. OTHER WORK**

**6.1 Related Work at Site**

OWNER may perform other work related to the Project at the site by OWNER'S own forces, have other work performed by utility owners or let other direct contracts therefor which shall contain General Conditions similar to these. If the fact that such other work is to be performed was not noted in the Contract Documents, written notice thereof will be given to CONTRACTOR prior to starting any such other work; and, if such performance will involve additional expense to CONTRACTOR or requires additional time, a Change Order to the Contract will be negotiated.

**6.2 Other Contractors or Utility Owners**

CONTRACTOR shall afford each utility owner and other contractor who is a party to such a direct contract (or OWNER, if OWNER is performing the additional work with OWNER'S employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the Work with theirs. CONTRACTOR shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of CONSULTANT and the others whose work will be affected. The duties and responsibilities of CONTRACTOR under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such utility owners and other contractors.

**6.3 Delays Caused by Others**

If any part of CONTRACTOR'S Work depends for proper execution or results upon the work of any such other contractor or utility owner (or OWNER), CONTRACTOR shall inspect and promptly report to CONSULTANT in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. CONTRACTOR'S failure so to report will constitute an acceptance of the other work as fit and proper for integration with CONTRACTOR'S Work except for latent or non-apparent defects and deficiencies in the other work.

**6.4 Coordination**

If OWNER contracts with others for the performance of other work on the Project at the site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified in the Special Conditions, and the specific matters to be covered by such authority and

responsibility will be itemized, and the extent of such authority and responsibilities will be provided, in the Special Conditions.

## **7. OWNER'S RESPONSIBILITIES**

### **7.1 Communications**

OWNER shall issue all communications to CONTRACTOR through CONSULTANT.

### **7.2 Data and Payments**

OWNER shall furnish the data required of OWNER under the Contract Documents promptly after they are due.

### **7.3 Lands, Easements, and Surveys**

OWNER'S duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.1 and 4.4. Paragraph 4.2 refers to OWNER'S identifying and making available to CONTRACTOR copies of reports of explorations and tests of subsurface conditions at the site and in existing structures which have been utilized by CONSULTANT in preparing the Drawings and Specifications.

### **7.4 Change Orders**

OWNER is obligated to execute Change Orders as indicated in paragraph 9.4.

### **7.5 Inspections, Tests and Approvals**

OWNER'S responsibility in respect to certain inspections, tests and approvals is set forth in paragraph 13.3.

### **7.6 Stop or Suspend Work**

In connection with OWNER'S right to stop Work or suspend Work, see paragraph 12.4 and 14.1 Paragraph 14.2 deals with OWNER'S rights to terminate services of CONTRACTOR under certain circumstances.

## **8. CONSULTANT'S STATUS DURING CONSTRUCTION**

### **8.1 OWNER'S Representative**

CONSULTANT will be OWNER'S representative during the construction period. The duties and responsibilities and the limitations of authority of CONSULTANT as OWNER'S representative during construction are set forth in the Contract Documents and shall not be extended without written consent of OWNER and CONSULTANT.

### **8.2 Visits to Site**

CONSULTANT will make visits to the site at intervals appropriate to the various stages of construction to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. CONSULTANT will not be required to make exhaustive or

continuous on-site inspections to check the quality or quantity of the Work. CONSULTANT'S efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform to the Contract Documents. On the basis of such visits and on-site observations, CONSULTANT will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defects and deficiencies in the Work.

**8.3 Project Representation**

CONSULTANT will provide an Inspector to assist CONSULTANT in observing the performance of the Work. If OWNER designates another agent to represent OWNER at the site who is not CONSULTANT'S agent or employee, the duties, responsibilities and limitations of authority of such other person will be as provided in the Special Conditions.

**8.4 Clarifications and Interpretations**

CONSULTANT will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as CONSULTANT may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents.

**8.5 Authorized Variations in Work**

CONSULTANT may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Time and are consistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order.

**8.6 Rejecting Defective Work**

CONSULTANT will have authority to disapprove or reject Work which CONSULTANT believes to be defective, and will also have authority to require special inspection or testing of the Work as provided in paragraph 12.3, whether or not the Work is fabricated, installed or completed.

**8.7 Shop Drawings**

In connection with CONSULTANT'S responsibility for Shop Drawings and samples, see paragraphs 5.15.1 through 5.16 inclusive.

**8.8 Change Orders**

In connection with CONSULTANT'S responsibilities as to Change Orders, see Articles 10, 11 and 12.

**8.9 Payments**

In connection with CONSULTANT'S responsibilities with respect to Applications for Payment, etc., see Article 13.

**8.10 Determinations for Unit Prices**

CONSULTANT will determine the actual quantities and classifications of Unit Price Work performed by CONTRACTOR.

CONSULTANT will review with CONTRACTOR CONSULTANT'S preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise).

**8.11 Decision on Disputes**

CONSULTANT will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work and claims under Articles 10 and 11 in respect of changes in the Contract Price or Contract Time will be referred initially to CONSULTANT in writing with a request for a formal decision in accordance with this paragraph, which CONSULTANT will render in writing within a reasonable time. Written notice of each such claim, dispute and other matter will be delivered to CONSULTANT promptly (but in no event later than thirty days) after the occurrence of the event giving rise thereto, and written supporting data will be submitted to CONSULTANT within sixty days after such occurrence unless CONSULTANT allows an additional period of time to ascertain more accurate data in support of the claim.

**8.12 Limitations on CONSULTANT's Responsibilities**

**8.12.1 CONTRACTOR, Supplier, or Surety**

Neither CONSULTANT'S authority to act under this Article 8 or elsewhere in the Contract Documents nor any decision made by CONSULTANT in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of CONSULTANT to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization performing any of the Work, or to any surety for any of them.

**8.12.2 To Evaluate the Work**

Whenever in the Contract Documents the terms "as ordered", "as directed", "as required", "as allowed", "as approved" or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper", or "satisfactory" or adjectives or like "effect" or "import" are used to describe a requirement, direction, review or judgment of CONSULTANT as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign CONSULTANT any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 8.12.3 or 8.12.4.



8.12.3 CONTRACTOR'S Means, Methods, Etc.

CONSULTANT will not be responsible for CONTRACTOR'S means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and CONSULTANT will not be responsible for CONTRACTOR'S failure to perform or furnish the Work in accordance with the Contract Documents.

8.12.4 Acts of Omissions of CONTRACTOR

CONSULTANT will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

9. **CHANGES IN THE WORK**

9.1 **OWNER May Order Change**

Without invalidating the Agreement and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions or revisions in the Work; these will be authorized by a Change Order. Upon receipt of such notice, CONTRACTOR shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

9.2 **Claims**

Claims for an increase or decrease in the Contract Price or an extension or shortening of the Contract Time that should be allowed as a result of a Change Order will be settled as provided for in Article 10 or Article 11.

9.3 **Work Not in Contract Documents**

CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Time with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in paragraph 3.4, except in the case of an emergency and except in the case of uncovering Work as provided in paragraph 12.3.4.

9.4 **Change Orders**

OWNER and CONTRACTOR shall execute appropriate Change Orders covering:

9.4.1 changes in the Work which are ordered by OWNER pursuant to paragraph 9.1, are required because of acceptance of defective Work under paragraph 12.7 or corrective defective Work under paragraph 12.8, or are agreed to by the parties;

9.4.2 changes in the Contract Price or Contract Time which are agreed to by the parties; and

9.4.3 changes in the Contract Price or Contract Time which embody the substance of any written decision rendered by CONSULTANT pursuant to paragraph 8.11; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and REGULATIONS, but during any such appeal, CONTRACTOR shall carry on the Work and adhere to the progress schedule as provided in paragraph 5.16.

**9.5 Notice of Change**

If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Time) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be CONTRACTOR'S responsibility, and the amount of each applicable Bond will be adjusted accordingly.

**10. CHANGE OF CONTRACT PRICE**

**10.1 Total Compensation**

The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to CONTRACTOR for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by CONTRACTOR shall be at his expense without change in the Contract Price.

**10.2 Claim for Increase or Decrease in Price**

The Contract Price may only be changed by a Change Order. Any claim for an increase or decrease in the Contract Price shall be based on written notice delivered by the CONTRACTOR to the CONSULTANT promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within sixty days after such occurrence (unless CONSULTANT allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by CONTRACTOR'S written statement that the amount claimed covers all known amounts (direct, indirect, and consequential) to which the CONTRACTOR is entitled as a result of the occurrence of said event.

**10.3 Value of Work**

The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:

**10.3.1 Unit Prices**

Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved (subject to the provisions of paragraphs 10.9.1. through 10.9.3, inclusive).

10.3.2 Lump Sum

By mutual acceptance of a lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 10.6.2.1).

10.3.3 Cost Plus Fee

On the basis of the Cost of the Work (determined as provided in paragraphs 10.4 and 10.5) plus a CONTRACTOR'S fee for overhead and profit (determined as provided in paragraphs 10.6 and 10.7).

**10.4 Cost of the Work**

The term Cost of the Work means the sum of all costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project; shall include only the following items; and shall not include any of the costs itemized in paragraph 10.5:

10.4.1 Payroll Costs

Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' or workmen's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing Work after regular working hours, on Saturday, Sunday or legal holidays, shall be included in the above to the extent authorized by OWNER.

10.4.2 Materials and Equipment Costs

Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and all returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.

10.4.3 Subcontractor Costs

Payments made by CONTRACTOR to the Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from Subcontractors acceptable to CONTRACTOR and shall deliver such bids to OWNER who will then determine, with the advice of CONSULTANT, which bids will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a Fee, the Subcontractor's Cost of the Work shall be determined in the same manner as CONTRACTOR'S Cost of the Work. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

#### 10.4.4 Special Consultant Costs

Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys and accountants) employed for services specifically related to the Work.

#### 10.4.5 Supplemental Costs

10.4.5.1 The proportion of necessary transportation, travel and subsistence expenses of CONTRACTOR'S employees incurred in discharge of duties connected with the Work.

10.4.5.2 Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of CONTRACTOR.

10.4.5.3 Rentals of all construction equipment and machinery and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by OWNER with the advice of CONSULTANT, and the costs of transportation, loading, unloading, installation, dismantling and removal shall be in accordance with terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.

10.4.5.4 Sales, consumer, use or similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.

10.4.5.5 Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

10.4.5.6 Losses and damages (and related expenses), not compensated by insurance or otherwise, to the Work or otherwise sustained by CONTRACTOR in connection with the performance and furnishing of the Work (except losses and damages within the deductible amounts of property insurance established by OWNER), provided they have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR'S fee. If, however, any such loss or damage requires reconstruction and CONTRACTOR is placed in charge thereof, CONTRACTOR shall be paid a fee proportionate to that stated in paragraph 10.6.2 for services.

10.4.5.7 The cost of utilities, fuel and sanitary facilities at the site.

10.4.5.8 Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.

10.4.5.9 Cost of premiums for additional Bonds and insurance required because of changes in the Work and premiums for property insurance coverage within the limits of the deductible amounts established by OWNER.

## **10.5 Not to Be Included in Cost of the Work**

The term Cost of the Work shall not include any of the following:

### **10.5.1 Costs of Officers and Executives**

Payroll costs and other compensation of CONTRACTOR'S officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the site or in CONTRACTOR'S principal or a branch office for general administration of

the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 10.4.1 or specifically covered by paragraph 10.4.4 - all of which are to be considered administrative costs covered by the CONTRACTOR'S fee.

**10.5.2 Principal Office**

Expenses of CONTRACTOR'S principal and branch offices other than CONTRACTOR'S office at the site.

**10.5.3 Capital Expense**

Any part of CONTRACTOR'S capital expenses, including interest on CONTRACTOR'S capital employed for the Work and charges against CONTRACTOR for delinquent payments.

**10.5.4 Bonds and Insurance**

Cost of premiums for all Bonds and for all insurance whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by subparagraph 10.4.5.9 above).

**10.5.5 Costs Due to Negligence**

Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.

**10.5.6 Other Costs**

Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 10.4.

**10.6 Contractor's Fee**

The CONTRACTOR'S Fee allowed to CONTRACTOR for overhead and profit shall be determined as follows:

10.6.1 a mutually acceptable fixed fee; or if none can be agreed upon,

10.6.2 a fee based on the following percentages of the various portions of the Cost of the Work:

10.6.2.1 for costs incurred under paragraphs 10.4.1 and 10.4.2, the CONTRACTOR'S fee shall be fifteen percent;

10.6.2.2 for costs incurred under paragraph 10.4.3, the CONTRACTOR'S fee shall be five percent; and if a subcontract is on the basis of Cost of the Work Plus a fee, the maximum allowable to CONTRACTOR on account of overhead and profit of all Subcontractors shall be fifteen percent;

10.6.2.3 no fee shall be payable on the basis of costs itemized under paragraphs 10.4.4, 10.4.5 and 10.5;

10.6.2.4 the amount of credit to be allowed by CONTRACTOR to OWNER for any such change which results in a net decrease in cost will be the amount of the actual net decrease plus a deduction in CONTRACTOR'S Fee by an amount equal to ten percent of the net decrease; and

10.6.2.5 when both additions and credits are involved in any one change, the adjustment in CONTRACTOR'S fee shall be computed on the basis of the net change in accordance with paragraphs 10.6.2.1 through 10.6.2.4, inclusive.

**10.7 Itemized Cost Breakdown**

Whenever the cost of any Work is to be determined pursuant to paragraph 10.4 or 10.5, CONTRACTOR will submit in form acceptable to CONSULTANT an itemized cost breakdown together with supporting data.

**10.8 Cash Allowances**

It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be done by such Subcontractors or Suppliers and for such sums within the limit of the allowances as may be acceptable to CONSULTANT, CONTRACTOR agrees that:

**10.8.1 Materials and Equipment**

The allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the site, and all applicable taxes; and

10.8.2 Other Costs

CONTRACTOR'S costs for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances. No demand for additional payment on account of any thereof will be valid.

10.8.3 Change Order

Prior to final payment, an appropriate Change Order will be issued as recommended by CONSULTANT to reflect actual amounts due CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

**10.9 Unit Price Work**

10.9.1 General

Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by CONSULTANT in accordance with Paragraph 8.10.

10.9.2 Overhead and Profit

Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR'S overhead and profit for each separately identified item.

10.9.3 Claim for Increase in Unit Price

Where the quantity of any item of Unit Price Work performed by CONTRACTOR differs materially and significantly from the estimated quantity of such item indicated in the Agreement and there is no corresponding adjustment with respect to any other item of Work and if CONTRACTOR believes that CONTRACTOR has incurred additional expense as a result thereof, CONTRACTOR may make a claim for an increase in the Contract Price in accordance with Article 10.



## **11. CHANGE OF CONTRACT TIME**

### **11.1 Change Order**

The Contract Time may only be changed by a Change Order. Any claim for an extension or shortening of the Contract Time shall be based on written notice delivered to CONSULTANT promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within sixty days after such occurrence (unless CONSULTANT allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Time shall be determined by CONSULTANT in accordance with paragraph 8.11. No claim for an adjustment in the Contract Time will be valid if not submitted in accordance with the requirements of this paragraph 11.1.

### **11.2 Justification for Time Extensions**

The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of CONTRACTOR if a claim is made therefore as provided in paragraph 11.1. Such delays shall include, but not be limited to, acts or neglect by OWNER or others performing additional work as contemplated by Article 6, or to fires, floods, labor disputes, epidemics, abnormal weather conditions or acts of God.

### **11.3 Time Limits**

All time limits stated in the Contract Documents are of the essence of the Agreement. The provisions of this Article 11 shall not exclude recovery for damages (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court costs) for delay by either party.

## **12. WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK**

### **12.1 Warranty and Guarantee**

CONTRACTOR warrants and guarantees to OWNER and CONSULTANT that all Work will be in accordance with the Contract Documents and will not be defective. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article 12.

### **12.2 Access to Work**

CONSULTANT and CONSULTANT'S representatives, other representatives of OWNER, testing agencies and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspecting and testing. CONTRACTOR shall provide proper and safe conditions for such access.

## 12.3 Tests and Inspections

### 12.3.1 Timely Notice

CONTRACTOR shall give CONSULTANT timely notice of readiness of the Work for all required inspections, tests or approvals.

### 12.3.2 Requirements and Responsibilities

The CONSULTANT may require such inspection and testing during the course of the Work as he/she deems necessary to ascertain and assure the integrity and acceptable quality of the materials incorporated and the work performed. Inspection presence may be either full-time or intermittent, and neither the presence nor absence at any time of the CONSULTANT or the INSPECTOR shall relieve the CONTRACTOR of sole responsibility for the acceptability and integrity of the Work or any part thereof.

The costs of sampling, testing, and inspection on-site to ascertain acceptability of the Work and materials will be borne by the OWNER except as otherwise provided. The OWNER will select a testing laboratory to perform such sampling and testing. Sampling and/or testing required by the CONTRACTOR or necessitated by failure of Work or materials to meet the above acceptability test shall be at the expense of the CONTRACTOR.

Inspection services may be performed by the employees of the OWNER or by others selected or designated by the OWNER or the CONSULTANT.

Sampling and/or testing required for manufacturing quality and/or process control, for certification that raw mineral materials or manufactured products are the quality specified in the contract, or to assure the acceptability for incorporation into the Work shall be borne by the CONTRACTOR or the material supplier.

Cost for inspection, sampling, testing, and approvals required by the laws or regulations of any public body having competent jurisdiction shall be borne by the CONTRACTOR or the material supplier.

Sampling and testing will be in accord with pertinent codes and regulations and with appropriate standards of the American Society of Testing Materials or other specified standards.

### 12.3.3 On-Site Construction Test and Other Testing

All inspections, tests or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by organizations acceptable to OWNER and CONTRACTOR (or by CONSULTANT if so specified).

#### 12.3.4 Covered Work

If any Work (including the work of others) that is to be inspected, tested or approved is covered without written concurrence of CONSULTANT, it must, if requested by CONSULTANT, be uncovered for observation. Such uncovering shall be at CONTRACTOR'S expense unless CONTRACTOR has given CONSULTANT timely notice of CONTRACTOR'S intention to cover the same and CONSULTANT has not acted with reasonable promptness in response to such notice.

#### 12.3.5 CONTRACTOR'S Obligation

Neither observations by CONSULTANT nor inspections, tests or approvals by others shall relieve CONTRACTOR from CONTRACTOR'S obligations to perform the Work in accordance with the Contract Documents.

#### 12.4 **OWNER May Stop the Work**

If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR or any other party.

#### 12.5 **Correction or Removal of Defective Work**

If required by CONSULTANT, CONTRACTOR shall promptly, as directed, either correct all defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by CONSULTANT, remove it from the site and replace it with non-defective Work. CONTRACTOR shall bear all direct, indirect and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

#### 12.6 **One Year Correction Period**

If within one year after the date of Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER'S written instructions, either correct such defective Work, or, if it has been rejected by OWNER, remove it from the site and replace it with non-defective Work. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement

(including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by CONTRACTOR. In special circumstances where a particular item of equipment is placed in continuous service before Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Change Order.

**12.7 Acceptance of Defective Work**

If, instead of requiring correction or removal and replacement of defective Work, OWNER prefers to accept it, OWNER may do so. CONTRACTOR shall bear all direct, indirect and consequential costs attributable to OWNER'S evaluation of and determination to accept such defective Work (such costs to be approved by CONSULTANT as to reasonableness and to include but not be limited to fees and charges of engineers, architects, attorneys and other professionals).

**12.8 OWNER May Correct Defective Work**

If CONTRACTOR fails within a reasonable time after written notice of CONSULTANT to proceed to correct and to correct defective Work or to remove and replace rejected Work as required by CONSULTANT in accordance with paragraph 12.5, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days' written notice to CONTRACTOR, correct and remedy any such deficiency. In exercising the rights and remedies under this paragraph OWNER shall proceed expeditiously. To the extent necessary to complete corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the site, take possession of all or part of the Work, and suspend CONTRACTOR'S services related thereto, take possession of CONTRACTOR'S tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER'S representatives, agents and employees such access to the site as may be necessary to enable OWNER to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of OWNER in exercising such rights and remedies will be charged against CONTRACTOR in an amount approved as to reasonableness by CONSULTANT, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price. Such direct, indirect and consequential costs will include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all court costs and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of CONTRACTOR'S defective Work. CONTRACTOR shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by OWNER of OWNER'S rights and remedies hereunder.

### **13. PAYMENTS TO CONTRACTOR AND COMPLETION**

#### **13.1 Schedule of Values**

The schedule of values established as provided in paragraph 2.8 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to CONSULTANT. Progress payments on account of Unit Price Work will be based on the number of units completed.

#### **13.2 Application for Progress Payment**

At least ten days before each progress payment is scheduled (but not more often than once a month), CONTRACTOR shall submit to CONSULTANT for review an Application for Payment filled out and signed by CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice or other documentation warranting that OWNER has received the materials and equipment free and clear of all liens, charges, security interests and encumbrances (which are hereinafter in these General Conditions referred to as "Liens") and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect OWNER'S interest therein, all of which will be satisfactory to OWNER. OWNER shall, within thirty (30) calendar days of presentation to him of an approved Application for Payment, pay CONTRACTOR the amount approved by CONSULTANT. Monthly progress payments shall be ninety (90) percent of the sum obtained by applying the respective bid unit prices to the approved estimated quantities of work completed by the Contractor during the preceding month. The remaining ten (10) percent will be held by the Owner, as retainage. At such time as the CONSULTANT deems appropriate - based on the quality of work performed, progress of cleanup, and other pertinent factors - the rate of retainage, or the total amount retained, may be reduced; although, any reduction in retainage, below the ten (10) percent level, is made solely at the CONSULTANT's discretion. All remaining retainage held will be included in the final payment to the Contractor.

#### **13.3 CONTRACTOR'S Warranty of Title**

CONTRACTOR warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens.

## **13.4 Review of Applications for Progress Payment**

### **13.4.1 Submission of Application for Payment**

CONSULTANT will, after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to OWNER, or return the Application to CONTRACTOR indicating in writing CONSULTANT'S reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application.

### **13.4.2 CONSULTANT'S Recommendation**

CONSULTANT may refuse to recommend the whole or any part of any payment, if, in CONSULTANT'S opinion, it would be incorrect to make such representations to OWNER. CONSULTANT may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended, to such extent as may be necessary in CONSULTANT'S opinion to protect OWNER from loss because:

13.4.2.1 the Work is defective, or completed Work has been damaged requiring correction or replacement;

13.4.2.2 the Contract Price has been reduced by Written Amendment or Change Order;

13.4.2.3 OWNER has been required to correct defective Work or complete Work in accordance with paragraph 12.8; or

13.4.2.4 of CONSULTANT's actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.2.1 through 14.2.9 inclusive.

## **13.5 Partial Utilization**

OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and has been completed. If CONTRACTOR agrees, CONTRACTOR will certify to OWNER that said part of the Work is complete and request that a Certificate of Completion be issued for that part of the Work.

## **13.6 Final Inspection**

Upon written notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, CONSULTANT will make a final inspection with CONTRACTOR and will notify CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies.

### **13.7 Final Application for Payment**

After CONTRACTOR has completed all such corrections to the satisfaction of CONSULTANT and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents (as provided in paragraph 5.14) and other documents - all as required by the Contract Documents, and after CONSULTANT has indicated that the Work is acceptable (subject to the provisions of paragraph 13.10), CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers (satisfactory to OWNER) of all Liens arising out of or filed in connection with the Work. In lieu thereof and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full; an affidavit of CONTRACTOR that the releases and receipts include all labor, services, material and equipment for which a Lien could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or OWNER'S property might in any way be responsible, have been paid or otherwise satisfied; and consent of the surety, if any, to final payment. If any Subcontractor or Supplier fails to furnish a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

### **13.8 Final Payment and Acceptance**

#### **13.8.1 CONSULTANT'S Approval**

If, on the basis of CONSULTANT'S observation of the Work during construction and final inspection, and CONSULTANT'S review of the final Application for Payment and accompanying documentation - all as required by the Contract Documents, CONSULTANT is satisfied that the Work has been completed and CONTRACTOR'S other obligations under the Contract Documents have been fulfilled, CONSULTANT will, after receipt of the final Application for Payment, indicate in writing CONSULTANT'S recommendation of payment and present the Application to OWNER for payment. Thereupon CONSULTANT will give written notice to OWNER and CONTRACTOR that the Work is acceptable, subject to the provisions of paragraph 13.10. Otherwise, CONSULTANT will return the Application to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application.

#### **13.8.2 Delay in Completion of Work**

If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed, OWNER shall, upon receipt of CONTRACTOR'S final Application for Payment and recommendation of CONSULTANT, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is

less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 10 of Part II, Information for Bidders, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to CONSULTANT with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

**13.9 CONTRACTOR'S Continuing Obligation**

CONTRACTOR'S obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by CONSULTANT, nor the issuance of a certificate of Completion, nor any payment by OWNER to CONTRACTOR under the Contract Documents, nor any use or occupancy of the Work or any part thereof by OWNER, nor any act of acceptance by OWNER nor any failure to do so, nor any review and approval of a Shop Drawing or sample submission, nor any correction of defective Work by OWNER will constitute an acceptance of Work not in accordance with the Contract Documents or a release of CONTRACTOR'S obligation to perform the Work in accordance with the Contract Documents (except as provided in paragraph 13.10).

**13.10 Waiver of Claims**

The making and acceptance of final payment will constitute:

**13.10.1** a waiver of all claims by OWNER against CONTRACTOR, except claims arising from unsettled Liens, from defective Work appearing after final inspection or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein; however, it will not constitute a waiver by OWNER of any rights in respect of CONTRACTOR'S continuing obligations under the Contract Documents; and

**13.10.2** a waiver of all claims by CONTRACTOR against OWNER other than those previously made in writing and still unsettled.

**14. SUSPENSION OF WORK AND TERMINATION**

**14.1 OWNER May Suspend Work**

OWNER may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety days by notice in writing to CONTRACTOR and CONSULTANT which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if CONTRACTOR makes an approved claim therefor as provided in Articles 10 and 11.



**14.2 OWNER May Terminate**

The OWNER may terminate the Work upon the occurrence of any one or more of the following events:

**14.2.1** if CONTRACTOR commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if CONTRACTOR takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency;

**14.2.2** if a petition is filed against CONTRACTOR under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against CONTRACTOR under any other federal or state law in effect at the time relating to bankruptcy or insolvency;

**14.2.3** if CONTRACTOR makes a general assignment for the benefit of creditors;

**14.2.4** if a trustee, receiver, custodian or agent of CONTRACTOR is appointed under applicable law or under contract, whose appointment or authority to take charge of property of CONTRACTOR is for the purpose of enforcing a Lien against such property or for the purpose of general administration of such property for the benefit of CONTRACTOR'S creditors;

**14.2.5** if CONTRACTOR admits in writing an inability to pay its debts generally as they become due;

**14.2.6** if CONTRACTOR persistently fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.8 as revised from time to time);

**14.2.7** if CONTRACTOR disregards Laws or Regulations of any public body having jurisdiction;

**14.2.8** if CONTRACTOR disregards the authority of CONSULTANT, or

**14.2.9** if CONTRACTOR otherwise violates in any substantial way any provisions of the Contract Documents;

OWNER may, after giving CONTRACTOR (and the surety) seven days' written notice and to the extent permitted by Laws and Regulations,

terminate the services of CONTRACTOR, exclude CONTRACTOR from the site and take possession of the Work and of all CONTRACTOR'S tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct, indirect and consequential costs of completing the Work (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) such excess will be paid to CONTRACTOR. If such costs exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such costs incurred by OWNER will be approved as to reasonableness by CONSULTANT and incorporated in a Change Order, but when exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

**14.2.10** If safety violations are observed and brought to the Contractors attention and Contractor fails to take immediate corrective measures any repeat of similar safety violations, Owner will order an immediate termination of contract. Note: it is the Contractor's responsibility to know proper safety measures as they pertain to construction and OSHA.

**14.2.11** This contract may be canceled by either party thirty (30) days after delivery by canceling party of written notice of intent to cancel to the other contracting party.

**14.2.12** This contract may be canceled by the Lexington-Fayette Urban County Government if it is determined that the Bidder has failed to perform under the terms of this agreement, such cancellation to be effective upon receipt of written notice of cancellation by the Bidder.

**14.3 CONTRACTOR'S Services Terminated**

Where CONTRACTOR'S services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

**14.4 Payment After Termination**

Upon seven days' written notice to CONTRACTOR, OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Agreement. In such case, CONTRACTOR shall be paid for all Work executed and any expense sustained plus reasonable termination expenses, which

will include, but not be limited to, direct, indirect and consequential costs (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs).

**14.5 CONTRACTOR May Stop Work or Terminate**

If, through no act or fault of CONTRACTOR, the Work is suspended for a period of more than ninety days by OWNER or under an order of court or other public authority, or CONSULTANT fails to act on any Application for Payment within sixty days after it is submitted, or OWNER fails for sixty days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days' written notice to OWNER and CONSULTANT, terminate the Agreement and recover from OWNER payment for all Work executed and any expense sustained plus reasonable termination expenses. In addition and in lieu of terminating the Agreement, if CONSULTANT has failed to act on an Application for Payment or OWNER has failed to make any payment as aforesaid, CONTRACTOR may upon seven days' written notice to OWNER and CONSULTANT stop the Work until payment of all amounts then due. The provisions of this paragraph shall not relieve CONTRACTOR of the obligations under paragraph 5.16 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with OWNER.

**15. MISCELLANEOUS**

**15.1 Claims for Injury or Damage**

Should OWNER or CONTRACTOR suffer injury or damage to person or property because of any error, omission or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time of the first observance of such injury or damage. The provisions of this paragraph 15.1 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.

**15.2 Non-Discrimination in Employment**

The CONTRACTOR shall comply with the following requirements prohibiting discrimination:

**15.2.1** That no person (as defined in KRS 344.010) shall bid on Lexington-Fayette Urban County Government construction projects, or bid to furnish materials or supplies to the Lexington-Fayette Urban County Government, if, within six months prior to the time of opening of bids, said person shall have been found, by declaratory judgment action in Fayette Circuit Court, to be presently engaging in an unlawful practice, as hereinafter defined. Such declaratory judgment action may be brought by an aggrieved individual or upon an allegation that an effort at conciliation pursuant to KRS 344.200 has been attempted and failed, by the Lexington-Fayette County Human Rights Commission.

**15.2.2** That it is an unlawful practice for an employer:

**15.2.2.1** to fail or refuse to hire, or to discharge any individual or otherwise to discriminate against an individual, with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, sex, age, or national origin; or

**15.2.2.2** to 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 sex, race, color, religion, age, or national origin.

**15.2.3** That it is an unlawful practice for an employer, labor organization, or joint-labor management committee controlling apprenticeship or other training or retraining, including on-the-job training programs to discriminate against an individual because of his race, color, religion, sex, age, or national origin in admission to, or employment in, any program established to provide apprenticeship or other training.

**15.2.4** That a copy of this Ordinance shall be furnished all suppliers and made a part of all bid specifications.

**15.2.5** This Ordinance shall take effect after it is signed, published and recorded, as required by law.

**15.3 Temporary Street Closing or Blockage**

The CONTRACTOR will notify the CONSULTANT at least 72 hours prior to making any temporary street closing or blockage. This will permit orderly notification to all concerned public agencies. Specific details and restrictions on street closure or blockage are contained in the Special Conditions.

**15.4 Percentage of Work Performed by prime CONTRACTOR**

The CONTRACTOR shall perform on site, and with its own organization, Work equivalent to at least fifty (50%) percent of the total amount of Work to be performed under the Contract. This percentage may be reduced by a supplemental agreement to this Contract if, during performing the Work, the CONTRACTOR requests a reduction and the CONSULTANT determines that the reduction would be to the advantage of the OWNER.

**15.5 Clean-up**

Cleanup shall progress, to the greatest degree practicable, throughout the course of the Work. The Work will not be considered as completed, and final payment will not be made, until the right-of-way and all ground occupied or affected by the

Contractor in connection with the Work has been cleared of all rubbish, equipment, excess materials, temporary structures, and weeds. Rubbish and all waste materials of whatever nature shall be disposed of, off of the project site, in an acceptable manner. All property, both public and private, which has been damaged in the prosecution of the Work, shall be restored in an acceptable manner. All areas shall be draining, and all drainage ways shall be left unobstructed, and in such a condition that drift will not collect or scour be induced.

**15.6 General**

The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon CONTRACTOR by paragraphs 12.1, 12.3.5, 13.3, and 15.2 and all of the rights and remedies available to OWNER and CONSULTANT thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply. All representations, warranties and guarantees made in the Contract Documents will survive final payment and termination or completion of the Agreement.

**15.7 Debris Disposal**

For all LFUCG projects any trash, construction demolition debris, yard waste, dirt or debris of any kind that is removed from the project site must be disposed of in accordance with local, state, and federal regulations. The disposal site or facility must be approved in advance by the LFUCG and disposal documentation is required. The Contractor will be responsible for payment of any fines associated with improper disposal of material removed from the project site.

END OF SECTION



**PART V**  
**SPECIAL CONDITIONS**  
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1. **BLASTING** – not applicable.
2. **RISK MANAGEMENT PROVISIONS**  
**INSURANCE AND INDEMNIFICATION**

**INDEMNIFICATION AND HOLD HARMLESS PROVISION**

- (1) It is understood and agreed by the parties that Contractor hereby assumes the entire responsibility and liability for any and all damages to persons or property caused by or resulting from or arising out of any act or omission on the part of Contractor or its employees, agents, servants, owners, principals, licensees, assigns or subcontractors of any tier (hereinafter "CONTRACTOR") under or in connection with this agreement and/or the provision of goods or services and the performance or failure to perform any work required thereby.
- (2) CONTRACTOR shall indemnify, save, hold harmless and defend the Lexington-Fayette Urban County Government and its elected and appointed officials, employees, agents, volunteers, and successors in interest (hereinafter "LFUCG") from and against all liability, damages, and losses, including but not limited to, demands, claims, obligations, causes of action, judgments, penalties, fines, liens, costs, expenses, interest, defense costs and reasonable attorney's fees that are in any way incidental to or connected with, or that arise or are alleged to have arisen, directly or indirectly, from or by CONTRACTOR's performance or breach of the agreement and/or the provision of goods or services provided that: (a) it is attributable to personal injury, bodily injury, sickness, or death, or to injury to or destruction of property (including the loss of use resulting therefrom), or to or from the negligent acts, errors or omissions or willful misconduct of the CONTRACTOR; and (b) not caused solely by the active negligence or willful misconduct of LFUCG.
- (3) In the event LFUCG is alleged to be liable based upon the above, CONTRACTOR shall defend such allegations and shall bear all costs, fees and expenses of such defense, including but not limited to, all reasonable attorneys' fees and expenses, court costs, and expert witness fees and expenses, using attorneys approved in writing by LFUCG, which approval shall not be unreasonably withheld.
- (4) These provisions shall in no way be limited by any financial responsibility or insurance requirements, and shall survive the termination of this agreement.
- (5) LFUCG is a political subdivision of the Commonwealth of Kentucky. CONTRACTOR acknowledges and agrees that LFUCG is unable to provide indemnity or otherwise save, hold harmless, or defend the CONTRACTOR in any manner.

**FINANCIAL RESPONSIBILITY**



BIDDER/CONTRACTOR understands and agrees that it shall, prior to final acceptance of its bid and the commencement of any work, demonstrate the ability to assure compliance with the above Indemnity provisions and these other risk management provisions.

**INSURANCE REQUIREMENTS**

YOUR ATTENTION IS DIRECTED TO THE INSURANCE REQUIREMENTS BELOW, AND YOU MAY NEED TO CONFER WITH YOUR INSURANCE AGENTS, BROKERS, OR CARRIERS TO DETERMINE IN ADVANCE OF SUBMISSION OF A RESPONSE THE AVAILABILITY OF THE INSURANCE COVERAGES AND ENDORSEMENTS REQUIRED HEREIN. IF YOU FAIL TO COMPLY WITH THE INSURANCE REQUIREMENTS BELOW, YOU MAY BE DISQUALIFIED FROM AWARD OF THE CONTRACT.

**Required Insurance Coverage**

BIDDER/CONTRACTOR shall procure and maintain for the duration of this contract the following or equivalent insurance policies at no less than the limits shown below and cause its subcontractors to maintain similar insurance with limits acceptable to LFUCG in order to protect LFUCG against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by CONTRACTOR. The cost of such insurance shall be included in any bid:

<b><u>Coverage</u></b>	<b><u>Limits</u></b>
General Liability aggregate (Insurance Services Office Form CG 00 01)	\$1 million per occurrence, \$2 million or \$2 million combined single limit
Commercial Automobile Liability occurrence (Insurance Services Office Form CA 0001)	combined single, \$1 million per occurrence
Worker's Compensation	Statutory
Employer's Liability	\$500,000.00

The policies above shall contain the following conditions:

- a. All Certificates of Insurance forms used by the insurance carrier shall be properly filed and approved by the Department of Insurance for the Commonwealth of Kentucky (DOI). LFUCG shall be named as an additional insured in the General Liability Policy and Commercial Automobile Liability Policy using the Kentucky DOI approved forms.
- b. The General Liability Policy shall be primary to any insurance or self-insurance retained by LFUCG.
- c. The General Liability Policy shall include a Products and Completed Operations endorsement or Premises and Operations Liability endorsement unless deemed not

to apply by LFUCG.

- d. LFUCG shall be provided at least 30 days advance written notice via certified mail, return receipt requested, in the event any of the required policies are canceled or non-renewed.
- e. Said coverage shall be written by insurers acceptable to LFUCG and shall be in a form acceptable to LFUCG. Insurance placed with insurers with a rating classification of no less than Excellent (A or A-) and a financial size category of no less than VIII, as defined by the most current Best's Key Rating Guide shall be deemed automatically acceptable.

#### Renewals

After insurance has been approved by LFUCG, evidence of renewal of an expiring policy must be submitted to LFUCG, and may be submitted on a manually signed renewal endorsement form. If the policy or carrier has changed, however, new evidence of coverage must be submitted in accordance with these Insurance Requirements.

#### Deductibles and Self-Insured Programs

**IF YOU INTEND TO SUBMIT A SELF-INSURANCE PLAN IT MUST BE FORWARDED TO LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT, DIVISION OF RISK MANAGEMENT, 200 EAST MAIN STREET, LEXINGTON, KENTUCKY 40507 NO LATER THAN A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO THE RESPONSE DATE.**

Self-insurance programs, deductibles, and self-insured retentions in insurance policies are subject to separate approval by Lexington-Fayette Urban County Government's Division of Risk Management, upon review of evidence of BIDDER/CONTRACTOR's financial capacity to respond to claims. Any such programs or retentions must provide LFUCG with at least the same protection from liability and defense of suits as would be afforded by first-dollar insurance coverage. If BIDDER/CONTRACTOR satisfies any portion of the insurance requirements through deductibles, self-insurance programs, or self-insured retentions, BIDDER/CONTRACTOR agrees to provide Lexington-Fayette Urban County Government, Division of Risk Management, the following data prior to the final acceptance of bid and the commencement of any work:

- a. Latest audited financial statement, including auditor's notes.
- b. Any records of any self-insured trust fund plan or policy and related accounting statements.
- c. Actuarial funding reports or retained losses.
- d. Risk Management Manual or a description of the self-insurance and risk management program.
- e. A claim loss run summary for the previous five (5) years.
- f. Self-Insured Associations will be considered.

Safety and Loss Control

CONTRACTOR shall comply with all applicable federal, state, and local safety standards related to the performance of its works or services under this Agreement and take necessary action to protect the life, health and safety and property of all of its personnel on the job site, the public, and LFUCG.

Verification of Coverage

BIDDER/CONTRACTOR agrees to furnish LFUCG with all applicable Certificates of Insurance signed by a person authorized by the insurer to bind coverage on its behalf prior to final award, and if requested, shall provide LFUCG copies of all insurance policies, including all endorsements.

Right to Review, Audit and Inspect

CONTRACTOR understands and agrees that LFUCG may review, audit and inspect any and all of its records and operations to insure compliance with these Insurance Requirements.

DEFAULT

BIDDER/CONTRACTOR understands and agrees that the failure to comply with any of these insurance, safety, or loss control provisions shall constitute default and that LFUCG may elect at its option any single remedy or penalty or any combination of remedies and penalties, as available, including but not limited to purchasing insurance and charging BIDDER/CONTRACTOR for any such insurance premiums purchased, or suspending or terminating the work.

00470806

3. **WAGE SCALES** – not applicable.

END OF SECTION



# CERTIFICATE OF LIABILITY INSURANCE

ECMAT-1

OP ID: J6

DATE (MM/DD/YYYY)

06/27/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).**

PRODUCER Roeding Group Companies, Inc PO Box 17900 Crestview Hills, KY 41017 Rob Hoenscheld	CONTACT NAME:		
	PHONE (A/C, No, Ext):	FAX (A/C, No):	
E-MAIL ADDRESS:			
INSURER(S) AFFORDING COVERAGE		NAIC #	
INSURER A: AGC KY ASSOC GEN CONT			
INSURED E.C. Matthews Company, Inc. Thomas & Janet Matthews 2265 Harrodsburg Rd Lexington, KY 40504	INSURER B: OHIO CASUALTY		24074
	INSURER C:		
	INSURER D:		
	INSURER E:		
	INSURER F:		

## COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:


THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADJL SUBR INSR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
B	<b>GENERAL LIABILITY</b> <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO. JECT <input type="checkbox"/> LOC		CBP8815934	07/01/2016	07/01/2017	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000
B	<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS		BA8817934	07/01/2016	07/01/2017	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (PER ACCIDENT) \$
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 10,000		CU8818534	07/01/2016	07/01/2017	EACH OCCURRENCE \$ 10,000,000 AGGREGATE \$ 10,000,000
A	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N/A	7461	01/01/2016	01/01/2017	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 4,000,000 E.L. DISEASE - EA EMPLOYEE \$ 4,000,000 E.L. DISEASE - POLICY LIMIT \$ 4,000,000
B	Leased Equipment		CBP8815934	07/01/2016	07/01/2017	380,000
B	Installation		CBP8815934	07/01/2016	07/01/2017	500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)  
 Registration #10391

## CERTIFICATE HOLDER

## CANCELLATION

LFCUGCO	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
LEXINGTON FAYETTE URBAN COUNTY GOVERNMENT CONTRACTORS REGISTRATION 200 EAST MAIN STREET LEXINGTON, KY 40507	AUTHORIZED REPRESENTATIVE 

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**PART VI**  
**CONTRACT AGREEMENT**

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**PART VI**  
**CONTRACT AGREEMENT**

THIS AGREEMENT, made on the **3rd** day of **February, 2017**, by and between **Lexington-Fayette Urban County Government**, acting herein called "OWNER" and **E.C. Matthews Co., Inc.** doing business as a corporation located in the City of **Lexington**, County of **Fayette**, and State of **Kentucky**, hereinafter called "CONTRACTOR."

WITNESSETH: That the CONTRACTOR and the OWNER in consideration of **Three Hundred Twenty Eight Thousand Thirty** Dollars and **zero** Cents (**\$328,030.00**) quoted in the proposal by the CONTRACTOR, dated **October 18, 2016** hereby agree to commence and complete the construction described as follows:

**1. SCOPE OF WORK**

The CONTRACTOR shall furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Proposal, the General Conditions, and the Special Conditions of the Contract, the Specifications and Contract Documents therefore as prepared by **EA Partners LLC** for **Retention Wall Repair at Kearney Hill Golf Links** project.

**2. TIME OF COMPLETION**

The time period estimated and authorized by the OWNER for the proper execution of the Work by the Contract, in full, is hereby fixed as one hundred twenty (120) calendar days. The time shall begin in accordance with the Notice to Proceed provided by OWNER.

**3. ISSUANCE OF WORK ORDERS**

Notice to begin Work will be given in whole or for part of the Work as determined by the OWNER pending the availability of funds. The order of construction will be as determined by the Engineer after consultation with the CONTRACTOR and the OWNER.

**4. THE CONTRACT SUM**

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the Contract, as quoted in the proposal, subject to any additions and deductions, as provided therein.

**5. LIQUIDATED DAMAGES**

It is mutually agreed by and between the parties hereto that time is of the essence of this Contract, and that there will be sustained by the OWNER damages, monetary and otherwise, in the event of delay in the completion of the Work hereby contracted. The CONTRACTOR will be held

responsible to the OWNER for delays in completion of the Work herein contracted beyond the date set for completion. Such monetary damage shall be deducted from the Contract sum in the amount of TWO HUNDRED DOLLARS (\$200.00) per calendar day of such delay. If the Work contracted to be done shall not, in good faith, be commenced at the time specified, then the CONTRACTOR together with the Surety or Sureties upon the bond herein provided for, shall be liable for and shall pay to the OWNER all damages sustained by reason of such failure for breach of Contract, and the OWNER may immediately re-let the Work involved.

**6. PROGRESS PAYMENTS**

The OWNER shall make payments on account of the Contract, as provided in accordance with the General Conditions, as estimated by the Engineer, less the aggregate of previous payments.

**7. ACCEPTANCE AND FINAL PAYMENT**

Final payment shall be due within ninety (90) days after completion of the Work; provided the Work be then fully completed and the Contract fully accepted.

Before issuance of final certificate, the CONTRACTOR shall submit evidence satisfactory to the Engineer that all payrolls, material bills, and other indebtedness connected with the Work has been paid.

If, after the Work has been substantially completed, full completion thereof is materially delayed through no fault of the CONTRACTOR, and the ENGINEER so certifies, the OWNER shall upon certificate of the ENGINEER, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

**8. THE CONTRACT DOCUMENTS**

The Advertisement for Bids, Information for Bidders, the General Conditions, Performance and Payment Bonds, Contract Agreement, Special Conditions, Technical Specifications, any and all Addenda, and Proposal, and Plan Drawings form the Contract, and they are fully a part of the Contract as if hereto attached or herein repeated.

**9. EXTRA WORK**

The OWNER, without invalidating the Contract, may order extra work or make changes by altering, adding to or deducting from the Work, the Contract Sum being adjusted accordingly. All such Work shall be executed and paid for in accordance with the General Conditions, which is a part of this Contract.

**10. THE FOLLOWING IS AN ENUMERATION OF THE SPECIFICATIONS AND DRAWINGS (CONTRACT DOCUMENTS):**

## SPECIFICATIONS

SECTION NO.	TITLE	PAGES
I	Advertisement for Bids	AB 1 thru 5
II	Information for Bidders	IB 1 thru 10
III	Form of Proposal	P 1 thru 35
IV	General Conditions	GC 1 thru 51
V	Special Conditions	SC 1 thru 8
VI	Contract Agreement	CA 1 thru 5
VII	Performance and Payment Bonds	PB 1 thru 7
VIII	Addenda	AD 1 thru 1
IX	Technical Specifications	

### ***Division 1 - General Requirements***

Section A	General Provisions	TS 1
Section B	Maintenance of Traffic	TS 6
Section C	Final Cleanup	TS 8
Section D	Mobilization and Demobilization	TS 10
Section E	Payment/Performance Bond	TS 11

### ***Division 2 - Site Work***

Section 02100	Erosion Control	TS 12
Section 02105	Water Pollution Control	TS 21
Section 02110	Clearing and Grubbing	TS 25
Section 02222	Roadway and Drainage Excavation	TS 27
Section 02223	Embankment	TS 32
Section 02224	Borrow Excavation	TS 36
Section 02225	Slope Protection & Channel Lining	TS 37
Section 02230	Subgrade	TS 41
Section 02231	Dense Graded Aggregate Base	TS 43
Section 02510	Bituminous Concrete Base, Class I	TS 46
Section 02511	Bituminous Concrete Surface, Class I	TS 49
Section 02512	Bituminous Prime and Tack Coat	TS 50
Section 02520	Concrete Pavement	TS 55
Section 02950	I-Beam/Timber Lagging Retaining Wall	TS 78



**Division 3 – Concrete**

Section 03200      Concrete Reinforcement  
Section 03300      Cast In Place Concrete

TS 82  
TS 85

**APPENDIX A      Geotechnical Report**

**PLAN DRAWINGS – Drawings and Photos**

IN WITNESSETH WHEREOF, the parties hereto have executed this Contract as of the date and year above written.

(Seal)

Lexington-Fayette Urban County Government.  
Lexington, Kentucky

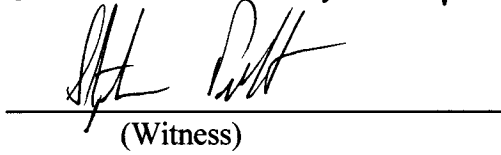
(Owner)

ATTEST:

  
Clerk of the Urban County Council

BY:

  
MAYOR

  
(Witness)

(Title)

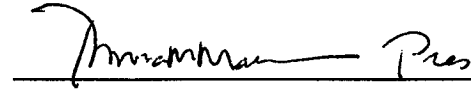
(Seal)

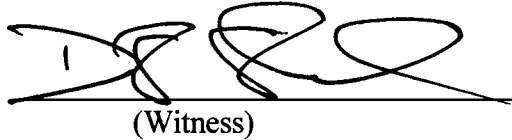
EC Matthews Co, Inc

(Contractor)

  
(Secretary)\*

BY:

  
Pres

  
(Witness)

President

(Title)

2265 Harrodsburg Rd Lexington Ky 40504  
(Address and Zip Code)

IMPORTANT: \*Strike out any non-applicable terms.

Secretary of the Owner should attest. If the CONTRACTOR is corporation, Secretary should attest. Give proper title of each person-executing Contract.

RESOLUTION NO. 721 - 2016

A RESOLUTION ACCEPTING THE BID OF E.C. MATTHEWS CO. INC., IN THE AMOUNT OF \$328,030.00, FOR RETENTION WALL REPAIR AT KEARNY HILL GOLF LINKS, FOR THE DIVISION OF PARKS AND RECREATION, AND AUTHORIZING THE MAYOR, ON BEHALF OF THE URBAN COUNTY GOVERNMENT, TO EXECUTE AN AGREEMENT WITH E.C. MATTHEWS CO. INC., RELATED TO THE BID.

BE IT RESOLVED BY THE COUNCIL OF THE LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT:

Section 1 - That the bid of E.C. Matthews Co. Inc., in the amount of \$328,030.00, for Retention Wall Repair at Kearny Hill Golf Links, for the Division of Parks and Recreation, be and hereby is accepted and approved as to the specifications and amounts set forth in the terms of the bid and agreement, which are attached hereto and incorporated herein by reference, and the Mayor, on behalf of the Lexington-Fayette Urban County Government, be and hereby is authorized to execute the attached agreement with E.C. Matthews Co. Inc., related to the bid.

Section 2 - That an amount, not to exceed the sum of \$328,030.00 be and hereby is approved for payment to E.C. Matthews Co. Inc., from account #1105-707602-91015 (\$170,000.00), account #1101-707601-76101 (\$15,255.00), account #2600-707602-91015 (\$119,480.00), account #2604-707602-91015 (\$22,500.00), and account #2518-707602-91015 (\$795.00), pursuant to the terms of the bid and agreement.

Section 3 - That this Resolution shall become effective on the date of its passage.

PASSED URBAN COUNTY COUNCIL: December 6, 2016

MAYOR



ATTEST:

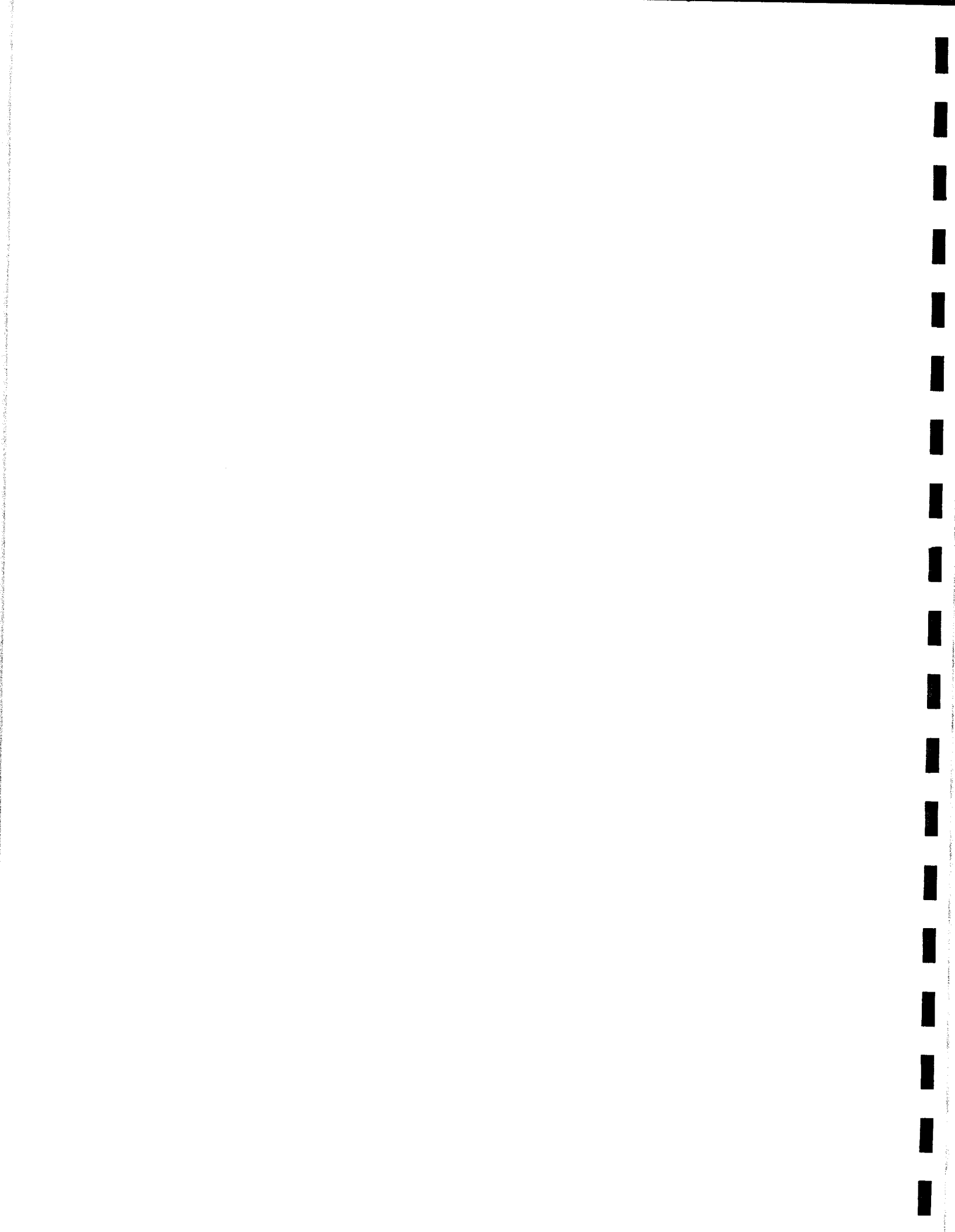
  
CLERK OF URBAN COUNTY COUNCIL  
1302-16.D:\B.X:\Cases\PARKS\16-LE0001\LEG\00554985.DOC



PART VII

PERFORMANCE AND PAYMENT BONDS

1. PERFORMANCE BOND
2. PAYMENT BOND



# THE AMERICAN INSTITUTE OF ARCHITECTS



Bond #30001181

AIA Document A312

## Performance Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

E.C. Matthews Company, Inc.  
2265 Harrodsburg Road  
Lexington, KY 40504

SURETY (Name and Principal Place of Business):

Western Surety Company  
333 S. Wabash Avenue, 41<sup>st</sup> Floor  
Chicago, IL 60604

OWNER (Name and Address): Lexington-Fayette Urban County Government  
101 East Vine Street  
Lexington, KY 40507

### CONSTRUCTION CONTRACT

Date: 02/07/2017

Amount: Three Hundred Twenty Eight Thousand Thirty Dollars and Zero Cents (\$328,030.00)

Description (Name and Location): Retention Wall Repair at Kearney Hill Golf Links.

### BOND

Date (Not earlier than Construction Contract Date): 02/07/2017

Amount: Three Hundred Twenty Eight Thousand Thirty Dollars and Zero Cents (\$328,030.00)

Modifications to this Bond:  None  See Page 3

### CONTRACTOR AS PRINCIPAL

Company: E.C. Matthews Company, Inc. (Corporate Seal)

### SURETY

Company: Western Surety Company  
(Corporate Seal)

Signature: \_\_\_\_\_

Name and Title: \_\_\_\_\_

Handwritten signature of the contractor representative, appearing to be "Tom...".

Signature: \_\_\_\_\_

Name and Title: Tonia C. Kennedy  
Attorney-In-Fact

Handwritten signature of Tonia C. Kennedy.

(Any additional signatures appear on page 3)

(FOR INFORMATION ONLY - Name, Address and Telephone)

AGENT or BROKER:

Roeding Insurance  
1056 Wellington Way, Ste. 130  
Lexington, KY 40513  
859-296-4580

OWNER'S REPRESENTATIVE (Architect, Engineer or other party):





1 The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators,

successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2 If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in conferences as provided in Subparagraph 3.1.

3 If there is no Owner Default, the Surety's obligation under this Bond shall arise after:

3.1 The Owner has notified the Contractor and the Surety at its address described in Paragraph 10 below that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default; and

3.2 The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the contract. Such Contractor Default shall not be declared earlier than twenty days after the Contractor and the Surety have received notice as provided in Subparagraph 3.1; and

3.3 The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Construction Contract or to a contractor selected to perform the Construction Contract in accordance with the terms of the contract with the Owner.

4 When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

4.1 Arrange for the Contractor, with consent of the Owner, to perform and complete the Construction Contract; or

4.2 Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or

4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and the contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default; or

4.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

.1 After investigation, determine the amount for

which it may be liable to the Owner and, as soon as practicable after the amount is determined, tender payment therefor to the Owner; or

.2 Deny liability in whole or in part and notify the Owner citing reasons therefor.

5 If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the surety proceeds as provided in Subparagraph 4.4, and the Owner refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

6 After the Owner has terminated the Contractor's right to complete the Construction Contract, and if the Surety elects to act under Subparagraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. To the limit of the amount of this Bond, but subject to commitment by the Owner of the Balance of the Contract Price to mitigation of costs and damages on the Construction Contract, the Surety is obligated without duplication for:

6.1 The responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

6.2 Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 4; and

6.3 Liquidated damages, or if not liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

7 The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators or successors.

8 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

9 Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.



10 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page.

11 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

**12 DEFINITIONS**

12.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received

by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

12.2 Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

12.3 Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.

12.4 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

**MODIFICATIONS TO THIS BOND ARE AS FOLLOWS:**

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL  
Company: \_\_\_\_\_ (Corporate Seal)

SURETY  
Company: \_\_\_\_\_ (Corporate Seal)

Signature: \_\_\_\_\_  
Name and Title:  
Address:

Signature: \_\_\_\_\_  
Name and Title:  
Address:



# Western Surety Company

## POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

**Steve Roeding, Rob Hoenscheid, Tonia C Kennedy, Daniel L Scherff, Individually**

of Lexington, KY, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

**- In Unlimited Amounts -**

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation.

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 12th day of February, 2016.

WESTERN SURETY COMPANY



Paul T. Bruflat  
Paul T. Bruflat, Vice President

State of South Dakota }  
County of Minnehaha } ss

On this 12th day of February, 2016, before me personally came Paul T. Bruflat, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is the Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires  
June 23, 2021



J. Mohr  
J. Mohr, Notary Public

### CERTIFICATE

I, L. Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 7th day of February, 2016.



WESTERN SURETY COMPANY

L. Nelson  
L. Nelson, Assistant Secretary



# THE AMERICAN INSTITUTE OF ARCHITECTS



Bond # 30001181

AIA Document A312

## Payment Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

E.C. Matthews Company, Inc.  
2265 Harrodsburg Road  
Lexington, KY 40504

SURETY (Name and Principal Place of Business):

Western Surety Company  
333 S. Wabash Avenue, 41<sup>st</sup> Floor  
Chicago, IL 60604

OWNER (Name and Address): Lexington-Fayette Urban County Government  
101 East Vine Street  
Lexington, KY 40507

### CONSTRUCTION CONTRACT

Date: 02/07/2017

Amount: Three Hundred Twenty Eight Thousand Thirty Dollars and Zero Cents (\$328,030.00)

Description (Name and Location): Retention Wall Repair at Kearney Hill Golf Links.

### BOND

Date (Not earlier than Construction Contract Date): 02/07/2017

Amount: Three Hundred Twenty Eight Thousand Thirty Dollars and Zero Cents (\$328,030.00)

Modifications to this Bond:  None  See Page 6

### CONTRACTOR AS PRINCIPAL

Company: E.C. Matthews Company, Inc. (Corporate Seal)

### SURETY

Company: Western Surety Company  
(Corporate Seal)

Signature: \_\_\_\_\_

Name and Title: \_\_\_\_\_

Handwritten signature of the contractor representative.

Signature: \_\_\_\_\_

Name and Title: Tonia C. Kennedy  
Attorney-In-Fact

Handwritten signature of the surety representative, Tonia C. Kennedy.

(Any additional signatures appear on page 6)

(FOR INFORMATION ONLY - Name, Address and Telephone)

AGENT or BROKER:

Roeding Group Insurance  
1056 Wellington Way, Ste. 130  
Lexington, KY 40513  
859-296-4580

OWNER'S REPRESENTATIVE (Architect, Engineer  
or other party):





1 The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.

2 With respect to the Owner, this obligation shall be null and void if the Contractor:

2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and

2.2 Defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity whose claim, demand, lien or suit is for the payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, provided the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety, and provided there is no Owner Default.

3 With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.

4. The Surety shall have no obligation to Claimants under this Bond until:

4.1 Claimants who are employed by or have a direct contract with the Contractor have given notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

4.2 Claimants who do not have a direct contract with the Contractor:

.1 Have furnished written notice to the Contractor and sent a copy, or notice thereof, to the Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and

.2 Have either received a rejection in whole or in part from the Contractor, or not received within 30 days of furnishing the above notice any communication from the Contractor by which the Contractor has indicated the claim will be paid directly or indirectly; and

.3 Not having been paid within the above 30 days, have sent a written notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the Contractor.

5 If a notice required by Paragraph 4 is given by the Owner to the Contractor or to the Surety, that is sufficient compliance.

6 When the Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:

6.1 Send an answer to the Claimant, with a copy to the Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.

6.2 Pay or arrange for payment of any undisputed amounts.

7 The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

8 Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any Construction Performance Bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

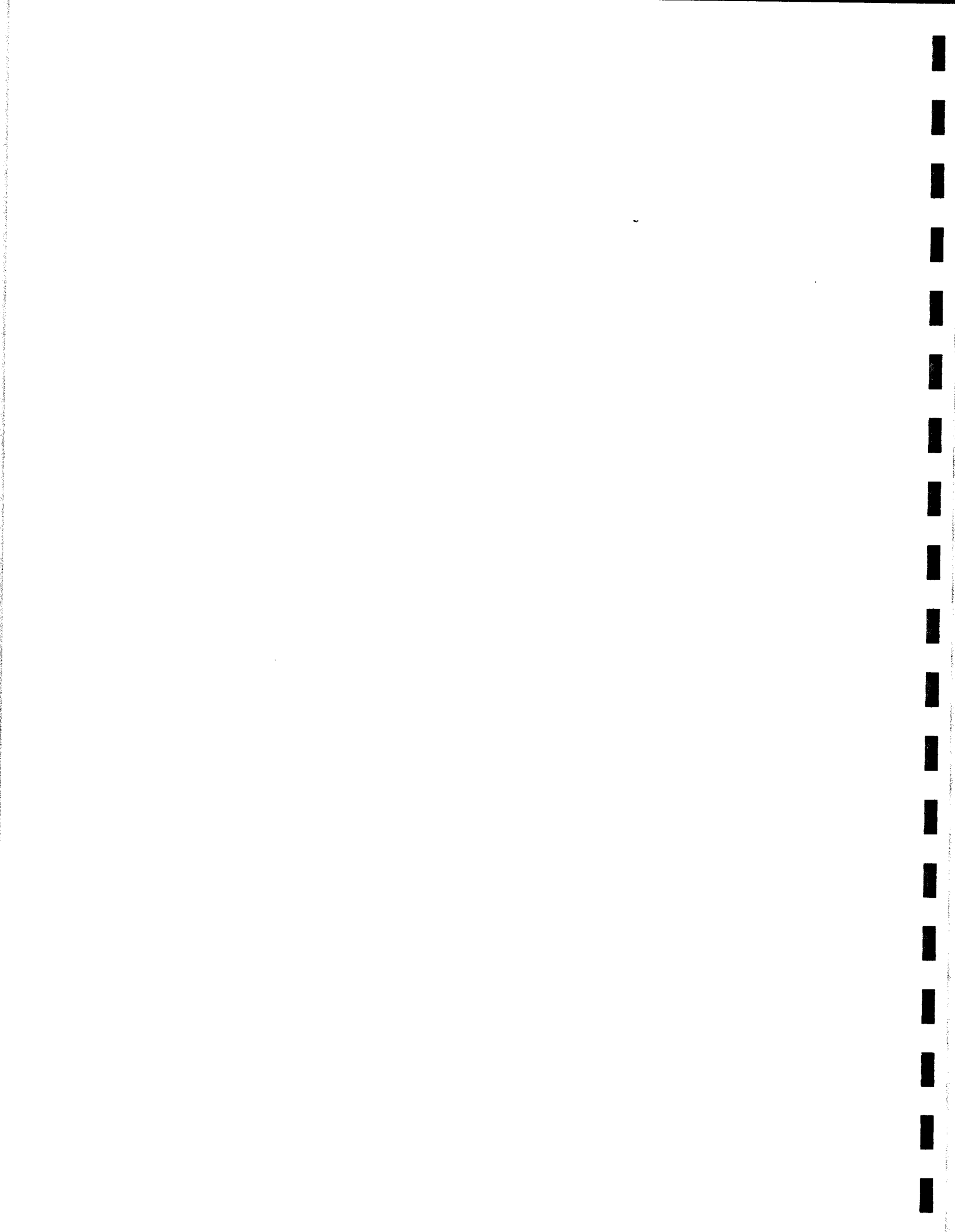
9 The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

11 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the work or part of the work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Subparagraph 4.1 or Clause 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the Owner or the Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirements shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this



Bond shall be construed as a statutory bond and not as a common law bond.

14 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

**15 DEFINITIONS**

15.1 Claimant: An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used

in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

15.2 Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

15.3 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

**MODIFICATIONS TO THIS BOND ARE AS FOLLOWS:** Paragraph 6 of this Bond is deleted in it's entirety and replaced with the following provision:

Within a reasonable time (1) after the Claimant has satisfied the conditions of Paragraph 4 and (2) after the Surety has reviewed all supporting documentation it requested to substantiate the amount of the claim, the Surety shall pay or arrange for payment of any undisputed amounts. Failure of the Surety to satisfy the above requirements shall not be deemed a forfeiture or waiver of the Surety's or the Contractor's defenses under this Bond or their right to dispute such claim. However, in such event the Claimant may bring suit against the Surety as provided under this Bond.

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL  
Company: \_\_\_\_\_ (Corporate Seal)

SURETY  
Company: \_\_\_\_\_ (Corporate Seal)

Signature: \_\_\_\_\_  
Name and Title:  
Address:

Signature: \_\_\_\_\_  
Name and Title:  
Address:



# Western Surety Company

## POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

**Steve Roeding, Rob Hoenscheid, Tonia C Kennedy, Daniel L Scherff, Individually**

of Lexington, KY, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

### - In Unlimited Amounts -

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation.

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 12th day of February, 2016.



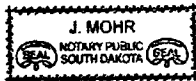
WESTERN SURETY COMPANY

Paul T. Bruflat  
Paul T. Bruflat, Vice President

State of South Dakota }  
County of Minnehaha } ss

On this 12th day of February, 2016, before me personally came Paul T. Bruflat, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is the Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires  
June 23, 2021



J. Mohr  
J. Mohr, Notary Public

### CERTIFICATE

I, L. Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 17th day of February, 2016.



WESTERN SURETY COMPANY

L. Nelson  
L. Nelson, Assistant Secretary



**PART VIII**

**ADDENDA**

All addenda issued during the bidding of the Project will be reproduced in the signed Contract Documents, on the pages following this heading sheet.

<u>Addendum Number</u>	<u>Title</u>	<u>Date</u>
1.	Pre-Bid Sign-in Sheet	9/29/2016
2.	Bid Opening date change	10/3/2016
3.	Opening date change and Q & A.	10/7/2016
4.		
5.		
6.		
7.		

MAYOR JIM GRAY



**LEXINGTON**

TODD SLATIN  
DIRECTOR  
CENTRAL PURCHASING

**ADDENDUM #1**

Bid Number: 129-2016

Date: September 29, 2016

Subject: Retention Wall Repair at Kearney Hill Golf Links

Please address inquiries to:

Conni Hayes, Buyer  
(859) 258-3320

**TO ALL PROSPECTIVE BIDDERS:**

Please be advised of the following clarifications to the above referenced bid:

- 1) Attached, please find the sign-in sheet for the pre-bid meeting held on September 27, 2016.

\_\_\_\_\_  
Todd Slatin, Director  
Division of Central Purchasing

All other terms and conditions of the Bid and specifications are unchanged. This letter should be signed, attached to and become a part of your Bid.

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

SIGNATURE OF BIDDER: \_\_\_\_\_







MAYOR JIM GRAY



**LEXINGTON**

TODD SLATIN  
DIRECTOR  
CENTRAL PURCHASING

**ADDENDUM #2**

**Bid Number: 129-2016**

**Date: October 3, 2016**

**Subject: Retention Wall Repair at Kearney Hill Golf Links**

**Please address inquiries to:**

**Conni Hayes, Buyer  
(859) 258-3320**

**TO ALL PROSPECTIVE BIDDERS:**

Please be advised of the following clarifications to the above referenced bid:

- 1) The bid opening date has changed from Tuesday, October 4, 2016 to Tuesday, October 11, 2016. The time of the opening remains the same – 2:00 pm.

\_\_\_\_\_  
Todd Slatin, Director  
Division of Central Purchasing

All other terms and conditions of the Bid and specifications are unchanged. This letter should be signed, attached to and become a part of your Bid.

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

SIGNATURE OF BIDDER: \_\_\_\_\_



MAYOR JIM GRAY



**LEXINGTON**

TODD SLATIN  
DIRECTOR  
CENTRAL PURCHASING

**ADDENDUM #3**

Bid Number: 129-2016

Date: October 7, 2016

Subject: Retention Wall Repair at Kearney Hill Golf Links

Please address inquiries to:

Conni Hayes, Buyer  
(859) 258-3320

**TO ALL PROSPECTIVE BIDDERS:**

Please be advised of the following clarifications to the above referenced bid:

- 1) The bid opening date has changed from Tuesday, October 11, 2016 to Tuesday, October 18, 2016. The time of the opening remains the same – 2:00 pm.
- 2) Please review the questions from E. C. Matthews and the answers from Tom Hatfield EA Partners below.

Connie-

We were trying to get this job put together this week (bids next Tuesday) and noted a few conflicts. We believe it would be in the UCG's best interest to clarify them.

The section notes state that the Contractor is to drill, set, and concrete the HPs. The notes also say the railroad ties and stone will be furnished by the Owner. This section was prepared in 2001 and even includes the items added by Addendum 1 in 2001. That first bid (which we located in our archives) had those same notes but had two alternates ... one for the contractor to provide the wood and one for the contractor to install the wood.

Fast forward to 2016. We were provided the same section with the same notes about the Owner adding "railroad ties" and stone. However, the specs for this (2016) project describe the wood as "pressure treated pine" and the bid form itself (P-6) says "oak timbers". (Note: if you elect to change the bid form you may want to change "I-beams" to "HP shapes"). In any case, we have these questions:

Q1: Please clarify who provides and installs the wood under this contract (base bid and alternates).



My plans do not say anything about the owner providing any of the materials. Contractor to provide and install all work.

Q2: If the Contractor is to provide the wood, please clarify what type of wood is desired? We suggest 8x8 P.T. SYP. Oak would last as long and is prohibitively expensive in 8x8 size, and we don't think railroad ties would be a good choice for a number of reasons.

The timbers provided should meet Category UC4B for pressure treated wood which allows for southern pine.

Q3: The base bid and both alternates are to replace various lengths of wall per the bid form. Please confirm that we can we install the new wall in front of the old wall as shown on the section provided from 2001.

See detail on Sheet 4.

Q4: The drawing done on the Google Earth image includes a description of wall materials that is unlike the walls as described on the unit price bid schedule. Please clarify if some different section is required for any part of this project and provide that wall section for reference.

I do not have this drawing to comment.



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Todd Slatin, Director  
Division of Central Purchasing

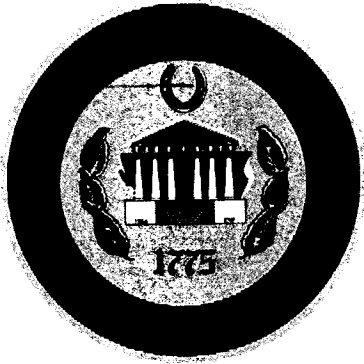
All other terms and conditions of the Bid and specifications are unchanged. This letter should be signed, attached to and become a part of your Bid.

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

SIGNATURE OF BIDDER: \_\_\_\_\_





# TECHNICAL SPECIFICATIONS

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RETENTION WALL REPAIR  
KEARNEY HILL GOLF LINKS  
3403 KEARNEY ROAD  
LEXINGTON KY 40511

LFUCG DEPT. OF GENERAL SERVICES  
DIVISION OF PARKS & RECREATION  
200 E. MAIN ST.  
LEXINGTON, KY 40507

BID # 129-2016

PREPARED BY: E A PARTNERS, PLC  
311 WALL STREET  
LEXINGTON, KY 40513



**PART IX**  
**TECHNICAL SPECIFICATIONS**

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Section 02105	Water Pollution Control	TS 21
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APPENDIX A – GEOTECHNICAL REPORT

**SECTION A**  
**GENERAL PROVISIONS**

**A.1 KENTUCKY DEPARTMENT OF HIGHWAYS - SPECIFICATIONS**

Except as otherwise indicated on the Plans, and in the Contract Documents and Specifications, all items of Work including materials, construction methods, method of measurement and basis of payment shall comply with the current edition of the *Kentucky Department of Highways (KDOH) Standard Specifications for Road and Bridge Construction* and all current revisions.

With regard to the incorporation *Standard Specifications of KDOH* into these Technical Specifications, the following should be noted:

- Unless either the content implicitly or the Plans and Contract Documents and Specifications explicitly indicate otherwise, all KDOH references to "the Department" should be construed as being references to the Lexington-Fayette Urban County Government (LFUCG).
- Any discrepancy between the Standard Specifications of KDOH and the express intentions of Lexington-Fayette Urban County Government (i.e., Plans, Contract Documents and Specifications, and Lexington-Fayette Urban County Government Standard Drawings) shall be resolved in favor of the latter. (An example of one of the more common types of discrepancy is that which sometimes occurs with regard to the measurement of and payment for Work items.)

**A.2 ABBREVIATIONS**

Abbreviations of standards, codes, and publications used within these Specifications are as follows:

ASTM	American Society of Testing and Materials
ANSI	American National Standard Institute
KDOH	Kentucky Department of Highways, "Standard Specifications for Road and Bridge Construction", Current Edition

**A.3 SCOPE**

It is the intent that the CONTRACTOR, in accordance with the Plans, Contract Documents and Specifications, and other mutually acknowledged informational materials shall perform everything required to be performed and to furnish a complete, fully operating Work, and shall provide and furnish all labor, materials, necessary tools, expendable and non-expendable equipment and all transportation services required for the entire, proper, substantial completion of the Work, the cost of all of which shall be included in his bid.

The CONTRACTOR shall make all requisite excavations and foundation preparation for constructing sidewalks, incidental drainage structures, and retaining walls. The CONTRACTOR shall, where required, excavate and prepare subgrade for pavement widening and replacement. The CONTRACTOR shall provide all signs, lighting, barricades, flagmen and watchmen, and make provisions necessary to protect and maintain buildings, fences, trees, shrubs, poles, existing utility fixtures, watercourses, surface drains, or other structures in, on, across, or adjacent to the Work and repair all damage done to them where and as required. The CONTRACTOR shall perform all backfilling, restore walks, grass plots, flowers, shrubs, trees, paved surfaces, etc., damaged or disturbed and clear away all rubbish and surplus materials. The CONTRACTOR shall put in complete and acceptable working order the items covered by the Contract.

This Specification sets forth several items of Work or conditions which are required as integral parts of the successful completion of the Project. All items discussed herein under General Provisions are considered incidental to the overall accomplishment of the Project and no separate payment shall be made therefore unless otherwise noted elsewhere in these specifications.



#### **A.4 CONTRACTOR'S FACILITIES**

A.4.1 Sanitary Facilities: The CONTRACTOR shall provide and maintain all necessary sanitary facilities at the site, in accordance with all applicable regulations, and shall properly remove same at completion of the Project.

A.4.2 Utilities: The obtaining of all utilities which may be required for construction shall be the responsibility of the CONTRACTOR.

#### **A.5 CONTRACTOR'S FIELD OFFICE**

A CONTRACTOR'S Field Office is not required for this project.

#### **A.6 UTILITIES**

The CONTRACTOR is to notify all utility companies prior to beginning construction operations.

It shall be the CONTRACTOR'S responsibility to locate all utilities, make appropriate arrangements regarding relocation, maintain utility service throughout the construction period, and make final relocations at the completion of the Work. The CONTRACTOR shall be responsible for any injury or damage to the existing utilities due to his operations whether shown or not shown in the plans. Where utilities are shown or indicated on the plans, the information given is in accordance with the best information in possession of the OWNER but is approximate only. The data is not warranted to be either complete or correct, and the CONTRACTOR shall assume all risks resulting from the conditions arising from the approximations shown.

The CONTRACTOR shall confer with the utility companies to inform them of the proposed construction schedule, verify the location and elevation of existing utilities and arrange for the relocation and adjustment of any facilities to avoid interference with the proposed construction. All such activities are to be performed under the direction of and with the approval of the ENGINEER.

When the various utility owners find it necessary to make adjustments to their lines where the CONTRACTOR is presently working, the CONTRACTOR is to move his operations to another area of Work so as not to interfere in any way with the utility company's Work.

Any utilities covered up or lost by the construction operations of the CONTRACTOR shall be uncovered and found by the CONTRACTOR and the new construction repaired and/or replaced as directed by the ENGINEER. No additional compensation will be allowed for such Work nor shall any additional payment be allowed for the relocation and adjusting of any utility but shall be considered Incidentals to other Work.

The CONTRACTOR shall make a concerted effort to prevent any disruption of utility services, and if an unintended disruption occurs, the CONTRACTOR shall immediately and safely restore service. If disruption of any of the utility services covered in this section is unavoidable, it will be the responsibility of the CONTRACTOR to notify affected property owners. The CONTRACTOR shall also make every effort to restore said services before quitting Work for the day. In the event this cannot be done, the CONTRACTOR shall provide temporary service to the property owners until permanent service can be restored.

#### **A.7 STAKING AND MARKING**

The survey baseline, if applicable, for the Project has been previously established. Should, prior to beginning of construction, part or all of the baseline be destroyed, it will be the Contractor's responsibility to re-establish this baseline from the reference points shown on the plans or otherwise identified.

The Contractor will furnish and be responsible for all staking necessary to control and complete the Work, according to the Specifications, to the lines and grades shown on the Plans.

The Contractor's staking party shall be under the general supervision of a Licensed Professional Land Surveyor.

## **A. 8 TESTING**

From time to time during the progress of the Work, the ENGINEER may require that testing be performed to determine the materials provided meet the specified requirements. The Lexington-Fayette Urban County Government will select a testing laboratory to perform the testing services. The cost of such services shall be the responsibility of the OWNER. If testing reveals defective materials or Work, the cost of said testing will become the responsibility of the CONTRACTOR.

A.7.1 Codes and Standards: Testing, when required, will be in accordance with all pertinent codes and regulations and with selected standards of the American Society for Testing and Materials.

A.7.2 Cooperation with the Testing Laboratory: Representatives of the testing laboratory shall have ready access to the Work at all times. The CONTRACTOR shall provide facilities for such access in order that the laboratory may properly perform its functions.

## **A.9 INSTALLATION REQUIREMENTS**

Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned as suggested by the respective manufacturers, unless otherwise specified herein or directed by the ENGINEER.

## **A.10 PROOF OF COMPLIANCE**

Whenever the Contract Documents require that a product be in accordance with Federal Specifications, ASTM Designations, ANSI Specifications, or other associations' standards, the CONTRACTOR shall present a certification from the manufacturer that the product complies therewith. When requested or specified, the CONTRACTOR shall submit supporting test data to substantiate compliance.

## **A.11 DUST CONTROL**

The CONTRACTOR shall be responsible for minimizing the generation of dust resulting from his operations at all times. The CONTRACTOR shall be required to maintain all excavations, embankments, stockpiles, roads, permanent access roads, plant sites, waste areas, and all other Work areas within or without the project boundaries free from dust which would cause a hazard or nuisance to others. Approved temporary methods of stabilization consisting of sprinkling, chemical treatment, light bituminous treatment, or similar methods will be permitted to control dust. Dust control shall be performed as the Work proceeds, and whenever a dust nuisance or hazard occurs.

## **A.12 REPAIR OF DAMAGE**

Any damage done to structures, fills, roadways, or other areas shall be repaired at the CONTRACTOR'S expense before final payment is made.

## **A.13 PROJECT EXTENT**

The CONTRACTOR shall be responsible for satisfying himself as to the construction limits for the Project. The CONTRACTOR shall not establish Work, storage, or staging area outside the Project limits, unless otherwise directed or approved by the ENGINEER.

## **A.14 WORKING HOURS**

All Work on this Project shall be restricted to daylight hours, but may be further restricted by the ENGINEER if required; except emergency Work, such as any necessary pumping, which may require 24-hour operation. If the CONTRACTOR elects to Work beyond the normal work week, he shall notify the ENGINEER of his intent as far in advance as possible. Lane closures for all streets with a functional classification above local shall occur only between the hours of 9:00 a.m. and 3:00 p.m., except as approved by the ENGINEER.

**A.15 GUARANTEE**

The CONTRACTOR shall assume responsibility for all workmanship and materials for a period of one year from final payment. Any Work found to be defective due to failure to comply with the provision and intent of the Contract Documents, Specifications, and Plans shall be replaced at the CONTRACTOR'S expense.

**A.16 PROPERTY CONSIDERATION**

Materials having a salvage value shall remain the property of the OWNER. Salvageable material rejected by the OWNER shall become the responsibility of the CONTRACTOR to dispose of in a proper manner subject to the approval of the ENGINEER.

**A.17 BLASTING**

Blasting is addressed in the Special Conditions.

**A.18 HAZARDOUS MATERIAL - GAS LINES**

The CONTRACTOR is advised to exercise caution in his operations on this project, regardless of whether the plans indicate or do not indicate the presence of any gas or hazardous materials carrying lines.

**A.19 DIVERSION OF STORM WATER**

Appropriate measures must be taken to sandbag the necessary manholes and to pump drainage around the area under construction. The CONTRACTOR is responsible for developing a plan to divert storm drainage around the construction area with the approval from the ENGINEER. Materials, labor, and all incidentals necessary to accomplish this diversion of storm drainage will be considered incidental to the contract.

**A.20 SEWER SERVICE MAINTENANCE**

This Work shall consist of maintaining existing sanitary sewer service to residents in the area during construction. Sewage is to be maintained by whatever means necessary. No surcharge of manholes will be allowed.

No separate payment will be made for Sewer Service Maintenance. Sewer Service Maintenance shall include all materials, equipment and labor necessary to maintain sewer service to residents during construction.

**A.21 PROJECT SIGNS**

Prior to construction Project Signs shall be installed in accordance with the Standard Drawings. The exact location shall be established prior to the beginning of the work and shall remain visible during the entire length of the Project. After all Work is complete and prior to final inspection, the signs shall be removed and disposed of properly. The cost and installation of the Project Signs will be paid per the Contract Unit Price as bid.

**END OF GENERAL PROVISIONS**

**SECTION B**  
**MAINTENANCE OF TRAFFIC**

**B.1 SCOPE**

The Contractor shall maintain all local vehicular and pedestrian traffic along the project during construction. The Contractor shall present a plan for maintenance of traffic and traffic signs subject to the approval of the Lexington-Fayette Urban County Government Traffic Engineer prior to the beginning of Work. All bus routes shall remain in operation during scheduled bus operating hours. Loading zone space shall be made available as necessary during normal business hours. At least one lane of traffic shall be maintained on all cross streets.

**B.2 MATERIALS**

The Contractor shall furnish bridging plates or provide other means of maintaining safe access for pedestrians and service traffic to all businesses during normal working hours. Adequate personnel shall be available during daylight hours to assure maintenance. Metal trench covers, granular backfill or other suitable methods shall be utilized to maintain vehicular traffic through areas disturbed by construction operations.

**B.3 SIGNING**

The Contractor shall furnish and erect suitable barricades, signs and other necessary devices to control, guide and safeguard traffic passing through or around the construction project. All such devices shall conform in all respects to the requirements of the Manual on Uniform Traffic Control Devices for Highway Construction and Maintenance Projects. The Contractor, before erecting any barricades or changing the location of one already placed, shall notify the Engineer at least three days prior to such contemplated erection or change, except in case of an emergency. In case of an emergency, the Engineer may direct the Contractor to immediately provide safety and warning devices to safeguard traffic. All night-time control devices requiring illumination shall be lighted every night during the entire period from sunset to sunrise. The Contractor will be held responsible for all damage to Work due to failure to provide barricades, signs, lights, and watchmen to protect it; and whenever evidence of such damage is found prior to acceptance, the Engineer may order the damaged portion removed and replaced by the Contractor at the Contractor's expense. The responsibility remains the Contractor's until the project is accepted.

**B.4 APPLICABLE KENTUCKY DEPARTMENT OF HIGHWAYS (KDOH) STANDARD SPECIFICATIONS**

To the extent that it does not conflict with the content of the Plans, Contract Documents, and Specifications, Subsection 112 of KDOH Standard Specifications, current edition, is incorporated into this Technical Specification.

**B.5 MEASUREMENT AND PAYMENT**

Payment for the maintenance of traffic will be incidental to the contract unless otherwise specified in the Purchase Order.

**END OF MAINTENANCE OF TRAFFIC**

**SECTION C**  
**FINAL CLEANUP**

**C.1 SCOPE**

The Work will not be considered as complete, and final payment will not be made, until the right-of-way and all ground occupied by the Contractor in connection with the Work has been cleared of all rubbish, equipment, excess materials, temporary structures, and weeds. Rubbish and all waste materials of whatever nature shall be disposed of in waste areas provided by the Contractor. All property, both public and private, which has been damaged in the execution of the Work, shall be repaired or replaced in an acceptable manner. All ditches in the area of the Work shall be drained and areas affected by the Work shall be left unobstructed and in such condition as acceptable to the Engineer.

**C.2 PAYMENT**

No direct payment will be made for final cleanup. Retainage will be withheld until final cleanup is approved by Engineer.

**END OF FINAL CLEANUP**

## **SECTION D**

### **MOBILIZATION AND DEMOBILIZATION**

#### **D.1 SCOPE**

Work for this Section shall include all labor, excavation, materials, equipment, and incidentals necessary to mobilize and demobilize all personnel, equipment, supplies, and incidentals to the project site; to establish offices, buildings, and other facilities, that are necessary for performing the work: to accomplish all other work or operations that must be performed, including costs that must be incurred, to begin work on the project in accordance with the Kentucky Department of Highway Standard Specifications, Section 110.

#### **D.2 MOBILIZATION**

The Contractor shall not bid an amount for Mobilization that exceeds 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, if applicable. The LFUCG will automatically adjust any bids in excess of this amount for bid comparisons. The LFUCG 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 LFUCG will adjust the amount bid for mobilization to 5 percent of the sum of the corrected total bid amounts

#### **D.3 DEMOBILIZATION**

The Contractor shall not bid an amount for Demobilization that is less than 3 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, if applicable. The LFUCG will automatically adjust any bids that are less than this amount up to 1.5 percent to compare Bid Proposals and award the Contract. The LFUCG will award a Contract for the actual amount bid when the amount bid for demobilization exceeds 1.5 percent, or the LFUCG will award the Contract for the adjusted bid amount when the amount bid for demobilization is less than 1.5 percent.

#### **D.4 PAYMENT**

Mobilization is included in the Bid Proposal as a separate bid item and the LFUCG will make partial payment for Mobilization in two equal or approximately equal payments. The LFUCG will make the first payment on the first pay estimate on which the Contractor's total earned value on Contract items, other than Mobilization, exceeds \$1,000. The LFUCG will make the second payment on the first pay estimate on which the Contractor has earned 5 percent or more of the total Contract amount for Contract items, other than Mobilization. The LFUCG will make both payments simultaneously when these requirements are met at the same time.

Demobilization is included in the Bid Proposal as a separate bid item, the LFUCG will pay for Demobilization according to the following schedule:

- 1) 25 percent upon formal acceptance of the project
- 2) 50 percent when the final estimate is submitted to the ENGINEER
- 3) 25 percent when the final estimate is paid.

**END OF MOBILIZATION AND DEMOBILIZATION**

**SECTION E**  
**PAYMENT/PERFORMANCE BOND COST**

**E.1 SCOPE**

The intent of this item is to allow full payment for the direct cost of Payment and Performance Bonds required for this project. The Contractor shall be reimbursed for Payment/Performance Bond Cost in accordance with his direct cost for such bonds. The amount bid for this item shall be the direct and specific amount of the Payment/Performance Bond cost. There shall be no adjustment for the Contractor's internal cost for personnel or staff in obtaining such bonds, or for any other cost related to bonding. If such cost are not determined at the time the project is bid, the Contractor shall enter his best estimate of such cost after consulting with his bond agent. Bidder/Contractor shall also have the option of leaving this item blank, i.e. not requesting direct payment for bond costs. The final pay amount shall be the Contractor's direct cost for the Payment/Performance bond. The Contractor shall furnish a receipt from his Bonding Agent verifying the cost of the bonds. He shall also submit proof of payment that the bonds have been paid for. And, the Contractor shall submit a letter from the Bonding Agent that the bonds are in effect, are in good standing, and will be in effect for the remaining life of the project. Payment for the cost of Payment and Performance Bonds may generally be requested after the work is twenty percent (20%) complete.

**E.2 BASIS OF PAYMENT**

Payment for Payment/Performance Bonds shall be on a Lump Sum basis at the Contract Price quoted in the Bid Schedule. Such payment may be modified/adjusted only as permitted above, if such cost are not known at the time of submittal of the bid. Such payment will be full compensation for all labor, materials, equipment and incidentals necessary to complete the Work required by this Section.

**END OF PAYMENT/PERFORMANCE BOND COST**

**SECTION 02100**  
**EROSION CONTROL**

1. DESCRIPTION

This work shall consist of soil preparation, application and incorporation of materials, and mulching of areas to be seeded and protected or sodded.

2. MATERIALS

Materials shall conform to the requirements specified in the following KDOH Sections.

Topsoil	827.09
Agricultural Limestone	827.02
100-Mesh Limestone	827.03
Fertilizer	827.04
Sod	827.10
Staples	827.08
Mulch Material	827.06
Bituminous Material	827.07

3. GENERAL

Erosion control measures shall be progressively coordinated with the grading operations throughout the duration of the project in accordance with the requirements of Section 02105, Water Pollution Controls.

4. TEMPORARY SEEDING

This item shall consist of seeding a temporary cover of grass, or grass and small grain, on areas disturbed on the construction site which will not be redisturbed within a 60 day period. The determination of the area to be temporarily seeded and the time of seeding shall be made by the ENGINEER.

The seed mixtures to be used for temporary cover will be governed by the time of year the seeding is accomplished. The mixture of seeding shall be as follows:

(A) Time of Seeding - February 15 to June 1

Rye 1 1/2 bushels and rye grass 25 pounds per acre; or tall fescue 30 pounds and rye grass 20 pounds per acre.

(B) Time of Seeding - June 2 to August 15

Tall fescue 30 pounds and rye grass 20 pounds per acre; or, spring oats 2 bushels and rye grass 30 pounds per acre.

(C) Time of Seeding - August 16 to February 14

Rye 2 bushels and rye grass 20 pounds per acre; or, tall fescue 30 pounds and rye grass 200 pounds per acre.

(D) Lime will not be required for temporary seeding.

(E) Fertilize at the rate of 400 pounds per acre of 10-10-10 fertilizer, or equivalent, broadcast uniformly on the area to be seeded.



(F) All seed shall be broadcast evenly over the area to be seeded and cultipacked or otherwise pressed into the soil. Seed and fertilizer may be mixed together and applied after the seed has been prepared.

(G) All temporarily seeded areas shall be protected as specified for method 2 in paragraph 5.3.

## 5. PERMANENT SEEDING AND PROTECTION

Grade exposed earth and any other erodible areas to a uniform cross section or slope as soon as practical in the judgment of the Engineer and then perform permanent seeding and protection at the earliest practical time.

Prepare all areas within the construction limits and right of way limits that can be expected to sustain plant growth and are not covered by satisfactory vegetation for permanent seeding. The ENGINEER will designate areas to be seeded.

### 5.1 SEED MIXTURES FOR PERMANENT SEEDING

Seed Mix Type I:                   30% Kentucky 31 Tall Fescue  
(*Festuca arundinacea*)  
20% Creeping Red Fescue (*Festuca rubra*)  
35% Hard Fescue (*festuca longifolia*)  
10% Ryegrass, Perennial (*Lolium perenne*)  
5% White Dutch Clover(*Trifolium repens*)

Seed Mix Type II:                   60% Kentucky 31 Tall Fescue  
(*Festuca arundinacea*)  
20% Ryegrass, Perennial (*Lolium perenne*)  
10% (based on pure live seed, PLS)  
Little Bluestem (*Schizachyrium scoparium*)  
10% Partridge Pea (*Cassia fasciculata*)

Seed Mix Type III:                   40% Kentucky 31 Tall Fescue  
(*Festuca arundinacea*)  
15% Perennial Ryegrass (*Lolium perenne*)  
20% Sericea Lespedeza (*Lespedeza cuneata*)  
15% Partridge Pea (*Cassia fasciculata*)  
10% (based on pure live seed, PLS)  
Little Bluestem (*Schizachyrium scoparium*)

(A) Permanent seeding on slopes 3:1 or less. Apply seed mix Type I at a minimum application rate of 100 pounds per acre.

(B) 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 (*Setaria italica*). During the months of September through May, apply 56 pounds of Cereal Rye (*Secale cereale*). If adjacent to golf courses replace the crown vetch with Kentucky 31 Tall Fescue.

(C) 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 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 (*Setaria italica*). During the months of September through May, apply 56 pounds of Cereal Rye (*Secale cereale*). If adjacent to crop land or golf course replace the Sericea Lespedeza with Kentucky 31 Tall Fescue.

## 5.2 PROCEDURES FOR PERMANENT SEEDING

- (A) Areas to be seeded shall be cleared of all weeds.
- (B) Topsoil, which is to be obtained from existing stockpiles, shall be applied. The topsoil shall not be spread until grading and shaping of the area to receive the topsoil has been completed, and seeding and protection operations are ready to begin. The stockpiled material shall be spread to a uniform depth of approximately 6 inches over such areas that are designated in the plans or by the ENGINEER, and lightly compacted. Areas designated to receive the topsoil will normally include, but are not limited to, medians, islands, cut slopes no steeper than 3:1, and other areas that it is anticipated will be mowed in the future. After the topsoil has been spread and compacted, the areas upon which it was stockpiled shall be neatly dressed.
- (C) The soil shall be loosened to a depth of 3 inches by rotary tools, discs, harrows, or other approved methods. The Engineer may reduce the depth to which the soil is loosened on steep slopes or places inaccessible to mechanical equipment. On areas subject to severe erosion, care shall be taken not to pulverize the soil as this may contribute to loss of seed and/or plant nutrients.
- (D) All large or unsightly clods or stones, and other foreign materials brought to the surface shall be removed, and any gullies, washes, or disturbed areas shall be repaired before seed is applied.
- (E) Prepare a seedbed and incorporate a minimum of 100 pounds of nitrogen, 100 pounds of phosphate, 100 pounds of potash, and 3 tons of agricultural limestone per acre.
- (F) Add additional fertilizer and agricultural limestone as needed.
- (G) Do not apply dry agricultural limestone when it may generate a traffic hazard.
- (H) Remove all rock and dirt clods over 4 inches in diameter from the surface of the seedbed.
- (I) Unless the ENGINEER directs otherwise, track all slopes 3:1 or greater. Ensure that tracking is performed up and down and not across.
- (J) Native Grass seed should be calculated figuring seed on a pure live 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.
- (K) 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.
- (L) For the periods of March 1 through May 15 and from September 1 through November 1, the option of using hydromulch at minimum rate of 1,500 pounds per acre in place of straw with tackifier will be allowed.
- (M) Seed shall be drilled or worked approximately 1/4 inch into the soil, or covered by means of a cultipacker or light roller; the Engineer may waive this requirement on very steep slopes or inaccessible places provided the soil surface is rough and open.
- (N) When the contract includes a bid item for crownvetch, crownvetch seed shall be uniformly sown at the rate of 30 pounds per acre on all areas having a slope of 3:1 or steeper and consisting of soil or mixtures of broken rock and soil. Crownvetch shall also be sown on soil seams and crevices within or adjacent to rock cuts, and

the flat areas of benched slopes. Crownvetch seed shall be sown separately from other seeds unless seeding is done hydraulically.

- (O) Each type of leguminous seed, such as crownvetch, shall be inoculated in accordance with the recommendations of the inoculant manufacturer. Five times the recommended quantity of inoculant shall be used when seeding is done hydraulically. Inoculation shall be performed the same day the seed is sown, and before the inoculated seed is mixed with the other seed.

### 5.3 PROTECTION

The methods of protection shall be as specified in the contract. Placing of mulch for protection shall follow seeding as soon as possible, and no later than 48 hours after seeding. In no instance shall the mulch be placed or crusted seeded areas, and any eroded areas shall be repaired and reseeded before mulch is applied. The mulch material shall be placed uniformly, all clumps loosened and scattered, and care shall be taken to avoid thicker applications than those specified as excessive mulch may hinder germination and survival of the seedlings.

After the seeding has been satisfactorily completed, the following methods of protection shall be used as required by the contract or the Engineer.

Method 1: Mulch and Netting. This method shall be used at bridge abutments, adjacent to pavements, or other areas designated on the plans or by the Engineer. Installation shall be in accordance with Standard Drawing No. RRE-002. Mulch material used under netting may be either plain or bituminous treated, unless otherwise directed, and shall be uniformly applied to approximately 2 inches loose depth (approximately 2 tons per acre).

Method 2: Bituminous Treated Mulch. Bituminous treated mulch shall be placed by equipment that will blow or eject a controlled quantity of mulch material uniformly over the entire seeded area, without appreciable cutting or breaking of the mulch material, and to a loose depth of approximately 2 inches (approximately 2 tons per acre).

Bituminous material shall be uniformly applied by jet nozzles installed at the discharge spout of the equipment at the minimum rate of 250 gallons per acre. When the initial application is less than 250 gallons per acre, neat bituminous material shall be uniformly sprayed over the mulch material until the minimum quantity had been applied.

In cool weather, the CONTRACTOR shall heat the bituminous material to ensure uniform distribution.

The CONTRACTOR shall take all necessary precautions to prevent the bituminous material from defacing structures or other roadway appurtenances, pavements, utilities, plant growth, traffic, or private property. Any such items defaced by bituminous material shall be cleaned to the satisfaction of the Engineer.

### 5.4 STAGE II TOPDRESSING

When quantities for 20-10-10 fertilizer are included in the plans and/or proposal, all seeded and sodded areas on the project shall receive a top-dressing of 20-10-10 fertilizer. Top-dress applications of fertilizer and agricultural limestone shall be made on all areas within the right-of-way limits on which satisfactory vegetation has been established or preserved. Top-dress applications shall be made at the time designated in the contract or by the Engineer, but shall not be made during the months of December and January, nor until a satisfactory stand or vegetation exists.

Both dry and/or liquid fertilizer will be acceptable and may be delivered to the project in bags, bulk or tank. If the dry form is used a 20-10-10 analysis fertilized shall be uniformly applied at the rate of 500 pounds per acre (11.5 lbs. per 1,000 square feet). If the liquid is

used, liquid fertilizer having an analysis ratio of 2-1-1 shall be applied at the rate required to furnish 100 lbs. of Nitrogen, 50 lbs. of Phosphorus, and 50 lbs. of Potassium per acre. The CONTRACTOR shall utilize application equipment, properly calibrated before use, capable of applying the fertilizer evenly over the entire designated areas at the specified rate without excessive drifting of material or damage to existing vegetation. The hydroseeder, power sprayer and/or mechanical blower type of broadcast spreaders are considered acceptable for slope and level areas. The minimum solution rate per acre to ensure uniform coverage shall be 200 gallons if a hydroseeder or power sprayer is used. Incorporation of these materials into the soil will not be required. Any areas which are top-dressed and later exhibit streaked or missed areas shall be refertilized at no additional cost to the Owner. Any vegetation severely damaged or destroyed because of Owner an excessive application of fertilizer shall be reestablished at no additional cost to the Owner.

When seeding performed during the latter part of a project has not had time to attain significant growth before all other contract items are completed, the project will be declared complete without regard topdressing work Topdressing shall then be performed at a later time approved by the Engineer. The time necessary to complete topdressing work will not be included in the contract time and no liquidated damages will be assessed, provided the work is completed within the time limits specified in KDOH Section 108-09.

#### 5.5 EROSION CONTROL BLANKET

Install erosion control blankets in ditches, except those to be paved or rock lined, to flow depth of 1.5 feet. Install erosion control blankets on final soil-like slopes as designated on the Erosion Control Plan and as the ENGINEER directs. Prepare the bed by loosening the soil to a depth of 2 to 3 inches. Apply fertilizer, limestone, and seed t the permanent seeding rate. Cover with the erosion control blanket. Roll out the blanket in the direction of the anticipated runoff flow. Anchor the blanket at the top and toe of slopes and at the top, toe, and edges of channels and ditches as the "Anchoring Edges and Ends" figure shows. Secure the blanket by stapling as the "Stapling Pattern" figure shows. At seams, overlap the blanket as the "Seam Overlaps" figure shows. Rework areas that become unstable or do not establish vegetation.

Erosion Control Blankets must be machine constructed with two sided netting filled with curled wood fiber mat, straw, or coconut fiber combination. The blanket must be smolder resistant without use of chemical additives.

The netting shall be photodegradable extruded plastic mesh or netting with a maximum spacing width of one inch square on both sides of the blanket.

#### 5.6 MAINTENANCE OF SEEDED AREAS

From the time seeding and protection work begins until the date the project is declared complete, the CONTRACTOR shall keep all seeded areas in good condition at all times. Any damage to seeded areas or to mulch materials shall be promptly repaired as directed.

All work and materials necessary to protect, maintain, and/or restore seeded areas during the life of the contract shall be performed at no additional cost to the Owner, except additional work caused by changes in the project by the Owner. When it becomes necessary to disturb previously seeded areas due to slope changes, addition of paved ditches not previously located, or other changes made at the direction of the Engineer, payment for a reasonable amount of additional work, as determined by the Engineer, will be made at the original contract unit prices.

No payment will be made for additional work due to changes made for the benefit of the CONTRACTOR, such as slope changes to obtain balance excavation in lieu of borrow excavation, nor will payment be made for additional work required because the CONTRACTOR has failed to properly coordinate his entire erosion control schedule thus

causing previously seeded areas to be disturbed by operations that could have been performed prior to the seeding.

## 5.7 ACCEPTANCE OF SEEDING

An inspection to determine the acceptability of the seeding will be made by an authorized representative of the Owner no less than 3 months but no more than 6 months after completion of the entire project, except that the Engineer may delay the inspection when conditions are such that the acceptability of the seeding cannot be determined at the end of the 6 month period. At the time of inspection, at least 90 percent of each seeded area shall have a minimum of 150 live seedlings representative of the specified seed mixture per square foot, with no vacant areas larger than 250 square feet each. This requirement shall apply to all permanent seeding performed in conjunction with the project, regardless of the type protection used or the season in which the seeding is performed.

When the seeding does not meet the live seedling requirement at the time of inspection, additional work will be required and may include preparation of a new seedbed, refertilizing, reseeding, mulching, or any erosion control items that were originally required.

Payment for additional seed mixture and protection ordered by the Engineer will be made at the agreed unit prices listed below, which payment shall be full compensation for all labor, equipment, materials and incidentals required to acceptably complete required work:

- (A) The corrective seed mixture rate of application will be determined by the Engineer and shall be derived from the permanent seed mixture specified in the contract. All seed used for corrective seeding will be paid for at the rate of \$1.50 per pound. This price includes all seed bed preparation, application, labor, and incidentals as directed by the Engineer.
- (B) Straw mulch for corrective seeding shall be applied at the rate per acre as designated by the Engineer. The mulch shall include asphalt emulsion at a rate of 100 gallons per ton of straw. All straw mulch used for corrective seeding will be paid for at the rate of \$185.00 per ton. This price shall include straw mulch, asphalt, labor, equipment, and incidentals necessary to satisfactorily perform the mulching operation.
- (C) The Engineer may direct other items such as fertilizer, limestone, and crownvetch to be applied. These items will be paid for at the contract unit price.

## 6. SODDING

This item shall consist of furnishing, hauling, and placing sod on a prepared sod bed at locations specified in the contract or by the ENGINEER.

### 6.1 CUTTING SOD

Prior to cutting sod, the grass shall be mowed to a height of no more than 3 inches and the mowed area shall be raked to eliminate all clippings, cuts and trash. The sod shall be cut into rectangular sections as required. Sections may vary in length not exceeding 8 feet but shall be of uniform width of 10 inches or more, and shall be cut to a depth of at least one inch and no more than 2 inches, depending on the nature or kind of sod. The sod shall be cut to such thickness that practically all of the dense root system will be retained but exposed in the sod strip, and to such width and length so that it can be handled without undue tearing and breaking. When cut in strips, the sod shall be rolled without damage with the grass folded inside.

The sod shall be cut by means of an approved mechanical sod cutter. During dry weather, the sod shall be watered before cutting to prevent loss of soil while handling. Sod shall not be cut when in a sufficiently wet condition which would interfere with proper handling.

All sod must be delivered to the project and placed within 24 hours after being cut, unless placing is prevented by circumstances beyond the CONTRACTOR'S control, in which case the ENGINEER may permit temporary storage.

## 6.2 TEMPORARY STORAGE

When temporary storage of sod is permitted, the sod shall be placed in layers with grass to grass and roots to roots. To prevent the sod from drying out, the stack shall be sprayed with water and covered with moist burlap as directed.

Sod will be rejected when permitted to decay or dry to the extent that, in the judgment of the ENGINEER, its survival is doubtful. Rejected sod shall be disposed of at no cost to the OWNER.

## 6.3 PREPARATION OF SOD BED

The sod bed shall be loosened to a depth of 3 inches and shaped to a smooth even surface and shall be graded to such elevation so the sod, when in place, shall be flush with any adjacent seeded or turfed area, pavement, curb, or other structures, except when otherwise directed.

Prior to placing the sod, the fertilizer and limestone shall be applied uniformly at the rates specified, and shall be harrowed, raked, or otherwise incorporated into the soil. The sod bed, when dry, shall be moistened to the loosened depth.

## 6.4 PLACING SOD

Sod shall be placed as the earthwork progresses insofar as practicable. Quantities of less than a normal truckload of sod will be deemed impracticable and will not be required until a truckload can be used, unless extremely erosive conditions are encountered which demand immediate attention in the judgment of the ENGINEER.

Sod shall not be placed when the atmospheric temperature is below 32°F, or when the sod or sod bed is frozen, or during other weather or soil conditions detrimental to the work.

The sod shall be carefully placed by hand so that each section closely joins the adjacent sections without overlapping. All open spaces or gaps shall be plugged with sod cut to the appropriate size and shape.

When placed on slopes, the sod shall be laid with the long edges of the strips parallel to the contour starting at the bottom of the slope. Successive strips shall be neatly matched and all joints staggered or broken. The sodding shall be carried at least 18 inches beyond the top of the slope to prevent surface water from undermining the sod.

When placed on slopes 2:1 or steeper and 6 feet or more in height, and in all sodded ditches, each strip or section of sod shall be staked securely with at least 2 wood stakes or wire staples no more than 2 feet apart and driven flush with the surface. The stakes or staples will be subject to approval by the ENGINEER on the project.

The sod, after it is placed, shall be wetted thoroughly and tamped sufficiently with approved tampers to incorporate the roots into the sod bed and to ensure tight joints between the sections or strips.

## 6.5 CARE AND RESTORATION

All sodded areas, including the sod bed, shall be kept thoroughly moist for at least 2 weeks after sodding. The sod shall be maintained in a good state of repair at all times during the life of the contract.

## 6.6 GUARANTEE

The CONTRACTOR shall guarantee a minimum of 90 percent live sod on the sodded areas at the inspection between 3 and 6 months after completion of the project and no vacant area of dead sod shall be larger than 15 square feet.

## 7. METHOD OF MEASUREMENT

The quantity of Agricultural Limestone and Fertilizer to be measured for payment, including materials used for top-dress applications, will be the number of tons each material weighed separately, complete and accepted in place in the final work. When 100-mesh ground limestone is substituted for agricultural limestone at the rate specified in subsection 7. 4-2 (d), the actual number of tons substituted will be converted to its equivalent in tons of Agricultural Limestone for pay purposes.

Sod measured for payment will be the number of square yards of surface area of sod conforming to the requirements specified herein complete and accepted by the ENGINEER. Additional sod necessary to restore areas that fail to meet the guarantee requirements will not be measured for payment.

## 8. BASIS OF PAYMENT

All work associated with this section shall be incidental to the project. No direct payment shall be made for seeding and protection.

**END OF SECTION 02100**

**SECTION 02105**  
**WATER POLLUTION CONTROL**

1. DESCRIPTION

This work shall consist of temporary control measures as shown on the plans or ordered by the ENGINEER during the life of the contract to control water pollution through use of silt checks; and coordinating these measures with the permanent erosion control features specified elsewhere in the contract to the extent practicable to assure effective and continuous erosion control throughout the construction and post construction period.

2. GENERAL

The intent of this specification is to protect the quality of water through the prevention, control and abatement of any pollution resulting from the OWNER'S construction projects.

The CONTRACTOR shall exercise every reasonable precaution at all times to prevent the pollution of all streams, lakes, and reservoirs. He shall construct all permanent drainage structures and ditch checks, as soon as practicable. He shall conduct and schedule his operations so as to avoid or minimize the muddying or siltation of all streams, lakes, and reservoirs and to avoid damage to fish habitats. No partially completed item of work shall be left in a manner that will contribute to erosion during the period in which work on the item is suspended.

Material removed from the roadway shall not be deposited in streams, stream channels, other areas subject to flooding, or other locations where it may be washed away by high stream flows or fast runoff.

Fuels, oils, bitumens, calcium chloride, or other harmful materials shall not be placed where they may be carried into a stream or underground waters at any time.

Lands outside the limits of the construction, as staked, shall not be disturbed, except as may be found necessary and as permitted. Before final acceptance of the work, all such disturbed areas, including storage areas, and plant sites, shall be reshaped to conform to the adjacent ground and shall be revegetated by the CONTRACTOR at his expense.

The CONTRACTOR shall provide and maintain adequate sanitation facilities for the duration of the work. Temporary sanitation facilities shall be of the portable type.

3. TEMPORARY CONTROL MEASURES

The ENGINEER may limit the surface area of erodible earth material exposed by clearing and grubbing, the surface area of erodible earth material exposed by excavation, borrow, and fill operations, and may direct the CONTRACTOR to provide immediate permanent or temporary pollution control measures to prevent contamination of watercourses or other areas of water impoundment.

The temporary pollution control measures shall be coordinated with the permanent erosion control features to the extent deemed practicable by the ENGINEER to assure effective and continuous erosion control throughout the construction and post construction periods.

Temporary erosion control measures shall be used at any time during the life of the project when directed to prevent soil erosion and pollution of streams.

Clearing and grubbing operations shall be so scheduled and performed that grading operations and permanent erosion control features can follow immediately thereafter if project conditions permit; otherwise, temporary erosion control measures may be required at the CONTRACTOR'S expense between successive construction stages.

Temporary pollution controls may include construction work outside the project area where such work is necessary as a result of roadway construction such as equipment storage sites.



The erosion control features installed by the CONTRACTOR shall be acceptably maintained by him.

#### 4. SILT CHECKS

Dams constructed of crushed stone, broken rock, soil or straw shall be constructed to retard the flow of water which is laden with eroded material in a manner to cause the eroded material to settle behind the dams. Silt checks shall be constructed, before major earth excavation takes place, at location designated on the plans or as directed, wherever it appears that eroded material will pollute adjacent property or streams. Construction methods shall be as specified herein.

Silt Check Type I - Straw bales, staked so as to remain in place, placed in the numbers and at the locations designated.

Silt Check Type II - Crushed stone such as Cyclopean Stone Rip Rap, Quarry Run Stone, or other size material approved as suitable for this use, dumped in place, at the locations designated and shaped to the configuration required.

Silt Check Type III - Blasted or broken rock dumped in place at the locations designated and shaped to the configuration required.

Unless otherwise provided or directed, the CONTRACTOR may select the type of ditch check to be constructed at each location.

Sediment deposited at silt checks shall be removed properly disposed of when deemed necessary. When their usefulness has ended, the silt checks shall be removed, surplus materials disposed of in accordance with section 4.6, and the entire area disturbed shall be seeded and protected, as directed. Silt checks may remain in place upon completion of the project only when permitted by the ENGINEER.

#### 4.1 SILT TRAPS

Silt traps shall be constructed by excavating basins in natural or excavated channels, and shall be one of the following types:

Silt Trap Type A - Excavated pits, from 2 to 3 feet in depth, 20 to 30 feet in length, and 5 to 10 feet in width.

Silt Trap Type B - Excavated pits with the addition of a dike and overflow pipe. Dimensions of the pit and the overflow pipe shall be in accordance with the plans and/or standard drawings.

Sediment deposited in silt traps shall be removed each time the silt trap is approximately 50 percent filled. When their usefulness has ended, the silt traps shall be removed, surplus materials disposed of in accordance with KDOH Section 204.09, and the entire area disturbed shall be seeded and protected or sodded, as directed. Silt traps may remain in place upon completion of the project only when permitted by the Engineer or the plans.

#### 4.2 TEMPORARY SILT FENCES

Temporary silt fences shall be constructed by installation of posts, and installation of metal fence fabric and geotextile fabric, in accordance with the plans and standard drawings.

Fence posts shall be at least 5 feet long, and metal fence fabric shall be at least 14 gage, 36 inches high, and with openings no larger than 6 inches x 6 inches. Geotextile fabric shall be a material recommended for this use by the manufacturer.

Fence posts and fabric will be accepted based on visual inspection by the Engineer in the field; geotextile fabric will be accepted upon receipt of a certification from the manufacturer that it is suitable for use as silt fence.

The silt fence shall be constructed at locations shown on the plans or directed by the Engineer. The silt fence shall be erected before grading is begun in the area to be protected. Posts shall be installed at 6 to 10 feet spacing (The closer spacing should be used in areas where rapid run-off can be expected) and the fence fabric attached. The geotextile fabric shall be attached to the fence, on the upstream side, using staples, hog-rings, or another approved method. The bottom 12 inches of the fabric shall be buried in a 6-inch trench cut into the ground or covered by 6 inches of fill material, to prevent sediment escaping under the fence. All earthwork shall be on the upstream side of the fence.

During the useful life of the silt fence, it shall be maintained by the CONTRACTOR, and silt accumulations that threaten damage to the fence shall be removed. After the usefulness of the fence has ended it shall be removed and disposed of, the accumulated silt shall be either removed or dressed in place as directed, and the entire area shall be seeded and protected.

#### 5. PROGRESS REQUIREMENTS

Both permanent and temporary erosion control measures including, but not limited to, ditch checks, seeding, etc., shall be progressively coordinated with the grading operations throughout the duration of the project.

As areas of erodible earth material are exposed to the elements of erosion, every effort should be made to stabilize and protect the areas as quickly as possible, as directed. Upon failure of the CONTRACTOR to coordinate the erosion control measures with the grading operations in a manner to effectively control erosion and to prevent water pollution, the ENGINEER may suspend the CONTRACTOR'S grading operations and/or withhold monies due the CONTRACTOR on current estimates until such time that all aspects of the work are coordinated in an acceptable manner.

In case of repeated failures on the part of the CONTRACTOR to control erosion, pollution, or siltation, the ENGINEER reserves the right to employ outside assistance or to use his own forces to provide the necessary corrective measures. Such incurred direct costs plus project engineering costs will be charged to the CONTRACTOR and appropriate deduction made from the CONTRACTOR'S pay estimate.

#### 6. METHOD OF MEASUREMENT

The final quantity of silt checks and silt traps will be the actual number acceptably constructed, maintained, and removed. The final quantity of temporary silt fence will be the actual length acceptably constructed, maintained, and removed. All such structures shall be fully maintained, cleaned and replaced, if necessary at no additional cost.

#### 7. BASIS OF PAYMENT

All work associated with this section shall be incidental to the project. No direct payment shall be made for erosion control.

**END OF SECTION 02105**

**SECTION 02110**  
**CLEARING, GRUBBING AND REMOVAL**

1. DESCRIPTION

This Work shall consist of clearing, grubbing, stripping, and stockpiling all topsoil or unsuitable material, removing and disposing of all vegetation and foundations not removed by others, and debris which are within the construction limits, except those objects which are designated to remain or are to be removed in accordance with other sections these specifications. This work shall also include the preservation from injury or defacement of all vegetation and objects designated to remain. This work will also include the removal of fences within the construction limits. Fences will be relocated outside the construction limits of the project.

2. GENERAL

The ENGINEER will designate all trees, shrubs, plants, and other items remain. Paint required for cut or scarred surfaces of trees or shrubs selected for retention shall be an approved asphaltum base paint prepared especially for tree surgery.

3. CLEARING AND GRUBBING

The entire area within the construction limits shall be cleared of all weeds, brush, briars, bushes, trees, stumps, and other protruding obstructions not designated to remain, except within areas the ENGINEER may designate to remain undisturbed. In addition, all bushes, trees, roots, and stumps within the line of slope stakes shall be grubbed, except undisturbed stumps, roots, and nonperishable solid objects which will be a minimum of 3 feet below subgrade or slope of embankments. Stumps and nonperishable solid objects to be left under embankments shall not extend more than 6 inches above the ground line or low water level.

The ENGINEER may permit sound trees and stumps 6 inches or larger in diameter to be cut within 3 inches of the groundline and all other trees, stumps, shrubs, and bushes to be cut flush with the groundline and left without grubbing in areas cleared outside the construction limits.

All topsoil and/or unsuitable material shall be stripped and stockpiled during the clearing and grubbing operations.

All fences within the construction limits will be removed and stored in a manner to preserve the structural strength of the fence. Upon completion of the project the fences will be replaced outside the limits of construction, or as directed by the ENGINEER, in as good as the existing condition and to the satisfaction of the ENGINEER. If the ENGINEER determines that the fence has been significantly damaged during removal, then the CONTRACTOR will replace the fence incidental to the clearing and grubbing.

Right-of-way areas lying between separate roadways, whether the roadways are constructed in the same plane or different planes, and right-of-way areas lying outside the construction limits shall be selectively cleared as directed.

All clearing and grubbing operations shall be performed in accordance with applicable provisions of Section 7, Erosion Control, and Section 8, Water Pollution Control.

All materials resulting from clearing and grubbing shall be completely disposed of by the CONTRACTOR. Any burning of perishable material shall be done in accordance with the requirements of the OWNER.

Materials and debris which cannot be burned and perishable materials may be disposed of by approved methods and at approved locations on or off the project. When disposal is by burying, the cover material shall be earth, shall provide a cover of at least 12 inches, and shall be graded and shaped to present a pleasing appearance.

In no case shall the CONTRACTOR place on adjacent property any material obtained from clearing and grubbing without written permission from the property OWNER, a copy of which shall be furnished to the OWNER. No material shall be placed within view of any public road, without written approval. The ENGINEER may require material placed within view of a public road to be covered with soil that will support vegetation, and seeded and protected as required on the remainder of the project.

All merchantable timber in the clearing area which as not been removed from the right-of-way prior to the beginning of construction shall become the property of the CONTRACTOR.

Low hanging branches and unsound and unsightly branches on trees or shrubs designated to remain shall be removed as directed. Branches of trees extending over the roadbed shall be trimmed to provide a minimum clear height of 20 feet above the roadbed surface. All trimming shall be performed in accordance with accepted practice.

#### 4. METHOD OF MEASUREMENT

The plans will indicate the entire area within the construction limits in acres. The final pay quantity of Clearing and Grubbing will be measured per acre by plane surveying standards.

The area shown on the plans is approximate only, and the contract unit price for Clearing and Grubbing shall include all work necessary to clear and grub the original construction limits in accordance with these specifications and all other requirements of the plans or proposal applicable to Clearing and Grubbing, regardless of the area actually cleared and grubbed.

No claim will be allowed for any increase over the estimated area of Clearing and Grubbing unless work is performed outside the construction limits shown on the original plans, and then only when such work is caused by a change in the plans approved, in writing, by the ENGINEER. The area of Clearing and Grubbing will not be decreased unless the total area of the original construction limits is decreased by a change in plans approved, in writing, by the ENGINEER. Approved increases and decreases will be measured in acres.

#### 5. BASIS OF PAYMENT

All work associated with this section shall be incidental to the project. No direct payment shall be made for clearing, grubbing and removal.

**END OF SECTION 02110**

**SECTION 02222**  
**ROADWAY AND DRAINAGE EXCAVATION**

1. DESCRIPTION

Roadway and drainage excavation shall consist of the removal and satisfactory disposal of all materials taken from within limits of the work contracted, meaning the calculated material lying between the original groundline and the excavation limits established or approved by the ENGINEER as shown on the final cross sections or grading plan.

2. GENERAL

Included in this work shall be excavation for widened cuts and roadbeds, pavement, embankment subgrades, under-cutting subgrades in cut sections, shoulders, slopes, removal of unsuitable material, ditches, waterways, intersections, approaches, balance excavation, and inlet and outlet ditches, all as indicated on the plans or as directed.

Roadway and drainage excavation shall also included removal and satisfactory disposal of miscellaneous structures removed from within the limits of the roadway and drainage cross sections such as, but not limited to, all types of pavements and pavement bases, whether rigid or flexible; sidewalks; all curbs and curbs and gutters; and all conduits that have no salvage value, such as unserviceable drainage pipe, sewer pipe, waterlines, and other unserviceable utility lines. The plans may or may not indicate the exact locations of the various types and quantities of these miscellaneous items to be removed and disposed of; however, it is the intent of these specifications that the removal of any such items that fall within the limits of the roadway and drainage cross sections as hereinbefore defined, whether or not shown on the plans, shall be paid for as Roadway Excavation Unclassified.

When quantities and bid items are shown on the plans or in the proposal for the removal of various types of miscellaneous items, it is the intent of these specifications that such quantities and bid items shall include only those miscellaneous structures that are found outside of the roadway and drainage cross sections.

Except as otherwise specifically stated roadway and drainage excavation shall also include inlet and outlet ditches, regardless of the classification of the material encountered, whether shown or not shown on the plans and whether or not on the right-of-way as shown. When the work is extended by the OWNER beyond the project area limits shown on the plans, easements or additional property will be obtained by the OWNER.

All drilling, grinding, and sawing of rock, shale, concrete and other similar dust-producing materials shall be performed in accordance with the requirements of the ENGINEER.

All excavation operations shall be conducted in accordance with the applicable requirements of Section 02100, Erosion Control, and Section 02105, Water Pollution Control.

Clearing and grubbing operations for excavation areas shall be completed prior to beginning excavation operations. The CONTRACTOR shall be responsible for and shall take all necessary precautions to protect and preserve any and all existing culverts, pipelines, conduits, subdrains, or parts thereof which may be affected by his operations on the contract and which, in the judgment of the ENGINEER, may be continued in use without any change. The CONTRACTOR shall, at his own expense, satisfactorily repair or replace any damaged part of any such culvert, pipeline, conduit, or subdrain which may result from his operations or negligence during the life of the contract.

During construction, all areas effected by excavation shall be maintained at all times in such condition that it will be well drained.

3. CLASSIFICATION

Without regard to the materials encountered, all roadway and drainage excavation shall be unclassified and shall be designated as Roadway Excavation. It shall be distinctly understood that

any reference to rock, earth, or any other material on the plans or cross sections, whether in numbers, words, letters, or lines, is solely for the OWNER'S information and is not to be taken as an indication of classified excavation or the quantity of either rock, earth, or any other material involved.

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

#### 4. SLOPES

All excavation shall be performed in such a manner as will ensure against removing or loosening any material outside of the required slopes. Slopes shall be shaped to reasonable close conformity with the lines and cross sections shown on the plans, with no deviations, therefrom readily discernible from the road, except as otherwise directed. All rock cut slopes shall be left with a reasonable uniform surface and all loose and overhanging rock shall be removed. Under no condition shall holes be gouged or dug in back slopes or in embankment slopes.

The slopes in cuts may be varied by the ENGINEER during construction, depending upon the material encountered in excavation. The cuts may be widened and the slopes may be varied to secure sufficient material for the formation of embankment and shoulders, to prevent landslides, to improve sight distance, or for any other reasons that such widening or variations are deemed to be to the best advantage of the work. When a cut is made on any section of the roadway in any material that may slide, the excavation shall be removed to the slope lines as designated on the plans or as directed, and no vertical slopes will be allowed during the process of excavation of such cuts, except in stage construction when material is left in cuts for future shoulder construction. No payment will be made for any excavated material which is used for purposes other than those designated.

#### 5. DITCHES

Ditches shall include inlet and outlet ditches and such other ditches as may be required for the satisfactory completion of the work.

Material removed from ditches shall be disposed of as provided in Section 02222 or as indicated on the plans and shall be paid for as Roadway Excavation.

#### 6. USE OF EXCAVATED MATERIALS

All suitable material removed from excavation shall be used, insofar as practicable, in the formation of embankments, subgrade, or shoulders; as backfill for structures; or for other purposes shown on the plans or as directed. No payment will be made for any excavated materials used for any purpose other than that indicated on the plans or approved.

All sod and soft or spongy material shall be removed and disposed of as directed. Such materials shall not be used in the construction of the grade, except as provided in Section 02223.

All rocks and boulders, when directed, shall be placed in the embankments, provided the embankments are of sufficient depth to provide 12 inches or more soil cover over such rocks or boulders placed within the shoulder limits. Such rock and boulders shall be placed under the shoulders rather than under the pavement foundation when the embankment is constructed principally of soils.

No excavated material shall be wasted without permission. Excavated material in excess of that required for normal embankment construction shall not be wasted within the project area limits, except when and as specifically directed or approved. When so directed or approved, excess material may be wasted adjacent to or incorporated in the normal embankment construction, and any material so wasted shall be uniformly distributed as directed. Irregular or partial widening of embankments will not be permitted. Stones and boulders wasted along embankments shall not exceed 1/3 cubic yard each in volume. Excess material shall not be wasted between cut slopes and the project area

limits, except for the purpose of filling depressions, gullies, and other cavities; and, when so wasted, the material shall be shaped to conform with the adjacent ground.

Material wasted off the project area shall be placed on approved sites obtained by the CONTRACTOR at no cost to the OWNER. Material placed within view from any public road shall be placed to avoid an unsightly appearance. All waste shall be placed to avoid the obstruction of drainage, and the wasted material shall be seeded and protected in accordance with these specifications at no additional cost to the OWNER. The application rates of agricultural limestone, fertilizer, seed, and mulch shall be the same as those on the project where the waste material originated, but the variety of seed may be altered, upon written request from the property OWNER.

The ENGINEER may require the CONTRACTOR to submit drawings of proposed waste areas, showing the configuration of the original ground and the anticipated configuration of the area upon completion of the waste operation; any preparatory work such as benching; provisions for surface and subsurface drainage of the area after wasting is completed; and any other information the ENGINEER may require before considering approval of the proposed waste area.

The CONTRACTOR shall furnish cross sections and hydraulic computations for waste area sites situated in the flood plain of any stream. This flood plain shall be defined as that area required to pass the 100 year flood. The computations shall indicate the effect that the waste site will have both the design and the 100 year flood.

The CONTRACTOR shall furnish to the OWNER copies of written agreement with the property OWNER, approval of the OWNER(S) of utilities of any nature existing within the proposed waste area.

## 7. ROADBED

In addition to the limits of the roadbed, the work required herein shall extend to the ditch lines or curb lines in cuts when so directed.

Where rock is encountered in the excavation, it shall be removed between ditch lines or curb lines to a depth below the required grade as shown on the plans with no points of rock projecting above such depth. The final surface of the rock shall be left so that complete drainage will be provided, and no water will be pocketed at any point. The refill over this surface shall be made of selected materials and shall contain no stone or spalls larger than 4 inches. All refill shall be placed in layers not exceeding 12 inches in depth, loose measurement, and compacted as specified in Section 02223. No allowance will be made for excavation and refill material to a greater depth below the required grade than as shown on the plans. When not designated on the plans, the refill material shall be selected by the ENGINEER.

In cut sections the roadbed, whether it consists of existing material or refill material, shall be compacted in accordance with the requirements of Section 02223. When the material in place does not contain sufficient moisture to obtain proper compaction, the roadbed shall be thoroughly scarified and broken to minimum depth of 6 inches, the moisture content increased as directed, and the roadbed compacted. Material unsuitable for the roadbed, when encountered at subgrade elevation, shall be removed to such depths as indicated on the plans or as directed, and disposed of as directed and replaced with suitable refill or #2 stone. Material that is unstable due to excessive moisture but that is otherwise suitable for the roadbed shall either be scarified, allowed to dry, and compacted; or removed, dried, and used for refill or embankment, as directed by the ENGINEER. Manipulation to speed drying will be permitted. No additional payment will be made for scarifying or manipulation necessary to increase or decrease the moisture content as this is considered incidental to the work. Payment will be made for existing material to be removed. When the ENGINEER directs that the material removed be wasted or requires the material to be used as refill or in embankment, then any additional material necessary for refill will be incidental to Roadway Excavation.

The CONTRACTOR shall conduct roadway excavation operations so that a sufficient quantity of selected materials is available, stockpiled, or otherwise reserved for providing the required volume of material necessary to complete the roadbed in accordance with the plans and as indicated herein.

## 8. METHOD OF MEASUREMENT

Roadway and drainage excavation will not be measured for direct payment.

Water used to provide sufficient moisture for compaction of the roadbed in cut sections will not be measured for separate payment but will be considered incidental to other items in the contract.

### 8.1 PAYMENT FOR DESIGN QUANTITIES

Final payment will be made at the contract unit price for the design quantity shown within the neat lines of the cross sections or grading plans, increased or decreased by authorized adjustments.

### 8.2 AUTHORIZED ADJUSTMENTS

Adjustments to the design quantities of Roadway Excavation authorized by the ENGINEER will be made only for the following purposes:

- A. Include changes in the quantity of work due to benching, changing slopes or grades, removing slides, and any other procedures required by the ENGINEER on the project.
- B. Correct major errors on the plans. Major errors are defined as individual mistakes of 5 percent or more in the quantity of earthwork between 2 consecutive cross sections, and are intended only to include omissions, duplication, arithmetical mistakes, or other errors in the survey or plans, but are not intended to include minor discrepancies in the plotting of cross sections, in the planimetry of cross sections, and in the resulting computation of the volume of earthwork. When errors in the lines or grades shown on the plans cause major errors in earthwork quantities, the earthwork quantities will be corrected throughout the entire span of the errors. Earthwork quantities will not be adjusted when errors in the lines or grades do not cause major errors in the earthwork quantities.

## 9. MISCELLANEOUS ITEMS

Removing and salvaging or disposal of all other items within the project area or easements not included in this Section such as guardrails, headwalls, inlet boxes, etc., whether shown on the plans or not shall be considered incidental to the contract and no direct payment shall be allowed, unless otherwise provided.

In removing manholes, catch basins, and inlets, any live sewers connected thereto shall be rebuilt and properly reconnected, and satisfactory by-pass service shall be maintained during such construction operations.

## 10. BASIS OF PAYMENT

All work associated with this section shall be incidental to the project. No direct payment shall be made for roadway and drainage excavation.

**END OF SECTION 02222**



**SECTION 02223**  
**EMBANKMENT**

1. DESCRIPTION

This work shall consist of forming embankments with materials from sources indicated on the plans or from other approved sources, in accordance with these specifications, to conform to the lines, grades, and cross section specified.

2. MATERIALS

Only acceptable materials from sources indicated on the plans or from other approved sources shall be used in embankment formation. No frozen material, stumps, logs, roots, or other perishable materials shall be placed in any embankment. No stone or masonry fragment greater than 4 inches in any dimension shall be placed within 12 inches of the finished subgrade elevation.

3. GENERAL

Clearing and Grubbing, including removal of topsoil, of embankment areas shall be completed in accordance with the requirements of Section 02110 before embankment is placed thereon.

Sod shall be removed from all embankment areas. Sod thus removed may be uniformly distributed along the toe of the slopes or upon the embankment slopes, unless otherwise provided. Sod shall not be placed within the limits of the embankment. The removal of sod will not be required where embankments are to be constructed over marshy areas, except when otherwise specifically provided. No direct payment will be allowed for removing sod from embankment areas.

Excavation of ditches and channel changes adjacent to embankment areas should be among the first operations on the project, and shall be performed prior to placing the adjacent embankment.

Embankments shall not be constructed upon frozen areas. All snow and ice shall be removed from the area to be covered prior to placement of embankment material.

When the height of the embankment, at subgrade elevation, is greater than 3 feet above an existing rigid pavement, the pavement shall be broken to such extent that none of the fragments shall have a dimension greater than 3 feet, or the pavement may be removed entirely when the CONTRACTOR so elects. When the height of the embankment, at subgrade elevation, is 3 feet or less above the existing rigid pavement, the pavement shall be removed entirely. The broken pavement thus removed may be utilized as embankment material provided none of the fragments has a dimension greater than on foot.

Existing flexible pavements shall be scarified or broken until all cleavage planes are destroyed or shall be removed entirely as conditions demand.

Benches with horizontal and vertical faces shall be cut into the original ground of embankment foundations when indicated on the plans or directed, and shall be of the dimensions indicated or directed. The horizontal face of the benches will be paid for as Roadway Excavation or Embankment-in-Place, as applicable.

Embankment foundations shall be compacted as directed.

When noted on the plans or when directed, unsuitable materials encountered in embankment areas shall be removed prior to placement of any embankment material thereon. Materials thus removed shall be wasted, stockpiled, or otherwise disposed of as directed, and payment for such work will be made at the contract unit price per cubic yard for Roadway Excavation.

#### 4. EMBANKMENT FORMATION

Embankments constructed of earth, soil-like shale (SDI 50 or less by KM 64-513), intermediate shale SDI greater than 50 but less than 95 by KM gravel, creek gravel, or similar materials, shall be formed by distributing the materials in successive uniform horizontal layers not exceeding 12 inches in thickness, loose depth, to the full width of the cross section. However, layers less than 12 inches in loose thickness will be required when necessary to obtain the specified density. Each layer shall be compacted to the requirements of Section 02223. The upper surface of the embankment shall be shaped so as to provide complete drainage of surface water at all times. The forming of ruts will not be permitted.

In embankments that are constructed principally of unweathered limestone, rock-like shale (SDI equal to or greater than 95 by KM 64-513), or durable sandstone, the layer thickness shall not exceed 3 feet; the maximum dimensions of boulders or large rocks placed in the embankment shall be 3 feet vertically and approximately 4.5 feet horizontally. Rocks having any dimension greater than 2 feet shall be kept at least 2 feet below subgrade elevation. The rock shall not be dumped into final position, but shall be distributed by blading or dozing in a manner that will ensure proper placement in the embankment so the voids, pockets, and bridging will be reduced to a minimum. The slopes shall conform substantially with the requirements of the plans. The rock embankment shall not be constructed to an elevation higher than 12 inches below subgrade elevation, unless otherwise provided. The remainder layers not exceeding 12 inches loose thickness and compacted as specified for embankments. Rolling will not be required in construction of rock embankment.

In areas where layers of rock and shale or soil are encountered and embankments are constructed of a mixture of rock and shale or rock and soil, the material shall be placed, manipulated, and compacted in layers not exceeding 12 inches in thickness; however, when the thickness of the rock exceeds 12 inches, the thickness of the embankment layers may be increased as necessary due to the nature of the material and as approved by the ENGINEER. In no case shall the layer thickness exceed 3 feet. The mixture shall not be dumped into final position but shall be distributed by blading or dozing in a manner that will ensure proper placement in the embankment so that voids, pockets, and bridging will be reduced to a minimum. The mixture shall then be compacted with suitable compaction equipment. When directed, the material shall be wetted to aid compaction.

When crossing marshy or otherwise unstable areas, the first embankment layer may exceed 12 inches loose depth when noted on the plans or directed. This first layer shall consist of rock or granular material, when available, and shall be constructed by placing material behind the leading edge of the layer and blading into place, to avoid unnecessary disturbance to the original ground. The maximum layer thickness shall be 3 feet unless otherwise provided or directed, and required compaction shall be as directed.

#### 5. COMPACTION

The embankment shall be compacted to a density of at least 95 percent of maximum density as determined by KM 64-511. The in-place density will be determined by KM 64-512 or by using nuclear gages. Tests will be made at such frequencies as deemed necessary to assure that the entire embankment is compacted to the specified density.

During compaction, the moisture content of embankment or subgrade shall not vary from the optimum moisture content as determined by KM 64-511 by more than plus 2 percent or minus 4 percent. This moisture content requirement shall have equal weight with the density requirement when determining the acceptability of embankment or subgrade construction. Embankment material which does not contain sufficient moisture to obtain proper compaction shall be wetted as directed, and thoroughly mixed as deemed necessary. Embankment material containing an excess of moisture shall be allowed to dry before being compacted. The manipulation of wet material to speed drying will be permitted.

Construction operations shall be performed in such a manner that simultaneous rolling and placing of material in the same lane or section will be prevented. To avoid uneven compaction, the hauling equipment shall traverse, as much as possible, the full width of the cross section. Each layer shall be

compacted as required before material for the next layer is deposited. Equipment shall be such as will satisfy the density requirements at all times.

## 5.1 WAIVING OF MOISTURE AND DENSITY CONTROLS

When specified on the plans or by the ENGINEER, the moisture and density control requirements will be waived, in which case at least one piece of compacting equipment meeting the minimum requirements set out hereinafter and operating continuously shall be provided for each 200 cubic yards, or fraction thereof, placed per hour at each location. Tamping or sheepsfoot rollers shall be the dual-drum self-cleaning type, mounted with rows of tamping feet projecting at least 7 inches from the surface of the drum. The tamping feet in each row shall be staggered with those in the alternate rows. The tamping surfaces shall have at least 5 square inches of area. All tamping feet on each roller shall have the same length and tamping area. The rollers shall be of such design as will exert contact pressures, which may be varied as directed, over a range of 200 to 450 pounds per square inch of tamping surface when supported by one row of tamping feet. The 2 drums shall be mounted abreast in a manner that will permit each drum to oscillate independently of the other. A single-drum roller will be permitted to operate only over those areas that are inaccessible to a double-drum roller. The operating speed under normal conditions shall not exceed 8 miles per hour. Pneumatic-tire rollers shall be equipped with tires of the same size, and all tires shall be uniformly inflated so the air pressures in the several tires does not vary more than 5 pounds per square inch. The rollers shall be of such design as will exert contact pressures which may be varied as directed over a range of 400 to 600 pounds per inch of tire width. The operating speed under normal conditions shall not exceed 8 miles per hour.

Heavier equipment than that specified may be used when approved.

Although moisture and density tests will not be performed when control requirements are waived, the ENGINEER may direct that extremely dry material be wetted during compaction or that material so wet as to be unstable be manipulated and/or allowed to dry prior to compaction.

## 6. EMBANKMENT ADJACENT TO STRUCTURES

Embankments adjacent to culverts, headwalls, and similar structures shall be constructed compacting the material in successive uniform horizontal lifts not exceeding 6 inches in thickness, loose measurement. Each layer shall be compacted as required by means of approved mechanical tampers. Each layer shall be compacted at the proper moisture content to ensure the same minimum density adjacent to the structure as that specified for the embankment. Rock larger than 4 inches in any dimension or other material that cannot be compacted by mechanical tampers shall not be placed in embankments adjacent to structures, unless approved by the ENGINEER, and then only in the manner the ENGINEER directs.

Embankment, when placed around adjoining or opposite faces of a structure, shall be compacted to the same level on all sides before proceeding to the next lift. As precaution against wedging action, compaction for each layer shall begin next to the structure.

Embankments adjacent to structures shall be constructed as outlined, to the height of the structure and shall slope to a sufficient distance from the structure to permit easy access of compacting equipment used in normal embankment construction.

7. **METHOD OF MEASUREMENT**

Payment for embankment in place will be based on design quantities.

Removing and/or scarifying existing pavements in embankment areas is considered incidental to other earthwork bid items and will not be measured for separate payment.

Water used to obtain proper compaction will not be measured for separate payment, but will be considered incidental to other items in the contract.

8. **BASIS OF PAYMENT**

All work associated with this section shall be incidental to the project. No direct payment shall be made for embankment.

**END OF SECTION 02223**

**SECTION 02224**  
**BORROW EXCAVATION**

1. DESCRIPTION

This work shall consist of removal and placement of all acceptable material taken from borrow site as designated on the plans used in refill, backfill, embankment construction, or other portions of the work.

2. CONSTRUCTION REQUIREMENTS

All borrow material shall be obtained from sites approved by the ENGINEER. In all instances the borrow site shall be excavated and maintained in a manner satisfactory to the ENGINEER. After use of the sites as sources of borrow material is terminated, the sites and haul roads shall be shaped to blend with the adjacent natural terrain and to have complete natural drainage unless otherwise approved by the ENGINEER.

Before ground is broken for excavation, all weeds and other vegetation shall be cut and disposed of properly. Sod and soft or spongy material shall not be used in embankments, or other construction, unless permitted by the ENGINEER. All topsoil and/or unsuitable material shall be stripped and stockpiled in accordance with Section 02110.

Material removed from the borrow site shall be placed where directed and in accordance with the requirements of Section 02223. All borrow sites shall be cut to uniform lines.

All borrow operations shall be conducted in accordance with Section 02100, Erosion Control, and 02105, Water Pollution.

3. METHOD FOR MEASUREMENT

Borrow excavation will not be measured for payment.

4. BASIS OF PAYMENT

All work associated with this section shall be incidental to the project. No direct payment shall be made for borrow excavation.

**END OF SECTION 02224**

**SECTION 02225  
SLOPE PROTECTION AND CHANNEL LINING**

**1. DESCRIPTION**

This work shall consist of furnishing and placing the specified material for a protective covering for slopes or linings in channels and ditches, placed at the locations shown on the plans or as directed, all in accordance with applicable provisions of these specifications and in reasonably close conformity with the lines, grades, thickness and to the area shown or otherwise designated. Slope protection includes the following types:

Cyclopean Stone Riprap, and Crushed Aggregate Slope Protection. Channel Lining includes 4 classes: IA, II, III, IV.

**2. MATERIALS**

Materials shall meet requirements specified in the following Sections.

Coarse Aggregate	KDOH 805
Drain Pipe	KDOH 810
Mattress Units	KDOH 813.14
Natural Sand	KDOH 804.03

**2.1 CYCLOPEAN STONE RIPRAP AND CHANNEL LINING, CLASS III**

Material for cyclopean stone riprap and Channel Lining, Class III shall meet the general requirements of KDOH Section 805. No less than 80 percent, by volume, of individual stones shall range in size from 1/4 to 1 1/2 cubic feet. Stones of smaller sizes are permissible for use in filling voids in the upper surface and dressing to the proper slope.

**2.2 COARSE AGGREGATE FOR CRUSHED AGGREGATE SLOPE PROTECTION**

Coarse aggregate for crushed aggregate slope protection shall meet the general requirements of KDOH Section 805 and shall be of such gradation that 100 percent passes the 4-inch sieve, 25 to 100 percent passes the 2 1/2-inch sieve, and a maximum of 15 percent passes the 1 1/2-inch sieve. Coarse aggregate meeting the gradation requirements for either size No. 1 or No. 2 will meet this requirement.

**2.3 AGGREGATE FOR CHANNEL LINING, CLASS IA**

Aggregate for Channel Lining, Class IA shall be limestone meeting the general requirements of Section 805. This material shall be produced by using a crusher, grizzly, or sieve with openings of 5 inches, and by such additional processing as may be necessary so that no more than 20 percent of the finished product will pass through square openings 1 1/2 inches by 1 1/2 inches.

**2.4 AGGREGATE FOR CHANNEL LINING, CLASS II**

Aggregate for Channel Lining, Class II shall be limestone meeting the general requirements of Section 805. This material shall be produced by using a crusher, grizzly, or sieve with openings of 9 inches, and by such additional processing as may be necessary so that no more than 20 percent of the finished product will pass through square openings 5 inches by 5 inches.

**2.5 MATTRESS UNITS FOR CHANNEL LINING, CLASS IA**

Mattress units for Channel Lining, Class IA shall meet requirements of KDOH Section 813.14.

**2.6 ANCHOR BARS OF CHANNEL LINING, CLASS IA**

Anchor bars for Channel Lining, Class IA shall be grade 40 or better steel reinforcing bars of the dimensions shown on the standard drawing. Acceptance of the anchor bars will be based on visual inspection by the Engineer.

2.7 CHANNEL LINING CLASS IV

See KDOH Subsection 204.09.01

2.8 GEOWEB SYSTEM

The Geoweb Cellular Confinement System shall be as manufactured by Presto Products Co., or equal.

The base material shall be a polyethylene polymer with a density of 58.4-60.2 IB/FT<sup>3</sup>.

The web shall be black in color.

The polyethylene strips shall be textured and perforated such that the peak friction angle between the surface of the textured/perforated plastic and #40 silica sand at 100% relative density shall be no less than 85% of the peak friction angle of the silica sand in isolation when tested by the direct shear method per ASTM D 5321.

The short term peel strength for 8" cell depth shall be 640 IBF.

2.9 GEOWEB SYSTEM

The Geoweb Cellular Confinement System shall be installed in accordance with the manufactured specifications.

A manufacturer's representative shall be on site to monitor the installation and shall approve all connections, tendons, and anchors prior to backfilling.

## CONSTRUCTION REQUIREMENTS

### 3. GENERAL FOR SLOPE PROTECTION

Slopes on which protection is placed shall be no steeper than the natural angle or repose, unless otherwise indicated on the plans or directed. The slopes shall be shaped to the slope and contour indicated or directed. Slope templates shall be used in determining the slope. Depressions shall be brought to the required slope line with fill material moistened and compacted as directed.

Unless otherwise shown on the plans or unless solid rock is encountered all slope protection, except crushed aggregate slope protection, shall begin in a trench 2 feet below the natural ground. Where solid rock is encountered, the lower terminus of the slope protection shall stop at the solid rock line unless otherwise directed.

### 4. CYCLOPEAN STONE RIPRAP SLOPE PROTECTION

Cyclopean stone riprap shall be constructed to a minimum thickness of 2 feet measured perpendicular to the slope. The stone may be dumped in place and placing shall be conducted in a manner to produce a surface of approximate regularity not varying more than 6 inches from a true plane.

### 5. CRUSHED AGGREGATE SLOPE PROTECTION

Unless otherwise shown, the aggregate shall be placed to a depth of one foot measured perpendicular to the slope flush with the embankment slopes under the bridge; shall extend from the face of the abutments or end bents across the berm and down the slope to the toe of the slope; and shall extend laterally to 1 1/2 feet beyond the outer edges of the superstructure.

The crushed aggregate may be dumped in place. Placing shall be conducted in a manner to produce a uniform surface varying no more than 1 1/2 inches in 4 feet from a true plane. Hand placing will not be required except as necessary to correct irregularities exceeding the specified tolerances.

6. GENERAL FOR CHANNEL LINING

Before placing any channel lining materials, all excavation and shaping of the area to receive the channel lining shall be performed, so that the completed channel lining will be uniform, and will conform to the designated lines, grades, and cross sections.

7. CHANNEL LINING, CLASS II, III, IV

Channel Lining Classes II and III shall be constructed to the dimensions shown on the plans or directed by the Engineer. The stone may be dumped in place, and the placing shall be conducted in a manner to produce a surface of approximately regularity, varying no more than 3 inches from a true plane. Hand placing will not be required except as a necessary to correct any surfaces irregularities exceeding the specified tolerance.

7.1 CHANNEL LINING, CLASS IV

See KDOH subsection 204.09.01 and Section 204.11 for requirements covering Channel Lining, Class IV

8. CHANNEL LINING, CLASS IA

Empty mattress units shall be set to the required line and grade. Lacing wire shall be used to join the units together.

After the mattress units are set to line and grade, they shall be stretched to remove any kinks from the mesh and to hold alignment.

The mattress units shall be filled carefully with stone fill placed by hand or machine to ensure good alignment and to avoid bulging of the mesh with a minimum of voids between the stones. After a unit has been filled, its top shall be placed so that it meets the sides and ends of each mattress unit. The top shall then be secured to the sides, ends, and the diaphragms with lacing wire as shown on the standard drawing.

If the mattress unit is placed on a grade the placing of the stone shall begin at the bottom of the slope and progress up grade. Mattress units shall be overfilled approximately one inch to allow for settlement.

When a complete mattress unit cannot be installed on the slope because of space limitations, the unit shall be cut to fit, in the manner indicated on the plans.

When required, anchor bars shall be driven in place at the location shown on the standard drawing.

9. METHOD OF MEASUREMENT

Cyclopean stone riprap or crushed aggregate for slope protection will be measured in tons for the material complete and accepted in the final work.

Stone used in each class of channel lining except channel lining, Class IV will be measured in tons complete and accepted in the final work.

All excavation required for the construction of slope protection will be considered incidental to the construction and will not be measured for separate payment. No separate measurement will



be made for excavation below the upper surface of any channel lining as this is considered incidental to the channel lining.

No separate measurement will be made for anchor bars, wire mesh, lacing wire, or other material necessary to acceptably complete the wire mattress units for Channel Lining, Class IA, as these materials are considered incidental to Channel Lining, Class IA.

10. BASIS OF PAYMENT

All work associated with this section shall be incidental to the project. No direct payment shall be made for slope protection and channel lining.

**END OF SECTION 02225**

**SECTION 02230**  
**SUBGRADE**

1. DESCRIPTION

Preparation of the subgrade shall include compacting to the required density and shaping to conform to the required lines, grades, and cross sections, all in accordance with the applicable provisions of these specifications.

2. GENERAL

Before construction of the base course, pavement, or surface is begun, the subgrade shall be prepared to the full width of the widest course plus one foot additional width beyond each edge, unless otherwise shown on the plans.

The subgrade shall be shaped to conform to the lines, grades, and cross section indicated on the plans or established by the ENGINEER. All high areas of the roadbed shall be removed, by scarifying when necessary, and all low areas shall be filled with approved material and compacted. The roadbed shall not be disturbed below subgrade elevation, except when necessary to comply with requirement herein specified.

The subgrade shall be compacted, as nearly as practicable, to a uniform density throughout. Except when otherwise provided, the compaction and moisture control requirements shall be in accordance with the requirements of Section 02223 as governed by the requirements for the embankment construction in the same contract. Should the subgrade subsequently lose its density due to exposure to severe weather conditions, after having been previously compacted to the required density during the construction of the grade, it shall be recompactd to the required density.

Areas of yielding or unstable material shall be excavated and backfilled with approved material as directed. The expense of such work in embankment areas shall be borne by the CONTRACTOR.

When the material in place does not contain sufficient moisture, or is too wet, to obtain proper compaction, the moisture content shall be increased or reduced as directed, and the material compacted. Scarifying of the subgrade may be required.

When a sheepsfoot roller is used, the compaction shall be finished by either a 3-wheel roller or a multiple-wheel pneumatic-tire roller of sufficient weight to smooth out and compact the indentations made by the sheepsfoot roller. On subgrade for traffic bound courses, the indentations, may be removed by a blade grader.

When excess dust is present on the subgrade, it shall either be wetted or completely removed and replaced by suitable material before any aggregate is placed thereon, at no additional cost to the OWNER.

A grading machine shall be operated over all subgrades as necessary to maintain a uniform cross section free from irregularities. All subgrades shall be prepared a sufficient distance ahead of the base course or pavement construction to permit the required testing and checking of the subgrade before any aggregate is placed. The CONTRACTOR shall furnish templates and labor required for checking the subgrade.

When the original grade is constructed to an elevation higher than that of the subgrade, the subgrade shall be formed by trenching. This work shall consist of cutting a channel in the roadway to the width of the base or pavement plus one foot additional width beyond each edge. All provisions set forth in this Section shall be required as applicable to the type of construction.

3. CONSTRUCTION TOLERANCES

All subgrades being prepared for base or surface courses, except traffic bound courses, shall show no deviation greater than 1/2 inch from the specified crown section, and shall be constructed uniformly so the subsequent base and/or surface courses can be constructed within their specified tolerances.

4. PROTECTION AND MAINTENANCE

All ditches and drains shall be completed in order to drain the roadbed effectively before any construction materials are placed thereon. The CONTRACTOR shall take every precaution to protect the subgrade and shall repair and restore to proper condition all damage that may be caused by hauling of material or by other causes, and not material shall be placed on any subgrade until it has been restored and accepted.

Equipment used for hauling materials over the completed subgrade shall be equipped with pneumatic tires. Equipment of such weight as to cause rutting shall not be permitted to operate over the subgrade.

No storage or stockpiling of materials will be permitted on a completed subgrade unless otherwise provided.

No surfacing materials shall be placed on a frozen, muddy, soft, or yielding subgrade.

Under no circumstances shall holes be gouged or dug in the back slopes or the embankment to obtain materials for correcting the subgrade, or for any other purpose.

5. METHOD OF MEASUREMENT

Preparation of the subgrade will not be measured for payment, and is incidental to the roadway excavation or embankment in place.

Water used for maintaining moisture for subgrade compaction and water used for conditioning the subgrade immediately in advance of base or pavement construction will not be measured for payment, but will be considered incidental to other items in the contract.

6. BASIS OF PAYMENT

The accepted quantities thus measure will be paid for at the contract unit prices. Payment shall be full compensation for all work required by this Section.

Payment will be made under:

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Roadway Excavation	See Section 02222
Embankment in Place	See Section 02223

**END OF SECTION 02230**

**SECTION 02231**  
**DENSE GRADED AGGREGATE BASE**

1. DESCRIPTION

This base course shall consist of graded aggregate and water mixed with or without an admixture, placed on a prepared subgrade, and shaped and compacted to the line, grades, and cross sections shown on the plans.

2. MATERIALS

Materials shall meet the requirements specified in the following KDOH sections.

Aggregate	805
Calcium Chloride	825

Water used in the mixture will be subject to approval by the ENGINEER on the project.

When approved by the ENGINEER, the aggregate may be produced by blending 2 or more aggregate sizes. When blending is permitted, the separate aggregate sizes shall be fed uniformly into the mixer and a synchronized proportioning system between the separate feeders shall be provided.

3. GENERAL

The subgrade shall be prepared in accordance with Section 6, and shall be maintained free from irregularities.

It is intended that the dense-graded aggregate base course shall be completely covered with the specified pavement courses before the work is suspended for the winter months. The CONTRACTOR shall make every reasonable effort to accomplish this objective. When the dense-graded aggregate base course is not completely covered with the specified pavement courses, the ENGINEER will then determine the extent of any further work necessary to protect and maintain the uncompleted work during the winter months and until the beginning of spring paving operations. When extra materials, methods, and construction techniques, not a part of the specified construction, are determined to be necessary to protect, maintain, and repair any portion of the uncompleted work, the cost of such extra materials, methods, and techniques shall be borne by the CONTRACTOR.

4. MIXING

The dense-graded aggregate and the water shall be thoroughly mixed in a twin shaft pugmill type mixer, unless another type of mixer is approved. The amount of water added to the aggregate shall be approved and shall be an amount which will provide the mixture with a satisfactory moisture content for compaction to the specified in-place density. The rate of flow of the water to the pugmill shall be controlled by valves or other devices which can be easily reset when a change in the rate of flow is desirable. The water supply system shall be equipped with a positive cut-off control which will stop the flow of water simultaneously with any stoppage in the flow of aggregate in the pugmill.

5. TRANSPORTING

The plant-mixed material shall be transported in such manner as to deliver the mix to the project without loss or segregation. Each truck load shall be covered with a heavy canvas sheet to reduce the loss of moisture in transit whenever the time between loading the truck and spreading the mixture exceeds 30 minutes.

6. PLACING AND SPREADING

The mixture shall be placed and shaped, by power equipment, to the specified lines, grades, cross sections, and depths, without segregation.

Placing, spreading, shaping, and compacting shall be continuous as practicable during each day's run. The base shall be wetted as directed during shaping and compaction operations to maintain the moisture content at the level necessary to ensure proper compaction.

Unless otherwise provided or permitted, the compacted depth of each layer shall be no less than 3 inches nor more than 6-1/2 inches.

Before placing the base material, the subgrade or previous base layer shall be wetted as directed.

## 7. COMPACTING

Each layer of base material, after being shaped to the required lines and cross section, shall be compacted to a density of no less than 84 percent of solid volume throughout the layer. The density determination will be based on the oven-dry, bulk specific gravity KM 64-607.

When the total compacted thickness of the base is 4 inches or less, acceptability of compaction will be determined either by nuclear gages or by visual inspection, at the option of ENGINEER; in all other cases in-place density will be determined by nuclear gages or by KM 64-512. When compaction of base 4 inches or less in thickness is accepted by visual inspection, no reduction of compactive effort is intended.

Manually operated mechanical tampers shall be used in areas inaccessible to power equipment

Initial layers of base shall be maintained to a uniform grade and cross section during compaction. the final layer shall be shaped, with additional material added when necessary, so that the completed base is true to the required lines, grades, and cross sections.

## 8. MAINTENANCE AND PROTECTION

Traffic on the completed base should be held to the minimum necessary to complete the work and/or maintain public traffic. Any damage such as raveling or areas which lose density shall be repaired as directed before covering with base or surface courses. Areas subject to traffic shall be moistened as directed, to avoid the loss fine materials, and the surface of these re-checked for grade and cross section and necessary corrections made as directed, before base or surface courses are constructed. At the CONTRACTOR'S option, dilute emulsified asphalt may be used for dust control, at the CONTRACTOR'S expense.

## 9. SURFACE TOLERANCES

The surface of the top course of the base shall be smooth and uniform and shall not deviate more than 1/2 inch from the specified cross section at any point and shall not deviate from the specified longitudinal grade more than 3/8 inch in 10 feet at any location. When final grading is to be performed by an automatic grading machine, the base shall be trimmed to such accuracy that the succeeding base and/or surface courses will meet their respective specified surface and thickness tolerances.

The CONTRACTOR shall furnish all devices necessary to check the surface, such as stringlines, straightedges, etc., and the labor necessary to handle the devices.

## 10. METHOD OF MEASUREMENT

Water used to moisten the subgrade prior to placing base, in mixing the base material, and to maintain moisture during compaction and maintenance of the base will not be measured for separate payment, but will be considered incidental to DGA Base.

## 11. BASIS OF PAYMENT

All work associated with this section shall be incidental to the project. No direct payment shall be made for dense graded aggregate base.

**END OF SECTION 02231**

**SECTION 02510**  
**BITUMINOUS CONCRETE BASE**

1. DESCRIPTION

This base course shall consist of one or more courses of hot-mixed, hot-laid bituminous concrete mixture constructed on a prepared subgrade, old surface, or underlying course, and in reasonably close conformity with the lines, grades, and typical cross sections shown on the plans, or as otherwise directed.

2. MATERIALS

Materials shall conform to the requirements of KDOH Sections 401 through 403.

3. GENERAL

The requirements of KDOH Sections 401 through 403 shall apply, except as provided herein.

Each layer of bituminous concrete base shall be constructed to a compacted thickness no less than 2 inches nor more than 4 inches, unless otherwise directed.

4. DENSITY REQUIREMENTS

Resurfacing and Initial Treatment Projects. All requirements of KDOH Section 403 concerning roller coverage shall be met when the total bituminous concrete base is less than 4 inches thick. Unless otherwise specified in the contract, the density requirements specified hereinafter for New Construction shall apply to resurfacing, initial treatment, reconstruction, or rehabilitation projects when bituminous concrete base has a total thickness of 4 inches or more.

New Construction. In lieu of the roller coverage requirements of KDOH Section 401.17, density requirements as specified in this Section will be applicable on all new construction projects. Laboratory density determinations will be made in accordance with KM 64-411 using the Marshall Stability test method in order to establish a job-mix formula design density for the bituminous mixture to be used in the work. The ENGINEER will make one density determination in accordance with KM 64-412 for each 1,200 square yards of base course placed. The density of each 1,200 square yard section determined by KM 64-412 shall not be less than 95.0 percent of the job-mix formula design density as established by KM 64-411, and the average density of any 10 consecutive sections no less than 96.0 percent of the job-mix formula design density. In the event the in-place density is less than 95.0 percent of the design density, the CONTRACTOR shall resume and continue compaction until such time additional tests indicate satisfactory density has been obtained, or until the ENGINEER determines it is impractical to continue rolling. Compaction equipment shall be such that the required density is obtained and all other requirements of KDOH Section 403 are met.

When the specified density is not being consistently obtained, the ENGINEER may suspend placing operations until the CONTRACTOR makes such changes in equipment, or other phases of the operation, as may be necessary to obtain the specified density.

The ENGINEER may accept density less than specified for the first course of bituminous concrete base placed directly on DGA base, gravel base, subgrade, or an existing pavement, if the CONTRACTOR provides suitable compaction equipment and procedures, and the ENGINEER determines that additional compactive effort may be detrimental.

The lift thickness may be increased when approved, providing satisfactory results are obtained.

No additional payment will be made for special equipment or work necessary to obtain the specified density as this is considered incidental to the price bid for Bituminous Concrete Base.

## 5. THICKNESS TOLERANCES

### 5.1 Initial Treatment and Resurfacing Projects

Total combined thickness of all layers of bituminous concrete base shall be in reasonable close conformity with the requirements of the plans. Thickness will be controlled by controlling the rate of application. The mixture shall be placed at the weight per square yard designated by the plans or by the ENGINEER. The rate of application shall not exceed the designated rate by more than 5 percent. No payment will be made for any material placed in excess of this 5 percent tolerance.

### 5.2 New Construction

- (A) General. The ENGINEER will make thickness checks in accordance with KM 64-420, as soon as is practical after completion of all, or a major portion, of the bituminous concrete base. When the CONTRACTOR so elects, coring may be performed in accordance with KM 64-420 by the CONTRACTOR'S personnel and equipment, provided the work is performed under the ENGINEER'S supervision and all measurement of cores is performed by the ENGINEER.

When an overlay is placed as hereinafter required, the gradation of the overlay material may be modified when thin overlays are necessary, but any modification must be approved before the material is used. When an overlay is constructed, adjacent work such as storage lanes, approaches, entrances, etc., shall be overlaid to the extent necessary to match their grades to the overlay section, whether these adjacent areas are deficient in thickness or not. All core holes shall be filled by the CONTRACTOR, either with compacted bituminous mixtures or portland cement concrete, and all remedial overlay work completed before the final course is placed. Neither measurement and payment nor deduction will be made for material and labor necessary to fill core sample holes.

- (B) Payment on Basis of Weight. When payment for Bituminous Concrete base is based on tonnage placed, the total combined thickness of all layers shall be within plus or minus 0.5 inch of compacted plan thickness.

In the event core thickness in excess of 0.5 inches of compacted plan thickness is encountered, a theoretical deduction of Bituminous Concrete Base as determined excess shall be deducted from payment. The deduction shall be for that thickness exceeding the 0.5 inch tolerance. When calculating the deduction for excess thickness, any leveling course placed at the CONTRACTOR'S expense will not be included in the thickness measurements. Leveling or other material placed on top of the completed base at the direction of the ENGINEER, and at the OWNER'S expense, will not be included when calculating excess thickness.

If the ENGINEER deems it necessary to check the thickness of the overlaid area by coring, the cost of this additional coring will be deducted from monies due or to become due to the CONTRACTOR when deficient thickness is found on recording.

If the placement of additional material is not feasible due to the proximity of structures, blocking of drainage, or other engineering reasons, the ENGINEER may waive the requirement for overlaying. In this event, the ENGINEER will require a deduction form payment of the theoretical quantity of Bituminous Concrete Base as determined deficient.

6. METHOD OF MEASUREMENT

Unless otherwise provided, Bituminous Concrete Base will be measured in tons and shall be weighed in accordance with the requirements of KDOH Sections 109 and 402.

7. BASIS OF PAYMENT

All work associated with this section shall be incidental to the project. No direct payment shall be made for bituminous concrete base.

**END OF SECTION 02510**



**SECTION 02511**  
**BITUMINOUS CONCRETE SURFACE**

1. DESCRIPTION

This work shall consist of constructing one or more courses of bituminous concrete surface on a prepared base in accordance with these specifications, and in reasonably close conformity with the lines, grades, thickness, and typical cross sections shown on the plans or established by the ENGINEER.

This bituminous surface shall be composed of a mixture of aggregate, filler when required, and bituminous material.

2. MATERIALS

See KDOH Section 401 through 403.

Bituminous Concrete Surface mixtures used in the final surface course shall contain polish resistant aggregate meeting the requirements of KDOH Sections 804 and 805.

3. CONSTRUCTION REQUIREMENTS

See KDOH Section 403.

4. METHOD OF MEASUREMENT

The bituminous concrete mixture will be weighed in accordance with KDOH Sections 109 and 403.

5. BASIS OF PAYMENT

All work associated with this section shall be incidental to the project. No direct payment shall be made for bituminous concrete surface.

**END OF SECTION 02511**

**SECTION 02512  
BITUMINOUS PRIME AND TACK COAT**

**1. DESCRIPTION**

This work shall consist of preparation of existing bases or surfaces, and the application thereto of liquid bituminous material prior to the placing of courses of bituminous mixtures or treatments.

**2. MATERIALS**

Any of the following emulsions are permitted for use as a tack material: SS-1, SS-1h, CSS-1, CSS-1h, AE-60, RS-1, or CRS-1. Cutback asphalts may be used only with the written permission of the ENGINEER, and shall be in conformance with all applicable laws and regulations concerning air pollution control. All tack materials shall meet the applicable requirements of KDOH Section 806.

Bituminous material for prime shall meet the requirements of KDOH Section 806. Primer-L shall be furnished unless other material is permitted by the contract.

**3. GENERAL**

Bituminous Prime Coat shall consist of the application of liquid bituminous material, having penetrating properties, to granular type bases.

Bituminous Tack Coat shall consist of the application of liquid bituminous material to the surface of concrete or brick pavements and bases, to existing bituminous surfaces, and, when necessary, to newly constructed bituminous courses.

All equipment required for performance of this work shall be approved before construction is started, and shall be maintained in a satisfactory operating condition.

The CONTRACTOR shall provide hand brooms and other small tools and equipment essential to the completion of the work in addition to a mechanical broom or sweeper, bituminous heating equipment, and a pressure distributor as hereinafter described.

The temperature limitations for applying prime and tack coats shall be that specified for the type of construction with which such work is included. Prime and tack coats shall not be applied to wet surfaces.

**4. WEATHER LIMITATIONS**

The temperature limitations for applying prime and tack coats shall be that specified for the type of construction with which such work is included. Prime and tack shall not be applied to wet surfaces.

**5. EQUIPMENT**

A mechanical broom or sweeper shall be provided which is adjustable to uniform contact with the surface and designed to thoroughly clean without cutting into the surface being swept.

Equipment for heating bituminous material in tanks, railroad cars, trucks and distributors shall meet with the approval of the ENGINEER and shall be capable of heating the material to the required temperature without introduction of moisture, localized overheating or otherwise changing the characteristics of the material.

The pressure distributor shall be mounted on a self-propelled motor vehicle equipped with pneumatic tires and shall have sufficient power to maintain a constant and uniform speed under all operating conditions. The distributor shall be designed to apply the material uniformly at the rate required for the type of construction. For tack coat treatments, a minimum rate of application of 0.8 pound (0.05 gallon) per square yard will be required. The distributor shall meet the following requirements:

- (A) Tank. The tank shall have a capacity of at least 600 gallons. It shall be equipped with a removable manhole cover, an overflow pipe, and a dial gage for indicating the contents mounted so as to be plainly visible to the operator. An accurate measuring stick shall be carried on the distributor at all times.
- (B) Heating System. The heating system shall be so designed that even heating of the bituminous material will be ensured with efficient and positive control at all times. A temperature measuring device shall be provided that will quickly and accurately determine the temperature of the material.
- (C) Distributing System. The pressure distributing system shall contain a separate power and pump unit of sufficient capacity to distribute the required quantity of bitumen at constant flow and uniform pressure. A dial pressure gage shall be mounted so as to be plainly visible to the operator.
- (D) Spray Bar and Nozzles. The spray bar shall be full circulating and shall be adjustable in length to conform to the width of the application being made without overlapping. The spray bar shall be designed to swing laterally over a distance of 9 inches or more. There shall be provided a positive and immediate cut off and means for preventing dripping of the material onto the road surface when the flow is shut off. The nozzles shall be designed and maintained to provide an equal flow from all nozzles at the same time. To prevent clogging the nozzles, the circulating system shall be provided with screens which shall be kept clean. A hand spray bar and nozzle having an adequate length of flexible steel hose with packed couplings shall also be provided.
- (E) Tachometer or Synchronizer. A tachometer shall be attached to the truck in such a manner as to be visible to the truck operator and to enable him to maintain the constant speed necessary for the correct application of the specified quantity of bitumen. Suitable charts shall be furnished showing the truck speeds necessary to obtain the required results.

When a synchronizer is used, the tachometer may be omitted. The synchronizer shall deliver a specified quantity of bituminous material onto the road surface independent of the speed of the truck.

## 6. PREPARATION OF SURFACE

All surfaces shall be thoroughly cleaned of all dirt and other matter foreign to the surface being treated. Mechanical sweepers will be required for cleaning old paved surfaces when necessary. Sweeping with wire hand brooms will be required when necessary. Sweeping shall extend beyond the edges of the surface to ensure a thorough cleaning of the full width to be treated.

Under extremely dry conditions and prior to the prime treatment, the ENGINEER may require an application of water to granular bases, applied at the rate of approximately 0.15 gallon per square yard.

Existing traffic-bound base receiving an application of bituminous prime shall be graded and shaped to the required grade and cross section before any bituminous material is applied. Floater material shall be wetted and rolled into the existing traffic-bound macadam or wasted, as directed.

The surface as prepared shall be approved before the prime coat or tack coat is applied.

## 7. APPLICATION

Prime coats shall be applied at the rate specified in the contract, or as directed when conditions justify variations in the rates of application.

The number of applications of the prime coat shall be as directed. The material shall be applied under pressure. Hand pouring shall not be used except for special conditions, and then only when approved.

The prime shall be allowed to cure for at least 36 hours before being covered by the bituminous course unless otherwise approved.

At the time of application, the temperature of prime and tack materials shall be within the following ranges, in degrees Fahrenheit:

PRIME

MC-30	85*
MC-70	120*
Primer L	60-120
RT-2	60-125

TACK

SS-1, SS-1h, CSS-1, CSS-1h, AE-60	70-160
RS-1, CRS-1	70-140
RC-70	120*
RC-250	165*

\* These temperatures should be used unless higher temperatures are required for satisfactory coverage. Caution must be exercised to prevent fire or explosion.

When RS-1, CRS-1, RC-70, or RC-250 is furnished for tack they shall be applied undiluted at the rate of 0.4 pound (0.05 gallon) per square yard, unless otherwise specified in the requirements for the bituminous mixture being placed.

When SS-1, SS-1h, CSS-1, CSS-1h, or AE-60 is furnished for tack the material may be applied without dilution providing uniform and satisfactory coverage is achieved. If an acceptable tack coat is not consistently achieved, the ENGINEER may direct that the SS-1, SS-1h, CSS-1, CSS-1h, or AE-60 be diluted with an equal quantity of water conforming to Section 803, be thoroughly mixed before application, and be applied a sufficient time in advance of the paver to ensure that all water has evaporated before the bituminous mixture is placed. Unless otherwise specified in the requirements for the bituminous mixture being placed, the application rate for undiluted SS-1, SS-1h, CSS-1, CSS-1h, or AE-60 shall be 0.4 pound (0.05 gallon) per square yard; when the ENGINEER requires dilution, the diluted material shall be applied at 0.8 pound (0.1 gallon) per square yard.

As specified in KDOH Section 404, tack material for Open Graded Friction Course shall be applied undiluted at the rate of 0.8 pound (0.1 gallon) per square yard.

If the initial application of any tack material is not uniform, the CONTRACTOR shall apply additional material as directed at no additional cost to the OWNER.

The tack coat may be applied with a spray bar which can be raised to a sufficient height so as to uniformly and completely coat the entire surface. When a uniform application, at the rate required, cannot be obtained from a spray bar, then the tack coat shall be applied by fogging with a hand spray attachment, and only complete and uniform coverage will be acceptable.

When, on newly constructed bituminous base courses or binder courses, the bituminous coating has been stripped from the aggregate due to abrasive action from traffic or to other causes, a light application of tack coating may be required.

Bituminous material applied in excess of requirements shall be removed, or shall be covered with blotter course of dry sand or stone chips as directed.

On projects over which public-traffic is being maintained, the tack coat shall be applied over one-half of the pavement width not to exceed one-half day's work in advance of the construction of the bituminous cover course; provided, that at no time shall the tack coat application end at a location hazardous to traffic. Tack coat application requiring an overnight lane closures will not be allowed,

unless approved in writing. The work shall be arranged so that at the end of runs all tack shall be covered with the bituminous mat or a sand blotter course. At road intersections or other traffic crossings, the ENGINEER may require the application of a sand blotter course over the tack coat.

When a bituminous paving material is placed adjacent to curbs, existing pavement, or other structures, the contact surface of the existing structure shall first be coated with tack material.

When RC-70 or RC-250 is furnished for the tack coat, a sufficient time and distance shall be allowed in advance of the paver to ensure that the volatiles have evaporated before any of the surface mixture is laid on the tacked surface. The surface mixture shall not be placed on the tacked surface until authorized.

When Sand for Blotter is included in the contract as a item, the tack coat shall be covered with surface dry natural sand in a minimum quantity sufficient to prevent pickup by traffic. The sand shall be applied uniformly at the rate as directed not to exceed 5 pounds per square yard. ( The normal rate is 2 to 3 pounds per square yard.) All necessary precautions shall be exercised to prevent spotting or discoloring curbs, headwalls, and other structures. When any such discolorations occur, they shall be removed at the CONTRACTOR'S expense.

The CONTRACTOR shall provide necessary barricade, warning sign, and flagmen to ensure against traffic traveling over freshly applied prime or tack coat, and shall further provide for public convenience and safety as specified in Sections 104 and 107.

#### 8. METHOD OF MEASUREMENT

When an approved cut-back asphalt is furnished for the tack coat, the actual quantity will be measured for payment. Only the actual quantity of undiluted SS-1, SS-1h, CSS-1, CSS-1h, or AE-60 furnished will be measured for payment, as the cost of the water for dilution will be considered incidental to the contract unit price for Bituminous Tack Coat. No measurement will be made for water used to prepare dry surfaces for prime, as this is considered incidental to the prime coat.

Bituminous materials for prime or tack will be weighed in accordance with the requirements of KDOH Section 109.

Sand for blotting tack coat will be weighed in accordance with the requirements of KDOH Section 109.

#### 9. BASIS OF PAYMENT

No direct payment shall be made for prime and tack coat. All materials and labor required as prescribed in this section shall be considered incidental to the project.

**END OF SECTION 02512**

**SECTION 02520**  
**CONCRETE PAVEMENT**

**PART 1 - GENERAL**

**1.0 DESCRIPTION**

This section includes, but is not limited to, all work necessary for final trimming of subgrade or subbase, integral curb, bars and reinforcement, joints and sealing, surface curing and pavement protection of concrete pavement.

**1.1 RELATED DOCUMENTS**

Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this Section.

KDOH Division 500 and 600

**1.2 SUMMARY**

A. This Section covers the requirements for the construction of unreinforced concrete pavement, with or without subbases, and may also include attached or integral curbs.

B. Related Sections may include the following:

Section 02231 - Subgrade  
Section 02231 - Dense Graded Aggregate

**1.3 DEFINITIONS**

A. **Cementitious Materials:** Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash and other pozzolans, slag cement, and silica fume; subject to compliance with requirements.

B. **Cold Weather:** a period when for more than three successive days the average daily outdoor temperature drops below 40°F (5°C). The average daily temperature is the average of the highest and lowest temperature during the period from midnight to midnight. When temperatures above 50°F (10°C) occur during more than half of any 24 h duration, the period shall no longer be regarded as cold weather.

C. **Construction Joint:** a joint constructed from two separate placements where the first has undergone final setting before the next placement.

D. **Contraction Joint:** formed, sawed, or tooled groove in a concrete structure to create a weakened plane and regulate the location of cracking resulting from the dimensional change of different parts of the structure.

E. **Dowel Bars:** steel pins, commonly plain round steel bars that extend into adjoining portions of a concrete construction, as at a joint in a pavement slab, to transfer shear loads.

F. **Exposure Conditions:**

1. Negligible: absence of exposure to freezing and thawing or to deicing agents.
  2. Moderate: exposure to a climate where the concrete will not be in a saturated condition when exposed to freezing and will not be exposed to deicing agents or other aggressive chemicals.
  3. Severe: exposure to deicing chemicals or other aggressive agents or where the concrete can become saturated by continual contact with moisture or free water before freezing.
- G. Free Edge: the edge of pavement abutting an isolation joint or the edge of the pavement against which no concrete is placed.
- H. Hot Weather: any combination of the following conditions that tend to impair the quality of freshly mixed or hardened concrete by accelerating the rate of moisture loss and rate of cement hydration, or otherwise resulting in detrimental results.
1. high ambient temperature above 90°F (32°C);
  2. high concrete temperature;
  3. low relative humidity;
  4. wind velocity; and
  5. solar radiation.
- M. Isolation Joint: a separation between adjoining parts of a concrete structure, usually a vertical plane, at a designed location such as to interfere least with performance of the structure, yet such as to allow relative movement in three directions and avoid formation of cracks elsewhere in the concrete and through which all or part of the bonded reinforcement is interrupted.
- N. Panel: an individual concrete slab bordered by joints or slab edges.
- O. Project Drawings: graphic presentation of project requirements.
- S. Subgrade: the soil prepared and compacted to support the pavement system.
- T. Tie Bar: a reinforcing bar, commonly a deformed steel bar intended to transmit tension, compression, or shear through a construction joint.
- V. Tolerances: the permitted deviation from a specified dimension, location, or quantity. Plus (+) tolerance increases the amount or dimension to which it applies or raises a level alignment. Minus (-) tolerance decreases the amount or dimension to which it applies or lowers a level alignment. A non-signed tolerance means + or -. Where only one signed tolerance is specified (+ or -), there is no limit in the other direction.
- W. Unreinforced Concrete Pavement: concrete pavement that does not contain distributed deformed steel reinforcing bars or welded wire fabric. Pavement may include dowel bars at the joints (construction and possibly contraction joints) and tie bars in some locations.
- X. Water/Cementitious Ratio (*w/cm*): the ratio of the mass of water, exclusive only of that absorbed by the aggregates, to the mass of cementitious material (hydraulic) in concrete, stated as a decimal.
- Y. Work: the entire construction or separately identifiable parts thereof required to be furnished under the Contract Documents.

## 1.4 REFERENCED STANDARDS AND MANUALS

All standards and manuals referenced herein shall be the latest versions or editions. Check with the reference organization for latest published version and utilize this version on the project.

1. AASHTO M182: Standard Specification for Burlap Cloth Made from Jute or Kenaf and Cotton Mats
2. ACI 301: Specifications for Structural Concrete
3. ACI 306.1: Standard Specification for Cold Weather Concreting
4. ACI 308.1: Standard Specification for Curing Concrete
5. ACI CP-1: Technical Workbook for ACI Certification of Concrete Field Testing Technician-Grade 1
6. ASTM A36/A36M: Standard Specification for Carbon Structural Steel
7. ASTM A615/A615M: Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
8. ASTM A775/A775M: Standard Specification for Epoxy-Coated Steel Reinforcing Bars
9. ASTM WK34874: New Specification for Epoxy-Coated Steel Dowels for Concrete Pavement
10. ASTM A820/A820M: Standard Specification for Steel Fibers for Fiber-Reinforced Concrete
11. ASTM C31/C31M: Standard Practice for Making and Curing Concrete Test Specimens in the Field 12. ASTM C33: Standard Specification for Concrete Aggregates
12. ASTM C39/C39M: Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
13. ASTM C42/C42M: Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
14. ASTM C94/C94M: Standard Specification for Ready-Mixed Concrete
15. ASTM C138/C138M: Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
16. ASTM C143/C143M: Standard Test Method for Slump of Hydraulic-Cement Concrete
17. ASTM C150: Standard Specification for Portland Cement
18. ASTM C171: Standard Specification for Sheet Materials for Curing Concrete
19. ASTM C172/C172 M: Standard Practice for Sampling Freshly Mixed Concrete



20. ASTM C173/C173M Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
21. ASTM C231/C231M: Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
22. ASTM C260/C260M: Standard Specification for Air-Entraining Admixtures for Concrete
23. ASTM C309: Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
24. ASTM C494/C494M: Standard Specification for Chemical Admixtures for Concrete
25. ASTM C595: Standard Specification for Blended Hydraulic Cements
26. ASTM C618: Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
27. ASTM C989: Standard Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars
28. ASTM C1017/C1017M: Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
29. ASTM C1064/C1064M: Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
30. ASTM C1074: Standard Practice for Estimating Concrete Strength by the Maturity Method
31. ASTM C1077: Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
32. ASTM C1116/C1116M: Standard Specification for Fiber-Reinforced Concrete
33. ASTM C1157: Standard Performance Specification for Hydraulic Cement
34. ASTM C1240: Standard Specification for Silica Fume Used in Cementitious Mixtures
35. ASTM C1260: Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
36. ASTM C1293: Standard Test Method for Determination of Length Change of Concrete Due to Alkali-Silica Reaction
37. ASTM C1567: Standard Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)
38. ASTM C1602/C1602M: Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
39. ASTM D698: Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12 400 ft-lbf/ft<sup>3</sup> (600 kN-m/m<sup>3</sup>))

40. ASTM D994/D994M: Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type)
41. ASTM D1751: Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
42. ASTM D1752: Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction
43. ASTM D2628: Standard Specification for Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements
44. ASTM D3406: Standard Specification for Joint Sealant, Hot-Applied, Elastomeric-Type, for Portland Cement Concrete Pavements
45. ASTM D3963/D3963M: Standard Specification for Fabrication and Jobsite Handling of Epoxy-Coated Steel Reinforcing Bars
46. ASTM D5893/D 5893M: Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements
47. ASTM E329: Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection
48. ASTM E548: Standard Guide for Proficiency Testing by Interlaboratory Comparisons
49. ASTM E1980: Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces
50. CRSI's "Manual of Standard Practice," Latest Edition.
51. NRMCA QC 3 – Checklist for Certification of Ready Mixed Concrete Production Facilities

## 1.5 SUBMITTALS

### A. Design Mixtures:

1. For each concrete mixture proposed for the Work.
2. Submit changes to design mixtures when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.
3. Only submit adjustments that involve changes in material sources or when the quantity of cementitious materials and aggregates vary by more than  $\pm 5\%$  of that in the design mixtures or admixture quantities exceed the manufacturers recommended range
4. Indicate on delivery tickets of delivered batches of concrete amounts of mixing water withheld for addition at Project site.

### B. Dowel and Tie Bar Steel Reinforcement Drawings: Drawings that detail placement. Include bar sizes, lengths, material, grade, and supports for concrete reinforcement.

- C. Qualification Data: For each plant supplying, vehicle transporting, installer, laboratory, and technician involved in testing concrete for paving, submit documentation that the appropriate certifications have been obtained and are currently valid.
- D. Material Certificates: For each of the following, signed by manufacturers:
  - 1. Cementitious materials.
  - 2. Admixtures.
  - 3. Steel reinforcement and accessories.
  - 4. Fiber reinforcement.
  - 5. Curing compounds.
  - 6. Joint filler.
- F. Field quality-acceptance inspection and testing reports as described in Section 3.11.

## 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who employs on project personnel qualified as ACI-certified Concrete Flatwork Technician and a supervisor who is an ACI-certified Concrete Flatwork Finisher.
- B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C94/C94M requirements for production facilities and equipment.
  - 1. Manufacturer's production facilities and delivery vehicles certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities"
  - 2. Personnel responsible for quality control/quality assurance of concrete, certified as NRMCA Concrete Technologist Level 2 or equivalent certification required by state highway agency in the jurisdiction of the Work.
- C. Testing Agency Qualifications: An independent agency, complying with the requirements of ASTM C1077 and ASTM E329 for quality assurance testing indicated, as documented according to ASTM E548, or similar and acceptable to the Engineer.
  - 1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program. Equivalent certification programs shall include a component that evaluates performance of the test methods.
  - 2. Personnel performing laboratory tests shall be ACI-certified Concrete Strength Testing Technician or Concrete Laboratory Testing Technician - Level I. Testing Agency laboratory supervisor shall be an ACI-certified Concrete Laboratory Testing Technician -Level II.
- D. Source Limitations: Use the same source of cementitious materials, aggregates, chemical admixtures and other ingredients for concrete mixtures for the duration of the project, unless otherwise permitted.
- E. Concrete Mixture Design: A qualified laboratory shall perform material evaluation tests and design concrete mixtures. The qualified laboratory can be the concrete supplier's laboratory facility or an independent testing agency either of which shall be accredited for testing

concrete mixtures and aggregates by the AASHTO Accreditation Program (AAP) or similar as accepted by the Engineer.

## 1.7 DELIVERY, STORAGE, AND HANDLING

Dowel and Tie Bar Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage. Avoid damaging coatings, if used, on steel reinforcement.

## PART 2 – PRODUCTS

### 2.1 CONCRETE MATERIALS

A. Comply with ASTM C94/C94M and the following requirements.

1. Cement: Conforms to ASTM C150, C595 or C1157.
2. Supplementary Cementitious Materials (SCMs):
  - a. Fly ash conforming to ASTM C618.
  - b. Slag cement conforming to ASTM C989.
  - c. Silica fume conforming to ASTM C1240.
3. Water: Conforms to ASTM C1602/C1602M. Provide documentation required by ASTM C1602/C1602M when non-potable water is proposed for use.
4. Aggregates: Conform to ASTM C33.

### 2.2 STEEL REINFORCEMENT

A. Dowel and Tie Reinforcing Bars: When used, dowel and tie bars shall comply with the sizes and grades as shown on the plans. If dowel and tie bar material requirements are not shown on plans, comply with ASTM A615, Grade 60 (Grade 420) and:

1. Dowel bars shall be plain bars cut true to length with ends square and free of burrs.
2. Epoxy-Coated Joint Dowel Bars shall comply with ASTM A775/A775M1 epoxy coated.
3. Plate Dowels shall be manufactured from hot rolled steel plate meeting ASTM A36.
4. Tie bars shall be deformed bars.

B. Bar Supports: Dowel bar chairs or other devices for spacing, supporting, and fastening reinforcing bars in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete.

### 2.3 ADMIXTURES

A. Air-Entraining Admixture: Conform with ASTM C260/C260M.

B. Chemical Admixtures: The following admixtures are permitted. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C494/C494M, Type A.
2. Retarding Admixture: ASTM C494/C494M, Type B.
3. Water-Reducing and Retarding Admixture: ASTM C494/C494M, Type D.
4. High-Range, Water-Reducing Admixture: ASTM C494/C494M, Type F.
5. High-Range, Water-Reducing and Retarding Admixture: ASTM C494/C494M, Type G.
6. Special Performance Admixture: ASTM C494/C494M, Type S.
7. Plasticizing Admixture for flowing concrete: ASTM C1017/C1017M, Type I.
8. Plasticizing and Retarding Admixture for flowing concrete: ASTM C1017/C1017M, Type II.

#### 2.4 FIBER REINFORCEMENT

A. Carbon-Steel Fiber: Comply with ASTM A820.

B. Synthetic Fiber: Utilize polypropylene fibers engineered and designed for use in concrete pavement, complying with ASTM C1116/C1116M, Type III.

#### 2.5 CURING MATERIALS

A. Liquid Membrane-Forming Compounds: Utilize a Membrane-Forming Curing Compound complying with ASTM C309, Type 2, Class A consisting of a waterborne, monomolecular film forming, manufactured for application to fresh concrete.

B. Absorptive Cover: If used, comply with AASHTO M182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz/yd<sup>2</sup> (305 g/m<sup>2</sup>) when dry.

C. Moisture-Retaining Cover: If used, comply with ASTM C171, polyethylene film or white burlap-polyethylene sheet.

#### 2.6 JOINT AND SEALANT MATERIALS

A. Isolation Joint Materials: When used, comply with ASTM D994/D994M, D1751, or D1752, or as shown on plans.

B. Joint Sealing Materials: When used, comply with the following:

1. Hot-Poured Elastomeric Type; ASTM D3406
2. Silicone Rubber Type (cold applied); ASTM D5893/D5893M
3. Single-Component Elastomeric Type (preformed); ASTM D2628

## 2.7 CONCRETE MIXTURES

- A. Mixture Design: Prepare design mixtures for each type and strength of concrete required, proportioned on the basis of field test records or laboratory trial mixtures according to ACI 301. Use a qualified laboratory in accordance with Section 1.6.E for preparing and reporting proposed mixture designs when proposed mixtures are based on laboratory trial mixtures.
1. Supplementary Cementitious Materials (SCMs): For concrete that will be in a Severe Exposure Condition, limit percentage of supplementary cementitious materials, by weight of total cementitious materials, to a maximum quantity as follows:
    - a. Fly Ash: 25 percent.
    - b. Slag Cement: 50 percent.
    - c. Silica Fume: 10 percent.
  2. Strength: Specified compressive strength shall be 4,000 psi (28 MPa) at 28 days, unless otherwise specified.
  3. Total Air Content: Comply with Table 1, unless otherwise specified. The tolerance for air content shall be  $\pm 1.5\%$ .
  4. Aggregates: Nominal maximum aggregate size shall not exceed 1/3 of the specified pavement thickness.
    - a. When required by the Engineer, provide results of aggregate tests for alkali silica reactivity in accordance with ASTM C1260.  
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    - b. When ASTM C1260 expansion at 14 days measured on each source of aggregate exceeds 0.10%, provide test results with the aggregate and proposed combination of cementitious materials with an expansion that is less than or equal to 0.10% at 14 days, in accordance with ASTM C1567.
  5. Slump: For pavements placed other than by using slipform equipment, nominal slump shall be 4 in. (100 mm), unless otherwise permitted. For pavements placed using slipform equipment the maximum slump shall be 2 in. (50 mm), unless otherwise permitted. Tolerance for slump stated in ASTM C94/C94M shall apply.
- B. Submit documentation for mixture proportions of concrete mixtures proposed for use in accordance with ACI 301 and Section 1.5.B herein.

## PART 3 – EXECUTION

### 3.1 SUBGRADE PREPARATION

- A. Prepare subgrade as required by the plans.
- B. Re-grade and re-compact subgrade disturbed by concrete delivery vehicles or other construction equipment to the requirements of Section 3.1.A.
- C. Do not use sand or loose material to obtain final subgrade elevation.

## 3.2 FORMWORK

- A. Construct formwork so concrete pavement is of size, shape, alignment, elevation, and position indicated and so that the pavement is within the tolerance limits of Section 3.10 Tolerances.
- B. Construct forms tight enough to prevent loss of concrete mortar.
- C. Fabricate forms for easy removal without hammering or prying against concrete surfaces.
- D. Clean forms and adjacent surfaces to receive concrete. Remove debris from forms just before placing concrete.
- E. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
- F. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement, if used.
- G. The edge of previously placed concrete may be used as a form. Do not apply form release agent to previously placed concrete, unless prevention of bond between the new and the old concrete is desired.
- H. Formwork may be removed after cumulatively curing at not less than 50°F (10°C) for 24 hours after placing concrete, if concrete is hard enough to not be damaged by form-removal operations and curing and protection operations are maintained.
- I. Clean and repair surfaces of forms to be reused in the Work. Damaged forms will not be acceptable. Apply new form-release agent.
- J. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets.

## 3.2 STEEL REINFORCEMENT

- A. Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
- B. Clean dowel and tie bar reinforcement of loose rust and mill scale, earth, ice, and other foreign materials.
- C. Place joint reinforcement at locations indicated on project drawings. Align dowels exactly centered over the joint line.
- D. Anchor dowel baskets securely into the subgrade. For paving lane widths greater than 12 ft (3.66 m), install a minimum of 4 stakes on the leave side of both basket legs.
- E. Do not place bent dowel baskets. Do not leave bent dowel baskets in place.
- F. At time of paving, make sure all dowels are parallel to the center line of the drive lane, parallel to the base, baskets are properly pinned, and the center of each basket (i.e., the joint location) is clearly marked. NRMCA 01/2012 (Revision 0)
- G. Place and align to meet the requirements of Section 3.10, Tolerances.

- H. For epoxy-coated dowel bar reinforcement, if used, repair cut and damaged epoxy coatings with epoxy repair coating according to ASTM D3963/D3963M.

### 3.3 CONCRETE PLACEMENT

- A. Measure, batch, mix, and deliver concrete according to ASTM C94/C94M, and ASTM C1116/C1116M when fibers are used, and furnish batch ticket information required by these specifications.
- B. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.
- C. When placing and finishing fixed-form concrete pavement, comply with the following steps:
  - 1. Deposit concrete directly from the transporting equipment onto the subgrade or subbase.
  - 2. Do not place concrete on frozen subgrade or subbase.
  - 3. Other methods of conveying the concrete may be used when specified or permitted by the Engineer.
  - 5. Deposit concrete between the forms to a uniform height.
  - 6. Consolidate concrete to remove voids and air pockets. Do not move concrete horizontally with a vibrator.
  - 7. Strike off concrete between forms using a form riding paving machine, vibrating screed, or laser screed. Other strikeoff devices may be used, such as a highway straightedge or scraping straightedge, when approved by the Engineer.
  - 8. Immediately after strikeoff and before bleed water appears on the surface, level concrete with a bullfloat.
  - 9. Do not use steel trowels or power finishing equipment, unless otherwise specified or permitted.
  - 9. Finish the pavement to the elevations, cross slope, and thickness specified in the project drawings and meet the requirements of Section 3.10, Tolerances.
- D. When placing and finishing slipform concrete pavement, comply with the following steps:
  - 1. Deposit and finish concrete in conformance with Section 3.5.C.
  - 2. The slipform paver shall be operated with adherence to continuous forward movement as possible, and as such, all delivery and spreading of concrete shall be coordinated so as to provide uniform progress without stopping and starting the machine. Coordination with the concrete supplier is especially important to achieve the desired result.
  - 3. Adjust the vibrator frequency for varying paver speeds and turn off vibrators when the paver stops.



4. When the slipform paver is to ride on the edge of a new concrete pavement, the concrete strengths of the riding surface shall be greater than 2,000 psi (14 MPa), determined by testing field cured specimens in accordance with ASTM C31 or maturity methods.
5. String lines or other means for setting grade should be checked frequently.

E. Edging:

1. Edge top surface edges to a radius of 1/4 in. (6 mm).
2. Do not tool edges if the joint is to be widened to provide a reservoir for joint sealant.

F. Final Surface Texture: Complete final texturing as soon as possible after finishing, but before the concrete has attained its initial set.

1. Artificial Turf Drag:

- a. Drag artificial turf longitudinally along the concrete pavement surface after finishing. The turf shall be mounted on a work bridge or a moveable support system capable of varying the area of turf in contact with the pavement.
- b. The turf drag shall be a single piece of artificial turf of sufficient length to span the full width of the pavement being placed. The turf shall have a means to adjust the height and/or length so as to always maintain a minimum of 4 ft (1.2 m) longitudinal length of turf in contact with the concrete being placed. Where construction operations necessitate and with the approval of the Engineer, the length and width of the turf may be varied to accommodate specific applications.
- c. The turf used shall be an artificial grass type having a molded polyethylene pile face. The pile shall contain blades that are curled and/or fibrillated. The pile shall not contain straight, smooth monofilament blades. The pile shall include blade lengths of 0.6 to 1.3 in. (15 to 33 mm). The turf shall have a minimum weight of 60 oz/yd<sup>2</sup> (2,035 g/m<sup>2</sup>). The backing shall be a strong, durable material not subject to rot, and shall be adequately bonded to withstand use as specified.
- d. Turf dragging operations should be delayed if there is excessive bleed water.
- e. Prevent the turf from getting plugged with grout or dragging larger aggregates or foreign materials by cleaning or replacing as necessary.
- f. Measures should be taken to ensure a surface of uniform appearance that is free from deep striations.
- g. Turf should be thoroughly cleaned or replaced at the end of each day's use. Damaged or worn turf should be repaired and/or replaced.

- h. When surface corrections for pavement smoothness are made in the hardened concrete, no additional texturing is required.
2. Broom Finish:
- a. Broom concrete surface with a steel or fiber broom to produce corrugations between 1/16 and 1/8 in. (2 and 3 mm) deep.
  - b. Broom perpendicular to nearest edge of pavement. Broom all areas of a panel in the same direction.
  - c. Use the same type and manufacture of broom for all paved surfaces to provide a consistent appearance.
  - d. Other methods of producing final surface texture may be permitted when specified or accepted by the Engineer.
- G. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, initial freezing, freezing and thawing cycles, or low temperatures.
- 1. Concrete temperature as delivered and temperature of placed concrete shall be maintained within the temperature range required by ACI 301.
  - 2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
  - 3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators, unless otherwise specified or permitted.
- H. Hot-Weather Placement: Comply with ACI 301 and as follows:
- 1. Maintain concrete temperature below 95°F (35°C) at time of placement. Chilled mixing water or ice may be used to control temperature. Quantity of ice used shall be included in the total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
  - 2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

### 3.4 CONCRETE PROTECTION AND CURING

- A. Protect the concrete from damage due to rain. Have available, near the site of the work, materials for protection of the edges and surface of the concrete. Should any damage result, the Engineer will suspend operations until corrective action is taken and may require removal and replacement of the rain-damaged concrete.
- B. Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.

- C. Apply curing compound immediately after final surface texture has been obtained and water sheen has disappeared.
- D. Apply membrane-forming curing compound to all exposed surfaces at a maximum coveragerate of 180 ft<sup>2</sup>/gal. (5 m<sup>2</sup>/L).
- E. When using liquid membrane-forming compounds, if the evaporation rate<sup>2</sup> during paving operations does not exceed 0.1 lb/ft<sup>2</sup>/hr (0.49 kg/m<sup>2</sup>/hr), then only 1 coat of membrane curing compound at an individual application rate not to exceed 180 ft<sup>2</sup>/gal. (5 m<sup>2</sup>/L) is permissible. Do not allow the concrete surface to dry before applying the curing compound. Remove any standing pools of bleed water that may be present on the surface before applying the curing compound. Apply the first coat within 10 min. after completing texturing operations. If applicable, apply the second coat within 30 min. after completing texturing operations.
- F. Maintain and promptly repair damage to curing materials on exposed surfaces of concrete pavement continuously for at least 3 curing days, or until the pavement is open to the traveling public, whichever occurs first. A curing day is defined as a 24-hr. period when either the temperature taken in the shade away from artificial heat is above 50°F (10°C) for at least 19 hr. or when the surface temperature of the concrete is maintained above 40°F (5°C) for 24 hr. Curing begins when the concrete curing system has been applied. Stop concrete paving if curing compound is not being applied promptly and maintained adequately.
- G. Apply curing compound to pavement edges after forms, if used, have been removed.
- H. Alternative curing methods may be used in accordance with this specification or with ACI 308.1 when acceptable to the Engineer.

### 3.5 JOINTS

- A. Construct joints at the locations, depths, and with dimensions indicated on the project drawings or accepted drawings submitted by the contractor.
- B. If jointing requirements are not indicated on the project drawings, the contractor shall submit drawings describing proposed jointing in accordance the requirements of 3.7.B.1 through 3.7.B.9. The contractor shall not proceed with work until the jointing requirements are accepted by the Engineer.
  - 1. Indicate locations of contraction joints, construction joints, and isolation joints. Spacing between contraction joints shall conform to Table 2, unless otherwise permitted.
  - 2. The larger dimension of a panel shall not exceed 125% of the smaller dimension.
  - 3. The minimum angle between two intersecting joints shall be 80 degrees, unless otherwise specified or permitted.

4. Joints shall intersect pavement free edges at 90-degree angles and shall extend straight for a minimum of 1-1/2 ft (0.5 m) from the pavement edge, where possible.
  5. Align joints of adjacent panels.
  6. Align joints in integral curbs with joints in pavement.
  7. Ensure joint depth and width dimensions are as specified.
  8. Minimum contraction joint depth, using a conventional saw, hand tools, or inserts, shall be 1/4 of the pavement thickness. Minimum joint width for saw cutting is 1/8 in. (3 mm). When using an early-entry dry-cut saw, the depth of the cut shall be at least 1 in. (25mm).
  9. Use isolation joints only where pavement abuts buildings, foundations, existing pavements, manholes, and other fixed objects.
- C. Construct contraction joints by one of the following methods:
1. Tool contraction joints in fresh concrete after the concrete has set sufficiently to maintain the formed joint to the specified depth and width.
  2. Insert plastic strips vertically into the fresh concrete. Depress strips into pavement until flush with surface.
  3. Saw-cut concrete after concrete has hardened sufficiently to prevent aggregate being dislodged and soon enough to control pavement cracking. Discontinue sawing joint if a crack precedes the saw-cut. Resume sawing at the next joint location.
- D. Extend isolation joints through the full depth of the pavement. Fill the entire isolation joint with isolation joint material, unless otherwise required by project drawings or by accepted jointing drawings submitted by the contractor (see Section 2.6 for material requirements).

**Table 2. Spacing Between Contraction Joints.**

Pavement Thickness, in. (mm)	Maximum Spacing, ft. (m)
3-1/2 (90)	8-1/2 (2.5)
4, 4-1/2 (100, 110)	10 (3)
5, 5-1/2 (125, 140)	12-1/2 (4)
6 or greater (150 or greater)	15 (4.5)

### 3.6 JOINT FILLING

- A. Prepare, clean, and install joint filler according to manufacturer's written instructions.
- B. Remove dirt, debris, saw cuttings, curing compounds, and sealers from joints; leave contact faces of joint clean and dry.
- C. Hot-Poured Liquid Sealants:
  1. Place joint sealer when the pavement and surrounding air temperature are 40°F (5°C) or higher.
  2. Where specified, backer rods shall be installed to provide proper shape factor.

3. Use an indirect heating kettle with an agitator to prevent localized overheating. Discard overheated material.
4. Use insulated hoses. Fit the application wand with a recirculation line to prevent the temperature of the sealant in the hose from dropping below application temperature.
5. Make sure that the top of the sealant is 1/8 to 1/4 in. (3 to 6 mm) below the pavement surface.
6. Clean any spilled or overfilled joint sealant from the concrete surface.

D. Cold-Poured Silicone Sealants:

1. Place joint sealer when the pavement and surrounding air temperature are 40°F (5°C) or higher.
2. Where specified, backer rods shall be installed to provide proper shape factor.
3. Use joint primer provided by the manufacturer to ensure a good bond between the sealant and the joint reservoir face.
4. Tool non-self-leveling sealants before the material cures.
5. Clean any spilled or overfilled joint sealant from the concrete surface.

E. Preformed Compression Sealers:

1. Check joint width for compatibility.
2. Make sure the joint width doesn't vary, especially at points where the saw reenters the joint.
3. Clean and dry the saw cut reservoir before sealing the joint. Seal joints only when the joint surfaces appear dry.
4. Follow the manufacturer's recommendation for sealant sizing and installation.
5. Make sure the sealant is lubricated, straight, vertical, and undamaged before installation.
6. Make sure that the installation device does not stretch the sealant.

3.7 OPENING TO TRAFFIC

Do not open the pavement to vehicular traffic until the in-place compressive strength is at least 3,000 psi (21 MPa), or 75% of the specified strength, or until the pavement is accepted by the Engineer for opening to traffic. In-place strength shall be determined using field cured cylinders in accordance with ASTM C31/C31M or maturity methods in accordance with ASTM C1074.

3.8 TOLERANCES

- A. Construct pavement to comply with the following tolerances:
1. Elevation: 3/4 in. (19 mm)
  2. Thickness: +3/8 in., -1/4 in. (+10 mm, -6 mm)
  3. Surface: In any direction, the gap below a 10 ft (3 m) unlevelled straightedge resting on high spots shall not exceed 1/2 in. (13 mm)
- B. Joint reinforcement:
- Tie bars: alignment of tie bar end relative to line perpendicular to edge of pavement: 1/2 in./ft (13 mm/300 mm) of tie bars
- C. Dowels:
1. Lateral alignment and spacing: 1 in. (25 mm)
  2. Vertical alignment: 1/4 in. (6 mm)
  3. Alignment of dowel bar end relative to line perpendicular to edge of pavement: 1/4 in./ft (6 mm/300 mm) of dowel
- D. Joint spacing (see Table 2)
1. Contraction joint depth: +1/4 in. (6 mm), -0 in.
  2. Joint width: +1/8 in. (3 mm), -0 in.

### 3.9 FIELD QUALITY ACCEPTANCE

- A. Testing and Inspecting: Contractor shall engage a qualified testing and inspecting agency meeting the requirements of Section 1.6.C to perform tests and inspections and to submit reports for acceptance in accordance with Section 1.5.F.
- B. Inspections: Prior to commencement of portions of the work, the inspection agency shall provide verification that the following items meet the specification requirements:
1. Subgrade and/or subbase density and elevation.
  2. Steel tie and dowel bar reinforcement placement, if used.
  3. Use of required design mixture.
  4. Concrete placement, including conveying and depositing.
  5. Curing procedures.
  6. Concrete strength before removal of forms, if used.
- C. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C172/C172M shall be performed according to the following requirements:

1. Preliminary Samples/Tests: Preliminary samples to measure slump and air content and to make necessary adjustments to mixtures to achieve specified requirements are permitted in accordance with ASTM C94/C94M.
  2. Testing Frequency: Obtain at least one random composite sample for each 50 cubic yards, or fraction thereof of each concrete mixture placed each day. a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
  3. Slump: ASTM C143/C143M; one test at point of placement for each composite sample when compressive strength specimens are made, but not less than one test for each day's pour of each concrete mixture.
  4. Air Content: ASTM C231/C231M, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
  5. Density: ASTM C138/C138M; one test for each composite sample when strength specimens are made.
  6. Concrete Temperature: ASTM C1064/C1064M; one test hourly when air temperature is 40°F (5°C) and below and when 80°F (27°C) and above, and one test for each composite sample when strength specimens are made.
  7. Compression Test Specimens: ASTM C31/C31M; two sets of two standard-cured cylinder specimens for each composite sample. Specimen sizes of 6 x 12 in. (150 x 300 mm) or 4 x 8 in. (100 x 200 mm) are permitted.
  8. Compressive-Strength Tests: ASTM C39/C39M; test one set of two standard-cured specimens at 7 days and one set of two specimens at 28 days. A compressive-strength test result shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated. Strength of each concrete mixture is satisfactory if every average of any three consecutive compressive-strength test results equals or exceeds specified compressive strength and no compressive-strength test result falls below specified compressive strength by more than 500 psi (3.5 MPa).
- D. Reporting: Test results shall be reported in writing to Engineer within 48 hours of testing. Reports shall contain Project identification information, date of concrete placement, name of concrete testing and inspecting agency, and location of concrete batch in Work.
- E. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Engineer. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C42/C42M or by other methods as directed by Engineer.
- F. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

- G. Correct deficiencies in the Work that test reports and inspections indicate does not comply with this specification and/or the Contract Documents.

### 3.10 METHOD OF MEASUREMENT

- A. Measurement will be in square yards for each different thickness of concrete pavement. The area of manholes, intakes, or other fixtures in the pavement will not be deducted from the measured pavement area.

### 3.11 BASIS OF PAYMENT

All work associated with this section shall be incidental to the project. No direct payment shall be made for concrete pavement.

**END OF SECTION 02520**



**SECTION 02950**  
**I-BEAM/TIMBER LAGGING RETAINING WALL**

**PART 1 - GENERAL**

**1.01 SUMMARY**

Section Includes

1. Drilled – In Soldier Piles
2. Timber Lagging Wall
3. Geotextile Fabric

**1.02 REFERENCES**

- A. ASTM A36/A36M – Standard specification for carbon steel
- B. American Wood Preservers Association (AWPA) Book of Standards (Latest Edition)
- C. Standard UC4

**1.03 SUMMARY OF WORK**

Furnish all labor and materials, equipment, excavation, backfill, pilings, timbers, concrete and other necessary items to install the I-Beam/Timber lagging retaining wall as shown on the Drawings and specified here in to construct a complete workable system.

**1.04 SUBMITTALS**

Shop drawings shall be submitted in accordance with the General Conditions.

**1.05 QUALITY ASSURANCE**

The contractor shall have successfully completed retaining wall construction similar in design, material and extent as required for this project.

**1.06 DELIVERY, STORAGE, HANDLING**

- A. Comply with General Conditions,
- B. Comply with manufacturers ordering instructions and lead time requirements to avoid construction delays.
- C. Deliver materials to site in packaging capable of transfer with forklift.
- D. Unload materials at site in a manner that no damage occurs to the product.
- E. Storage and Protections
  1. Store materials protected such that they are kept free from mud, dirt and other foreign material.
  2. Store materials in staging area as directed by Owner.

## PART 2 – PRODUCTS

### 2.01 CARBON STEEL H PILES

- A. Steel piles shall be HP10 x 42.
- B. The minimum yield strength shall be 50 KSI.
- C. The piles shall be provided with a bare finish.

### 2.02 TIMBER LAGGING

- A. Timbers shall be 8" x 8" nominal size.
- B. Timbers shall be pressure treated to meet the requirements of the American Wood Protection Association (AWPA).
- C. The timbers shall meet the requirements of Category UC4B.

### 2.03 GEOTEXTILE FABRIC

- A. The geotextile fabric shall meet requirements of Kentucky Department of Highways Type II for underdrains (Section 843).

## PART 3 – EXECUTION

### 3.01 EXAMINATION

- A. Verify that the lake subgrade is suitable for the proposed work.
- B. Verify the location of all vertical piles.
- C. Confirm elevations of the adjacent green and toe of wall.
- D. Establish the bottom of the wall to achieve the desired top of wall at 8" intervals. A wall mock up shall be performed for correct spacing.

### 3.02 INSTALLATION

- A. Drill hole for piling to a depth of 2 feet into the shale. Remove all loose soil from the excavation.
- B. Protect drilled hole with an 18" diameter sonnet tube. The tube shall be trimmed so that the pile can sit as close to the existing wall as possible.
- C. Clean the bottom of the hole so that no more than 1" of muck remains on the bottom.
- D. If over excavation occurs, fill to required elevations with No 57 stone.
- E. The soldier pile shall be lowered into place. Insure that the piling is oriented correctly and is plumb.

- F. Shore each piling to prevent movement. Remove fluid from drilled holes.
- G. Fill sonnet tube with Class A concrete with a compressive strength of 4, 000 PSI to the existing lake bottom.
- H. Construct leveling pad at the established elevation. Compact No 57 stone for aggregate leveling pad with a vibratory compactor.
- I. Cut timbers so that they fit snug within the piling. Install timbers to final elevations shown on the drawings.
- J. Insure that each section is level and constructed to required elevation.
- K. Remove top three horizontal railroad ties from the existing wall as well as any damaged tie.
- L. Backfill to the elevation of the remaining ties with No 9 crushed aggregate.
- M. Install the geotextile fabric above the crushed stone and backfill to the finished grade with topsoil allowing for sod thickness.
- N. Cut off the steel I-Beams to the elevation shown on the Drawings.
- O. Remove and dispose of drill spoil to location directed by Owner.

### 3.03 FIELD QUALITY ASSURANCE

- A. The alignment of the vertical soldiers shall be within 1/4" of vertical.
- B. The vertical elevation of the top of wall shall be within 1/4" of the planned elevation.

### 3.04 METHOD OF MEASUREMENT

The quality of the I-Beam/Timber retaining wall shall be measured in square feet. All geotextile fabric, concrete, topsoil and crushed stone bedding and backfill shall be considered incidental to the project.

### 3.05 BASIS OF PAYMENT

All work within this section shall be considered incidental to the project. No direct payment shall be made for I-Beam/timber Retaining Wall.

**END OF SECTION 02950**

**SECTION 03200**  
**CONCRETE REINFORCEMENT**

1. DESCRIPTION

This work shall consist of furnishing and placing steel for reinforcement of concrete. The reinforcement shall consist of bars, of the quality, type, size, and quantity designated by these specifications and as shown on the plans.

2. MATERIALS

Materials shall meet requirements specified in the following KDOH Section.

Steel Reinforcement                      811

The CONTRACTOR shall provide the Engineer with copies of the steel manufactures manifest which indicates the heat or test identification numbers and the grade of steel provided.

3. PROTECTION OF MATERIAL

Proper care shall be used in handling and storing steel reinforcement to prevent bending, excessive rusting, or coating with objectionable substances.

4. CONDITION OF MATERIAL

Reinforcement, when incorporated into the work, shall be reasonably free from dirt, paint, oil, grease, loose-thick rust, or other foreign substance, and, when deemed necessary, shall be cleaned to the satisfaction of the ENGINEER. Tight-thin or powdery rust on these materials shall not be cause to require cleaning. Reinforcement which is rusted sufficiently to cause it to fail to meet specified physical properties shall be rejected.

5. STRAIGHTENING

Reinforcement which may have become bent during shipment or handling shall be straightened before being placed in the work. Straightening shall be done in a manner which will not injure the steel. Heating will not be allowed. Sharp kinks shall be cause for rejection.

6. BENDING

Reinforcement shall be bent cold. It shall be bent accurately to the dimensions and shapes shown on the plans and to within tolerances designated in the CRSI Manual of Standard Practice. In bending, care shall be taken not to injure the steel and only proper appliances and competent workmen shall be employed on the work. Bars shall be bent in the shop before shipment and shall not be bent in the field, unless otherwise noted.

7. PLACING AND FASTING

All steel reinforcement shall be accurately placed in positions shown and firmly held in position during placement and hardening of concrete. All steel reinforcement shall be spaced to within a tolerance of plus or minus 1/2 inch and placed to within a tolerance of plus or minus 1/4 inch of specified clearance from the face of concrete. Dimensions shown from the face of concrete to bars are clear distances, unless otherwise noted. Bar spacings are from center to center of bars. Bars shall be tied at all intersections, except where spacing is less than one foot in both directions, then alternate intersections shall be tied. Vertical stirrups shall always pass around the main tension members and shall be securely attached thereto.

Distances from forms shall be maintained by means of stays, blocks, ties, hangers, or other approved supports. Supports for holding reinforcement from contact with the forms shall be approved precast blocks composed of mortar or approved metal chairs. The tips of metal chair supports which are in contact with the surface of the concrete shall be plastic coated steel. When plastic coated steel

supports are used, there shall be a minimum of 1/8-inch thickness of the plastic material between the metal tips and the exposed surface of the concrete. The steel placed in reinforced concrete slabs shall also be securely tied down with wire 0.148 inch or greater in diameter at intervals not greater than 8 feet in both the longitudinal and transverse directions to prevent any possibility of steel rising above the specified elevation during placing, vibrating, and finishing the concrete. Metal supports shall have a shape that will be easily enveloped by the concrete.

The top mat and bottom mat of bars shall be separated by precast mortar blocks or by other equally suitable devices. The use of pebbles, pieces of broken stone or brick, metal pipe, and wooden blocks shall not be permitted as separators. Reinforcement in any member shall be securely placed and then inspected and approved before the placing of concrete begins. Concrete placed in violation of this provision may be rejected.

## 8. SPLICING

No splicing of reinforcement will be permitted, except those splices of the type and at the locations shown, without written permission. Acceptable splices may include lapped splices, welded splices, mechanical splices, or other positive connection splices designated by the plans or ENGINEER.

Lapped splices, except splices for spiral shapes, shall have a length of no less than 40 times the nominal diameter of the reinforcement being spliced, unless otherwise designated. Lapped splices in areas not designated on the plans shall be rigidly clamped or wired together in an approved manner.

Welded splices shall be in conformance with the AWS Reinforcing Steel Welding Code, current edition. Bars to be welded shall be butted and welded so as to develop, in tension, at least 125 percent of the specified yield strength of the bars. Welded splices will not be permitted unless shown on the plans or approved by the ENGINEER.

Mechanical splices shall be used primarily for bars required for compression only. Mechanical splices for bars designed to carry critical tension or compression shall be equivalent in strength to approved welded splices.

All splices added in the field and not shown on the plans shall be made as far from the point of maximum tensile stress in the member as practicable and splice points shall be staggered 3 feet or more in adjacent bars, when possible. No splices shall be used which reduce the clear distance between the splice and the closest bar to less than the minimum clear distance of 4 inches.

All splices shall be made with clean, sound materials properly affixed to the members being spliced and shall be free of any substances that would weaken or contaminate the splice or concrete surrounding the splice.

When welded or mechanical splices are permitted, 2 test specimens of the spliced reinforcement shall be prepared and submitted to the ENGINEER for testing prior to the incorporation of such splices into the work, and an additional test specimen shall be submitted for each 100 splices made. The welded splices shall be made only by workmen who are qualified in conformance with the AWS Reinforcing Steel Welding Code.

9. METHOD OF MEASUREMENT

Reinforcing steel will be measured by the pound, based on the theoretical number of pounds complete in place as shown or as ordered and accepted in the final work.

The quantities of materials furnished and placed shall be based upon the calculated weights of the reinforcing steel actually placed in accordance with these specifications. Bars used to replace test specimens will also be measured for payment. The weights calculated will be based upon the following table.

**ASTM STANDARD REINFORCING BARS**

BAR SIZE	NOMINAL WEIGHT	NOMINAL DIMENSIONS -- ROUND SECTIONS			
		Pounds Per Foot	Diameter Inches	Cross-Sectional Area, Sq. Inches	Perimeter Inches
# 30.376	0.375		0.11	1.178	
# 40.668	0.500		0.20	1.571	
# 51.043	0.625		0.31	1.963	
# 61.502	0.750		0.44	2.356	
# 72.044	0.875		0.60	2.749	
# 82.670	1.000		0.79	3.142	
# 93.400	1.128		1.00	3.544	
#104.303	1.270		1.27	3.990	
#115.313	1.410		1.56	4.430	
#147.650	1.693		2.25	5.320	
#1813.600	2.257		4.00	7.090	

10. BASIS OF PAYMENT

All work associated with this section shall be incidental to the project. No direct payment shall be made for concrete reinforcement.

**END OF SECTION 03200**

**SECTION 03300**  
**CAST IN PLACE CONCRETE**

1. DESCRIPTION

All concrete box or arch culverts, sidewalks, curb and gutter, and headwalls for pipe shall be built as indicated, in reasonably close conformity to line, grade, dimensions and design shown on the plans, and in accordance with these specifications.

2. MATERIALS

Materials and construction shall meet requirements specified in the following KDOH Sections and/or Technical Specifications.

Concrete, Class A	KDOH Section 601
Steel Reinforcement	TS Section 03200
Concrete Pipe	KDOH Section 810.03

3. GENERAL

All concrete construction shall conform to the applicable requirements of KDOH Section 601.

4. TESTING

All concrete testing shall be provided by a qualified Geotechnical Engineering Consultant; meeting at a minimum the "Manual of Field Sampling and Testing Practices" guidelines with all costs borne by the CONTRACTOR, and results provided to the ENGINEER.

Compressive strength specimens will be cast and tested in accordance with KM 64-304 and ASTM C 39, respectively. In cases of failures, cylinder results will be evaluated in accordance with KM 64-314 to determine whether in-place investigation may be necessary.

5. SIDEWALKS

Sidewalks shall be constructed on a prepared, compacted, smooth subgrade of uniform density formed by trenching or filling to the required elevations.

Large boulders and ledge rock found in the subgrade shall be removed to a minimum depth of six inches below the finished subgrade elevation and the space shall be backfilled with suitable material.

The CONTRACTOR shall furnish a template and check the subgrade prior to depositing concrete.

Sidewalks may be placed by use of side forms or an approved slip form method.

The minimum thickness for sidewalks shall be 4.5 inches.

Slip forming shall comply with the requirements of KDOH Section 601.20, Part C. Any excess slumping or irregularities shall be corrected immediately after passage of the slip form machine, and finished and broomed to blend with the general appearance of the adjacent concrete.

Before concrete is given final finish and brooming, the surfaces shall be checked with a 10 foot straight edge and any irregularities or more than 1/4 inch shall be eliminated.

All edges shall be rounded to 1/4 inch radius.

The surfaces of sidewalks shall be divided into rectangular areas by means of a jointer having a radius of 1/4 inch and forming a groove no less than an inch in depth for the full width of the walk, or the joints may be sawed in accordance with KDOH Section 501.18. The length of the rectangle formed shall not exceed the width of the sidewalk being constructed unless otherwise directed.

6. CURB AND GUTTER

Curbs, gutters, and combination curb and gutters may be cast in place by use of side forms meeting the requirements of KDOH Section 601.

The subgrade shall be prepared and moistened before concrete is placed. During placement, the concrete shall be thoroughly spaded and vibrated or tamped until the mortar entirely covers the surface and all honeycombs and voids are eliminated.

Expansion joints shall be constructed at all breaks in alignment, at all drainage boxes and other fixed objects, at the beginning and ending points of curves, and at the beginning, quarter, middle and ending points of semicircular curves, except joints at the quarter points will not be required for semicircles having radii of 5 feet or less.

A curb and gutter adjacent to median shall be constructed with a cross slope which matches that of the adjoining pavement.

7. STRUCTURE EXCAVATIONS

Any and all excavation relative to safe structure placement/construction shall be incidental to the structure cost. No payment will be made for structure excavation.

8. BASIS OF PAYMENT

All work associated with this section including structure excavation or backfill shall be incidental to the project. No direct payment shall be made for cast in place concrete.

**END OF SECTION 03300**