

Contract Documents and Specifications

Division of Parks & Recreation

for
Carver Center and Lou Johnson
Building Renovations

Bid No. 1-2018

Prepared by Fitzsimons Office of Architecture

TABLE OF CONTENTS
CONTRACT DOCUMENTS

PART I	ADVERTISEMENT FOR BIDS
PART II	INFORMATION FOR BIDDERS
PART III	FORM OF PROPOSAL
PART IV	GENERAL CONDITIONS
PART V	SPECIAL CONDITIONS
PART VI	CONTRACT AGREEMENT
PART VII	PERFORMANCE AND PAYMENT BONDS
PART VIII	ADDENDA
PART IX	TECHNICAL SPECIFICATIONS AND PLANS



PART 1
ADVERTISEMENT FOR BIDS

INDEX

1.	INVITATION	AB-2
2.	DESCRIPTION OF WORK	AB-2
3.	OBTAINING PLANS, SPECIFICATIONS, AND BID DOCUMENTS	AB-2
4.	METHOD OF RECEIVING BIDS.....	AB-3
5.	METHOD OF AWARD	AB-3
6.	BID WITHDRAWAL.....	AB-3
7.	BID SECURITY	AB-3
8.	SUBMISSION OF BIDS	AB-3
9.	RIGHT TO REJECT	AB-4
10.	NOTIFICATION TO THE LFUCG FOR AFFIRMATIVE ACTION	AB-4
11.	NOTICE CONCERNING DBE GOAL.....	AB-4
12.	PRE-BID MEETING	AB-5

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, **January 29, 2018**, 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 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 Carver Center and Lou Johnson Building Renovations, Lexington-Fayette County, Kentucky.

3. OBTAINING PLANS, SPECIFICATIONS, AND BID DOCUMENTS

Plans, Specifications, and Contract Documents may be obtained from the official bid document distributor, LYNN IMAGING, 328 Old Vine Street, Lexington, KY 40507, (859) 255-1021 or (www.lynnimaging.com) and click on plan room for a non-refundable price of reproduction for each full set of plans and documents.

Specifications, Plans, and Bid Documents may be examined at the following places:

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

Builder's Exchange
2300 Meadow Drive
Louisville, KY 40218

LFUCG
Division of Grants and Special Projects
200 East Main Street
Lexington, Kentucky 40507

4. METHOD OF RECEIVING BIDS

Bids will be received from Prime Contracting firms on a **Lump Sum** basis 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, January 29, 2018. 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 January 29, 2018. 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, 3rd Floor, Room 338
Lexington, Kentucky 40507

11. NOTICE CONCERNING MWDBE 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

12. PRE-BID MEETING

A non-mandatory pre-bid meeting will be held at 10:00 AM local time on January 16, 2018, beginning at 522 Patterson St and concluding at 190 Prall St, Lexington, KY.

END OF SECTION

PART II
INFORMATION FOR BIDDERS

INDEX

1.	RECEIPT AND OPENING OF BIDS.....	IB-2
2.	PREPARATION OF BID	IB-2
3.	SUBCONTRACTS	IB-2
4.	QUALIFICATION OF BIDDER	IB-3
5.	BID SECURITY	IB-4
6.	LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT.....	IB-4
7.	TIME OF COMPLETION AND LIQUIDATED DAMAGES	IB-4
8.	EXAMINATION OF CONTRACT DOCUMENTS AND SITE	IB-5
9.	ADDENDA AND INTERPRETATIONS	IB-5
10.	SECURITY FOR FAITHFUL PERFORMANCE	IB-6
11.	POWER OF ATTORNEY	IB-6
12.	TAXES AND WORKMEN'S COMPENSATION	IB-6
13.	LAWS AND REGULATIONS	IB-6
14.	EROSION AND SEDIMENT CONTROL AND PERMITS	IB-6
15.	PREVAILING WAGE LAW	IB-6
16.	AFFIRMATIVE ACTION PLAN.....	IB-7
17.	CONTRACT TIME.....	IB-7
18.	SUBSTITUTION OR "OR-EQUAL" ITEMS.....	IB-7
19.	ALTERNATE BIDS	IB-8
20.	SIGNING OF AGREEMENT	IB-8
21.	ASSISTANCE TO BE OFFERED TO DBE CONTRACTORS.....	IB-8
22.	LFUCG NON-APPROPRIATION CLAUSE.....	IB-10

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 \$500.00 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 wage rates and regulations, if required for this Project, will be as described in the Special Conditions and appendices.

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
mclark@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
mclark@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

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.

END OF SECTION

PART III
FORM OF PROPOSAL

INDEX

1.	FORM OF PROPOSAL.....	P-2
2.	LEGAL STATUS OF BIDDER.....	P-4
3	BIDDERS AFFIDAVIT	P-5
4.	BID SCHEDULE – SCHEDULE OF VALUES.....	P-6
5.	STATEMENT OF BIDDER'S QUALIFICATIONS.....	P-8
6.	LIST OF PROPOSED SUBCONTRACTORS.....	P-11
7.	LEXINGTON FAYETTE URBAN COUNTY GOVERNMENT MWDBE PARTICIPATION GOALS, FORMS, AND GOOD FAITH EFFORTS	P-12
8.	AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST	P-24
9.	STATEMENT OF EXPERIENCE.....	P-25
10.	EQUAL OPPORTUNITY AGREEMENT	P-27
11.	EQUAL EMPLOYMENT OPPORTUNITY AFFIRMATIVE ACTION POLICY	P-30
12.	WORKFORCE ANALYSIS	P-31
13.	EVIDENCE OF INSURABILITY	P-32
14.	DEBARRED FIRMS	P-33
15.	DEBARRED CERTIFICATION	P-34

PART III

Invitation to Bid No. 1-2018

Carver Center and Lou Johnson Building Renovations

I. FORM OF PROPOSAL

Place: Lexington, Kentucky

Date: 25 Jan 2018

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

This Proposal Submitted by FuelBand LLC
2100 Hartford Ct. Lexington, KY 40514
(Name and Address of Bidding Contractor)

(Hereinafter called "Bidder"), organized and existing under the laws of the State of Kentucky doing business as Limited Liability Corp. (LLC)
"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 **Carver Center and Lou Johnson Building Renovations** 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.

The Bidder hereby acknowledges receipt of the following addenda:

Addendum No. 1 Date 01/15/2018

Addendum No. 2 Date 01/18/2018

Addendum No. 3 Date 01/19/2018

Addendum No. 4 Date 01/22/2018

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.

2. LEGAL STATUS OF BIDDER

Bidder FuelBand LLC

Date 24 January 2018

* 1. A corporation duly organized and doing business under the laws of the State of Kentucky, for whom Mirza Salkovic, bearing the official title of President/Owner, 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, Mirza Salkovic, and after being first duly sworn, states under penalty of perjury as follows:

1. His/her name is Mirza Salkovic and he/she is the individual submitting the bid or is the authorized representative of FuelBand LLC, 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.

Mirza Salkovic
(Affiant)

STATE OF Kentucky

COUNTY OF Fayette

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

[Signature] on this the 25 day of January, 2018.

My Commission expires: 6-1-2020

[Signature]
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.	Building Renovation - Carver Center Woman's Restroom as per specs for <u>fifty eight thousand</u> <u>eighty</u> Dollars <u>zero</u> Cents	LS	\$ <u>58800⁰⁰</u>
2.	Building Renovation - Lou Johnson Renovation as per specs for <u>twenty nine thousand</u> Dollars <u>zero</u> Cents	LS	\$ <u>29000⁰⁰</u>
3.	Alternate #1 - Carver Center Men's Restroom as per specs for <u>fifty eight thousand</u> Dollars <u>zero</u> Cents	LS	\$ <u>58000⁰⁰</u>
4.	Alternate #2 - Lou Johnson painting of restroom and additional interior as per specs for <u>twenty nine thousand</u> Dollars <u>zero</u> Cents	LS	\$ <u>29000⁰⁰</u>
5.	Alternate #3 - Lou Johnson remove and replace all hollow metal doors and hardware as per specs for <u>twenty seven thousand</u> Dollars <u>zero</u> Cents	LS	\$ <u>27400⁰⁰</u>

Item No.	Description w/Unit Bid Price Written in Words	Unit	Total Bid Amount
6.	Alternate #4 - Replace 2" water supply from street to basement, connect to existing in Storage 003, include water company fees as per specs for <u>eighteen thousand</u> Dollars <u>zero</u> Cents	LS	\$ <u>18,000</u>

TOTAL OF ALL BID PRICES FOR Carver Center and Lou Johnson Building Renovations Project (Items 1 through 2) in words and figures. In case of discrepancy, the amount shown in words will govern.

eighteen thousand eight hundred
(\$ 18,800).

Submitted by:

FuelBand LLC

Firm

2100 Hartford Ct.

Address

Lexington, KY 40514

City, State & Zip

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

Signature of Authorized Company Representative – Title

Mirza Salkovic

Representative's Name (Typed or Printed)

859-913-1101

Area Code – Phone – Extension

Fax #

FuelBandLLC@yahoo.com

E-Mail Address

OFFICIAL ADDRESS:

(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: FuelBand LLC
2. Permanent Place of Business: State of Kentucky
3. When Organized: 07/16/2013
4. Where Incorporated: _____

5. Construction Plant and Equipment Available for this Project:

FuelBand LLC has extensive amount of experience performing projects of this scope and type.

The company has the Plant and Equipment readily available, infact FuelBand LLC has completed
the Carver Center restroom renovation.

(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:

Carrol & Stone Insurance Services (Surety)

Signed: _____ (Representative of Surety)

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

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>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

(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. _____	Name: _____ Address: _____	_____	_____
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
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 LI-UCG 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

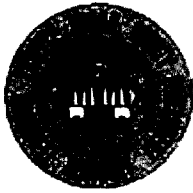
In addition, to that end the city council also adopted and implemented resolution 167-91—Veteran-owned Businesses, 3% Goal Plan in July of 2015. The resolution states in part (a full copy is available in Central Purchasing):

"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 and Veteran-Owned Small Businesses in (<https://lexingtonky.ionwave.net>)

Business	Contact	Email Address	Phone
LFUCG	Sherita Miller	smiller@lexingtonky.gov	859-258-3323
Commerce Lexington – Minority Business Development	Tyrone Tyra	tyra@commercelexington.com	859-226-1625
Tri-State Minority Supplier Diversity Council	Susan Marston	smarston@tsmsdc.com	502-365-9762
Small Business Development Council	Shirle Hawkins UK SBDC	smack@uky.edu	859-257-7666
Community Ventures Corporation	Phyllis Alcorn	palcorn@cvky.org	859-231-0054
KY Transportation Cabinet (KYTC)	Melvin Byne	Melvin.bynes2@ky.gov	502-564-3601
KYTC Pre-Qualification	Shella Eagle	Shella.Eagle@ky.gov	502-782-4815
Ohio River Valley Women's Business Council (WBENC)	Sheila Mixon	smixon@orvwbc.org	513-487-6537
Kentucky MWBE Certification Program	Yvette Smith, Kentucky Finance Cabinet	Yvette.Smith@ky.gov	502-564-8099
National Women Business Owner's Council (NWBOC)	Janet Harris-Lange	janet@nwbo.org	800-675-5066
Small Business Administration	Robert Coffey	robertcoffey@sba.gov	502-582-5971
LaVoz de Kentucky	Andres Cruz	lavozdeky@yahoo.com	859-621-2106
The Key News Journal	Patrice Muhammad	paatricem@keynewsjournal.com	859-373-9428



LFUCG MWDBE PARTICIPATION FORM
Bid/RFP/Quote Reference # 01-2018

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.			
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.

FuelBand LLC
Company

24 January 2018
Date

Mirza Salkovic
Company Representative

President/Owner
Title



LFUCG MWDBE SUBSTITUTION FORM

Bid/RFP/Quote Reference # 01-2018

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.					

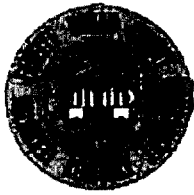
The undersigned acknowledges that any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

Company

Company Representative

Date

Title

**MWDBE QUOTE SUMMARY FORM**Bid/RFP/Quote Reference # 01-2018

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 FuelBand LLC	Contact Person Mirza Salkovic
Address/Phone/Email 2100 Hartford Ct. Lexington, KY 40514 859-913-1101 FuelbandLLC@yahoo.com	Bid Package / Bid Date 24 January 2018

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.

FuelBand LLC
Company
24 January 2018
Date

Mirza Salkovic
Company Representative
President/Owner
Title

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

X_____ 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.

FuelBand LLC

Mirza Salkovic

Company
24 January 2018

Company Representative
President/Owner

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 _____. 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: Mirza Salkovic

POSITION/TITLE: Project Manager

STATEMENT OF EXPERIENCE: Mirza has an extensive experience managing projects
of this scope and type. He managed the Carver Center Restroom, KY Theater, and MLK
Restroom and Concessions projects which were successfully completed.

NAME OF INDIVIDUAL: _____

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: _____

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:

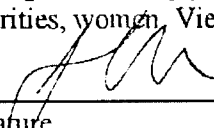
The Secretary of Labor may investigate the employment practices of any Government contractor or sub-contractor to determine whether or not the contractual provisions specified in Section 202 of this order have been violated.

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.



Signature

FuelBand LLC
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 FuelBand LLC

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: FuelBand LLC

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																	
Professionals																	
Superintendents	1	X														1	
Supervisors																	
Foremen																	
Technicians																	
Protective Service																	
Para-Professionals																	
Office/Clerical																	
Skilled Craft																	
Service/Maintenance																	
Total:																	

Prepared by: Mirza Salkovic Date: 24 / 01 / 2018
(Name and Title) 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 _____

NOTE: Authorized signatures may be the agent's if agent has placed insurance through an agency agreement with the insurer. If insurance is brokered, authorized signature must be that of authorized representative of insurer.

IMPORTANT: Contract may not be awarded if a completed and signed copy of this form for all coverage's listed above is not provided with the bid.

14. DEBARRED FIRMS

PROJECT NAME: Carver Center and Lou Johnson building renovations

BID NUMBER: 01-2018

**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 Fuelband, LLC 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.

Fuelband, LLC
Name of Firm Submitting Bid

Signature of Authorized Official

Title

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: FuelBand LLC

Project: Carver Center and Lou Johnson Bldg. Renovation

Printed Name and Title of Authorized Representative: Mirza Salkovic

Signature: 

Date: _____

END OF SECTION



PART IV
GENERAL CONDITIONS
TABLE OF CONTENTS

Article Number	Title	Page
1.	DEFINITIONS.....	GC-6
2.	PRELIMINARY MATTERS	GC-10
3.	CONTRACT DOCUMENTS: INTENT, CONFLICTS, AMENDING AND REUSE	GC-11
4.	AVAILABILITY OF LANDS; PHYSICAL CONDITIONS; REFERENCE POINTS	GC-13
5.	CONTRACTOR'S RESPONSIBILITIES.....	GC-16
6.	OTHER WORK.....	GC-27
7.	OWNER'S RESPONSIBILITIES.....	GC-28
8.	CONSULTANT'S STATUS DURING CONSTRUCTION	GC-28
9.	CHANGES IN THE WORK	GC-31
10.	CHANGE OF CONTRACT PRICE	GC-32
11.	CHANGE OF CONTRACT TIME	GC-39
12.	WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK	GC-39
13.	PAYMENTS TO CONTRACTOR AND COMPLETION	GC-43
14.	SUSPENSION OF WORK AND TERMINATION	GC-46
15.	MISCELLANEOUS.....	GC-49

DETAILED TABLE OF CONTENTS OF GENERAL CONDITIONS

1. Definitions
2. Preliminary Matters
 - 2.1 Delivery of Bonds
 - 2.2 Copies of Documents
 - 2.3 Commencement of Contract Time; Notice to Proceed
 - 2.4 Starting the Project
 - 2.5 Before Starting Construction
 - 2.6 Submittal of Schedules
 - 2.7 Preconstruction Conference
 - 2.8 Finalizing Schedules
3. Contract Documents, Intent, Conflicts, Amending, and Reuse
 - 3.1 General
 - 3.2 Intent
 - 3.3 Conflicts
 - 3.4 Amending and Supplementing Contract Documents
 - 3.5 Reuse of Documents
4. Availability of Lands, Physical Conditions, Reference Points
 - 4.1 Availability of Lands
 - 4.2 Physical Conditions
 - 4.3 Physical Conditions - Underground Facilities
 - 4.4 Reference Points
5. CONTRACTOR'S Responsibilities
 - 5.1 Supervision
 - 5.2 Superintendence
 - 5.3 Labor
 - 5.4 Start-Up and Completion of Work
 - 5.5 Materials and Equipment
 - 5.6 Adjusting Progress Schedule
 - 5.7 Substitutes or "Or-Equal" Items
 - 5.8 Subcontractors, Suppliers and Others
 - 5.9 Patent Fees and Royalties
 - 5.10 Permits
 - 5.11 Laws and Regulations
 - 5.12 Taxes
 - 5.13 Use of Premises

- 5.14 Record Drawings
- 5.15 Shop Drawings and Samples
- 5.16 Continuing the Work
- 5.17 Erosion and Sediment Control
- 6. Other Work
 - 6.1 Related Work at Site
 - 6.2 Other Contractors or Utility Owners
 - 6.3 Delays Caused By Others
 - 6.4 Coordination
- 7. OWNER'S Responsibilities
 - 7.1 Communications
 - 7.2 Data and Payments
 - 7.3 Lands, Easements, and Surveys
 - 7.4 Change Orders
 - 7.5 Inspections, Tests, and Approvals
 - 7.6 Stop or Suspend Work
- 8. CONSULTANT'S Status During Construction
 - 8.1 OWNER'S Representative
 - 8.2 Visits to Site
 - 8.3 Project Representation
 - 8.4 Clarification and Interpretations
 - 8.5 Authorized Variations in Work
 - 8.6 Rejecting Defective Work
 - 8.7 Shop Drawings
 - 8.8 Change Orders
 - 8.9 Payments
 - 8.10 Determinations for Unit Prices
 - 8.11 Decisions on Disputes
 - 8.12 Limitations on CONSULTANT'S Responsibilities
- 9. Changes in the Work
 - 9.1 OWNER May Order Changes
 - 9.2 Claims
 - 9.3 Work Not in Contract Documents
 - 9.4 Change Orders
 - 9.5 Notice of Change

- 10. Change of Contract Price
 - 10.1 Total Compensation
 - 10.2 Claim for Increase or Decrease in Price
 - 10.3 Value of Work
 - 10.4 Cost of the Work
 - 10.5 Not to Be Included in Cost of the Work
 - 10.6 CONTRACTOR'S Fee
 - 10.7 Itemized Cost Breakdown
 - 10.8 Cash Allowance
 - 10.9 Unit Price Work
- 11. Change of Contract Time
 - 11.1 Change Order
 - 11.2 Justification for Time Extension
 - 11.3 Time Limits
- 12. Warranty and Guarantee; Tests and Inspections; Correction, Removal or Acceptance of Defective Work
 - 12.1 Warranty and Guarantee
 - 12.2 Access to Work
 - 12.3 Tests and Inspections
 - 12.4 OWNER May Stop Work
 - 12.5 Correction or Removal of Defective Work
 - 12.6 One Year Correction Period
 - 12.7 Acceptance of Defective work
 - 12.8 Owner May Correct Defective Work
- 13. Payments to CONTRACTOR and Completion
 - 13.1 Schedule of Values
 - 13.2 Application for Progress Payments
 - 13.3 CONTRACTOR'S Warranty of Title
 - 13.4 Review of Application for Progress Payments
 - 13.5 Partial Utilization
 - 13.6 Final Inspection
 - 13.7 Final Application for Payment
 - 13.8 Final Payment and Acceptance
 - 13.9 CONTRACTOR'S Continuing Obligation
 - 13.10 Waiver of Claims

14. Suspension of Work and Termination

- 14.1 OWNER May Suspend Work
- 14.2 OWNER May Terminate
- 14.3 CONTRACTOR'S Services Terminated
- 14.4 Payment After Termination
- 14.5 CONTRACTOR May Stop or Terminate

15. Miscellaneous

- 15.1 Claims for Injury or Damage
- 15.2 Non-Discrimination in Employment
- 15.3 Temporary Street Closing or Blockage
- 15.4 Percentage of Work Performed by Prime CONTRACTOR
- 15.5 Clean-up
- 15.6 General
- 15.7 Debris Disposal

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; (5) The establishment of procedures for effectively implementing the LFUCG's 10% minimum DBE goals; and (6) Requirement for Mechanic's Lien on Partial Applications for Payment.

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 in 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 its 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.

13.2.1 Waivers of Mechanic's Lien

With each Application for Payment OWNER may require CONTRACTOR to submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.

13.2.1.1 Requirement for waivers of Mechanic's Lien on Partial Applications for Payment will be determined and communicated at the Preconstruction Conference.

13.2.1.2 Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.

13.2.1.3 When an application shows completion of an item, submit conditional final or full waivers.

13.2.1.4 Owner reserves the right to designate which entities involved in the Work must submit waivers.

13.2.1.5 Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.

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
INDEX

- 1 BLASTING
- 2 RISK MANAGEMENT PROVISIONS –
INSURANCE AND INDEMNIFICATION
- 3 WAGE SCALE
- 4 WEATHER RELATED DELAYS

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:

<u>Coverage</u>	<u>Limits</u>
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
Worker's Compensation	Statutory
Employer's Liability	\$1,000,000.00

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 it is 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.

00357187



FUELBAN-01

ATOMLINSON

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

02/02/2018

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 have ADDITIONAL INSURED provisions or 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
Carroll & Stone Insurance
4384 Clearwater Way, Ste. 200
Lexington, KY 40515

CONTACT
NAME:
PHONE
(A/C, No, Ext): (859) 269-1044 FAX
(A/C, No): (859) 276-0266
E-MAIL
ADDRESS:

INSURER(S) AFFORDING COVERAGE

NAIC #

INSURER A: EMC Insurance Companies

21415

INSURER B: KEMI

10320

INSURER C:

INSURER D:

INSURER E:

INSURER F:

INSURED

Fuel Band LLC
2000 Hartford Court
Lexington, KY

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 INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY						1,000,000
	CLAIMS-MADE X OCCUR	X	5D16889	07/31/2017	07/31/2018	EACH OCCURRENCE	\$ 300,000
						DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 5,000
						MED EXP (Any one person)	\$ 1,000,000
						PERSONAL & ADV INJURY	\$ 2,000,000
						GENERAL AGGREGATE	\$ 2,000,000
						PRODUCTS - COMP/OP AGG	\$
	GEN'L AGGREGATE LIMIT APPLIES PER:						
	POLICY PRO-JECT LOC						
	OTHER: General Aggregate						
A	AUTOMOBILE LIABILITY					COMBINED SINGLE LIMIT (Ea accident)	\$ 1,000,000
X	ANY AUTO OWNED AUTOS ONLY	SCHEDULED AUTOS	X 5E16889	07/31/2017	07/31/2018	BODILY INJURY (Per person)	\$
	HIRED AUTOS ONLY	NON-OWNED AUTOS ONLY				BODILY INJURY (Per accident)	\$
						PROPERTY DAMAGE (Per accident)	\$
							\$
	UMBRELLA LIAB	OCCUR				EACH OCCURRENCE	\$
	EXCESS LIAB	CLAIMS-MADE				AGGREGATE	\$
	DED RETENTION \$						\$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	Y / N	400854	10/20/2017	10/20/2018	X PER STATUTE OTH-ER	1,000,000
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	N / A				E.L. EACH ACCIDENT	\$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below					E.L. DISEASE - EA EMPLOYEE	\$ 1,000,000
						E.L. DISEASE - POLICY LIMIT	\$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
For All Work Performed
LFUCG is added as additional insured under GL and Auto

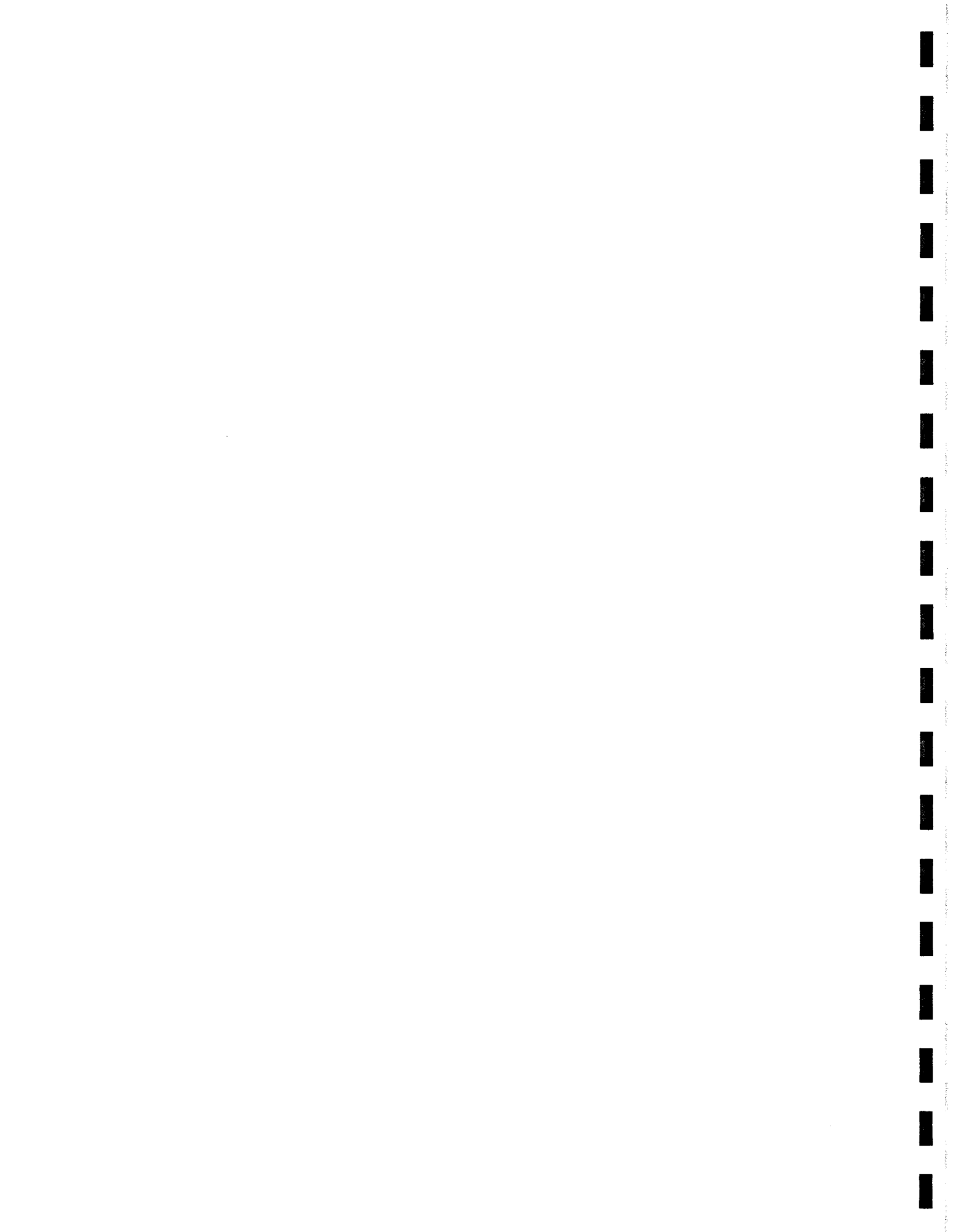
CERTIFICATE HOLDER

CANCELLATION

LFUCG
200 E. MAIN ST.
LEXINGTON, KY 40507

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



3. WAGE SCALES

General Decision Number: KY170169 12/29/2017 KY169

Superseded General Decision Number: KY20160169

State: Kentucky

Construction Type: Building

County: Fayette County in Kentucky.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.20 for calendar year 2017 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.20 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2017. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/06/2017
1	02/03/2017
2	05/19/2017
3	07/14/2017
4	08/11/2017
5	09/08/2017
6	09/29/2017
7	10/13/2017
8	12/29/2017

ASBE0051-001 03/01/2017

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 25.36	14.51

BOIL0040-002 10/01/2014

	Rates	Fringes
BOILERMAKER.....	\$ 32.22	24.26

BRKY0018-004 06/01/2017

	Rates	Fringes
BRICKLAYER.....	\$ 26.47	12.76

CARP1076-003 06/01/2017

	Rates	Fringes
MILLWRIGHT.....	\$ 26.14	19.63

CARP1650-011 06/01/2017

	Rates	Fringes
CARPENTER (Acoustical Ceiling Installation, Drywall Finishing/Taping, Drywall Hanging, Form Work, and Metal Stud Installation Only).....	\$ 24.35	17.26

ELEC0369-015 05/31/2017

	Rates	Fringes
ELECTRICIAN.....	\$ 31.07	16.60

ELEV0020-001 01/01/2017

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 42.35	31.585

PAID HOLIDAYS:

a. New Year's Day, Memorial Day, Independence Day, Labor Day,
Veteran's Day, Thanksgiving Day, the Friday after
Thanksgiving, and Christmas Day.

b. Employer contributes 8% of regular hourly rate to vacation
pay credit for employee who has worked in business more
than 5 years; 6% for less than 5 years' service.

ENGI0181-054 06/01/2015

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Drill).....	\$ 28.85	14.40

ENGI0181-079 06/01/2016

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Loader).....	\$ 29.86	14.65

ENGI0181-085 07/01/2017

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Crane).....	\$ 31.18	15.15

CRANES WITH BOOM 150 FEET & OVER, INCLUDING JIB, SHALL
RECEIVE \$.75 ABOVE THE WAGE RATE.
ALL CRANES WITH PILING LEADS WILL RECEIVE \$.50 ABOVE THE
WAGE, REGARDLESS OF BOOM LENGTH.

ENGI0181-091 06/01/2016

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Forklift).....	\$ 29.86	14.65

ENGI0181-093 06/01/2016

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Oiler).....	\$ 26.05	14.65

IRON0070-015 06/01/2017

	Rates	Fringes
IRONWORKER (Structural and Ornamental).....	\$ 28.30	21.85

LABO0189-030 06/01/2017

	Rates	Fringes
LABORER (Common or General).....	\$ 22.58	12.10

LABO1445-002 06/01/2017

	Rates	Fringes
LABORER (Power Tool Operator)....	\$ 28.40	15.81

* PAIN0387-003 11/01/2017

	Rates	Fringes
GLAZIER.....	\$ 26.00	14.15

PLAS0132-015 06/01/2014

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 22.00	12.55

PLUM0452-015 11/01/2016

	Rates	Fringes
PLUMBER.....	\$ 32.70	17.80

PLUM0452-021 11/01/2016

	Rates	Fringes
PIPEFITTER (Includes HVAC Pipe and Unit Installation).....	\$ 32.70	17.80

ROOF0042-008 08/01/2015

	Rates	Fringes
ROOFER.....	\$ 27.01	13.62

SFKY0669-002 04/01/2017

	Rates	Fringes
SPRINKLER FITTER.....	\$ 33.75	15.84

SHEE0024-031 06/01/2016

	Rates	Fringes
SHEET METAL WORKER (Includes HVAC Duct Installation).....	\$ 27.63	19.86

* UAVG-KY-0016 06/02/2015

	Rates	Fringes
BRICKLAYER: TILE FINISHER.....	\$ 22.42	11.12
BRICKLAYER: TILE SETTER.....	\$ 27.15	10.79

SUKY2015-029 06/02/2015

	Rates	Fringes
CARPENTER, Excludes Acoustical Ceiling Installation, Drywall Finishing/Taping, Drywall Hanging, Form Work, and Metal Stud Installation.....	\$ 20.34	8.58
IRONWORKER, REINFORCING.....	\$ 28.38	16.89
LABORER: Mason Tender - Brick...	\$ 18.91	0.00
LABORER: Mason Tender - Cement/Concrete.....	\$ 24.13	0.00

LABORER: Pipelayer.....	\$ 20.36	9.90
OPERATOR:		
Backhoe/Excavator/Trackhoe.....	\$ 24.60	12.65
OPERATOR: Bulldozer.....	\$ 19.69	4.71
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 22.52	4.00
OPERATOR: Roller.....	\$ 23.60	12.65
PAINTER (Brush and Roller).....	\$ 25.14	11.29
PAINTER: Spray.....	\$ 22.81	11.87
TRUCK DRIVER: Dump Truck.....	\$ 13.56	0.00

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

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

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

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular

rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of

each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

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

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board

U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

SPECIAL CONDITIONS
LABOR/EQUAL EMPLOYMENT OPPORTUNITY
INFORMATION PACKAGE

FOR

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT

JIM GRAY, MAYOR

LABOR/EEO CONDITIONS INDEX

PROJECT NAME: _____

BID NO. _____

ITEM DESCRIPTION
PAGE NO.

FEDERAL LABOR STANDARDS PROVISIONS	3-12
COMPLIANCE WITH EXECUTIVE ORDER 11246	13-14
COMPLIANCE WITH THE DAVIS BACON ACT	15-16
AMENDMENT TO DAVIS-BACON ACT	17
COMPLIANCE WITH THE COPELAND ANTI-KICKBACK ACT	18
COMPLIANCE WITH THE CONTRACT WORK HOURS AND SAFETY STANDARD ACT	18
REPORTING REQUIREMENTS	19
PATENT RIGHT REQUIREMENTS	20-29
COPYRIGHT REQUIREMENTS	30-32
ACCESS TO RECORDS REQUIREMENTS	33
RECORD RETENTION REQUIREMENT	33
CONTRACT AWARD RESTRICTION TO FOREIGN COUNTRIES	34-35
KENTUCKY EQUAL EMPLOYMENT OPPORTUNITY ACT	36-37
EXECUTIVE ORDER 11246, 24CFR PART 130(A)	38-39
HOUSING & URBAN DEVELOPMENT OF 1968 SECTION 3 CLAUSE 24 CFR 135(B)...	40-41
OTHER FEDERAL REQUIREMENTS	42
PUBLIC LAW 88-352: TITLE VI OF THE CIVIL RIGHTS ACT OF 1964	43
COMPLIANCE WITH CLEAN AIR AND WATER ACTS	44
ENERGY EFFICIENCY REQUIREMENTS	45
EQUAL EMPLOYMENT OPPORTUNITY AFFIRMATIVE ACTION (TO BE COMPLETED AND/OR SIGNED)	46
DEBARMENT FORM (TO BE COMPLETED AND/OR SIGNED)	47
LEAD-BASED PAINT.....	48

POTENTIAL DBE CONTRACTOR (S)	
LIST.....	49

FEDERAL LABOR STANDARDS PROVISIONS

CONTRACT PROVISIONS: A grantee's and subgrantee's contracts must contain provisions in paragraph (i) of this Section. Federal agencies are permitted to required changes, remedies, changed conditions, access and records retention, suspension of work, and other clauses approved by the Office of Procurement Policy.

APPLICABILITY

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Provisions are included in this Contract pursuant to the provisions applicable to such federal assistance.

A. 1. (i) **Minimum Wages.** All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project) will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made apart hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or cost reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR Part 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. Housing and Urban Development (HUD) shall approve an additional classification and wage rate and fringe benefits, therefore, only when the following criteria have been met:

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

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

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

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

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

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor or subcontractor disburse such amounts withheld for and on account of the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) Payrolls and Basic Records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been

communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed, a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all the information required to be maintained under 29 CFR Part 5.5(a)(3)(i). This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

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

(1) That the payroll for the period contains the information required to be maintained under 29 CFR Part 5.5 (a)(3)(i) and that such information is correct and complete;

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

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

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirements for submission of the "Statement of Compliance" required by paragraph A.3(ii)(b) of this section.

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph A.3.(i) of this section available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR Part 5.12.

4. (i) Apprentices and Trainees. Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal Employment Opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. COMPLIANCE WITH COPELAND ACT REQUIREMENTS. The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract.

6. SUBCONTRACTS. The contractor or subcontractor will insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as HUD or its designee may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.

7. CONTRACT TERMINATION; DEBARMENT. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. COMPLIANCE WITH DAVIS-BACON AND RELATED ACT REQUIREMENTS. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1,3, and 5 are herein incorporated by reference in this contract.

9. DISPUTES CONCERNING LABOR STANDARDS. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5,6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) CERTIFICATION OF ELIGIBILITY. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C., 1001. Additionally, U.S. Criminal Code, Section 1010, title 18, U.S.C., "Federal Housing Administration transactions", provides in part "Whoever, for the purpose of . . . influencing in any way the action of such Administration. . . makes, utters or publishes any statement, knowing the same to be false . . . shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. COMPLAINTS, PROCEEDINGS, OR TESTIMONY BY EMPLOYEES. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

1. Overtime Requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek, in which he or she is employed on such work, to work in excess of forty hours in such workweek unless such laborer

or mechanic receives compensation at a rate of less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; Liability for Unpaid Wages, Liquidated Damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

3. Withholding for Unpaid Wages and Liquidated Damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contract, or any other Federally assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. HEALTH AND SAFETY

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 (formerly Part 1518) and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act (Public Law 91-54, 83 Stat. 96).

(3) The Contractor shall include the provisions of this Article in every subcontract so that such provisions will be binding on each subcontractor. The Contractor shall take such action with respect to any subcontract as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

COMPLIANCE WITH EXECUTIVE ORDER 11246

Compliance with Executive Order 11246 of September 24, 1965, entitled "Equal Employment Opportunity" as amended by Executive Order 11375 of October 13, 1967, and as supplemented in Department of Labor regulations (41 CFR Part 60).

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, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and the employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not limited to, the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

3. The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the Contract Compliance Officer advising the said labor union or worker's representative of the Contractor's commitment under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

4. The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

5. The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the

Department and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

6. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contract procedures authorized in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

7. The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 25, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such actions with respect to any subcontract or purchase order as the Department may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Department, the Contractor may request the United States to enter into such litigation to protect the interest of the United States.

COMPLIANCE WITH THE DAVIS BACON ACT

Compliance with the Davis-Bacon Act (40 U.S.C. 276a to a-7) as supplemented by the Department of Labor regulations (29 CFR Part 5). (Construction contracts in excess of \$2,000 awarded by grantees and subgrantees when required by Federal grant program legislation.)

An Act

To amend the Act approved March 3, 1931, relating to the rate of wages for laborers and mechanics employed by contractors and subcontractors on public buildings.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Act entitled "An Act relating to the rate of wages for laborers and mechanics employed on public buildings of the United States and the District of Columbia by contractors or subcontractors, and for other purposes", approved March 3, 1931, is amended to read as follows:

"That the advertised specifications for every contract in excess of \$2,000, to which the United States or the District of Columbia is a party, for construction, alteration, and/or repair, including painting and decorating, of public buildings or public works of the United States or the District of Columbia within the geographical limits of the States of the Union or the District

of Columbia, and which requires or involves the employment of mechanics and/or laborers shall contain a provision stating the minimum wages to be paid various classes of laborers and mechanics which shall be based upon the wages that will be determined by the Secretary of Labor to be prevailing for the corresponding classes of laborers and mechanics employed on projects of a character similar to the contract work in the city, town, village, or other civil subdivision of the State in which the work is to be performed, or in the District of Columbia if the work is to be performed there; and every contract based upon these specifications shall contain a stipulation that the contractor or his subcontractor shall pay all mechanics and laborers employed directly upon the site of the work, unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment, computed at wage rates not less than those stated in the advertised specifications, regardless of any contractual relationship which may be alleged to exist between the contractor or subcontractor and such laborers and mechanics, and that the scale of wages to be paid shall be posted by the contractor in a prominent and easily accessible place at the site of the work; and the further stipulation that there may be withheld from the contractor so much of accrued payments as may be considered necessary by the contracting officer to pay to laborers and mechanics employed by the contractor or any subcontractor on the work the difference between the rates of the wages required by the contract to be paid laborers and mechanics on the work and the rates of wages received by such laborers and mechanics and not refunded to the contractor, subcontractors, or their agents.

"Sec. 2. Every contract within the scope of this Act shall contain the further provision that in the event it is found by the contracting officer that any laborer or mechanic employed by the contractor or any subcontractor directly on the site of the work covered by the contract has been or is being paid a rate of wages less than the rate of wages required by the contract to be paid as aforesaid, the Government may, by written notice to the contractor, terminate his right to proceed with the work or such part of the work as to which there has been a failure to pay said required wages and to prosecute the work to completion by contract or otherwise, and the contractor and his sureties shall be liable to the Government for any excess costs occasioned by the Government thereby.

"Sec. 3. (a) The Comptroller General of the United States is hereby authorized and directed to pay directly to laborers and mechanics from any accrued payments withheld under the terms of the contract any wages found to be due laborers and mechanics pursuant to this Act; and the Comptroller General of the United States is further authorized and is directed to distribute a list to all departments of the Government giving the names of persons or firms whom he has found to have disregarded their obligations to employees or subcontractors. No contract shall be awarded to the persons or firms appearing on this list or to any firm, corporation, partnership, or association in which such persons or firms have an interest until three years have elapsed from the date of publication of the list containing the names of such persons or firms.

"(b) If the accrued payments withheld under the terms of the contract, as aforesaid, are insufficient to reimburse all the laborers and mechanics with respect to whom there has been a failure to pay the wages required pursuant to this Act, such laborers and mechanics shall have the right of a action and/or intervention against the contractor and his sureties conferred by law upon persons furnishing labor or materials, and in such proceedings it shall be no defense that

such laborers and mechanics accepted or agreed to accept less than the required rate of wages or voluntarily made refunds.

"Sec. 4. This Act shall not be construed to supersede or impair any authority otherwise granted by Federal law to provide for the establishment of specific wage rates.

"Sec. 5. This Act shall take effect thirty days after its passage, but shall not affect any contract then existing or any contract that may thereafter be entered into pursuant to invitations for bids that are outstanding at the time of the passage of this Act.

"Sec. 6. In the event of a national emergency the President is authorized to suspend the provisions of this Act.

"Sec. 7. The funds appropriated and made available by the Emergency Relief Appropriation Act of 1935 (Public Resolution Numbered 11, 74th Congress), are hereby made available for the fiscal year ending June 30, 1936, to the Department of Labor for expenses of the administration of this Act."

Approved, August 30, 1935.

Amendment

[Public--No. 633--76th Congress]

[Chapter 373--3d Session]

[S.3650]

AN ACT

To require the payment of prevailing rates of wages on Federal public works in Alaska and Hawaii.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That Section 1 of the Act entitled "An Act related to the rate of wages for laborers and mechanics employed on public buildings of the United States and the District of Columbia by contractors or subcontractors, and for other purposes," approved March 3, 1931, (46 Stat. 1494), as amended, is further amended by striking out the words

"States of the Union or the District of Columbia" and inserting in lieu thereof "States of the Union, the Territory of Alaska, the Territory of Hawaii, or the District of Columbia"; and by striking out the words "or other civil subdivision of the State" and inserting in lieu thereof "or other civil subdivision of the State, or the Territory of Alaska or the Territory of Hawaii".

Sec. 2. The amendments made by this Act shall take effect on the thirtieth day after the date of enactment of this Act, but shall not affect any contract in existence on such effective date or made thereafter pursuant to invitations for bids outstanding on the date of enactment of this Act.

Approved, June 15, 1940

[40 U.S.Code, sec. 276a-7]

The fact that any contract authorized by any Act is entered into without regard to section 5 of Title 41, or upon a cost-plus-a-fixed-fee basis or otherwise without advertising for proposals, shall not be construed to render inapplicable the provisions of sections 276a to 276a-5 of this title, if such Act would otherwise be applicable to such contract. March 23, 1941, 12 noon, ch. 26, 55 Stat. 53; Aug. 21, 1941, ch. 395, 55 Stat. 658.

COMPLIANCE WITH THE COPELAND ANTI-KICKBACK ACT

Compliance with the Copeland "Anti-Kickback" Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR Part 3). (All contracts and subgrants for construction or repair.)

ANTI-KICKBACK ACT

Contractors and all subcontractors shall comply with the provisions of the Copeland "Anti-Kickback Act" 18 US Code 874 as supplemented in 29 CFR Part 3, and are prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public works, to give up any part of the compensation to which he is otherwise entitled.

COMPLIANCE WITH THE CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Compliance with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor regulations (29 CFR Part 5). (Construction contracts awarded by grantees and subgrantees in excess of \$2,000, and in excess of \$2,500 for other contracts which involve the employment of mechanics or laborers.)

CONTRACT WORK HOURS AND SAFETY STANDARD ACT PROVISIONS

The Contractor, if the contract is in excess of \$2,000, and any of his subcontractors, shall comply with Section 102 and 107 of the Contract Work Hours and Safety Standards Act (40 USC 327-330) as supplemented by Department of Labor Regulations contained in 29 CFR Part 5.

Under Section 103 of the Act, the Contractors and any of his subcontractors, shall be required to compute the wages of every mechanic and laborer on the basis of a standard work week of forty (40) hours. Work in excess of the standard work week is permissible, provided the worker is compensated at a rate not less than one and one-half (1-1/2) times the basic rate of pay for all hours worked in excess of forty (40) hours in any work week. Section 5 of the Federal Labor Standards Provision, HUD Form Exhibit 14, dated 9/75, sets forth in detail the Section 103 requirements.

Section 107 of the Act provides that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety, as determined under construction, safe and health standards promulgated by the Secretary of Labor. These requirements do not apply to the purchase of supplies or materials or articles ordinarily available on the open market.

REPORTING REQUIREMENTS

Notice of awarding agency requirements and regulations pertaining to reporting.

A. Preconstruction Conference

Before Contractor starts the work at the proposed site, a conference attended by the Contractor, Engineer, 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 10% minimum DBE goals.

B. Documents Required of Contractor

A sworn statement signed by the President or Owner of the Contractor 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.

C. Optional Owner Requirements

The Owner, at its discretion, may require the Contractor to provide: (1) financial security in amounts and kind deemed necessary by the Owner or require other financial security to meet the financial responsibility requirements of the Contractor to indemnify the Owner; (2) Additional information and/or DBE work data, as well as DBE participation data.

PATENT RIGHT REQUIREMENTS

Notice of awarding agency requirements and regulations pertaining to patent rights with respect to any discovery or invention which arises or is developed in the course of or under such contract.

§ 401.14 STANDARD PATENT RIGHTS CLAUSES

The following is the standard patent rights clause to be used as specified in §401.3(a).

Patent Rights (Small Business Firms and Nonprofit Organizations)

A. Definitions

1. "Invention" means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the United States Code, or any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 U.S.C. 2321 et seq.).

2. "Subject invention" means any invention of the contractor conceived or first actually reduced to practice in the performance of work under this contract, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d) must also occur during the period of contract performance.

3. "Practical Application" means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being

utilized and that its benefits are, to the extent permitted by law or government regulations, available to the public on reasonable terms.

4. "Made" when used in relation to any invention means the conception or first actual reduction to practice such invention.

5. "Small Business Firm" means a small business concern as defined at section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this clause, the size standards for small business concerns involved in government procurement and subcontracting at 13 CFR 121.3-8 and 13 CFR 121.3-12, respectively, will be used.

6. "Nonprofit Organization" means a university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c) and exempt from taxation under section 501(a) of the Internal Revenue Code (25 U.S.C. 501 (a)) or any nonprofit scientific or educational organization qualified under a state nonprofit organization statute.

B. Allocation of Principal Rights

1. The Contractor may retain the entire right, title, and interest throughout the world to each subject invention, subject to the provisions of this clause and 35 U.S.C. 203. With respect to any subject invention in which the Contractor retains title, the Federal Government shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world.

C. Invention Disclosure, Election of Title and Filing of Patent Application by Contractor.

1. The Contractor will disclose each subject invention to the Federal Agency within two months after the inventor discloses it in writing to contractor personnel responsible for patent matters. The disclosure to the agency shall be in the form of a written report and shall identify the contract under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding to the extent known at the time of the disclosure, of the nature, purpose, operation, and the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the agency the Contractor will promptly notify the agency of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the contractor.

2. The Contractor will elect in writing whether or not to retain title to any such invention by notifying the Federal agency within two years of disclosure to the Federal agency. However, in any case where publication, on sale or public use has initiated the one year statutory period wherein valid patent protection can still be obtained in the United States, the period for election of title may be shortened by the agency to a date that is no more than 60 days prior to the end of the statutory period.

3. The Contractor will file its initial patent application on a subject invention to which it elects to retain title within one year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the United States after a publication, on sale, or public use. The Contractor will file patent applications in additional countries or international patent offices within either ten months of the corresponding initial patent application or six months from the date permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications where such filing has been prohibited by a Secrecy Order.

4. Requests for extension of the time for disclosure, election, and filing under subparagraphs (1), (2), and (3) may, at the discretion of the agency, be granted.

D. Conditions When the Government May Obtain Title

The Contractor will convey to the Federal agency, upon written request, title to any subject invention--

1. If the contractor fails to disclose or elect title to the subject invention within the times specified in (C), above, or elects not to retain title; provided that the agency may only request title within 60 days after learning of the failure of the contractor to disclose or elect within the specified times.

2. In those countries in which the contractor fails to file patent applications within the times specified in (C) above; provided, however, that if the contractor has filed a patent application in a country after the times specified in (C) above, but prior to its receipt of the written request of the Federal agency, the contractor shall continue to retain title in that country.

3. In any country in which the contractor decides not to continue the prosecution of any application for, to pay the maintenance fees on, or defend in reexamination or opposition proceeding on, a patent on a subject invention.

E. Minimum Rights to Contractor and Protection of the Contractor Right to File

1. The contractor will retain a nonexclusive royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the contractor fails to disclose the invention within the times specified in (C), above. The contractor's license extends to its domestic subsidiary and affiliates, if any, within the corporate structure of which the contractor is a party and includes the right to grant sublicenses of the same scope to the extent the contractor was legally obligated to do so at the time the contract was awarded. The license is transferable only with the approval of the Federal agency except when transferred to the successor of that party of the contractor's business to which the invention pertains.

2. The contractor's domestic license may be revoked or modified by the funding Federal agency to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR Part 404 and agency licensing regulations (if any). This license will not be revoked in that field of use or the geographical areas in which the contractor has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of the funding Federal agency to the extent the contractor, its licensees, or the domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.

3. Before revocation or modification of the license, the funding Federal agency will furnish the contractor a written notice of its intention to revoke or modify the license, and the contractor will be allowed thirty days (or such other time as may be authorized by the funding Federal agency for good cause shown by the contractor) after the notice to show cause why the license should not be revoked or modified. The contractor has the right to appeal, in accordance with applicable regulations in 37 CFR Part 404 and agency regulations (if any) concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of the license.

F. Contractor Action to Protect the Government's Interest

1. The contractor agrees to execute or to have executed and promptly deliver to the Federal agency all instruments necessary to (i) establish or confirm the rights the Government has throughout the world in those subject inventions to which the contractor elects to retain title, and (ii) convey title to the Federal agency when requested under paragraph (D) above and to enable the government to obtain patent protection throughout the world in that subject invention.

2. The contractor agrees to require, by written agreement, its employees, other than clerical and nontechnical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the contractor each subject invention made under contract in order that the contractor can comply with the disclosure provisions of paragraph (C), above, and to execute all papers necessary to file patent applications on subject inventions and to establish the government's rights in the subject inventions. This disclosure format should require, as a minimum, the information required by

(C)(1), above. The contractor shall instruct such employees through employee agreements or other suitable educational programs on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.

3. The contractor will notify the Federal agency of any decisions not to continue the prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than thirty days before the expiration of the response period required by the relevant patent office.

4. The contractor agrees to include, within the specification of any United States patent applications and any patent issuing thereon covering a subject invention, the following statement, "This invention was made with government support under (identify the contract) awarded by (identify the Federal agency). The government has certain rights in the invention."

G. Subcontracts

1. The contractor will include this clause, suitably modified to identify the parties, in all subcontracts, regardless of tier for experimental, developmental or research work to be performed by a small business firm or domestic nonprofit organization. The subcontractor will retain all rights provided for the contractor in this clause, and the contractor will not, as part of the consideration for awarding the subcontractor, obtain rights in the subcontractor's subject inventions.

2. The contractor will include in all other subcontracts, regardless of tier, for experimental developmental or research work the patent rights clause required by (cite section of agency implementing regulations or FAR).

3. In the case of subcontracts, at any tier, when the prime award with the Federal agency was a contract (but not a grant or cooperative agreement), the agency, subcontractor, and the contractor agree that the mutual obligations of the parties created by this clause constitute a contract between the subcontractor and the Federal agency with respect to the matters covered by the clause; provided, however, that nothing in this paragraph is intended to confer any jurisdiction under the Contract Disputes Act in connection with proceedings under paragraph (J) of this clause.

H. Reporting Utilization of Subject Inventions

1. The Contractor agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the contractor or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the contractor, and such other data and information as the agency may

reasonably specify. The contractor also agrees to provide additional reports as may be requested by the agency in connection with any march-in proceeding undertaken by the agency in accordance with paragraph (J) of this clause. As required by 35 U.S.C. 202 (C)(5), the agency agrees it will not disclose such information to persons outside the government without permission of the contractor.

I. Preference for United States Industry

Notwithstanding any other provision of this clause, the contractor agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject inventions in the United States unless such person agrees that any products embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement for such an agreement may be waived by the Federal agency upon a showing by the contractor or its assignee that reasonable but unsuccessful efforts have been made to grant licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

J. March-in Rights

The contractor agrees that with respect to any subject invention in which it has acquired title, the Federal agency has the right in accordance with the procedures in 37 CFR 401.6 and any supplemental regulations of the agency to require the contractor, an assignee or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the contractor, assignee, or exclusive licensee refuses such a request the Federal agency has the right to grant such a license itself if the Federal agency determines that:

1. Such action is necessary because the contractor or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use.
2. Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the contractor, assignee or their licensees:
3. Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the contractor, assignee or licensees; or
4. Such action is necessary because the agreement required by paragraph (I) of this clause has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such agreement.

K. Special Provisions for Contracts with Nonprofit Organizations

If the Contractor is a nonprofit organization, it agrees that:

1. Rights to a subject invention in the United States may not be assigned without the approval of the Federal agency, except where such assignment is made to an organization which has as one of its primary functions the management of inventions, provided that such assignee will be subject to the same provisions as the contractor.

2. The contractor will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when the agency deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. 202(e) and 37 CFR 401.10;

3. The balance of any royalties or income earned by the contractor with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions, will be utilized for the support of scientific research or education; and

4. It will make efforts that are reasonable under the circumstances to attract licensees of subject invention that are small business firms and that it will give a preference to a small business firm when licensing a subject invention if the contractor determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally as likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided, that the contractor is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be at the discretion of the contractor. However, the contractor agrees that the Secretary may review the contractor's licensing program and decisions regarding small business applicants, and the contractor will negotiate changes to its licensing policies, procedures, or practices with the Secretary when the Secretary's review discloses that the contractor could take reasonable steps to implement more effectively the requires of this paragraph (K)(4).

1. Communication

(Complete According to Instruction at 401.5(b)

(b) When the Department of Energy (DOE) determines to use alternative provisions under § 401.3(a)(4), the standard clause at

§ 401.14(a), above, shall be used with the following modifications unless a substitute clause is drafted by DOE:

(1) The title of the clause shall be changed to read as follows: Patent Rights to Nonprofit DOE Facility Operators

(2) Add an "(A)" after "(1)" in paragraph (c)(1) and add subparagraphs (B) and (C) to paragraph (c)(1) as follows:

(B) If the subject invention occurred under activities funded by the naval nuclear propulsion or weapons related programs of DOE, then the provisions of this subparagraph (c)(1)(B) will apply in lieu of paragraphs (c)(2) and (3). In such cases the contractor agrees to assign the government the entire right, title, and interest thereto throughout the world in and to the subject invention except to the extent that rights are retained by the contractor through a greater rights determination or under paragraph (e), below. The contractor, or an employee-inventor, with authorization of the contractor, may submit a request for greater rights at the time the invention is disclosed or within a reasonable time thereafter. DOE will process such a request in accordance with procedures at 37 CFR 401.15. Each determination of greater rights will be subject to paragraphs (h)-(k) of this clause and such additional conditions, if any, deemed to be appropriate by the Department of Energy.

(C) At the time an invention is disclosed in accordance with (c)(1)(A) above, or within 90 days thereafter, the contractor will submit a written statement as to whether or not the invention occurred under a naval nuclear propulsion or weapons-related program of the Department of Energy. If this statement is not filed within this time, subparagraph (c)(1)(B) will apply in lieu of paragraphs (c)(2) and (3). The contractor statement will be deemed conclusive unless, within 60 days thereafter, the Contracting Officer disagrees in writing, in which case the determination of the Contracting Officer will be deemed conclusive unless the contractor files a claim under the Contract Disputes Act within 60 days after the Contracting Officer's determination. Pending resolution of the matter, the invention will be subject to subparagraph (c)(1)(B).

3. Paragraph (k)(3) of the clause will be modified as prescribed at § 401.5(g).

§ 401.15 Deferred Determinations

(a) This section applies to requests for greater rights in subject inventions made by contractors when deferred determination provisions were included in the funding agreement because one of the exceptions at § 401.3(a) was applied, except that the Department of Energy is authorized to process deferred determinations either in accordance with its waiver regulations or this section. A contractor requesting greater rights should include with its request information on its plans and intentions to being the invention to practical application. Within 90 days after receiving a request and supporting information, or sooner if a statutory bar

to patenting is imminent, the agency should seek to make a determination. In any event, if a bar to patenting is imminent, unless the agency plans to file on its own, it shall authorize the contractor to file a patent application pending a determination by the agency. Such a filing shall normally be at the contractor's own risk and expense. However, if the agency subsequently refuses to allow the contractor to retain title and elects to proceed with the patent application under government ownership, it shall reimburse the contractor for the cost of preparing and filing the patent application.

(b) If the circumstances of concerns which originally led the agency to invoke an exception under § 401.3(a) are not applicable to the actual subject invention or are no longer valid because of subsequent events, the agency should allow the contractor to retain title to the invention on the same conditions as would have applied if the standard clause at § 401.14(a) had been used originally, unless it has been licensed.

(c) If paragraph (b) is not applicable, the agency shall make its determination based on an assessment whether its own plans regarding the invention will better promote the policies and objectives of 35 U.S.C. 200 than will contractor ownership of the invention. Moreover, if the agency is concerned only about specific uses or applications of the invention, it shall consider leaving title in the contractor with additional conditions imposed upon the contractor's use of the invention for such applications or with expanded government license rights in such applications.

(d) A determination not to allow the contractor to retain title to a subject invention or to restrict or condition its title with conditions differing from those in the clause at § 401.14(a), unless made by the head of the agency, shall be appealable by the contractor to an agency official at a level above the person who made the determination. This appeal shall be subject to the procedures applicable to appeals under

§ 401.11 of this part.

§ 401.16 Submissions and Inquiries

All submissions or inquiries should be directed to Federal Technology Management Policy Division, telephone number 202-377-0659, Room H4837, U.S. Department of Commerce, Washington, DC 20230

(FR Doc. 87-5618 Filed 3-17-87: 8:45 am)

COPYRIGHT REQUIREMENTS

Awarding agency requirements and regulations pertaining to copyrights and rights in data.

COPYRIGHTS

Federally supported grant research projects frequently result in the production of books, brochures, manuals, articles, films, or other written materials. In most instances they are technical reports which serve to disseminate the results of a project to the public and to the scientific community or other researchers. Often, however, these documents are publishable and occasionally they have significant commercial value. Who controls the rights to these materials? What rights does the Government retain? What are the grantee's responsibilities in handling the materials?

There is a widely held notion that written materials produced with the support of public money are automatically in the public domain. That view is erroneous, and in fact no member of the public has an inherent right to use grant-produced materials merely because they were prepared under Government assistance. Because of the confusion, however, it is important for grantees to note a few features of the copyright law which relate to the subject of the grants.

In general, researchers have exclusive rights in any original works of their authorship. Under the most recent amendment to the copyright law, statutory copyright protection extends to both published and unpublished works of the author. Researchers are cautioned to observe the publication policies of their institutions or organizations in this regard, and unless there is an express agreement to the contrary, their employing institution may be considered the author of any materials prepared in the course of their employment, under the "works for hire" doctrine.

Under the most recent amendments to the copyright law, it is clear that grant reports are not considered works of the Government which are in the public domain. The legislative history of the law shows that Congress expressly left it to the discretion of the individual grant-making agencies to determine whether written materials produced by their grantees should be placed in the public domain, and it expected the questions to be resolved by the terms and conditions of grants. The House Report No. 94-1476, September 3, 1976, stated on page 59:

A more difficult and far-reaching problem is whether the definition should be broadened to prohibit copyright in works prepared under U.S. Government contract or grant. As the bill is written, the Government agency concerned could determine in each case whether to allow an independent contractor or grantee to secure copyright in works prepared in whole or in part with the use of Government funds. The argument that has been made against allowing copyright in this situation is that the public should not be required to pay a "double subsidy," and that it is inconsistent to prohibit copyright in works by Government employees while permitting private copyrights in a growing body of works created by persons who are paid with Government funds. Those arguing in favor of potential copyright protection have stressed the importance of copyright as an incentive to creation and dissemination in this situation, and the basically different policy considerations, applicable to works written by Government employees and those applicable to works prepared by private organizations with the use of Federal funds.

The bill deliberately avoids making any sort of outright, unqualified prohibition against copyright in works prepared under Government contract or grant. There may be cases where it would be in the public interest to deny copyright in the writings generated by Government research contracts and the like; it can be assumed that, where a Government agency commissions a work for its own use merely as an alternative to having one of its own employees prepare the work, the right to secure a private copyright would be withheld. However, there are almost certainly many other cases where the denial of copyright protection would be unfair or would hamper the production and publication of important works. Where, under the particular circumstances, Congress or the agency involved finds the need to have a work freely available outweighs the need of the private author to secure copyright, the problem can be dealt with by specific legislation, agency regulations, or contractual restrictions.

Agency Policy

Government-wide policies contained in Office of Management and Budget Circulars A-102 and A-110 speak to the issue of copyrightable materials through their respective Attachments N. Circular A-110 states:

8b. Copyrights. - Except as otherwise provided in the terms and conditions of the agreement, the author or the recipient organization is free to copyright any books, publications, or other copyrightable materials developed in the course of or under a Federal agreement, but the Federal sponsoring agency shall reserve a royalty-free, nonexclusive and irrevocable right to reproduce, publish, or otherwise use, and to authorize others to use, the work for Government purposes.

Except for minor, nonsubstantive differences, the provisions of A-102 are identical. Each permits the grantee to copyright published materials, subject to a license for the U.S. Government to use the materials for Government purposes. Each also gives the grantor agency discretion in altering that condition, by establishing different terms and conditions in its grants.

Suggested steps for grantees

A grantee whose grant-financed activity may involve the need for potential need for copyrighting of materials should:

- Check the terms and conditions of the grant to determine whether a copyright can be asserted in unpublished as well as published materials. This may vary from grantor agency to grantor agency and from grant to grant.

- It is the grantee's obligation to take the necessary steps to preserve the Government's license when conveying rights to publishers. If the publisher provides a release form that does not contain a reference to Government use of the materials, appropriate

language should be inserted that preserves the Government's rights. If necessary, the granting agency should be consulted to assure compliance with the terms of the grant.

- Under most Federal grants, proper acknowledgment of the source of funds used to write a published work will be required. For example, the National Science Foundation Grant General Conditions require the following acknowledgment of support and disclaimer statement in any publication of material, whether copyrighted or not: "This material is based upon work supported by the National Science Foundation under Grant No. .". Except for scientific articles and papers appearing in scientific journals, all materials must also contain the following disclaimer:

Any opinions, findings and conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

- When negotiating a publication agreement, the grantee must include in the publishing contract the reservation of Government license and the acknowledgment and disclaimer statements.

- Grants often are made with the stipulation that any substantive technical reports will be made available to the public through the U.S. Department of Commerce, National Technical Information Service (NTIS). Again, the grantee is well advised to check the terms and conditions of its grant agreement to see if such requirements exist and, if so, to account for them in dealing with potential publishers.

- Provide copies of copyrighted work to the granting agency.

- Some agencies may require prior approval of any proposed commercial publication, including approval of the selection process by which a publisher is obtained. The National Science Foundation, for example, requires documentation showing that a reasonable number of qualified publishers were given an opportunity to compete for the materials. Also, the selection criteria are subject to examination, as well as the final publishing contract.

With respect to any discovery or invention which arises or is developed in the course of or under this contract, Lexington-Fayette Urban County Government shall have the right to require the contractor, an assignee or exclusive licensee of a subject invention to grant a non-exclusive, partially exclusive, or exclusive license in any field of use to Lexington-Fayette Urban County Government

With respect to any copyrights and rights in data, Lexington-Fayette Urban County Government shall have the right to retain all copyrights and rights in data.

ACCESS TO RECORDS REQUIREMENTS

Access by the grantee, the subgrantee, the Federal grantor agency, the Comptroller General of the United States, or any of their duly authorized representatives to any books, documents, papers, and records of the contractor which are directly pertinent to that specific contract for the purpose of making audit, examination, excerpts, and transcriptions.

ACCESS TO RECORDS

The Contractor agrees that the Lexington-Fayette Urban County Government, the Secretary of Housing and Urban Development, the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any and all books, documents, papers, and records of the Contractor which are directly pertinent to this specific project for the purposes of making an audit, examination, excerpts, and transcriptions.

RECORDS RETENTION REQUIREMENTS

Retention of all required records for three years after contractors or subcontractors make final payments and all other pending matters are closed.

CONTRACT AWARD RESTRICTION TO FOREIGN COUNTRIES

The recipient, Lexington-Fayette Urban County Government agrees to fully comply with applicable terms and conditions in Section 109 of Pub. L. 100-102 as set forth below:

RESTRICTIONS ON PUBLIC BUILDINGS AND PUBLIC WORKS PROJECTS

(A) Definitions. "Component" as used in this clause means those articles, materials, and supplies incorporated directly into the product.

"Contractor or subcontractor of a foreign country," as used in this clause, means any Contractor or Subcontractor that is a citizen or national of a foreign country or is controlled directly or indirectly by citizens or nationals of a foreign country. A contractor or subcontractor shall be considered to be a citizen or national of a foreign country or controlled directly or indirectly by citizens or nationals of a foreign country.

(1) If 50 percent or more of the Contractor or Subcontractor is owned by a citizen or a national of the foreign country;

(2) If the title of to 50 percent or more of the stock of the Contractor or Subcontractor is held subject to trust or fiduciary obligation in favor of citizens or nationals of the foreign country;

(3) If 50 percent or more of the voting power in the Contractor-Subcontractor is vested in or exercisable on behalf of a citizen or national of the foreign country;

(4) In the case of a partnership, if any general partner is a citizen of the foreign country;

(5) In the case of a corporation, if its president or other chief executive officer or the chairman of its board of directors is a citizen of the foreign country or the majority of any number of its directors necessary to constitute a quorum are citizens of the foreign country or the corporation is organized under the laws of the foreign country or any subdivision, territory, or possession thereof; or

(6) In the case of a Contractor or Subcontractor who is a joint venture, if any participant firm is a citizen or national of a foreign country or meets any of the criteria in subparagraphs (a)(1) through (5) of this clause.

"Product", as used in this clause, means construction materials-i.e., articles, materials, and supplies brought to the construction site for incorporation into the public works project, including permanently affixed equipment, instruments, utilities, electronic or other devices, but not including vehicles or construction equipment. In determining the origin of a product Lexington-Fayette Urban County Government will consider a product as produced in a foreign country if it has been assembled or manufactured in the foreign country, or if the cost of the components mined, produced, or manufactured in the foreign country exceed 50 percent of the cost of all its components.

(b) Restrictions. The Contractor shall not (1) knowingly enter into any subcontract under this contract with a Subcontractor of a foreign country on the list of countries that discriminate against U.S. firms published by the United States Trade Representative (see paragraph (c) of this clause, or (2) supply any product under this contract of a country included on the list of foreign countries that discriminate against U.S. firms published by the USTR.

(c) USTR list. The USTR published an initial list in the Federal Register on December 30, 1987 (53 FR 49244), which identified one country - Japan. The USTR can add other countries to the list or remove countries from it in accordance with Section 109 (c) of Pub. L 100-202.

(d) Certification. The Contractor may rely upon the certification of a prospective Subcontractor that it is not a Subcontractor of a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR and that products supplied by such

Subcontractor for use on the Federal public works project under this contract are not products of a foreign country included on the list of foreign countries that discriminate against U.S. firms published by the USTR, unless such Contractor has knowledge that the certification is erroneous.

(e) Subcontracts. The Contractor shall incorporate this clause, modified only for the purpose of properly identifying the parties in all subcontracts. This paragraph (e) shall also be incorporated in all subcontracts.

(End of Contract Clause)

Bids/proposals from such firms/suppliers shall be deemed nonresponsive and rejected.

Questions related to this issue should be directed to Division of Grants and Special Programs, Lexington-Fayette Urban County Government, 200 E. Main Street 6th Floor, Lexington, Kentucky 40507.

KENTUCKY EQUAL EMPLOYMENT OPPORTUNITY ACT

The Kentucky Equal Employment Opportunity Act of 1978 (KRS 45.570-45.640) requires that any county, 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 contractor that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age, or national origin;
3. The contractor will post notices in conspicuous places, available to employees and applicants for employment, setting forth the provisions of the nondiscrimination 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 worker's representative of the contractor's commitments under the non discrimination 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 timetables.
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 KRS 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 certifications 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 to 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 subcontractor 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 the 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.

EXECUTIVE ORDER 11246 (24 CFR PART 130 A)

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, creed, color, or national origin. The contractor will take affirmative action to

ensure that applicants are employed, and that employees are treated, during employment without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous place, available to employees and applicants for employment, notices to be provided setting forth the provisions of this non-discrimination clause.

2. The contractor will, in all solicitations or advertisements for employees placed on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

3. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract of understanding, a notice to be provided advising the said labor union or worker's representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous place available to employees and applicants for employment. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance.

In case the work to be performed is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan, insurance or guarantee, or undertaken pursuant to any Federal Program involving such grant, contract, loan, insurance or guarantee, during the performance of this contract, the Contractor, in addition, agrees to comply with:

4. All provisions of the latest current Executive Order and executive amendments, of the rules, regulations and relevant orders of the President's Committee on Equal Employment Opportunity created thereby.

5. The contractor will furnish all information and reports required by the Executive, and by the rules, regulations and orders of the said committee, or pursuant thereto, and will permit access to his books, records and accounts by the administering agency and the Committee for purposes of investigation to ascertain compliance with such rules, regulations and orders.

6. In the event of the contractor's noncompliance with the non-discrimination clauses of this contract or with any of the said rules, regulations or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or Federally assigned construction contracts in accordance with procedures authorized in the Executive Order, and such other sanctions may be imposed and remedies invoked as provided in the said Executive Order or by rule, regulation or order of the President's Committee on Equal Employment Opportunity or as otherwise provided by law.

7. The contractor will include the provisions of Paragraphs (1) through (7) in every sub-contract or purchase order unless exempted by rules, regulations or orders of the President's Committee on Equal Employment Opportunity, so that provisions will be binding upon each sub-contractor or vendor. The contractor will take such action with respect to any sub-contractor purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a sub-contractor or vendor as a result of such direction by the agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

HOUSING AND URBAN DEVELOPMENT ACT OF 1968

SECTION 3 CLAUSE

24 CFR 135 (B)

A. The work to be performed under this contract is on a project assisted under a program providing direct Federal financial assistance from the Department of Housing and Urban Development and is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968 as amended, 12 U.S.C. 1701u Section 3 requires that to the greatest extent feasible opportunities for training and employment be given lower income residents of the project area and contracts for work in connection with the project to be awarded to business concerns which are located in, or owned in substantial part by persons residing in the area of the project.

B. The parties to this contract will comply with the provisions of said Section 3 and the regulations issued pursuant thereto by the Secretary of Housing and Urban Development set forth in 24 CFR 135, and all applicable rules and orders of the Department issued thereunder prior to execution of this contract. The parties to this contract certify and agree that they are under no contractual or other disability which would prevent them from complying with these requirements. (This Section 3 clause must be included verbatim in all contracts in excess of \$10,000).

C. The contractor will send to each labor organization or representative of workers with which he has a collective bargaining agreement or other contract or understandings, if any, a notice advising the said labor organization of workers representative of his commitments under the Section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment and training.

D. The contractor will include this Section 3 clause in every subcontract for work in connection with the project and will at the direction of the applicant for or recipient of Federal financial assistance, take appropriate action pursuant of the subcontract upon a finding that the subcontractor is in violations of regulations issued by the Secretary of Housing and Urban

Development, 24 CFR 135. The contractor will not subcontract with any subcontractor where it has notice or knowledge that the latter has been found in violation of regulations under 24 CFR 135 and will not let any subcontract unless the subcontractor has first provided it with a preliminary statement of ability to comply with the requirements of these regulations.

E. Compliance with the provisions of Section 3, the regulations set forth in 24 CFR 135 and all applicable rules and orders of the Department issued thereunder prior to the execution of the contract, shall be a condition of the Federal financial assistance provided to the project, binding upon the applicant or recipient for such assistance, its successors, and assigns. Failure to fulfill these requirements shall subject the applicant or recipient, its contractor and subcontractors, its successors and assigns to those sanctions specified by the grant or loan agreement or contract through which federal assistance is provided, and to such sanctions, as are specified in 24 CFR 135.

OTHER FEDERAL REQUIREMENTS

INTEREST OF CERTAIN FEDERAL OFFICIALS

No member of or Delegate to the Congress of the United States and no Resident Commissioner, shall be admitted to any share or part of this Agreement or to any benefit to arise from the same.

INTEREST OF MEMBERS, OFFICERS, OR EMPLOYEES OF PUBLIC BODY, MEMBER OF LOCAL GOVERNING BODY, OR OTHER PUBLIC OFFICIALS

No member, officer, or employee of the Public Body, or its designees or agents, no member of the governing body of the locality in which the program is situated, and no other public official of such locality or localities who exercises any functions or responsibilities with respect to the program during his tenure or for one year thereafter, shall have any interest, direct or indirect, in any contract or sub-contract, or the proceeds thereof, for work to be performed in connection with the program assisted under this Agreement.

PROHIBITION AGAINST PAYMENTS OF BONUS OR COMMISSION

The assistance provided under this Agreement shall not be used in the payment of any bonus or commission for the purpose of obtaining HUD approval of the application for such assistance, or HUD approval of applications for additional assistance, or any other approval of concurrence of HUD required under this Agreement, Title I of the Housing and Community Development Act of 1974 or HUD regulations with respect thereto; provided, however, that reasonable fees or bonafide technical, consultant, managerial or other such services, other than actual solicitation, are not hereby prohibited if otherwise eligible as program costs.

PUBLIC LAW 88-352: TITLE VI OF THE CIVIL RIGHTS ACT OF 1964

The Developer agrees to insure that no person shall on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program in the multi-family rental housing facility developed through this contract.

PUBLIC LAW 90-284: TITLE VIII OF THE CIVIL RIGHTS ACT
OF 1968 AND EXECUTIVE ORDER 11063

The Developer warrants and assures that they and their agents will not discriminate in the rental or leasing of housing units constructed under this contract and will in no way make unavailable or deny a dwelling to any person, because of race, color, religion, sex or national origin.

SECTION 109

The Developer will not on the ground of race, color, national origin, sex, age, or handicap:

1. Deny an facilities, services, financial aid or other benefits provided under the program or activity.
2. Provide any facilities, services, financial aid or other benefits which are different, or are provided in a different form from that provided to others under the program or activity.
3. Subject to segregated or separate treatment in any facility in, or in any matter of process related to receipt of any service or benefit under the program or activity.
4. Restrict in any way access to, or in the enjoyment of any advantage or privilege enjoyed by others in connection with facilities, services, financial aid or other benefits under the program or activity.
5. Treat any individual differently from others in determining whether the individual satisfies any admission, enrollment, eligibility, membership, or other requirement or condition which individual must meet in order to be provided any facilities, services or other benefit provided under the program or activity.

6. Deny an opportunity to participate in a program or activity as an employee.

COMPLIANCE WITH THE CLEAN AIR AND WATER ACTS

Compliance with all applicable standards, orders, or requirements issued under section 206 of the Clean Air Act (42 U.S.C. 1857)(h), Section 506 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR Part 15). (Contracts, subcontracts, and subgrants of amounts in excess of \$100,000).

COMPLIANCE WITH AIR AND WATER ACTS

This Agreement is subject to the requirements of the Clean Air Act, as amended, 42 USC 1857 et. seq., the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. and the regulations of the Environmental Protection Agency with respect thereto, at 40 CFR Part 15, as amended from time to time.

The Contractor and any of its subcontractors for work funded under this Agreement, in excess of \$100,000 agree to the following requirements:

1. A stipulation by the Contractor or subcontractors that any facility to be utilized in the performance of any non-exempt contract or subcontract is not listed on the List of Violating Facilities issued by the Environmental Protection Agency (EPA) pursuant to 40 CFR 15.20.
2. Agreement by the Contractor to comply with all requirements of Section 114 of the Clean Air Act, as amended, (42 U.S.C. 1857c-8) and Section 308 of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1318) relating to inspecting, monitoring, entry, reports and information, as well as all other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.
3. A stipulation that as a condition for the award of the Contract prompt notice will be given of any notification received from the Director, Office of Federal Activities, EPA indicating that a facility utilized or to be utilized for the Contract is under consideration to be listed on the EPA list of Violating Facilities.
4. Agreement by the Contractor that he/she will include or cause to be included the criteria and requirements in paragraph (1) through (4) of this section in every nonexempt subcontract and requiring that the Contractor will take such action as the Government may direct as a means of enforcing such provision.

In no event shall any amount of assistance provided under this Agreement be utilized with respect to a facility which has given rise to a conviction under Section 113(c)(1) of the Clean Air Act or Section 309(c) of the Federal Water Pollution Control Act.

ENERGY EFFICIENCY REQUIREMENTS

Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L.94-163).

EQUAL EMPLOYMENT OPPORTUNITY AFFIRMATIVE ACTION POLICY

It is the policy of

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.

has been appointed Equal Employment Compliance (EEOC) Officer and shall be available for counseling, answering of questions in regards to this company policy, and to hear any complaints of discrimination. The EEOC Office may be reached by calling

Signature:
(Bidding Contractor)

Title:

Date:

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: _____

Project: _____

Printed Name and Title of Authorized Representative: _____

Signature: _____

Date: _____

LEAD BASED PAINT

A. All paint to be lead free.

B. Existing lead paint to be removed or concealed with an acceptable covering (paint, siding, etc.)

D. Warning

1. Use of lead-base paint materials on any surface, interior or exterior, is prohibited.
2. Lead-base paint removal is a dangerous task and safety precautions should be strictly enforced when workers are engaged in hazard abatement.

POTENTIAL DBE CONTRACTOR(S) LIST

For a listing of DBE (Disadvantaged Business Enterprise) contractors/subcontractors please contact:

Sherita Miller

Division of Central Purchasing

200 E. Main Street, 3rd Floor

Lexington, KY 40507

(859) 258-3323

TDD [hearing impaired only] (859) 425-2563

Or

Todd Slatin

Division of Central Purchasing

200 E. Main Street, 3rd Floor

Lexington, KY 40507

(859) 258-3326

TDD [hearing impaired only] (859) 425-2563

4. WEATHER RELATED DELAYS

- A. The Project Completion date shall be established with the understanding that no extension of time will be granted for weather related delays that are within the average temperature or number of rain or snow days within a particular month. The average weather conditions shall be established by referencing the records of the National Oceanic and Atmospheric Administration (NOAA) and as defined herein.
- B. Extensions of inclement weather shall be granted only when the work affected must be on schedule at the time of delay. No time will be granted for work which is behind schedule in excess of the actual delay caused by the weather, assuming the work had been on schedule.
- C. Time granted for weather delays shall be requested on a monthly basis.
- D. The weather experienced at the project site during the contract period must be found to be unusually severe, that is more severe than the adverse weather anticipated for the project location during any given month. The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the contractor.
- E. The anticipated adverse weather delays shall be based on the National Oceanic and Atmospheric Administration (NOAA) climatology ten year average for the Lexington Bluegrass Airport KY US location. The Mean Number of Days of daily precipitation using ≥ 0.10 will determine the base line for monthly anticipated adverse weather evaluations. The contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities. Upon acknowledgement of the Notice to Proceed (NTP) and continuing throughout the contract, the contractor will record the occurrence of actual adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical path activities for 50 percent or more of the contractor's scheduled work date. The number of actual adverse weather delay days shall be calculated chronologically from the first to the last day of each month, and be recorded as full days. The number of actual adverse weather days greater than the number of anticipated adverse weather days, listed above, shall be the number of unusually severe weather days for the purposes of any contract extensions (actual adverse weather days - anticipated adverse weather days = unusually severe weather days.)
- F. Definitions:
 - 1. "Unusually severe weather" - weather that is more severe than the adverse weather anticipated for the season or location involved.
 - 2. "Adverse weather" - atmospheric conditions at a definite time and place that are unfavorable to construction activities.

END OF SECTION

PART VI
CONTRACT AGREEMENT

INDEX

1.	SCOPE OF WORK.....	CA-2
2.	TIME OF COMPLETION	CA-2
3.	ISSUANCE OF WORK ORDERS.....	CA-2
4.	THE CONTRACT SUM.....	CA-2
5.	PROGRESS PAYMENTS	CA-3
6.	ACCEPTANCE AND FINAL PAYMENT.....	CA-3
7.	THE CONTRACT DOCUMENTS.....	CA-3
8.	EXTRA WORK	CA-3
9.	ENUMERATION OF SPECIFICATIONS AND DRAWINGS.....	CA-4



PART VI

CONTRACT AGREEMENT

THIS AGREEMENT, made on the _____ day of _____, 20____, by and between **Lexington-Fayette Urban County Government**, acting herein called "OWNER" and **FuelBand LLC**, 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 one hundred forty-five thousand eight hundred Dollars and no Cents (\$145,800.000) quoted in the proposal by the CONTRACTOR, dated January 29, 2018, 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, IonWave Q&A and Contract Documents therefore as prepared by Fitzsimons Office of Architecture for Carver Center and Lou Johnson Building Renovations project.

2. TIME OF COMPLETION

The date authorized by the OWNER for the proper execution of the Work by the Contract, in full, is hereby fixed as 90 calendar days for final completion. 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. 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.

6. 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.

7. 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.

8. 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.



9. 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 52
V	Special Conditions	SC 1 thru 56
VI	Contract Agreement	CA 1 thru 7
VII	Performance and Payment Bonds	PB 1 thru 7
VIII	Addenda	AD 1 thru 1
IX	Technical Specifications	

Technical Specifications Contents Lou Johnson

Table of Contents	1
<i>Division 1 - General Requirements</i>	
010000 Special Requirements	9
<i>Division 2 - Site Work</i>	
020700 Selective Demolition	4
<i>Division 6 - Carpentry</i>	
061000 General Carpentry	11
064020 Interior Architectural Woodwork	10
<i>Division 7 - Thermal and Moisture Protection</i>	
079000 Joint Sealers	4
<i>Division 8 - Doors</i>	
081100 Hollow Metal Doors and Frames	3
<i>Division 9 - Finishes</i>	
099000 Painting	6

Drawings

A-1 Plans, Elevations, Notes
A-2 Alternate #1 and #2

Technical Specifications Contents Carver Community Center Rest Room Renovation Phase 2

Table of Contents	1
<i>Division 1 - General Requirements</i>	
010000 Special Requirements	9
<i>Division 2 - Site Work</i>	
020700 Selective Demolition	4
<i>Division 4 - Masonry</i>	
042500 Masonry Work	8
<i>Division 6 - Carpentry</i>	
061000 General Carpentry	11
<i>Division 7 - Thermal and Moisture Protection</i>	
079000 Joint Sealers	4
<i>Division 9 - Finishes</i>	
092550 Gypsum Board Assemblies	9
093000 Ceramic Tile	7
099000 Painting	6
<i>Division 10 – Specialties</i>	
102166 Solid Plastic Toilet Compartments	3
102800 Toilet and Bath Accessories	4
<i>Division 22 – Plumbing</i>	
220100 General Provisions for Plumbing Work	15
220200 Pipe Trenching	3
220300 Basic Materials for Plumbing Work	11
220700 Piping Insulation	3
223300 Miscellaneous Plumbing Equipment	6
224000 Plumbing Fixtures	8

List of Drawings

A-1	Existing Basement Plan
A-2	Existing First Floor Plan
A-3	Existing Second Floor Plan
A-4	Renov. Floor and Reflected Ceiling
A-5	Interior Wall Elevations
P-0	Basement Floor Plumbing
PD-1	Existing Second Floor Plumbing
P-1	First Floor Plumbing



P-2 Second Floor Plumbing, Risers
P-3 Plumbing Details, Legend, Schedule
E-1 Electrical Demolition
E-2 Electrical Second Floor Plans





RESOLUTION NO. 92 - 2018

A RESOLUTION ACCEPTING THE BID OF FUEL BAND, LLC, IN THE AMOUNT OF \$145,800.00, FOR CARVER CENTER AND LOU JOHNSON BUILDING RENOVATIONS, FOR THE DIVISION OF GRANTS AND SPECIAL PROGRAMS, AND AUTHORIZING THE MAYOR, ON BEHALF OF THE URBAN COUNTY GOVERNMENT, TO EXECUTE AN AGREEMENT WITH FUEL BAND, LLC, RELATED TO THE BID.

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

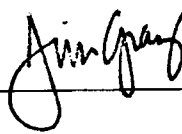
Section 1 - That the bid of FuelBand, LLC, in the amount of \$145,800.00, for Carver Center and Lou Johnson Building Renovations, for the Division of Grants and Special Programs, be and hereby is accepted and approved as to the specifications and amounts set forth in the terms of the bid and the agreement, 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 FuelBand, LLC, related to the bid.

Section 2 - That an amount, not to exceed the sum of \$145,800.00, be and hereby is approved for payment to FuelBand, LLC, from account #3120-707602-90511, 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: February 8, 2018

MAYOR



ATTEST:


CLERK OF URBAN COUNTY COUNCIL
0147-18:DJB:X:\Cases\CA0118-LE0001\LEG\00600103.DOC

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:

Maude Maller
Clerk of the Urban County Council

BY: Jim Gray

MAYOR

Mayor

(Title)

(Seal)

[Signature]
(Witness)

[Signature]
(Contractor)

BY: FUEL BAND LLC

(Secretary)*

Jeffrey H. Jackson
(Witness)

OWNER

(Title)

2000 HARTFORD CT LEX KY 40514
(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.

PART VII

PERFORMANCE AND PAYMENT BONDS

1. PERFORMANCE BOND
2. PAYMENT BOND



THE CINCINNATI INSURANCE COMPANY

Performance Bond

CONTRACTOR (Name, legal status and address):

Fuel Band LLC
2000 Hartford Court
Lexington, KY 40514

SURETY (Name, legal status and principal place of business):

THE CINCINNATI INSURANCE COMPANY
6200 S. GILMORE ROAD
FAIRFIELD, OHIO 45014-5141

OWNER (Name, legal status and address):

LEXINGTON-FAYETTE CO. GOVERNMENT
200 EAST MAIN
LEXINGTON, KY 40508

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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

AIA Document A312-2010 combines two separate bonds, a Performance Bond and a Payment Bond, into one form. This is not a single combined Performance and Payment Bond.

CONSTRUCTION CONTRACT

Date: February 05, 2018

Amount: \$145,800.00

Description (Name and location):

Remodel Bathrooms at Carver Center

BOND

Date (Not earlier than Construction Contract Date): February 05, 2018

Amount: \$145,800.00

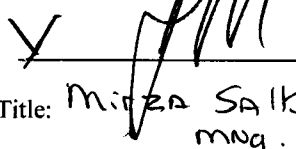
Modifications to this Bond:

☐ None

☐ See Section 16

CONTRACTOR AS PRINCIPAL

Company:  (Corporate Seal)
Fuel Band LLC

Signature: 

Name and Title: *Mirza Salkovic*
mg. member

(Any additional signatures appear on the last page of this Performance Bond.)

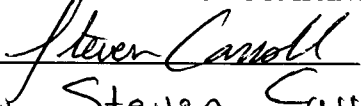
(FOR INFORMATION ONLY - Name, address and telephone)

AGENT or BROKER:

Carroll and Stone Insurance
4384 Clearwater Way Ste 200
Lexington, KY

SURETY

Company:  (Corporate Seal)
THE CINCINNATI INSURANCE COMPANY

Signature: 

Name and Title: *Steven Carroll*
Agent/Port

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



1 The Contractor and 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 when applicable to participate in a conference as provided in Section 3.

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

- .1 the Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Section 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. 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;
- .2 the Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
- .3 the Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4 Failure on the part of the Owner to comply with the notice requirement in Section 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

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

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

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

5.3 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 a 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 Section 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

5.4 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, make payment to the Owner; or
- .2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6 If the Surety does not proceed as provided in Section 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven 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 Section 5.4, and the Owner refuses the payment 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.

1. The first part of the document is a list of names and their corresponding dates. The names are listed in a column on the left, and the dates are listed in a column on the right. The names are: John Doe, Jane Smith, Bob Johnson, Alice Brown, and Charlie White. The dates are: 1/1/2020, 2/1/2020, 3/1/2020, 4/1/2020, and 5/1/2020.

7 If the Surety elects to act under Section 5.1, 5.2 or 5.3, 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. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication, for

- .1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
- .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 Section 5; and
- .3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8 If the Surety elects to act under Section 5.1, 5.3 or 5.4, the Surety's liability is limited to the amount of this Bond.

9 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, successors and assigns.

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 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 a declaration of 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.

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

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 requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14 Definitions

14.1 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.

14.2 Construction Contract. The agreement between the Owner and the Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default. Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default. Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents. All the documents that comprise the agreement between the Owner and Contractor.

15 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16 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)

Fuel Band LLC

Signature: X 

Name and Title: Mirza Salkovic (my name)

Address: 2000 HARTFORD Ct.
Lexington, Ky. 40514

SURETY

Company: _____ (Corporate Seal)

Signature: Steven Carroll 

Name and Title: Steven Carroll
Agent/POA

Address: 4384 Clearwater Way
Lexington, Ky 40515



THE CINCINNATI INSURANCE COMPANY

Payment Bond

CONTRACTOR (Name, legal status and address):

Fuel Band LLC
2000 Hartford Court
Lexington, KY 40514

SURETY (Name, legal status and principal place of business):

THE CINCINNATI INSURANCE COMPANY
6200 S. GILMORE ROAD
FAIRFIELD, OHIO 45014-5141

OWNER (Name, legal status and address):

LEXINGTON-FAYETTE CO. GOVERNMENT
200 EAST MAIN
LEXINGTON, KY 40508

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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

AIA Document A312-2010 combines two separate bonds, a Performance Bond and a Payment Bond, into one form. This is not a single combined Performance and Payment Bond.

CONSTRUCTION CONTRACT

Date: February 05, 2018

Amount: \$145,800.00

Description (Name and location):

Remodel Bathrooms at Carver Center

BOND

Date (Not earlier than Construction Contract Date): February 05, 2018

Amount: \$145,800.00

Modifications to this Bond:

☐ None

☐ See Section 18

CONTRACTOR AS PRINCIPAL

Company: (Corporate Seal)

Fuel Band LLC

Signature: X

Name and Title: Mirza Salkovic

mg member

(Any additional signatures appear on the last page of this Payment Bond.)

SURETY

Company: (Corporate Seal)

THE CINCINNATI INSURANCE COMPANY

Signature: X

Name and Title: STEVEN CARROLL / Agent RA

(FOR INFORMATION ONLY - Name, address and telephone)

AGENT or BROKER:

Carroll and Stone Insurance
4384 Clearwater Way Ste 200
Lexington, KY

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, subject to the following terms.

2 If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

3 If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Section 13) of claims, demands, liens or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety.

4 When the Owner has satisfied the conditions in Section 3, the Surety shall promptly and at the Surety's expense defend, indemnify and hold harmless the Owner against a duly tendered claim, demand, lien or suit.

5 The Surety's obligations to a Claimant under this Bond shall arise after the following:

5.1 Claimants, who do not have a direct contract with the Contractor,

- .1** have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and

- .2** have sent a Claim to the Surety (at the address described in Section 13).

5.2 Claimants, who are employed by or have a direct contract with the Contractor, have sent a Claim to the Surety (at the address described in Section 13).

6 If a notice of non-payment required by Section 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Section 5.1.1.

7 When a Claimant has satisfied the conditions of Sections 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

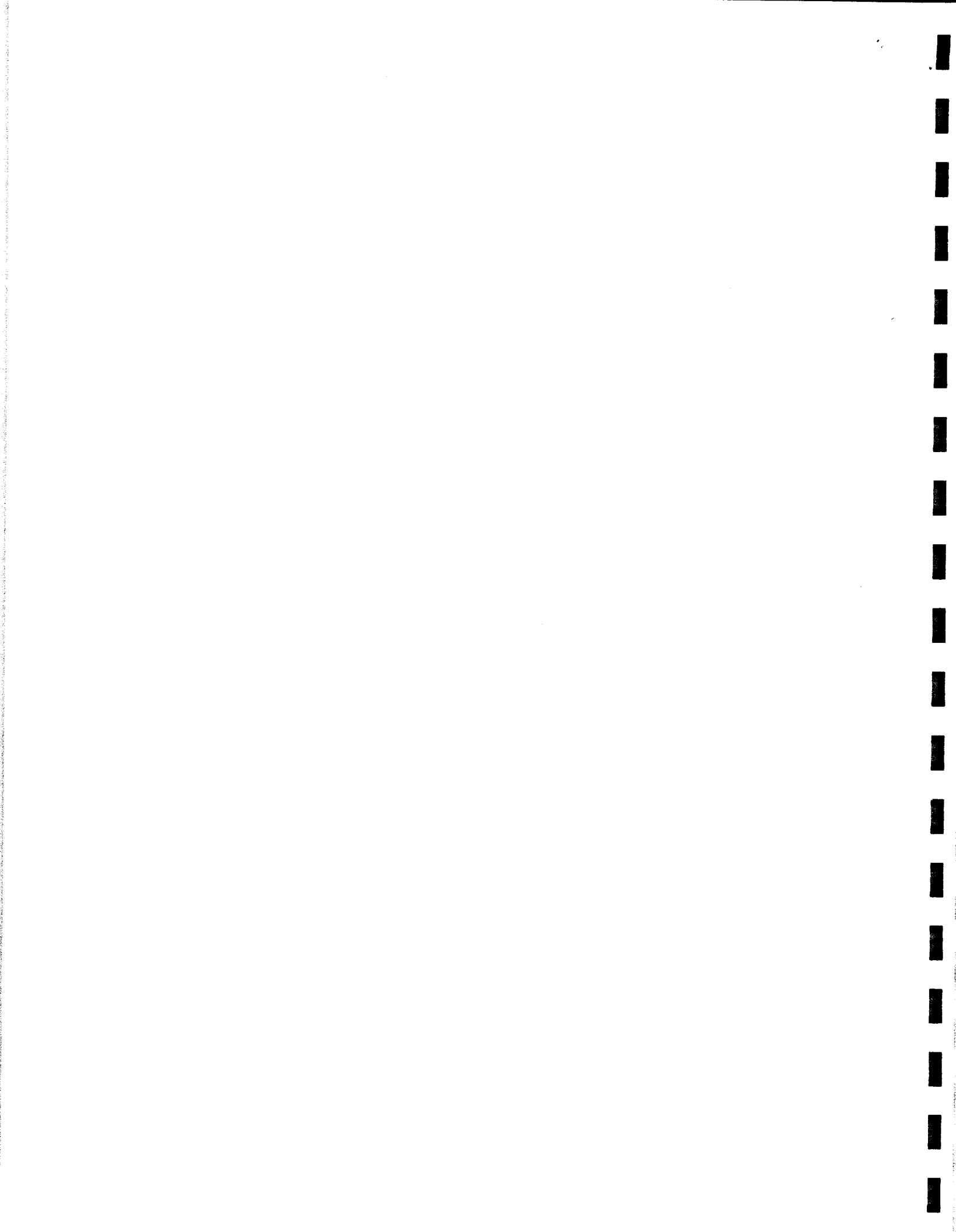
7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

7.2 Pay or arrange for payment of any undisputed amounts.

7.3 The Surety's failure to discharge its obligations under Section 7.1 or Section 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Section 7.1 or Section 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8 The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Section 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

9 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 Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.



10 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, or give notice on behalf of, Claimants or otherwise have any obligations to Claimants under this Bond.

11 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.

12 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Section 5.1.2 or 5.2, 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.

13 Notice and Claims to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

14 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 here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

15 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16 Definitions

16.1 Claim. A written statement by the Claimant including at a minimum:

- .1 the name of the Claimant;
- .2 the name of the person for whom the labor was done, or materials or equipment furnished;
- .3 a copy of the agreement or purchase order pursuant to which labor, materials or equipment was furnished for use in the performance of the Construction Contract;
- .4 a brief description of the labor, materials or equipment furnished;
- .5 the date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
- .6 the total amount earned by the Claimant for labor, materials or equipment furnished as of the date of the Claim;
- .7 the total amount of previous payments received by the Claimant; and
- .8 the total amount due and unpaid to the Claimant for labor, materials or equipment furnished as of the date of the Claim.

16.2 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 Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. 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.

16.3 Construction Contract. The agreement between the Owner and the Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.



16.4 Owner Default. Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5 Contract Documents. All the documents that comprise the agreement between the Owner and Contractor.

17 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.


18 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)
Fuel Band LLC

Signature:  _____

Name and Title:  MITZA SALKOVIC
my member

Address: 2000 HARTFORD CT.
LEXINGTON, KY. 40514

SURETY

Company: _____ (Corporate Seal)

Signature:  _____

Name and Title: STEVEN CARROLL

Agent/POI
Address: 4324 Clearwater Way
Lexington, Ky 40515

THE CINCINNATI INSURANCE COMPANY

Fairfield, Ohio

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That THE CINCINNATI INSURANCE COMPANY, a corporation organized under the laws of the State of Ohio, and having its principal office in the City of Fairfield, Ohio, does hereby constitute and appoint

David Hollenbaugh, Ron Carroll, Steven Carroll,

of Lexington, KY

its true and lawful Attorney(s)-in-Fact to sign, execute, seal and deliver on its behalf as Surety, and as its act and deed, any and all bonds, policies, undertakings, or other like instruments, as follows:

Ten Million Dollars and 00/100 (\$10,000,000.00)

This appointment is made under and by authority of the following resolution passed by the Board of Directors of said Company at a meeting held in the principal office of the Company, a quorum being present and voting, on the 6th day of December, 1958, which resolution is still in effect:

"RESOLVED, that the President or any Vice President be hereby authorized, and empowered to appoint Attorneys-in-Fact of the Company to execute any and all bonds, policies, undertakings, or other like instruments on behalf of the Corporation, and may authorize any officer or any such Attorney-in-Fact to affix the corporate seal; and may with or without cause modify or revoke any such appointment or authority. Any such writings so executed by such Attorneys-in-Fact shall be binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company."

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company at a meeting duly called and held on the 7th day of December, 1973.

"RESOLVED, that the signature of the President or a Vice President and the seal of the Company may be affixed by facsimile on any power of attorney granted, and the signature of the Secretary or Assistant Secretary and the seal of the Company may be affixed by facsimile to any certificate of any such power and any such power of certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certified by certificate so executed and sealed shall, with respect to any bond or undertaking to which it is attached, continue to be valid and binding on the Company."

IN WITNESS WHEREOF, THE CINCINNATI INSURANCE COMPANY has caused these presents to be sealed with its corporate seal, duly attested by its Vice President this 10th day of May, 2012.

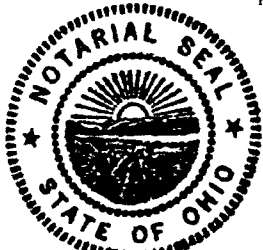


STATE OF OHIO) ss:
COUNTY OF BUTLER)

THE CINCINNATI INSURANCE COMPANY

Stacy A. Jester
Vice President

On this 10th day of May, 2012, before me came the above-named Vice President of THE CINCINNATI INSURANCE COMPANY, to me personally known to be the officer described herein, and acknowledged that the seal affixed to the preceding instrument is the corporate seal of said Company and the corporate seal and the signature of the officer were duly affixed and subscribed to said instrument by the authority and direction of said corporation.



Mark J. Huller
MARK J. HULLER, Attorney at Law
NOTARY PUBLIC - STATE OF OHIO
My commission has no expiration date. Section 147.03 O.R.C.

I, the undersigned Secretary or Assistant Secretary of THE CINCINNATI INSURANCE COMPANY, hereby certify that the above is a true and correct copy of the Original Power of Attorney issued by said Company, and do hereby further certify that the said Power of Attorney is still in full force and effect.

GIVEN under my hand and seal of said Company at Fairfield, Ohio,
this _____ day of _____



Scott R. Bolen
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.	<u>Pre-Bid date change</u>	<u>1/15/2018</u>
2.	<u>Facility walk through scheduled, Pre-bid sign in sheet</u>	<u>1/17/2018</u>
3.	<u>AWI certification deleted, Q&A extended, wage rates...</u>	<u>1/19/2018</u>
4.	<u>Door hardware preferences, Replace pages P6-P8 Part 3</u>	<u>1/22/2018</u>
5.	<u></u>	<u></u>



MAYOR JIM GRAY



LEXINGTON

TODD SLATIN
DIRECTOR
CENTRAL PURCHASING

ADDENDUM #1

Bid Number: #1-2018

Date: January 15, 2018

Subject: Carver Center and Lou Johnson Building Renovations

Address inquiries to:
Sondra Stone
859.258.3320

TO ALL PROSPECTIVE SUBMITTERS:

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

Pre-bid has been changed to January 17, 2018, 1:00 pm, beginning at 522 Patterson St and concluding at 190 Prall St.

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: #1-2018

Date: January 17, 2018

Subject: Carver Center and Lou Johnson Building Renovations

Address inquiries to:

Sondra Stone

859.258.3320

TO ALL PROSPECTIVE SUBMITTERS:

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

1. A walk-thru is scheduled for January 19, 2018, 2:00 pm at the Lou Johnson Building at 190 Prall St.
2. The pre-bid sign-in sheet from Carver Center is attached.

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: _____



SIGN-IN SHEET
Pre-Bid Meeting 1-2018 Carver Center and Lou Johnson Building Renovations
January 16, 2018 @ 10:00 AM

Representative	Company Name	DBE/MBE/WBE/ Veteran	Phone#	Email Address
Sondra Stone	LFUCG		859-258-3320	sstone@lexingtonky.gov
Sherita Miller	LFUCG		859-258-3323	smiller@lexingtonky.gov
Alex Stahl	Erbank & Stale		859-269-0009	erbankandstale@aol.com

Martin Feldman	PLG, Inc.		859-800-1481	martin92lie@yahoo.com
David Disher	PLG, Inc		859-537-7207	DDISHAN11@bmdc.com
Bishop Carter	ELIWE ALLEN LLC	MBE	859-221-1563	BISHOP, CARTER & ELIWEALLENLLC.COM
Ervin Manley	FRANTZ INC.		859-233-1335	ervin.manley@frantzinc.com
John Harris	Harboe Const.		857-528-6444	sheddix@harboeconst.com
Billy Townsend	The Master's Touch Mechanical		859-771-9348	billy@mtmechanical.com
MIRZA Spasovic	FUELBAVARS LLC		859 913 1101	FUELBAVARS LLC @ YAHOO.COM
Neal Dunn	Custom Creations		859-885-2358	ndunn1@customcreationsky.com
Singh, Terry	Wani		859-396-4141	SINGH, TERRY CONSULTING INC. @ GMAIL.COM
Tom Smith	WIS O'Pong Inc		859-403-4242	topping@gmail.com
Kyle Thacker	Churchill McGee		859-475-3828	kthacker@churchillmgee.com
Jim Robertson	Davis H Elliot		859-699-8010	troberston@dhec.com
Allen Campbell	Davis H Elliot		859-229-5187	acampbell@dhac.com

SIGN-IN SHEET

Pre-Bid Meeting 1-2018 Carver Center and Lou Johnson Building Renovations
January 16, 2018 @ 10:00 AM

[illegible]



MAYOR JIM GRAY



LEXINGTON

TODD SLATIN
DIRECTOR
CENTRAL PURCHASING

ADDENDUM #3

Bid Number: #1-2018

Date: January 19, 2018

Subject: Carver Center and Lou Johnson Building Renovations

Address inquiries to:

Sondra Stone

859.258.3320

TO ALL PROSPECTIVE SUBMITTERS:

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

1. Delete the requirement for AWI certification; however, the cabinet shop must be acceptable to the Architect.
2. The Q&A period has been extended to January 22, 2018, 10:00 am.
3. See attached updated wage rates.
4. See attached pre-bid sign-in sheet for Lou Johnson Park.

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: _____



General Decision Number: KY180169 01/12/2018 KY169

Superseded General Decision Number: KY20170169

State: Kentucky

Construction Type: Building

County: Fayette County in Kentucky.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.35 for calendar year 2018 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.35 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2018. The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/05/2018
1	01/12/2018

ASBE0051-001 03/01/2017

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 25.36	14.51

BOIL0040-002 10/01/2014

	Rates	Fringes
BOILERMAKER.....	\$ 32.22	24.26

BRKY0018-004 06/01/2017

	Rates	Fringes
BRICKLAYER.....	\$ 26.47	12.76

CARP1076-003 06/01/2017

	Rates	Fringes
--	-------	---------

MILLWRIGHT.....\$ 26.14 19.63

CARP1650-011 06/01/2017

Rates Fringes

CARPENTER (Acoustical Ceiling
Installation, Drywall
Finishing/Taping, Drywall
Hanging, Form Work, and Metal
Stud Installation Only).....\$ 24.35 17.26

ELEC0369-015 05/31/2017

Rates Fringes

ELECTRICIAN.....\$ 31.07 16.60

* ELEV0020-001 01/01/2018

Rates Fringes

ELEVATOR MECHANIC.....\$ 43.66 32.645

PAID HOLIDAYS:

a. New Year's Day, Memorial Day, Independence Day, Labor Day,
Vetern's Day, Thanksgiving Day, the Friday after
Thanksgiving, and Christmas Day.

b. Employer contributes 8% of regular hourly rate to vacation
pay credit for employee who has worked in business more
than 5 years; 6% for less than 5 years' service.

ENGI0181-054 06/01/2015

Rates Fringes

POWER EQUIPMENT OPERATOR
(Drill).....\$ 28.85 14.40

ENGI0181-079 06/01/2016

Rates Fringes

POWER EQUIPMENT OPERATOR
(Loader).....\$ 29.86 14.65

ENGI0181-085 07/01/2017

Rates Fringes

POWER EQUIPMENT OPERATOR
(Crane).....\$ 31.18 15.15

CRANES WITH BOOM 150 FEET & OVER, INCLUDING JIB, SHALL
RECEIVE \$.75 ABOVE THE WAGE RATE.
ALL CRANES WITH PILING LEADS WILL RECEIVE \$.50 ABOVE THE
WAGE, REGARDLESS OF BOOM LENGTH.

ENGI0181-091 06/01/2016

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Forklift).....	\$ 29.86	14.65

ENGI0181-093 06/01/2016

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Oiler).....	\$ 26.05	14.65

IRON0070-015 06/01/2017

	Rates	Fringes
IRONWORKER (Structural and Ornamental).....	\$ 28.30	21.85

LABO0189-030 06/01/2017

	Rates	Fringes
LABORER (Common or General).....	\$ 22.58	12.10

LABO1445-002 06/01/2017

	Rates	Fringes
LABORER (Power Tool Operator)....	\$ 28.40	15.81

PAIN0387-003 11/01/2017

	Rates	Fringes
GLAZIER.....	\$ 26.00	14.15

PLAS0132-015 06/01/2014

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 22.00	12.55

PLUM0452-015 11/01/2016

	Rates	Fringes
PLUMBER.....	\$ 32.70	17.80

PLUM0452-021 11/01/2016

	Rates	Fringes
PIPEFITTER (Includes HVAC Pipe and Unit Installation).....	\$ 32.70	17.80

ROOF0042-008 08/01/2015

	Rates	Fringes
ROOFER.....	\$ 27.01	13.62

SFKY0669-002 04/01/2017

	Rates	Fringes
SPRINKLER FITTER.....	\$ 33.75	15.84

SHEE0024-031 06/01/2016

	Rates	Fringes
SHEET METAL WORKER (Includes HVAC Duct Installation).....	\$ 27.63	19.86

* UAVG-KY-0016 06/02/2015

	Rates	Fringes
BRICKLAYER: TILE FINISHER.....	\$ 22.42	11.12
BRICKLAYER: TILE SETTER.....	\$ 27.15	10.79

SUKY2015-029 06/02/2015

	Rates	Fringes
CARPENTER, Excludes Acoustical Ceiling Installation, Drywall Finishing/Taping, Drywall Hanging, Form Work, and Metal Stud Installation.....	\$ 20.34	8.58
IRONWORKER, REINFORCING.....	\$ 28.38	16.89
LABORER: Mason Tender - Brick...	\$ 18.91	0.00
LABORER: Mason Tender - Cement/Concrete.....	\$ 24.13	0.00
LABORER: Pipelayer.....	\$ 20.36	9.90
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 24.60	12.65
OPERATOR: Bulldozer.....	\$ 19.69	4.71
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 22.52	4.00
OPERATOR: Roller.....	\$ 23.60	12.65
PAINTER (Brush and Roller).....	\$ 25.14	11.29
PAINTER: Spray.....	\$ 22.81	11.87

TRUCK DRIVER: Dump Truck.....\$ 13.56 0.00

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

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

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

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

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the

Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

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

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

Pre-Bid Meeting 1-2018 Carver Center and 1400 Johnson Building Renovations
January 19, 2018 @ 2:00 PM

January 19, 2018 @ 2:00 PM

[illegible]



MAYOR JIM GRAY



LEXINGTON

TODD SLATIN
DIRECTOR
CENTRAL PURCHASING

ADDENDUM #4

Bid Number: #1-2018

Date: January 22, 2018

Subject: Carver Center and Lou Johnson Building Renovations

Address inquiries to:
Sondra Stone
859.258.3320

TO ALL PROSPECTIVE SUBMITTERS:

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

1. Add to the hardware notes that the Schlage locks are preferred and they are to use the "C" or Classic keyway/cylinders for those locks to allow Parks the ability to duplicate the keys in house.
2. Replace pages P6-P8 in Part III. Form of Proposal. 4. Bid Schedule with the attached. This adds an alternate for replacing water line at Carver Center.

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: _____



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.	Building Renovation – Carver Center Woman's Restroom as per specs for _____ Dollars _____ Cents	LS	\$ _____
2.	Building Renovation – Lou Johnson Renovation as per specs for _____ Dollars _____ Cents	LS	\$ _____
3.	Alternate #1 – Carver Center Men's Restroom as per specs for _____ Dollars _____ Cents	LS	\$ _____
4.	Alternate #2 – Lou Johnson painting of restroom and additional interior as per specs for _____ Dollars _____ Cents	LS	\$ _____
5.	Alternate #3 – Lou Johnson remove and replace all hollow metal doors and hardware as per specs for _____ Dollars _____ Cents	LS	\$ _____

Item No.	Description w/Unit Bid Price Written in Words	Unit	Total Bid Amount
6.	Alternate #4 – Replace 2" water supply from street to basement, connect to existing in Storage 003, include water company fees as per specs for _____ Dollars Cents	LS	\$ _____

TOTAL OF ALL BID PRICES FOR Carver Center and Lou Johnson Building Renovations Project (Items 1 through 2) in words and figures. In case of discrepancy, the amount shown in words will govern.

 _____ (\$ _____).

Submitted by:

Firm

Address

City, State & Zip

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

Signature of Authorized Company Representative – Title

Representative/s Name (Typed or Printed)

Area Code – Phone – Extension

Fax #

E-Mail Address

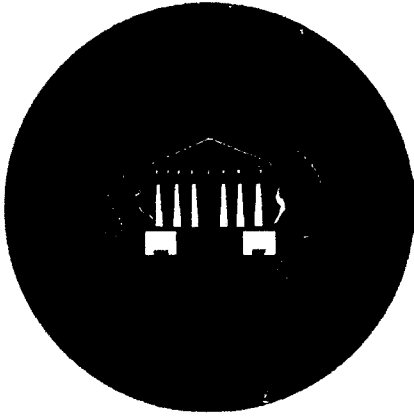
OFFICIAL ADDRESS:

_____ (Seal if Bid is by Corporation)

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

PART IX
TECHNICAL SPECIFICATIONS





Technical Specifications

**Carver Community Center Rest Room
Renovation Phase 2
522 Patterson Street
Lexington, KY**

**LFUCG General Services
Department of Parks
200 East Main St
Lexington, KY 40507**

**Prepared by: Fitzsimons Office of Architecture
112 W. Third St.
Lexington, KY 40508
(859) 243-0038**

**STW Consulting Engineers
628 Winchester Road
Lexington, KY 40505
(859) 277-8177**

Technical Specifications Contents

TABLE OF CONTENTS	1
DIVISION 1 - GENERAL REQUIREMENTS	
010000 SPECIAL REQUIREMENTS	9
DIVISION 2 - SITE WORK	
020700 SELECTIVE DEMOLITION	4
DIVISION 4 - MASONRY	
042500 - MASONRY WORK	8
DIVISION 6 - CARPENTRY	
061000 GENERAL CARPENTRY	11
DIVISION 7 - THERMAL AND MOISTURE PROTECTION	
079000 JOINT SEALERS	4
DIVISION 9 - FINISHES	
092550 GYPSUM BOARD ASSEMBLIES	9
093000 CERAMIC TILE	7
099000 PAINTING	6
DIVISION 10 - SPECIALTIES	
102166 SOLID PLASTIC TOILET COMPARTMENTS	3
102800 TOILET AND BATH ACCESSORIES	4
DIVISION 22 - PLUMBING	
220100 GENERAL PROVISIONS FOR PLUMBING WORK	15
220200 PIPE TRENCHING	3
220300 BASIC MATERIALS FOR PLUMBING WORK	11
220700 PIPING INSULATION	3
223300 MISCELLANEOUS PLUMBING EQUIPMENT	6
224000 PLUMBING FIXTURES	8

SECTION 010000 - Special Requirements

1.1 SECTION INCLUDES:

This Section includes information which supplements the General Conditions:

1. Scope
2. Time for Completion
3. Ordering Materials
4. Storage of Materials
5. Protection of Existing Facilities
6. Project Closeout and Record Drawings.
7. Access to Site and Building
8. Temporary Parking
9. Owner Occupancy
10. Interruption and Protection of Utilities
11. Progress Meetings
12. Work by Owner
13. Field Office
14. Communications Service
15. Staging and Storage
16. Sanitary Facilities
17. Utilities
18. Final Cleaning
19. Substantial Completion, Final Inspections and Subsequent Inspections
20. Divisions of Specifications
21. Disputes
22. Allocation of Work
23. Codes and Ordinances
24. Conduct of Employees
25. Contractor Coordination
26. Cutting and Patching
27. Fire-Smoke Detectors - Existing
28. Submittal Procedure
29. Construction Photographs
30. Proposed Materials and Equipment List
31. Interior Enclosures
32. Progress Cleaning
33. Hazardous Materials

1. SCOPE

- A. Project Description: Rest Room Renovation Phase 2 at the Carver Community Center includes but is not limited to the complete renovation of the second floor rest rooms with the women's restroom renovation the base bid and the men's restroom renovation add alternate #1. DWV will connect to existing piping in basement locations. Water service located in the basement shall connect to renovated rest rooms. Existing wall tile will be remove and replaced. Existing vinyl floor tile will be removed. New floor tile to be installed over concrete floor. A new 4" masonry plumbing wall to be constructed to assist in piping installation. Interiors of the restrooms to be fully finish painted. First floor restrooms are to remain in operation.
- B. Bidders, subcontractors and suppliers, before submitting proposals, shall visit and examine the site to satisfy themselves as to the nature and scope of the existing conditions at the site. The submission of a proposal will be construed as evidence that a visit and examination have been made. Later claims for labor equipment, or materials required for difficulties encountered which could have been foreseen had such an examination been made will not be recognized.
- C. The Work under this contract does not include any items marked N.I.C. on the Drawings (Not In Contract).

- D. It shall be the responsibility of all Contractors and Subcontractors to carefully examine all Drawings, Specifications and Contract Documents pertaining to all phases of the construction in order that Contractor and Subcontractor may foresee all requirements for coordination of their work. Submission of a bid shall be construed as evidence that such an examination has been made. Claims based on unforeseen requirements will not be considered.
- E. Should any error or inconsistency appear in Drawings or Specifications, the Contractor, before proceeding with the work, must make mention of the same to the Architect for proper adjustment, and in no case proceed with the work in uncertainty or with insufficient drawings.
- F. The Contractor and each Subcontractor shall be responsible for verification of all measurements at the building before ordering any materials or doing any work. No extra charge or compensation shall be allowed due to differences between actual dimensions and dimensions indicated on the Drawings. Any such discrepancy in dimensions which may be found shall be submitted to the Architect for his consideration before the Contractor proceeds with the work in the affected areas.
- G. Contractors shall follow sizes in Specification or figures on Drawings, in preference to scale measurements and follow detail drawings in preference to general drawings.

2. TIMES FOR COMPLETION:

- A. Substantial Completion: Subject to the conditions of the General Conditions, the total work to be done under this Construction Contract shall be commenced at the time stipulated in the Work Order to the Contractor and shall be substantially completed within: **120 calendar days** for entire project.
- B. The date of Substantial Completion, to be determined, shall be the date certified by the Architect when the work is sufficiently complete, in accordance with the Contract Documents, so the Owner may conditionally accept, and beneficially occupy and use, all of the facilities provided under this Construction Contract.
- C. Final Completion: Subject to the conditions of the General Conditions, the total work to be done under this Construction Contract shall be fully completed within thirty (30) consecutive calendar days after the Date of Substantial Completion.
- D. The Date of Final Completion shall be the date that the work is complete and all Contract requirements have been fulfilled by the Contractor.

3. ORDERING MATERIALS

- A. Immediately following Award of Contract for this work, Contractor shall determine source of supply for all materials and length of time required for their delivery, including materials of subcontractors, and order shall be placed for such materials based on the project schedule.
- B. If, for any reason, any item specified will not be available when needed and Contractor can show that he has made a reasonably persistent effort to obtain item in question, the Architect is to be notified in writing within 15 days after Contract is signed; otherwise the Contractor will not be excused for delays in securing materials specified and will be held accountable if completion of building is thereby delayed.

4. STORAGE OF MATERIALS

- A. Each Contractor providing materials and equipment shall be responsible for the proper and adequate storage of his materials and equipment, and for the removal of same upon completion of his work. Storage of materials at the site shall be confined to areas within Contract Limits or as otherwise designated by the Owner at the Pre-Construction Conference. Coordinate with Architect. Storage will be limited to the site.

5. PROTECTION OF EXISTING FACILITIES

- A. The General Contractor shall repair and/or replace, at no expense to the Owner, any sections of existing roads, streets, sidewalks, curbs, grassed areas, shrubs, trees, utilities, buildings, automobiles, trucks and other structures or vehicles damaged by reason of work performed under this Contract or incidental thereto, whether by his own forces or by his subcontractors or his material suppliers.

Care should be taken by the Contractor to protect from injury any persons and vehicles that will use the building during construction. The Contractor, at the Construction Conference will outline his proposed procedures of construction, determine degrees of potential dangers and outline protective measures he will take during various construction phases.

- B. Exterior Enclosures. Provide temporary weather-tight closures to exterior openings to protect the interior at all times for all types of weather.
- C. Security. Provide security to protect work and existing facilities from unauthorized entry, vandalism or theft. Verify with Owner the schedule for opening and closing the building.

6. PROJECT CLOSEOUT AND RECORD DRAWINGS

- A. The Owner will furnish one (1) set of blue line prints which the Contractor shall keep on file in the field office. The Contractor shall record on these prints from day to day as the work progresses, all changes and deviations from the contract Drawing, with special emphasis on the exact location of all work concealed from view by offset distances to surface improvements such as building corners, curbs, etc. Entries and notations shall be neat, legible and permanent. These prints shall be delivered to the Architect upon completion of this project. Approval of final payment will be contingent upon compliance with these provisions.
- B. Provide a minimum of three (3) bound final installation, training, operation, maintenance and repair manuals to be turned over to the LFUCG's Project Manager and approved for content by the Owner prior to acceptance of substantial completion.
- C. Manuals provided must be of sufficient detail to enable customer to install, calibrate, train, operate, maintain, service and repair every system, subsystem, and/or piece of equipment installed on or as part of this contract. Manual must contain:
1. Project Title, Project number, Location, dates of submittals, names of Design Consultant, Engineer, Contractor, and Contractor's Subs. Provide phone numbers and addresses for Contractor and Subs.
 2. An Equipment Index that includes vendors name, address, and telephone number for all equipment purchased on the project.

3. Emergency instructions with phone numbers and names of contact persons on warranty items.
4. All manuals in binders shall be original copies provided by the manufacturer. At minimum these binders must include:

Installation manuals	Calibration manuals
Training manuals	Repair manuals
Service Manual	Parts list
Reviewed shop drawings	

5. Included in the front of the "Operation and Maintenance Manual" shall be a copy of the Interior and Exterior Finish plan and Schedule listing all finish materials, the manufacturer, the finish color, and the manufacturer's paint number.

D. Submission of final set of record drawings.

1. The Contractor, on copies of the Contract Documents provided by the contractor, shall submit a Record Set of Drawings indicating all deviations of construction as originally specified in the contract documents. These Record Drawings will compile information from the General Contractor as well as all sub-contractors. The Contractor shall provide a qualified representative to update the Record Set of Drawings as construction progresses.
2. Approval of the final payment request will be contingent upon compliance with these provisions. The Contractor's Record Set of Drawings shall be delivered to the Design Consultant at their completion so that the Design Consultant may make any changes on the original contract drawings.

7. **ACCESS TO SITE AND BUILDING**

- A. Contact the architect for arrangements to visit the building.
- B. Working Hours: Contractor can have access to the site from 7:30am until 5:00pm. The owner will work with the contractor to limit the impact on construction by occupancy. The building is occupied by children so all caution and protective measures shall be employed. The owner will work with the successful contractor on a work plan for the contractor and owner to follow. The project time will be adjusted accordingly.

8. **TEMPORARY PARKING**

- A. Parking is limited to street parking, coordinate with owner.

9. **OWNER OCCUPANCY:**

- A. The site will be occupied during construction.
- B. The contractor shall confine his operations, including delivery and unloading of materials and equipment, to the areas within the designated Contract Limits.

10. **INTERRUPTION AND PROTECTION OF UTILITIES:**

- A. Utilities on the site are not to be interrupted without 48 hour notice to the Owner.
- B. The contractor shall protect all utilities during construction.

11. PROGRESS MEETINGS

- A. With the express purpose of expediting construction and providing the opportunity for cooperation of affected parties, meetings may be called which shall be attended by representatives of:
- (1) Project Manager LFUCG, other LFUCG staff
 - (2) the Architect and Consultants
 - (3) the General Contractor
 - (4) all Subcontractors

A location on or near the site will be designated where such meetings will be held. The frequency of meeting shall be twice a month for a formal meeting.

12. WORK BY OWNER

- A. The owner may under take minor construction projects related to this project. The owner will coordinate any projects with the contractor and not disrupt the construction project.

13. FIELD OFFICE

- A. Field office is not required; contractor cannot leave any items on site without permission of Station.

14. COMMUNICATIONS SERVICE

- A. Contractor to arrange for and provide direct on-site communication by telephone during the construction of this project. Cellular phone is acceptable.

15. STAGING AND STORAGE AREA

- A. All staging and storage is to occur within the site limits.

16. SANITARY FACILITIES

- A. Restroom facilities are to be provided by the contractor for his workers and subcontractors. Drinking water shall be provided from an approved safe source, so piped or transported as to be kept clean and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing governing health regulations.

17. UTILITIES

- A. The Contractor can connect to existing electric service for construction power.
- B. The Contractor can connect to existing water service for construction water.

18. FINAL CLEANING:

- A. Execute prior to final inspection. Clean building according to general conditions final cleaning. The intent is to clean and vacuum the entire building to keep dirt from being drawn into the HVAC system.
- B. Clean interior and exterior surfaces exposed to view.

- C. Clean debris from site, roofs, gutters, downspouts and drainage systems.
- D. Remove waste and surplus materials, rubbish and construction facilities from the site.

19. SUBSTANTIAL COMPLETION, FINAL INSPECTION & SUBSEQUENT INSPECTIONS:

- A. In as much as all parties with and intend to prosecute the work in a diligent and good faith manner, and to complete the work in a timely fashion, the Contractor shall notify the Architect when the Contractor believes he has attained Substantial Completion. Notification shall be made at least five (5) calendar days prior to the date set to the Substantial Completion inspection. The Contractor shall comply with the prerequisite requirements for Substantial Completion as set forth in General Conditions.
- B. Upon receipt of the Contractor's request, the Architect will either proceed with inspection or advise Contractor of prerequisites not fulfilled. Following initial inspection, the Architect will either prepare a certificate of substantial completion, or advise the Contractor of work which must be performed prior to issuance of the certificate of substantial completion. The Architect will repeat the inspection when requested and assure that the work has been substantially completed. Results of the completed inspection will form the initial "punch list" for final acceptance.
- C. The Architect will re-inspect the work upon the receipt of the Contractor's notice that he believes in good faith that except for those items whose completion has been delayed due to circumstances that are acceptable to the Architect, the work has been completed, including punch list items from earlier inspections. Punch List shall be completed within 30 working days or Liquidated Damages can be assessed. Upon completion of re-inspection, the Architect will either recommend final acceptance and final payment, or will advise the Contractor of work not completed or obligations not fulfilled as required for final acceptance by issuance of another punch list. The architect will inspect for punch list completion only twice.
- D. The Contractor, upon completion of all outstanding items set forth on the punch list, shall notify the Architect of the completion of the work. The Architect shall verify completion of the work by an on-site inspection.
- E. If at this final inspection items remain on the punch list the general contractor shall be responsible for the cost of re-inspection by the architect and engineer. The cost is to be determined prior to the inspection but will not be less than hourly amounts noted on the Architect and Owner contract.

20. DIVISION OF SPECIFICATIONS:

- A. Division of Specification into sections is done for convenience of reference and is not intended to control contractors in dividing work among subcontractors or to limit scope of work performed by any trade under any given section.

21. DISPUTES:

- A. Contractor is hereby put on notice that it is his contractual obligation to adjust differences between his several subcontractors. Attempts to have the Architect or Owner settle disputes between Prime Contractor and his subcontractors, will not be given consideration.

22. ALLOCATION OF WORK:

- A. Where certain materials are specified to be installed under various headings, it shall be the responsibility of the General Contractor to reallocate such work under the proper subcontractor if the specification is in conflict with local jurisdiction.

23. CODES AND ORDINANCES:

- A. All branches of the work shown on the Plans or specified, whether specifically mentioned or not, shall be executed in strict compliance with all local or state regulations and codes and shall be in compliance with all national codes, when same have jurisdiction.

24. CONDUCT OF EMPLOYEES:

- A. No Smoking is allowed on the job site.
- B. The Contractor shall post signs conspicuously on the site to prohibit the use or possession of alcoholic beverages by any of his employees while they are on the grounds of this project. The Contractor is responsible for reporting violations of the provisions of KRS 244 to the proper authorities and for taking the necessary action to insure that the intent of this paragraph is carried out

25. CONTRACTOR COORDINATION:

- A. The General Contractor and all Subcontractors shall cooperate and coordinate their work to expedite the progress of the project. All Subcontractors shall review and refer to the Drawings and Specifications of other trades involved with their particular work before proceeding. Any work installed which conflicts with another trade and had not been brought to the attention of the Architect prior to installation shall be removed at no additional expense to the Owner.

26. CUTTING AND PATCHING:

- A. This is a historic building. All craftsmen are to be skilled in working on historic building. Extra time and care is needed to properly selectively demolish and rebuild this project. Matching new materials to the existing will require test patches to be approved before entire work is started. There will be discussion of the construction techniques and methods to make sure that the finished product will meet the required standards.
- B. Employ a skilled and experienced installer to perform cutting and patching; replace materials ONLY if existing materials cannot be restored by splicing, filling and other appropriate restoration procedures.
- C. Fit work tight to adjacent elements. Seal voids and gaps with appropriate sealant as indicated in plans and specifications. Consult the architect for detailing questions.

27. FIRE-SMOKE DETECTORS - EXISTING:

- A. Existing systems are to remain in operation at all times except when construction will cause false alarms. Devise methods to cover and protect existing equipment during construction. Remove to keep system operational while no construction underway.

28. SUBMITTAL PROCEDURES:

- A. Submittal form to identify Project, Contractor, Subcontractor Supplier and

pertinent Contract Document Reference Numbers.

- B. Apply Contractor's stamp or signature, certifying that review, verification of products required, field dimensions, adjacent work and coordination of information is in accordance with the requirements of the Work and Contract Documents.
- C. Identify variations from Contract Documents and Product Specifications which may be detrimental to successful performance of the completed work.
- D. Revise and resubmit submittals as required; identify all changes made since previous submittal.
- E. Product Data. Submit the number of copies which the Contractor requires plus two copies to be retained by the Architect/Engineer. Mark each copy to identify applicable product, model, options, etc. Supplement manufacturers' standard data to provide information unique to this project.
- F. Samples. Submit samples to illustrate functional and aesthetic characteristics of the product. Submit samples of projects from the full range of manufacturers' standard colors or in custom colors selected, textures, and patterns for Architect/Engineer's selection.

29. CONSTRUCTION PHOTOGRAPHS:

- A. Provide digital photographs of all uncovered conditions, and prior to covering any detail of construction.

30. PROPOSED MATERIALS AND EQUIPMENT LIST:

- A. Within one hour of bid opening the successful low bidder must submit complete list of major Products proposed for use, with name of manufacturer, trade name, and model number of each Product.

31. INTERIOR ENCLOSURES:

- A. Provide interior enclosures to control dust while performing demolition or cutting plaster, concrete, terrazzo, masonry or other material that generates dust.
- B. Provide interior enclosures as required by public safety rules and regulations.

32. PROGRESS CLEANING:

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

33. HAZARDOUS MATERIALS:

- A. The owner has tested suspect materials in the building and there are no currently known hazardous materials on site. Asbestos containing materials previously known to the owner have been removed from the building. If the contractor suspects a material that is uncovered as the project progresses he shall immediately notify the owner.
- B. Lead Paint: The building was constructed in 1930's. The original layers of paint and some added layers contain lead paint. All of the originally painted surfaces have been painted in the last two years and are encapsulated. There is the potential for exposure to lead based paint. The contractor shall use all means and methods required by government agencies during construction. No painted surfaces in the construction area have been

identified. Contractor shall use all EPA recommendations related to lead paint awareness, and protective measures.

- C. Lead Ceramic Tile: The blue ceramic tile in the restrooms has been identified as containing lead. The EPA has stated that the RRP Rule does not apply to ceramic tile, yet there are implications for any lead containing material. In order to minimize any exposure the existing sound wall tile shall remain in place. The contractor shall fill all voids or missing tile for an even surface to install tile. New tile shall be installed according to TCNA Handbook in details TR712 (floors) and TR713 (walls) and the recommendations for installing tile over existing terrazzo floors. An underlayment membrane such as EasyMat or Schluter shall be installed over existing tile and new tile installed using bonding adhesives and mortars recommended by the manufacturer.

For Information Only (not a formal interpretation)

The RRP Rule applies only to renovations (i.e., disturbances of "paint or other surface coatings") in target housing or child-occupied facilities. See 40 CFR 745.82. The term "surface coating," as defined in the regulations banning lead-based paint, specifically excludes those materials which are actually bonded to the substrate, such as ceramic glazing. See 16 CFR 1303.2. As such, the reach of the RRP Rule does not extend to disturbances of ceramic glaze on tiles, bathtubs, and showers. EPA nevertheless recommends that renovators use lead safe work practices when working with any materials known or likely to contain lead. As a practical matter, contractors should understand that the inapplicability of the RRP Rule will not shield them potential civil liability if they fail to contain, clean or otherwise knowingly expose residents or workers to lead hazards.

Ryan Schmit

U.S. Environmental Protection Agency

- D. The architect and architect's consultants shall have no responsibility for the discovery, presence, handling, removal or disposal of or exposure of persons to hazardous materials in any form at the project site, including but not limited to asbestos, asbestos products, polychlorinated biphenyl (PCB) or other toxic substances.
- E. If the work which is to preformed under this contract interfaces in any way with existing components which contain hazardous materials, it shall be the contractor's responsibility to contact the Owner or Owner's environmental consultant regarding the proper means and methods to be utilized in dealing with the hazardous materials.
- F. By execution of the contract for construction, the Contractor hereby agrees to bring no claim for negligence, breach of contract, indemnity, or otherwise against the Architect, his principals, employees, agents, and consultants if such claim in any way would involve the investigation of or remedial work related to hazardous materials in any form at the project site, including but not limited to asbestos, asbestos products, polychlorinated biphenyl (PCB) or other toxic substances. The contractor further agrees to defend, indemnify, and hold the Architect and his principals, employees, agents, and consultants harmless from any such claims related to hazardous materials that may be brought by the Contractor's Subcontractors, Suppliers, or other third parties who may be acting under the direction of the Contractor pursuant to this project.

END OF SECTION 010000 - Special Requirements

SECTION 020700 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. The renovation of two restrooms in place of the existing will require careful layout, planning, and skilled workmanship. The space is limited, the building will be occupied. The building is a historic structure.
 - 2. Remove existing restroom finishes completely to allow for new construction.
 - 3. Remove all mechanical, plumbing and electrical items from the existing restroom and affected locker room area.
 - 4. Patching and repairs are to be completed under other sections of the specifications but coordination between demolition and renovation must be considered and planned for.
 - 5. Provide interior barriers to control dust, full barriers, wall to ceiling, sealed at all times.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. LFUCG General Conditions "Summary of Work" for use of the building requirements.
 - 2. LFUCG General Conditions "Cutting and Patching" for cutting and patching procedures for selective demolition operations.
 - 3. LFUCG General Conditions "Contract Closeout" for record document requirements.

1.3 DEFINITIONS

- A. Remove: Remove and legally dispose of items except those indicated to be reinstalled, salvaged, or to remain the Owner's property.
- B. Remove and Salvage: Items indicated to be removed and salvaged remain the Owner's property. Remove, clean, and pack or crate items to protect against damage. Identify contents of containers and deliver to Owner's designated storage area.
- C. Remove and Reinstall: Remove items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage. Reinstall items in the same locations or in locations indicated.
- D. Existing to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by the Architect, items may be removed to a suitable, protected storage location during selective demolition and then cleaned and reinstalled in their original locations.

1.4 MATERIALS OWNERSHIP

- A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain the Owner's property, demolished materials shall become the Contractor's property and shall be

removed from the site with further disposition at the Contractor's option.

1.5 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: Engage an experienced (min. five years experience) firm that has successfully completed selective demolition Work similar to that indicated for this Project.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before starting selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

1.6 PROJECT CONDITIONS

- A. Owner assumes no responsibility for actual condition of buildings to be selectively demolished.
 - 1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- B. Asbestos: It is not expected that asbestos will be encountered in the Work. If any materials suspected of containing asbestos are encountered, do not disturb the materials. Immediately stop all work. Remove workmen from the area. Immediately notify the Architect and the Owner.

PART 2 - PRODUCTS

2.1 REPAIR MATERIALS

- A. Use repair materials identical to existing materials.
 - 1. Where identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
 - 2. Use a material whose installed performance equals or surpasses that of existing materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with the intended function or design are encountered, investigate and measure the nature and extent of the conflict. Promptly submit a written report to the Architect.
- E. Survey the condition of the building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of the structure or adjacent structures during selective demolition.
- F. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES

- A. Utility Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services serving building to be selectively demolished.
 - 1. Arrange to shut off indicated utilities with LFUCG Division of Fire and Emergency Services.
- B. Utility Requirements: A licensed electrical contractor shall be employed for shutting off, disconnecting, removing, and sealing or capping utility services. Do not start selective demolition work until utility disconnecting and sealing have been completed and verified in writing.

3.3 PREPARATION

- A. Drain, purge, or otherwise remove, collect, and dispose of chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with selective demolition operations.
- B. Employ a certified, licensed exterminator to treat building and to control rodents and vermin before and during selective demolition operations.
- C. Conduct demolition operations and remove debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- D. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around selective demolition area.
 - 1. Protect walls, ceilings, floors, and other existing finish work that are to remain and are exposed during selective demolition operations.
 - 2. Cover and protect furniture, furnishings, and equipment that have not been removed.
- F. Coordinate new openings in the existing concrete slab with existing structural system.

3.4 POLLUTION CONTROLS

- A. Use water mist, temporary enclosures, and other suitable methods to limit the spread of dust and dirt. Comply with governing environmental protection regulations.
 - 1. Do not use water when it may damage existing construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.
- B. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 1. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level.
- C. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before start of selective demolition.

3.5 SELECTIVE DEMOLITION

- A. Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete Work within limitations of governing regulations and as follows:
 - 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition work above each floor or tier before disturbing supporting members on lower levels.
 - 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. To minimize disturbance of adjacent surfaces, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
 - 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.

3.6 PATCHING AND REPAIRS

- A. Promptly patch and repair holes and damaged surfaces caused to adjacent construction by selective demolition operations.
- B. Patching is specified in Division 1 Section "Cutting and Patching."
- C. Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.
- D. Restore exposed finishes of patched areas and extend finish restoration into adjoining construction to remain in a manner that eliminates evidence of patching and refinishing.
- E. Patch and repair floor and wall surfaces in the new space where demolished walls or partitions extend one finished area into another. Provide a flush and even surface of uniform color and appearance.
 - 1. Closely match texture and finish of existing adjacent surface.
 - 2. Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
 - 3. Where patching smooth painted surfaces, extend final paint coat over entire unbroken surface containing the patch after the surface has received primer and second coat.
 - 4. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - 5. Inspect and test patched areas to demonstrate integrity of the installation, where feasible.
- F. Patch, repair, or re-hang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

3.7 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site. Remove debris daily from the site.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them. The disposal of any materials removed by the contractor must be in compliance with all building codes, local, city, state and federal requirements.

3.8 CLEANING

Carver Community Center Rest Room Renovation
Phase 2

Section 020700
SELECTIVE DEMOLITION

- A. Sweep the building broom clean on completion of selective demolition operation.

END OF SECTION 020700

SECTION 042500 - MASONRY WORK AND REPAIRS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Repairs to existing glazed tile walls in restrooms.
 - 2. Installing new concrete block plumbing wall in restrooms.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 7 Section "Flashing and Sheet Metal" for metal flashing for restored clay masonry construction.

1.3 DEFINITIONS

- A. Repointing: The process of raking out (removing) mortar and replacing it with new mortar.
- B. Pointing: The process of placing new mortar in existing joint spaces, which have previously been raked out. This term does not include the raking out process.
- C. Tuckpointing: The process of touching up existing mortar joints by filling in recesses with new mortar, without first raking out the joints.

1.4 SUBMITTALS

- A. General: Submit the following according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Product data for each product indicated including recommendations for their application and use. Include test reports and certifications substantiating that products comply with requirements.
- C. Samples for verification purposes, prior to preparing sample panels, of the following:
 - 1. Each new exposed masonry material to be used for replacing existing materials. Include in each set of samples the full range of colors and textures to be expected in the completed Work.
 - a. Provide straps or panels containing not less than four brick units.
 - 2. Each type of mortar for pointing and masonry rebuilding and repair in the form of sample mortar strips 6 inches long by 1/2 inch wide set in aluminum or plastic channels.
- D. Qualification data for firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include a list of comparable completed projects with project names,

age, condition prior to restoration, addresses and names of Architects and Owners.

- E. Restoration program for each phase of the restoration process, including protection of surrounding materials on building and site during operations. Describe in detail the materials, methods, and equipment to be used for each phase of the restoration work.
- F. Cleaning program indicating cleaning process, including protection of surrounding materials on building and site, and control of runoff during operations. Describe in detail the materials, methods and equipment to be used.

1.5 QUALITY ASSURANCE

- A. Restoration Specialist: Engage an experienced masonry restoration and cleaning firm that has specialized in the types of work required for this Project. The firm shall have been in business for 10 years and shall have worked on five projects of a similar age and scope. At Contractor's option, the work may be divided between two specialist firms: one for cleaning work and one for repair work.
 - 1. Field Supervision: Require restoration specialist firm to maintain an experienced full-time supervisor on the job site during times that clay masonry restoration and cleaning are in progress.
- B. Field-Constructed Mockups: Prior to starting general masonry restoration, prepare the following sample panels on the building where directed by Architect. Prepare sample panels using same materials and methods proposed for the Work, and under same weather conditions to be expected during the restoration. Obtain Architect's acceptance of visual qualities before proceeding with masonry restoration. Retain acceptable panels in an undisturbed condition, suitably marked, during construction as a standard for judging the completed Work.
 - 1. Notify Architect one week in advance of dates and times when sample panels will be prepared.
 - 2. Cleaning: Demonstrate the materials and methods to be used for cleaning each type of masonry surface and condition on sample panels approximately 25 sq. ft. in area.
 - a. Allow a waiting period of the duration indicated, but not less than 7 calendar days, after completion of sample cleaning to permit a study of sample panels for negative reactions.
 - 3. Repointing: Prepare two separate sample areas approximately 3 feet high by 6 feet wide for each type of repointing required, one for demonstrating methods and quality of workmanship expected in removing mortar from joints and the other for demonstrating quality of materials and workmanship expected in pointing mortar joints.
 - 4. Masonry Repair: Prepare sample panels of size indicated for each type of masonry material indicated to be patched, rebuilt, or replaced. Erect sample panels into an existing wall, unless otherwise indicated, to demonstrate the quality of materials and workmanship.
- C. Masonry Pre-construction Testing: Contractor shall employ, at his own expense, an independent testing agency experienced in performing

the type of tests indicated and acceptable to Architect to perform the pre-construction tests.

1. Pre-construction brick tests involve testing each type of existing brick indicated for replacement and each type of proposed replacement brick for properties indicated below using the sampling and testing methods in ASTM C 67. Carefully remove existing bricks from locations designated by Architect.
 - a. Compressive strength.
 - b. 24-hour cold water absorption.
 - c. 5-hour boil absorption.
 - d. Saturation coefficient.
 - e. Initial rate of absorption (suction).
2. Pre-construction mortar tests involve testing each type of existing mortar to help duplicate mortar mix to be reused for repointing compressive strength, color, aggregate, size, mix and materials.

- D. Source of Materials: Obtain materials for masonry restoration from a single source for each type material required (face brick, stone, cement, sand, etc.) to ensure a match of quality, color, pattern, and texture.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Carefully pack, handle, and ship masonry units and accessories strapped together in suitable packs or pallets, or in heavy-duty cartons. Unload and handle to prevent chipping and breakage.
- B. Deliver other materials to Project site in manufacturer's original and unopened containers and packaging, bearing labels as to type and names of products and manufacturers.
- C. Protect masonry restoration materials during storage and construction from rain, snow, and ground water, and from staining and mixing with soil and other materials.
- D. Protect grout, mortar, and other materials from deterioration by moisture and temperature. Store in a dry place or in waterproof containers. Keep containers tightly closed and away from open flames. Protect liquid components from freezing.
- E. Comply with manufacturer's recommendations for minimum and maximum temperature requirements for storage.

1.7 PROJECT CONDITIONS

- A. Clean masonry surfaces only when air temperature is 40 deg F (4 deg C) and above and will remain so until masonry has dried out, but for not less than 7 days after completion of cleaning.
- B. Do not repoint mortar joints or repair masonry unless air temperature is between 40 deg F (4 deg C) and 80 deg F (27 deg C) and will remain so for at least 48 hours after completion of work.
- C. Prevent grout or mortar used in repointing and repair work from staining face of surrounding masonry and other surfaces. Immediately remove grout and mortar in contact with exposed masonry and other surfaces.

- D. Protect sills, ledges, and projections from mortar droppings.

1.8 SEQUENCING/SCHEDULING

- A. Order replacement materials at the earliest possible date, to avoid delaying completion of the Work.
- B. Perform masonry restoration work in the following sequence:
 - 1. Clean masonry surfaces. Remove plants, paint, and soot prior to general cleaning.
 - 2. Study and note painting styles and methods of producing the maximum both horizontal and vertical joints to determine which were struck first and whether they are the panel style.
 - 3. Repair existing masonry, including replacing existing masonry with new masonry materials.
 - 4. Rake out existing mortar from joints indicated to be repointed.
 - 5. Point existing mortar joints of masonry indicated to be restored.
 - 6. Clean masonry surfaces. Remove excess mortar from face of brick.

PART 2 - PRODUCTS

2.1 MANUFACTURERS CONCRETE MASONRY UNITS

- A. Any local manufacturer with a documented history of 10 years performance in this market. The architect may require documentation or certification from the trade associations.

2.2 CONCRETE MASONRY UNITS

- A. Hollow Load Bearing Block Units: ASTM C90, Grade N, Type I -Moisture Controlled; High density water absorption rate not to exceed 9lbs./cu.ft. of material or 7.2% of dryweight of unit.
- B. Hollow and Solid Non-Load Bearing Block Units: ASTM C129, Type II - Non-Moisture Controlled; light weight.
- C. Concrete Brick Units: ANSI/ASTM C55, of same Grade, Type, and Weight as block units.
- D. Masonry Units: Nominal modular size as shown on plans. Provide special units for 90 degree corners, bond beams, lintels, and bullnosed corners.

2.3 MANUFACTURERS - STRUCTURAL CLAY UNITS

- A. Clay Units: Product - To match existing brick
Name: to match existing
Size: to match ex. clay units

2.4 MORTAR MATERIALS

- A. Portland Cement: ASTM C 150, Type I or Type II.
- B. Hydrated Lime: ASTM C 207, Type S.
- C. Aggregate for Mortar: ASTM C 144, unless otherwise indicated in pre-construction testing.

1. Colored Mortar Aggregate: Natural or manufactured sand selected to produce mortar color indicated.
2. For pointing mortar, provide sand with rounded edges.
3. Match size, texture, and gradation of existing mortar as closely as possible.

2.5 CLEANING MATERIALS AND EQUIPMENT

- A. Water for Cleaning: Clean, potable, free of oils, acids, alkalis, salts, and organic matter.
- B. Warm Water: Heat water to a temperature of 140 to 180 deg F (60 to 82 deg C).
- C. Brushes: Fiber bristle only.
- D. Spray Equipment: Provide equipment for controlled spray application of water at rates indicated for pressure, measured at spray tip, and for volume. Adjust pressure and volume, as required, to ensure that damage to masonry does not result from cleaning methods.
 1. For water spray application, provide a fan-shaped spray tip that disperses water at an angle of not less than 15 degrees.
 2. For heated water spray application, provide equipment capable of maintaining a temperature at flow rates indicated between 140 and 180 deg F (60 and 82 deg C).
 3. For steam application, provide a steam generator capable of delivering live steam at the nozzle head.

2.6 MORTAR MIXES

- A. Measurement and Mixing: Measure cementitious and aggregate material in a dry condition by volume or equivalent weight. Do not measure by shovel, use known measure. Mix materials in a clean mechanical paddle batch mixer.
 1. Mixing Pointing Mortar: Thoroughly mix cementitious and aggregate materials together before adding any water. Then mix again adding only enough water to produce a damp, unworkable mix that will retain its form when pressed into a ball. Maintain mortar in this dampened condition for 1 to 2 hours. Add the remaining water in small portions until reaching mortar of the desired consistency. Use mortar within 30 minutes of final mixing; do not retemper or use partially hardened material.
- B. Colored Mortar: Produce mortar of color required by using selected ingredients. Do not adjust proportions without Architect's approval.
 1. Colored Mortar Pigment: Where colored mortar pigments are indicated. Color may be added to the mix in quantities not to exceed 6% by weight of the content in the mix.
- C. Do not use admixtures of any kind in mortar, unless otherwise indicated.
- D. Mortar Proportions: Submit formula for architects review.
 - 1 part portland cement
 - 1 part hydrated lime
 - 6 part sand

PART 3 - EXECUTION

3.1 CLEANING MASONRY, GENERAL

- A. Clean areas where new construction will attach to the existing masonry. Proceed with cleaning in an orderly manner; work from top to bottom of each scaffold width and from one end of each elevation to the other. Work from bottom to top of the building for each scaffold drop.
- B. Use only those cleaning methods indicated for each masonry material and location.
- C. Perform each cleaning method indicated in a manner that results in uniform coverage of all surfaces, including corners, moldings, and interstices, and that produces an even effect without streaking or damaging masonry surfaces.
- D. Removing Plant Growth: Completely remove plant, moss, and shrub growth from masonry surfaces. Carefully remove plants, creepers, and vegetation by cutting at roots and allowing to dry as long as possible prior to removal. Remove loose soil and debris from open masonry joints to whatever depth they occur.
- E. Water Application Methods: Where water application methods are indicated, comply with the following:
 - 1. Spray Applications: Spray-apply water to masonry surfaces to comply with requirements indicated for location, purpose, water temperature, pressure, volume, and equipment. Unless otherwise indicated, hold spray nozzle no less than 6 inches from surface of masonry and apply water from side to side in overlapping bands at an angle of not more than 30° from the wall surface to produce uniform coverage and an even effect.
 - a. Low-Pressure Spray: 80 to 275 psi; 3 to 6 gal. per minute.
 - 2. Steam Wash: Apply steam to masonry surfaces at pressures not exceeding 80 psi. Hold nozzle no less than 6 inches from surface of masonry and apply steam from side to side or in the direction of the tooling in overlapping bands at an angle of not more than 30° from the wall surface to produce uniform coverage and an even effect.

3.2 COURSING

- A. Establish lines, levels, and coursing indicated. Protect from displacement.
- B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
- C. Lay brick units in running common bond and special bonding to make brick patterns as designed. Course three brick units and three mortar joints to equal 8 inches. Form concave mortar joints.
- D. For new brick masonry walls adjacent to existing walls and where new brick is not the same size as existing masonry; adjust the mortar joints to keep the brick units aligned. Verify in mock-up.

3.3 PLACING AND BONDING

- A. Lay solid masonry units in full bed of mortar, with full head joints,

uniformly jointed with other work.

- B. Lay hollow masonry units with face shell bedding on head and bed joints.
- C. Buttering corners of joints or excessive furrowing of mortar joints are not permitted.
- D. Remove excess mortar as Work progresses.
- E. Interlock intersections and external corners.
- F. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.
- G. Perform jobsite cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.
- H. Cut mortar joints flush where cement parging is required or bitumen dampproofing is applied.
- I. Isolate masonry partitions from vertical structural framing members with a control joint.
- J. Isolate top joint of masonry partitions from horizontal structural framing members and slabs or decks with compressible joint filler.

3.4 FINAL CLEANING

- A. After mortar has fully hardened, thoroughly clean exposed masonry surfaces of excess mortar and foreign matter using stiff nylon or bristle brushes and clean water, which is spray-applied at a low pressure.
- B. Using metal scrapers or brushes is not permitted.
- C. Using acid or alkali cleaning agents is not permitted.

3.5 SEALING OF CONCRETE BLOCK

- A. Provide 4'x4' test patch for review by architect.
- B. Surfaces must be clean and dry. Materials must be above 50° F.
- C. Allow 72 hours drying time for mortar and any spot pointing before application.
- D. Treat any alkali or efflorescent with paper neutralizing compound.
- E. Application of porous masonry sealer: 200-250 sqft/ga.
- F. Allow 4 days drying time before applying final finish clear coat. Application of clear sealer: 40-80 sqft/ga.

3.6 PROTECTION OF FINISHED WORK

- A. Protect finished installation under provisions of Section 01001.
- B. Without damaging completed work, provide protective boards at exposed external corners which may be damaged by construction activities.

3.7 SCHEDULES

- A. Concrete block for new plumbing wall.
- B. Misc. masonry materials for patching walls to accept tile finish.

END OF SECTION 042500

SECTION 061000 - GENERAL CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Wall framing for new partitions and wood nailers, framing and blocking.
 - 2. Finish carpentry, miscellaneous trim work.
 - 3. Interior architectural woodwork.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 9 Section "Painting" for back priming and finishing of finish carpentry.

1.3 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Product data for each type of factory-fabricated product and process specified, including details of construction relative to materials, dimensions of individual components, profiles, finishing and installation.
- C. Material certificates for dimensional lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use as well as design values approved by the Board of Review of American Lumber Standards Committee (ALSC).
- D. Wood treatment data as follows including chemical treatment manufacturer's instructions for handling, storing, installation, and finishing of treated material:
 - 1. For each type of preservative treated wood product include certification by treating plant stating type of preservative solution and pressure process used, net amount of preservative retained, and compliance with applicable standards.
 - 2. Warranty of chemical treatment manufacturer.
- E. Shop drawings showing location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.
- F. Lumber and panel products with non-factory applied finish, 50 sq. in. (300 sq. cm) for lumber and 8 by 10 inches (203 by 250 mm) for panels for each species and cut, with one-half of exposed surface finished.
- G. Mockup: Prior to fabricating or installing interior architectural woodwork, cabinetry, construct mockup to verify selections made under sample submittals and to demonstrate aesthetic effects as well as qualities of materials and execution. Build mockup of the size indicated, using materials indicated for final unit of work, and complying with the following requirements.

1. Locate mockup on site in the location indicated or, if not indicated, as directed by Architect.
2. Notify Architect one week in advance of the date and time when mockup will be installed.
3. Demonstrate the proposed range of aesthetic effects and workmanship.
4. Obtain architect's acceptance of mockup before start of final unit of Work.
5. Retain and maintain mockup during construction in an undisturbed condition as a standard for judging the completed Work.
 - a. Accepted mockup in an undisturbed condition at the time of Substantial Completion may become part of the completed Work.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Arrange for installation of carpentry items by firms that can demonstrate successful experience in installing carpentry items similar in type and quality to those required for this Project.
- B. Source Quality Control: Obtain trim, paneling and siding each from a single manufacturer to ensure a match of quality, color, pattern and texture.
- C. Comply with the AWI Quality Standards of the Architectural Woodwork Institute for grades of interior architectural woodwork, construction, finishes and other requirements.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Storage: Keep materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber; provide for air circulation within and around stacks and under temporary coverings including polyethylene and similar materials.
 1. For lumber pressure treated with waterborne chemicals, place spacers between each bundle to provide air circulation.
- B. Do not deliver interior finish carpentry until concrete, plaster, masonry, ceramic tile, and other wet work is complete and cured to a condition of equilibrium and temperature and humidity are maintained at or near occupancy levels.

1.6 PROJECT CONDITIONS

- A. Environmental Conditions: Obtain and comply with finish carpentry manufacturer's and installer's coordinated advice for optimum temperature and humidity conditions for finish carpentry during its storage and installation.
- B. Weather Conditions: Proceed with finish carpentry only when existing and forecasted weather conditions will permit exterior finish carpentry to be installed in compliance with manufacturer's recommendations and when substrate is completely dry.
- C. Open sealed packages of wood to permit natural adjustment of moisture content and allow wood to acclimate to the room conditions.
- D. Field Measurements: Where woodwork is indicated to be fitted to other construction, check actual dimensions of other construction by accurate field measurements before fabrication, and show recorded measurements on

final shop drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1. Verify locations of concealed framing, blocking, reinforcements, and furring that support woodwork by accurate field measurements before being enclosed. Record measurements on final shop drawings.

1.7 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.

1.8 EXTRA MATERIAL

- A. Deliver extra material to owner. Before installation begins, furnish not less than 1.0 percent of the quantity of each type of wood trim profile installed on the project packaged with protective covering for storage and identified with labels clearly describing contents.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the work include, but are not limited to, the following:
 1. Solid Surface Material: NEMA LD 3, grades as indicated, or if not indicated, as required by woodwork quality standard.
 - a. Ralph Wilson Plastics Co.
 - b. Formica
 - c. Pionite
 - d. Substitutions as per Section 010000.

2.2 MATERIALS

- A. General: Provide materials that comply with requirements of the AWI quality standard for each type of woodwork and quality grade indicated and, where the following products are part of interior woodwork, with requirements of the referenced product standards that apply to product characteristics indicated:
 1. Hardboard: AHA A135.4.
 2. Particleboard: ANSI A208.1, Grade M-2.
 3. Softwood Plywood: PS 1.
 4. Hardwood Plywood and Face Veneers: HPVA HP-1.

2.3 LUMBER, GENERAL

- A. Lumber Standards: Furnish lumber manufactured to comply with DOC PS 20 "American Softwood Lumber Standard" and with applicable grading rules of inspection agencies certified by American Lumber Standards Committee's (ALSC) Board of Review.
- B. Inspection Agencies: Inspection agencies and the abbreviations used to reference them with lumber grades and species include the following:
 1. NELMA - Northeastern Lumber Manufacturers Association.
 2. SPIB - Southern Pine Inspection Bureau.
 3. NHLA - National Hardwood Lumber Association.
- C. Grade Stamps: Provide lumber with each piece factory-marked with grade stamp of inspection agency evidencing compliance with grading rule

requirements and identifying grading agency, grade, species, moisture content at time of surfacing, and mill.

1. For exposed lumber furnish pieces with grade stamps applied to ends or back of each piece; or omit grade stamps entirely and provide certificates of grade compliance issued by inspection agency.
- D. Nominal sizes are indicated, except as shown by detail dimensions. Provide actual sizes as required by PS 20, for moisture content specified for each use.
 1. Provide dry lumber with 19 percent maximum moisture content at time of dressing and shipment for sizes 2 inches or less in nominal thickness, unless otherwise indicated.

2.4 DIMENSION LUMBER

- A. General: Provide dimension lumber of grades indicated according to the ALSC National Grading Rule (NGR) provisions of the inspection agency indicated.
- B. For light framing (2 to 4 inches thick, 2 to 4 inches wide) provide the following grade and species:
 1. "Construction" grade.
 2. Southern Pine graded under SPIB rules.

2.5 MISCELLANEOUS LUMBER

- A. General: Provide lumber for support or attachment of other construction, including rooftop equipment curbs and support bases, cant strips, bucks, nailers, blocking, furring, grounds, stripping, and similar members.
- B. Fabricate miscellaneous lumber from dimension lumber of sizes indicated and into shapes shown.
- C. Moisture Content: 19 percent maximum for lumber items not specified to receive wood preservative treatment.
- D. Grade: For dimension lumber sizes, provide No. 3 or Standard grade lumber per ALSC's NGRs of any species. For board-size lumber, provide No. 3 Common grade per NELMA, NLGA, or WWPA; No. 2 grade per SPIB; or Standard grade per NLGA, WCLIB or WWPA of any species.

2.6 FASTENERS

- A. General: Provide fasteners of size and type required for application indicated to provide secure attachment.
 1. Provide noncorrosive aluminum fasteners or fasteners with a hot dipped zinc coating per ASTM A 153 or of QISI Type 304 stainless steel.
 2. For finish carpentry, countersink nails and fill surface where face nailing is unavoidable.
 3. Nails, Wire, Brads, and Staples: FS FF-N-105.
 4. Power-Driven Fasteners: CABO NER-272.
 5. Wood Screws: ASME B18.6.1.
 6. Lag Bolts: ASME B18.2.1. (ASME B18.2.3.8M)
 7. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.
- B. Adhesives: Comply with manufacturer's recommendations for adhesives.

- C. Flashing: Comply with requirements of Division 7 Section "Flashing and Sheet Metal" for flashing materials installed in finish carpentry.
- D. Sealants: Comply with requirements of Division 7 Section "Joint Sealants" for materials required for sealing.

2.7 ENGINEERED WOOD PRODUCTS

- A. General: Provide engineered wood products for which current model code evaluation/research reports exist that are acceptable to authorities having jurisdiction and that evidence compliance for the application indicated with specified requirements and the building code in effect for this Project.
- B. Laminated Veneer Lumber: Lumber manufactured by laminating wood veneers in a continuous press using an exterior-type adhesives complying with ASTM D 2559 to produce members with grain of veneers parallel with their lengths and complying with the following requirements:
 - 1. Veneer Characteristics: Douglas fir or southern pine veneers of varying thickness by widths and lengths standard with manufacturer, end-jointed with a lap-joint, butt joint, or scarf joint.
 - 2. Allowable Design Stresses: As published by manufacturer, determined from empirical data or by rational engineering analysis, and demonstrated by comprehensive testing performed by a qualified independent testing laboratory.
 - 3. Sizes: 1-3/4 inches thick by depth and length indicated.
 - 4. Sizes: As indicated.
- C. Prefabricated Wood I Joists: Units manufactured by bonding stress-graded lumber flanges to APA-Performance-Rated panel webs with exterior-type adhesives complying with ASTM D 2559, to produce I-shaped joists complying with the following requirements:
 - 1. Flange Material: Spruce-pine-fir dimension lumber.
 - 2. Web Material: Oriented strand board.
 - 3. Web Material: Plywood complying with PS 1.
 - 4. Web Material: Either material indicated above, as standard with joist manufacturer.
 - 5. Allowable Design Stresses: As published by manufacturer, determined according to ASTM D 5055, and demonstrated by comprehensive testing performed by a qualified independent testing laboratory.
 - 6. Sizes: Depths and widths as indicated, with flanges not less than 1-1/2 inches wide.
- D. Composite Joists and Headers: Lumber manufactured by laminating visually graded wood veneers, whose thicknesses range from 0.15 to 0.25 inches in thickness and grain runs parallel to long axis, to narrow faces of oriented strand board to produce rectangular members with veneers making up not less than 32 percent of total cross section.
 - 1. Wood Species: Veneers and board composed of a random mix of yellow-poplar, sweetgum, red maple, and southern pine; with a minor amount of ash, elm, sycamore, and black gum not to exceed 15 percent of finished product.
 - 2. Adhesives: Melamine formaldehyde adhesive for gluing veneers to each other and phenol formaldehyde adhesive for gluing veneers to oriented flakeboard.
 - 3. Allowable Design Stresses: As follows, determined from empirical data or by rational engineering analysis, and demonstrated by comprehensive testing performed by a qualified independent testing laboratory:

- a. Extreme Fiber Stress in Bending (Fb): 1950 psi for single member uses, 2250 psi for multiple member uses.
 - b. Modulus of Elasticity in Edgewise Bending (Eb): 1,500,000 psi.
 - c. Compression Perpendicular to Veneer Face: 550 psi.
 - d. Horizontal Shear of Flakeboard (Fv): 500 psi.
 - 4. Sizes: 1-1/2 inches thick by depth and length indicated.
 - E. Available Products: Subject to compliance with requirements, products that may be incorporated in the Work include, but are not limited to, the following:
 - F. Products: Subject to compliance with requirements, provide one of the following:
 - 1. Laminated Veneer Lumber:
 - a. "Micro=Lam L.V.L Headers and Beams," Trus Joist Corporation.
 - b. "Gang-Lam Laminated Veneer Lumber," Mitek Wood Products, Inc.
 - 2. Prefabricated Wood I Joists:
 - a. "Alpine Structures I-Beams and Headers," Wood Products Division, Alpine Engineered Wood Products, Inc.
 - b. "Wood I-Beam Prefabricated Wooden I Joists and Headers," Georgia Pacific Corp.
 - c. "TJI Joists," Trus Joist Corporation.
 - 3. Composite Joists and Headers:
 - a. "Arrowood Joists VJ1," Fibreboard Technology Corp.
- 2.8 CONSTRUCTION PANELS, GENERAL
- A. Construction Panel Standards: Comply with PS 1 "U.S. Product Standard for Construction and Industrial Plywood" for plywood construction panels and, for products not manufactured under PS 1 provisions, with APA PRP-108.
 - B. Trademark: Furnish construction panels that are each factory-marked with APA trademark evidencing compliance with grade requirements.
- 2.9 CONCEALED PERFORMANCE-RATED CONSTRUCTION PANELS
- A. General: Where construction panels are indicated for the following concealed types of applications, provide APA Performance-Rated Panels complying with requirements designated under each application for grade designation, span rating, exposure durability classification, edge detail (where applicable), and thickness.
- 2.10 FASTENERS
- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
 - 1. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with a hot-dip zinc coating per ASTM A 153 or of AISI Type 304 stainless steel.
 - B. Nails, Wire, Brads, and Staples: FS FF-N-105.
 - C. Power Driven Fasteners: National Evaluation Report NER-272.
 - D. Wood Screws: ANSI B18.6.1.
 - E. Lag Bolts: ANSI B18.2.1.
 - F. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and where indicated, flat washers.

2.11 METAL FRAMING ANCHORS

- A. General: Provide metal framing anchors of type, size, metal, and finish indicated that comply with requirements specified including the following:
 - 1. Current Evaluation/Research Reports: Provide products for which model code evaluation/research reports exist that are acceptable to authorities having jurisdiction and that evidence compliance of metal framing anchors for application indicated with the building code in effect for this Project.
 - 2. Allowable Design Loads: Provide products for which manufacturer publishes allowable design loads that are determined from empirical data or by rational engineering analysis and that are demonstrated by comprehensive testing performed by a qualified independent testing laboratory.
- B. Galvanized Steel Sheet: Steel sheet zinc-coated by hot-dip process on continuous lines prior to fabrication to comply with ASTM A 525 for Coating Designation G60 and with ASTM A 446, Grade A (structural quality); ASTM A 526 (commercial quality); or ASTM A 527 (lock-forming quality); as standard with manufacturer for type of anchor indicated.
 - 1. Use galvanized steel framing anchors for rough carpentry exposed to weather, in ground contact, or in area of high relative humidity, and where indicated.
- C. Painted Steel Sheet: ASTM A 366 (commercial quality) cold rolled steel sheet or ASTM A 570, Grade 33 (structural quality) hot-rolled steel sheet, as standard with manufacturer for type of anchor indicated, coated after fabrication with manufacturers standard, fast-curing, lead-free "universal primer" resistant to normal atmospheric corrosion.
 - 1. Use painted steel framing anchors for rough carpentry not exposed to weather, in ground contact, or in area of high relative humidity.

2.12 MISCELLANEOUS MATERIALS

- A. Sill Sealer Gaskets: Glass fiber resilient insulation fabricated in strip form for use as a sill sealer; 1 inch nominal thickness compressible to 1/32 inch; selected from manufacturer's standard widths to suit width of sill members indicated; in rolls of 50 feet or 100 feet in length.
- B. Adhesives for Field Gluing Panels to Framing: Formulation complying with APA AFG-01 that is approved for use with type of construction panel indicated by both adhesive and panel manufacturer.
- C. Water Repellent Preservative: NWWDA-tested and -accepted formulation containing 3-iodo-2-propynyl butyl carbonate (IPBC) as its active ingredient.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Discard units of material with defects that impair quality of carpentry construction and that are too small to use in fabricating carpentry with minimum joints or optimum joint arrangement.
- B. Set carpentry to required levels and lines, with members plumb and true to line and cut and fitted.

- C. Fit carpentry to other construction; scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking, grounds, and similar supports to allow attachment of other construction.
- D. Securely attach carpentry work to substrate by anchoring and fastening as required to securely attach.
- E. Countersink nail heads on exposed carpentry work and fill holes.
- F. Use common wire nails for rough carpentry work, unless otherwise indicated. Use finishing nails for finish work. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners

3.2 WOOD FRAMING, GENERAL

- A. Framing Standard: Comply with N.F.P.A. "Manual for Wood Frame Construction," unless otherwise indicated.
- B. Install wall framing members of nominal 2" x 4"'s at 16" on center or as required to match existing.
- C. Install roof framing members of nominal 2" x (x)"'s as noted on drawings at 16" on center or as required to match existing.
- D. Anchor and nail as required to securely attach, and to comply with the following:
 - 1. "Appendix C - Recommended Nailing Schedule" of the BOCA National Building Code.
- E. Do not splice structural members between supports.
- F. Firestop concealed spaces of wood framed walls and partitions at each floor level and at the ceiling line of the top story. Where firestops are not automatically provided by the framing system used, use closely fitted wood blocks of nominal 2-inch-thick lumber of the same width as framing members.

3.3 FINISH CARPENTRY EXAMINATION

- A. Examine substrates for compliance with requirements for installation tolerances and other conditions affecting installation and performance of finish carpentry. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.4 FINISH CARPENTRY PREPARATION

- A. Clean substrates of projections and substances detrimental to application.
- B. Condition finish carpentry to average prevailing humidity conditions in installation areas before installation for a minimum of 24 hours unless longer conditioning recommended by manufacturer.
- C. Backprime lumber for painted finish exposed on the exterior. Comply with requirements for surface preparation and application in Section "Painting."

3.5 FINISH CARPENTRY INSTALLATION, GENERAL

- A. Do not use finish carpentry materials that are unsound, warped, bowed, twisted, improperly treated or finished, not adequately seasoned, or too small to fabricate with proper jointing arrangements.
 - 1. Do not use manufactured units with defective surfaces, sizes, or patterns.
- B. Install finish carpentry plumb, level, true, and aligned with adjacent materials. Use concealed shims where required for alignment.
 - 1. Scribe and cut finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer.
 - 2. Install to tolerance of 1/8 inch in 8 feet for plumb and level. Install adjoining finish carpentry with 1/16 inch maximum offset for flush installation and 1/8 inch maximum offset for reveal installation.
 - 3. Coordinate finish carpentry with materials and systems that may be in or adjacent to standing and running trim and rails. Provide cutouts for mechanical and electrical items that penetrate exposed surfaces of trim and rails.
- C. Finish in accordance with specified requirements.
- D. Refer to Division 9 Sections for final finishing of finish carpentry.

3.6 FINISH CARPENTRY, STANDING AND RUNNING TRIM AND RAILS

- A. Install with minimum number of joints practical, using full-length pieces from maximum lengths of lumber available. Stagger joints in adjacent and related standing and running trim and rails. Cope at returns and miter at corners to produce tight-fitting joints with full-surface contact throughout length of joint. Use scarf joints for end-to-end joints. Plane back of casings to provide uniform thickness across joints if required.
 - 1. Match grain pattern across joints.
 - 2. Drill pilot holes in hardwood prior to nailing or fastening to prevent splitting. Fasten to prevent movement or warping. Countersink nail heads on exposed carpentry work and fill holes.
 - 3. Fit exterior joints to exclude water. Apply flat grain lumber with bark side exposed to weather.
- B. Condition woodwork to average prevailing humidity conditions in installation areas prior to installing.

3.7 ADJUSTING

- A. Repair damaged or defective finish carpentry where possible to eliminate functional or visual defects. Where not possible to repair, replace finish carpentry. Adjust joinery for uniform appearance.

3.8 CLEANING

- A. Clean finish carpentry on exposed and semiexposed surfaces. Touch up factory-applied finishes to restore damaged or soiled areas.

3.9 PROTECTION

- A. Provide final protection and maintain conditions that ensure finish carpentry is without damage or deterioration at time of Substantial Completion.

3.10 INTERIOR ARCHITECTURAL WOODWORK

A. PREPARATION

1. Condition woodwork to average prevailing humidity conditions in installation areas prior to installing.
2. Prior to installation of architectural woodwork, examine shop fabricated work for completion, and complete work as required, including back priming and removal of packing.

B. INSTALLATION

1. Install woodwork plumb, level, true and straight with no distortions. Shim as required using concealed shims. Install to a tolerance of 1/8" in 8'-0" for plumb and level (including tops); and with no variations in flushness of adjoining surfaces.
2. Scribe and cut work to fit adjoining work, and refinish cut surfaces or repair damaged finish at cuts.
3. Pressure treated wood: Handle, store, and install pressure treated wood in compliance with recommendations of chemical treatment manufacturer including those for adhesives, where required for installation.
4. Anchor woodwork to anchors or blocking built-in or directly attached to substrates. Secure to grounds, stripping and blocking with countersunk, concealed fasteners and blind nailing as required for a complete installation. Except where prefinished matching fasteners heads are required, use fine finishing nails for exposing nailing, countersunk and filled flush with woodwork, and matching final finish where transparent finish is indicated.
5. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to the greatest extent possible. Stagger joints in adjacent and related members. Cope at returns, miter at corners and comply with referenced Quality Standards for joinery.
6. Cabinets: install without distortion so that doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete the installation of hardware and accessory items as indicated. Maintain veneer sequence matching (if any) of cabinets with transparent finish.
7. Tops: Anchor securely to base units and other support systems as indicated.
8. Secure backsplashes to tops with concealed metal brackets at 16" O.C.
9. Wood storage shelving: Complete the assembly of units and install in the areas indicated, including hardware and accessories as indicated.
10. Paneling: Anchor paneling to supporting substrate with concealed panel-hanger clips and by blind nailing on backup strips, splined-connection strips, and similar associated trim and framing. Do not face nail unless otherwise indicated.
 - a. Install flush paneling with no more than 1/16 inch in 96-inch (1.5 mm in 2400-mm) vertical cup or bow and 1/8 inch in 96-inch (3 mm in 2400-mm) horizontal variation from a true plane.

3.11 ADJUSTING AND CLEANING

- A. Repair damaged and defective woodwork where possible to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean, lubricate, and adjust hardware.

- C. Clean woodwork on exposed and semi-exposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

3.12 INSTALLATION

- A. Quality Standard: Install woodwork to comply with WIC Section 26 for the same grade specified in Part 2 of this Section for type of woodwork involved.
- B. Install woodwork plumb, level, true, and straight with no distortions. Shim as required with concealed shims. Install to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm) for plumb and level (including tops).
- C. Scribe and cut woodwork to fit adjoining work and refinish cut surfaces or repair damaged finish at cuts.
- D. Cabinets: Install without distortion so that doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete the installation of hardware and accessory items as indicated.
 - 1. Install cabinets with no more than 1/8 inch in 96-inch (3 mm in 2400-mm) sag, bow, or other variation from a straight line.
 - 2. Maintain veneer sequence matching of cabinets with transparent finish.
- E. Tops: Anchor securely to base units and other support systems as indicated. Caulk space between backsplash and wall with specified sealant.
 - 1. Install countertops with no more than 1/8 inch in 96-inch (3 mm in 2400-mm) sag, bow, or other variation from a straight line.
- F. Complete the finishing work specified in this Section to the extent not completed at shop or before installation of woodwork. Fill nail holes with matching filler where exposed. Apply specified finish coats, including stains and paste fillers if any, to exposed surfaces where only sealer/prime coats were applied in the shop.

3.13 ADJUSTING AND CLEANING

- A. Repair damaged and defective woodwork where possible to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean, lubricate, and adjust hardware.
- C. Clean woodwork on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 061000

SECTION 079000 - JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes joint sealants for the following locations:
 - 1. Interior joints where rest room installed.
- B. Related Sections: The following sections contain requirements that relate to this Section:
 - 1. Division 6 Section "Woodwork" for sealing all woodwork and carpentry.
 - 2. Division 9 Section "Painting."

1.3 SYSTEM PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that have been produced and installed to establish and to maintain watertight and airtight continuous seals without causing staining or deterioration of joint substrates.

1.4 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Product data from manufacturers for each joint sealant product required.
 - 1. Certification by joint sealant manufacturer that sealants plus the primers and cleaners required for sealant installation shall contain no volatile organic compounds.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer who has completed joint sealant applications similar in material, design, and extent to that indicated for Project that have resulted in construction with a record of successful in-service performance.
- B. Conform to Sealant and Waterproofers Institute requirements for materials and installation.
- C. Product Testing: Provide comprehensive test data for each type of joint sealant based on tests conducted by a qualified independent testing laboratory on current product formulations within a 24-month period preceding date of Contractor's submittal of test results to Architect.
 - 1. Test elastomeric sealants for compliance with requirements specified by reference to ASTM C 920. Include test results for hardness, stain resistance, adhesion and cohesion under cyclic movement (per ASTM C 719), low-temperature flexibility, modulus of elasticity at 100 percent strain, effects of heat aging, and effects of accelerated weathering.

- D. Field-Constructed Mock-Ups: Prior to installation of joint sealants, apply elastomeric sealants as follows to verify selections made under sample submittals and to demonstrate aesthetic effects as well as qualities of materials and execution:

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multi-component materials.
- B. Store and handle materials in compliance with manufacturer's recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.7 PROJECT CONDITIONS

- A. Environmental Conditions: Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside the limits permitted by joint sealant manufacturer.
 - 2. When joint substrates are wet.
- B. Joint Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than allowed by joint sealant manufacturer for application indicated.
- C. Joint Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with their adhesion are removed from joint substrates.

1.8 SEQUENCING AND SCHEDULING

- A. Sequence installation of joint sealants to occur not less than 21 nor more than 30 days after completion of waterproofing, unless otherwise indicated.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
- B. Colors: Provide color of exposed joint sealants to comply with the following:
 - 1. Provide selections made by Architect from manufacturer's full range of standard colors for products of type indicated.

2.2 ELASTOMERIC JOINT SEALANTS

- A. Exterior sealant, except paving joints, shall be Sonolastic NP-I by Sonneborn, Dymetric by Tremco, Synthacalk GC-5 by Pecora, or approved equal.
- B. Interior sealant shall be Pecora AC-20 acrylic or equal by Sonneborn or Tremco.

- C. Joint fillers and back-up materials, solvents, primers, bond breakers, and cleaners shall be as recommended by sealant manufacturer for various conditions encountered and shall be non-bituminous material.

2.3 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from pre-construction joint sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming in any way joint substrates and adjacent nonporous surfaces, and formulated to promote optimum adhesion of sealants with joint substrates.
- C. Masking Tape: Non-staining, non-absorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint sealant performance. Do not proceed with installation of joint sealants until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with recommendations of joint sealant manufacturer and the following requirements:
 - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
 - 2. Clean concrete, masonry, unglazed surfaces of ceramic tile, and similar porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
 - 3. Remove laitance and form release agents from concrete.
 - 4. Clean metal, glass, porcelain enamel, glazed surfaces of ceramic tile, and other nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.
- B. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealant manufacturer based on pre-construction joint sealant-substrate tests or prior experience. Apply primer to comply with joint sealant manufacturer's recommendations. Confine

primers to areas of joint sealant bond; do not allow spillage or migration onto adjoining surfaces.

- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint sealant manufacturer's printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Installation of Sealant Backings: Install sealant backings to comply with the following requirements:
 - 1. Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - a. Install joint backing to achieve a neck dimension no greater than $1/3$ the joint width.
 - b. Do not stretch, twist, puncture, or tear joint fillers.
 - c. Remove absorbent joint fillers that have become wet prior to sealant application and replace with dry material.
 - 2. Install bond breaker tape between sealants where backer rods are not used between sealants and joint fillers or back of joints.
- D. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability. Install sealants at the same time sealant backings are installed.
- E. Tooling of Non-sag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration, to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents that discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.
 - 1. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

3.4 CLEANING

- A. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so that and installations with repaired areas are indistinguishable from original work.

END OF SECTION 079000

SECTION 08 71 00 - DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Commercial door hardware for the following swinging doors:
 - a. Hollow metal.
 - b. Flush wood.
- B. Related Sections include the following:
 - 1. Division 08 Section "Hollow Metal Doors and Frames" for astragals provided as part of fire-rated labeled assemblies and for door silencers provided as part of hollow-metal frames.
 - 2. Division 08 Section "Flush Wood Doors" for astragals provided as part of fire-rated labeled assemblies.

1.3 SUBMITTALS

- A. Number of Submittals: All items listed in this section are to be included in one submittal prepared by one Supplier.
- B. Product Data: Include construction and installation details, material descriptions, dimensions of individual components and profiles, and finishes.
- C. Qualification Data:
 - 1. Finish Hardware Installers
 - a. Finish hardware, including electrified hardware, for wood, hollow metal, and aluminum doors to be installed by personnel trained and certified by the manufacturer of the product furnished.
 - b. Provide manufacturer's certificates for installer as part of Contractor's bid information. Failure to supply certificates may result in rejection of bid.
 - 2. Hardware Supplier
 - a. Established contract hardware firm which maintains and operates an office, display, and stock in project area and which is a factory authorized distributor of the lock being furnished.
 - b. Hardware scheduled and furnished by or under direct supervision an Architectural Hardware Consultant.

- c. All schedules submitted to the Architect for approval and job use must carry the signature and certified seal of this Architectural Hardware Consultant.
- 3. Architectural Hardware Consultant
 - a. Currently certified by the Door and Hardware Institute.
 - b. Full-time employee of the Hardware Supplier or an individual having no contractual ties to any supplier/manufacturing entity.
 - c. Available at reasonable times to Architect, Owner, and Contractor during course of work.
- D. Maintenance Data: For each type of door hardware. Include final hardware schedule, keying schedule, riser diagrams, and point-to-point wiring diagrams in 3-ring binder, labeled on spine with project name and "Door Hardware".
- E. Warranty: Special warranty specified in this Section.
- F. Other Action Submittals:
 - 1. Door Hardware Sets: Prepared by or under the supervision of a DHI certified Architectural Hardware Consultant, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final door hardware sets with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
 - a. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule"; other formats will be rejected without review. Double space entries, and number and date each page.
 - b. Numerical Sequence of Sets and Headings: Submittal headings shall be in exact order as hardware sets in specification: one heading only per set. Submittal set numbers shall relate to specification set numbers, ie. if three headings are required for Set 12 due to door width differences, then the heading numbers should be 12.1, 12.2, and 12.3 or employing similar linking logic.
 - c. Door Numbers: Identical to those used in the contract documents.
 - d. Number of Copies: (5).
 - e. Content: Include the following information:
 - 1) Identification number, location, hand, fire rating, and material of each door and frame.
 - 2) Type, style, function, size, quantity, and finish of each door hardware item.
 - 3) Complete designations of every item required for each door or opening including name and manufacturer.
 - 4) Degree of opening for closer and overhead stop and holder installation.
 - 5) Keying information.
 - 6) Fastenings and other pertinent information.
 - 7) Location of each door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.

- 8) Explanation of abbreviations, symbols, and codes contained in schedule.
- 9) Mounting locations for door hardware.
- 10) Notes included with specification hardware sets transcribed verbatim into submittal hardware sets.
- 11) Door and frame sizes and materials.
- 12) List of related door devices specified in other Sections for each door and frame.

f. Submittal Sequence: Submit the final door hardware sets at earliest possible date, particularly where approval of the door hardware sets must precede fabrication of other work that is critical in Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the door hardware sets.

2. Keying Schedule: Prepared by or under the supervision of Architectural Hardware Consultant, detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations.

1.4 QUALITY ASSURANCE

- A. Furnish proper hardware types and quantities for door function, hardware mounting and clearances, and to meet applicable codes. Bring discrepancies to the attention of the Architect a minimum of (10) days prior to bid date so that an addendum may be issued. No additional compensation will be allowed after bidding for hardware changes required for proper function, hardware mounting or clearances, or to meet codes.
- B. Engineering Responsibility: Preparation of data for electrified door hardware, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.
- C. Source Limitations: All items listed in hardware sets are to be furnished by one supplier. Obtain each type and variety of door hardware from a single manufacturer, unless otherwise indicated.
- D. Keying Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." In addition to Owner, Contractor, and Architect, conference participants shall also include Hardware Supplier's Architectural Hardware Consultant. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including, but not limited to, the following:
 1. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
 2. Preliminary key system schematic diagram.
 3. Requirements for key control system.
 4. Address for delivery of keys.

- E. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." In addition to Owner, Contractor, and Architect, conference participants shall also include Certified Installer, Hardware Supplier's Architectural Hardware Consultant, and Security Supplier. Review methods and procedures related to electrified door hardware including, but not limited to, the following:

1. Coordinate electrical roughing-in and other preparatory work to be performed by other trades.
2. Review sequence of operation for each type of electrified door hardware.
3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review required testing, inspecting, and certifying procedures.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.
- B. Tag each item or package separately with identification related to the final door hardware sets, and include basic installation instructions, templates, and necessary fasteners with each item or package.
- C. Deliver keys to Owner by registered mail or overnight package service. Obtain Owner's contact name and address from Architect.

1.6 COORDINATION

- A. Templates: Distribute door hardware templates for doors, frames, and other work specified to be factory prepared for installing door hardware. Distribute templates in a timely manner so as not to delay suppliers. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

1.7 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

- a. Structural failures including excessive deflection, cracking, or breakage.
- b. Faulty operation of operators and door hardware.
- c. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.

2. Warranty Period: Five years from date of Substantial Completion, except as follows:

- a. Manual Closers: 10 years from date of Substantial Completion.

1.8 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.
- B. Maintenance Service: Beginning at Substantial Completion, provide six months' full maintenance by skilled employees of door hardware Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper door hardware operation. Provide parts and supplies same as those used in the manufacture and installation of original products.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in this and door hardware sets indicated in Part 3 "Door Hardware Sets" Article.
 1. Door Hardware Sets: Provide quantity, item, size, finish or color indicated, and named manufacturers' products.
 2. Sequence of Operation: Provide electrified door hardware function, sequence of operation, and interface with other building control systems indicated.
- B. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of door hardware are indicated in Part 3 "Door Hardware Sets" Article. Products are identified by using door hardware designations, as follows:
 1. Named Manufacturers' Products: Manufacturer and product designation are listed for each door hardware type required for the purpose of establishing minimum requirements. Manufacturers' names are abbreviated in Part 3 "Door Hardware Sets" Article.
 2. References to BHMA Standards: Provide products complying with these standards and requirements for description, quality, and function.
- C. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include manufacturers specified.

2.2 BUTT HINGES, GENERAL

A. Quantity: Provide the following, unless otherwise indicated:

1. Two Hinges: For doors with heights up to 60 inches (1524 mm).
2. Three Hinges: For doors with heights 61 to 90 inches (1549 to 2286 mm).
3. Four Hinges: For doors with heights 91 to 120 inches (2311 to 3048 mm).
4. For doors with heights more than 120 inches (3048 mm), provide 4 hinges, plus 1 hinge for every 30 inches (750 mm) of door height greater than 120 inches (3048 mm).

B. Template Requirements: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.

C. Hinge Height, Width, and Weight: Unless otherwise indicated, provide the following:

1. Doors with Exit Devices or 3'6" or more in width: 5" high, heavy-weight hinges.
2. Doors less than 3'6" in width: 4-1/2" high, standard-weight hinges.
3. Width: 4-1/2" heavy-weight, 4" standard-weight, unless proper clearance requires a different width.
4. Doors with Closers: Antifriction-bearing hinges.

D. Hinge Base Metal: Unless otherwise indicated, provide the following:

1. Exterior and in-swinging restroom door hinges: Stainless steel, with stainless-steel pin.
2. Balance of hinges: Steel, with steel pin.

E. Hinge Options: Provide the following:

1. Nonremovable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for reverse bevel lockable doors.
2. Corners: Square.
3. Number of knuckles: Five.

F. Fasteners: Comply with the following:

1. Machine Screws: For metal doors and frames. Install into drilled and tapped holes.
2. Wood Screws: For wood doors and frames.
3. Threaded-to-the-Head Wood Screws: For fire-rated wood doors.
4. Screws: Phillips flat-head. Finish screw heads to match surface of hinges.

G. Template Hinge Dimensions: BHMA A156.7.

H. Available Manufacturers:

1. Bommer Industries, Inc. (BI).

2. Hager Companies (HAG).
3. McKinney Products Company; an ASSA ABLOY Group company (MCK).
4. Stanley Commercial Hardware; Div. of The Stanley Works (STH).
5. PBB, Inc. (PBB)

2.3 LOCKS AND LATCHES, GENERAL

- A. Accessibility Requirements: Where indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)."
 1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf (22 N).
- B. Latches and Locks for Means of Egress Doors: Comply with NFPA 101. Latches shall not require more than 15 lbf (67 N) to release the latch. Locks shall not require use of a key, tool, or special knowledge for operation.
- C. Grade 1 or Grade 2 as indicated by model number in hardware sets.
- D. Lock Trim:
 1. Levers: Cast.
 - a. Sargent P model with full smooth return.
 2. Roses: Forged.
 - a. Sargent L model.
 3. Lockset Designs: Provide design indicated in hardware sets, or, if sets are provided by another manufacturer, provide designs that match those designated.
- E. Lock Throw: Comply with testing requirements for length of bolts required for labeled fire doors, and as follows:
 1. Bored Locks: Minimum 1/2-inch (13-mm) latchbolt throw.
- F. Backset: 2-3/4 inches (70 mm), unless otherwise indicated.
- G. Strikes: Manufacturer's standard strike with strike box for each latchbolt or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, and as follows:
 1. Strikes for Bored Locks and Latches: BHMA A156.2.

2.4 MECHANICAL LOCKS AND LATCHES

- A. Lock Functions: Function numbers and descriptions indicated in door hardware sets comply with the following:
 1. Bored Locks: BHMA A156.2.

B. Bored Locks: BHMA A156.2 Grade 1 or 2 as indicated in hardware sets.

1. Available Manufacturers:

- a. Best Access Systems; Div. of The Stanley Works (BAS).
- b. Corbin Russwin Architectural Hardware; an ASSA ABLOY Group company (CR).
- c. SARGENT Manufacturing Company; an ASSA ABLOY Group company (SGT).
- d. Schlage Commercial Lock Division; an Ingersoll-Rand Company (SCH).
- e. Yale Commercial Locks and Hardware; an ASSA ABLOY Group company (YAL).

2.5 DOOR BOLTS

A. Bolt Throw: Comply with testing requirements for length of bolts required for labeled fire doors, and as follows:

1. Mortise Flush Bolts: Minimum 3/4-inch (19-mm) throw.

B. Manual Flush Bolts: BHMA A156.16, Grade 1; designed for mortising into door edge.

1. Available Manufacturers:

- a. Door Controls International (DCI).
- b. Glynn-Johnson; an Ingersoll-Rand Company (GJ).
- c. Hager Companies (HAG).
- d. IVES Hardware; an Ingersoll-Rand Company (IVS).
- e. McKinney Products Company; an ASSA ABLOY Group company (MCK).
- f. Rockwood Manufacturing Company (RM).
- g. Trimco (TBM).

2.6 EXIT DEVICES

A. Exit Devices: BHMA A156.3, Grade 1.

B. Accessibility Requirements: Where handles, pulls, latches, locks, and other operating devices are indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)."

1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf (22 N).

C. Exit Devices for Means of Egress Doors: Comply with NFPA 101. Exit devices shall not require more than 15 lbf (67 N) to release the latch. Locks shall not require use of a key, tool, or special knowledge for operation.

- D. Panic Exit Devices: Listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for panic protection, based on testing according to UL 305.
- E. Fasteners. Manufacturer's standard, except furnish sex bolts for attachments to doors.
- F. Shims: Provide shims if needed for clearance.
- G. Available Manufacturers:
 - 1. Detex, Inc. (DTX)
 - 2. Precision Hardware, Inc. (PH).
 - 3. SARGENT Manufacturing Company; an ASSA ABLOY Group company (SGT).
 - 4. Yale
 - 5. Corbin-Russwin

2.7 LOCK CYLINDERS

- A. Standard Lock Cylinders: BHMA A156.5, Grade 1.
- B. Cylinders: Provide cylinders for all devices requiring key cylinders to properly function: constructed from brass or bronze, stainless steel, or nickel silver, and complying with the following:
 - 1. Number of Pins: Six.
 - 2. Keyway: Manufacturer's standard.
 - 3. Mortise Type: Threaded cylinders with rings and straight- or clover-type cam.
 - 4. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
 - 5. Bored-Lock Type: Cylinders with tailpieces to suit locks.
- C. Permanent Cores: Manufacturer's standard; finish face to match lockset; complying with the following:
 - 1. Small-format Interchangeable Cores: Core insert, removable by use of a special key; usable with other manufacturers' cylinders.
- D. Construction Keying: Comply with the following:
 - 1. Construction Cores: Provide keyed brass construction cores that are replaceable by permanent cores for locking devices on exterior doors. Provide 5 construction master keys.
 - a. Replace construction cores with permanent cores as directed by Owner.
- E. Supplemental Items: Provide cylinder spacers, collars, and correct cams as needed for proper function of locking devices.
- F. Available Manufacturers:
 - 1. Best Access Systems; Div. of The Stanley Works (BAS).

2. Corbin Russwin Architectural Hardware; an ASSA ABLOY Group company (CR).
3. SARGENT Manufacturing Company; an ASSA ABLOY Group company (SGT).
4. Schlage Commercial Lock Division; an Ingersoll-Rand Company (SCH).
5. Yale Commercial Locks and Hardware; an ASSA ABLOY Group company (YAL).

2.8 KEYING

- A. Keying System: Factory registered, complying with guidelines in BHMA A156.28, Appendix A. Incorporate decisions made in keying conference, and as follows:
 1. Grand Master Key System: Cylinders are operated by a change key, a master key, a grand master key, and a great-grand master key.
- B. Keys: Nickel silver.
 1. Stamping: Permanently inscribe each key with a visual key control number and include the following notation:
 - a. Notation: "DO NOT DUPLICATE."
 2. Quantity: Provide the following:
 - a. Cylinder Change Keys: Three per cylinder.
 - b. Master Keys: Six per master.
 - c. Grand Master Keys: Six.
 - d. Control Keys: Two.
 - e. Construction Control Keys: Two.
 - f. Blanks: Fifty.

2.9 KEY CONTROL SYSTEM

- A. Key Control Cabinet: BHMA A156.5, Grade 1; metal cabinet with baked-enamel finish; containing key-holding hooks, labels, 2 sets of key tags with self-locking key holders, key-gathering envelopes, and temporary and permanent markers; with key capacity of 150 percent of the number of locks.
 1. Wall-Mounted Cabinet: Cabinet with hinged-panel door equipped with key-holding panels and pin-tumbler cylinder door lock.
 2. Locate and mount per direction of Architect.
- B. Cross-Index System: Multiple-index system for recording key information. Include three receipt forms for each key-holding hook.
 1. Available Manufacturers:
 - a. Lund Equipment Co., Inc. (LUN).
 - b. MMF Industries (MMF).
 - c. Telkee; a division of Sunroc Corporation (TEL).

2.10 OPERATING TRIM

- A. Materials: Fabricate from stainless steel, unless otherwise indicated.
- B. Dimensions: All dimensions, shapes, fasteners, and other properties identical to models specified in hardware sets.
- C. Available Manufacturers:
 - 1. Hager Companies (HAG).
 - 2. IVES Hardware; an Ingersoll-Rand Company (IVS).
 - 3. McKinney Products Company; an ASSA ABLOY Group company (MCK).
 - 4. Rockwood Manufacturing Company (RM).
 - 5. Trimco (TBM).

2.11 SURFACE CLOSERS

- A. Accessibility Requirements: Where handles, pulls, latches, locks, and other operating devices are indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)."
 - 1. Comply with the following maximum opening-force requirements:
 - a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf (22.2 N) applied perpendicular to door.
 - b. Fire Doors: Minimum opening force allowable by authorities having jurisdiction.
- B. Door Closers for Means of Egress Doors: Comply with NFPA 101. Door closers shall not require more than 30 lbf (133 N) to set door in motion and not more than 15 lbf (67 N) to open door to minimum required width.
- C. Fasteners: Manufacturer's standard for arms, shoes and brackets. Sex bolts for fastening closers to doors.
- D. Mounting Accessories: Provide shoes, brackets, drop plates, spacers, etc., as needed for proper mounting of closers and arms to door and frame.
- E. Spring Size of Units: Provide field-sizable closers, adjustable for spring sizes 1-6, plus 50% extra spring power at spring size 6, to meet field conditions and requirements for opening force.
- F. Cylinders: As specified in hardware sets.
- G. Mounting Configuration: Unless otherwise indicated by model number in the hardware sets:
 - 1. Do not furnish closers capable of being mounted on the corridor side of doors.
 - 2. Do not furnish regular arm closers in areas accessible to students.

3. If tri-pack closers are furnished for regular arm applications, remove parallel arm shoe from closer box before delivering to job.
4. Parallel Arm closers are to be manufacturer's double forged rigid models.

H. Available Manufacturers:

1. LCN Closers; an Ingersoll-Rand Company (LCN).
2. SARGENT Manufacturing Company; an ASSA ABLOY Group company (SGT).
3. Stanley Commercial Hardware; Div. of The Stanley Works (STH).
4. Norton
5. Yale
6. Corbin-Russwin

2.12 PROTECTIVE TRIM UNITS

A. Size:

1. Width
 - a. Singles, and pairs with removable mullions or surface applied astragals: 2 inches (38 mm) less than door width on push side and 1 inch (13 mm) less than door width on pull side
 - b. Other pairs: 1 inch (13 mm) less than door width
2. Height: as specified in door hardware sets; or, if constrained by door bottom rail height, 1" less bottom rail height.

B. Fasteners: Manufacturer's machine or self-tapping countersunk screws.

C. Metal Protective Trim Units: BHMA A156.6; beveled 4 sides; fabricated from 0.050-inch- (1.3-mm-) thick stainless steel.

D. Available Manufacturers:

1. Hager Companies (HAG).
2. IVES Hardware; an Ingersoll-Rand Company (IVS).
3. McKinney Products Company; an ASSA ABLOY Group company (MCK).
4. Rockwood Manufacturing Company (RM).
5. Trimco (TBM).

2.13 MECHANICAL WALL AND FLOOR STOPS AND HOLDERS

A. Stops and Bumpers: BHMA A156.16, Grade 1.

1. Provide wall stops for doors unless floor, overhead, or other type stops are scheduled or indicated. Do not mount floor stops where they will impede traffic. Provide floor stops (and spacers if needed) of proper height and configuration to accommodate floor condition. Where floor or wall stops are not appropriate, provide overhead holders.
2. Properties. Cast construction with fastener suitable for wall or floor condition.
3. Available Manufacturers:
 - a. Hager Companies (HAG).
 - b. IVES Hardware; an Ingersoll-Rand Company (IVS).

- c. McKinney Products Company; an ASSA ABLOY Group company (MCK).
- d. Rockwood Manufacturing Company (RM).
- e. Trimco (TBM).

2.14 OVERHEAD STOPS AND HOLDERS

- A. BHMA A156.8, Grade 1. Template for maximum degree of opening before encountering obstruction.
- B. Available Manufacturers:
 - 1. Architectural Builders Hardware Mfg., Inc. (ABH).
 - 2. Glynn-Johnson; an Ingersoll-Rand Company (GJ).
 - 3. Rixson Specialty Door Controls; an ASSA ABLOY Group company (RIX).
 - 4. SARGENT Manufacturing Company; an ASSA ABLOY Group company (SGT).

2.15 SILENCERS

- A. Silencers for Metal Door Frames: BHMA A156.16, Grade 1; neoprene or rubber, minimum diameter 1/2 inch (13 mm); fabricated for drilled-in application to frame.
- B. Available Manufacturers:
 - 1. Glynn-Johnson; an Ingersoll-Rand Company (GJ).
 - 2. Hager Companies (HAG).
 - 3. IVES Hardware; an Ingersoll-Rand Company (IVS).
 - 4. McKinney Products Company; an ASSA ABLOY Group company (MCK).
 - 5. Rockwood Manufacturing Company (RM).
 - 6. Trimco (TBM).

2.16 DOOR GASKETING

- A. General: Provide continuous weather-strip gasketing on exterior hollow metal doors and provide smoke, light, or sound gasketing on interior doors where indicated or scheduled. Provide noncorrosive fasteners as indicated by models in hardware sets.
 - 1. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
 - 2. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
 - 3. Mullion Gasketing: Fasten to mullions, forming seal when doors are closed.
 - 4. Sweeps: Apply to bottom of in-swinging hollow metal doors, forming seal with threshold when door is closed.
 - 5. Seals integral to threshold at out-swinging exterior hollow metal doors.
- B. Requirements per type of rated door provided (these requirements supersede models indicated in hardware sets):

1. Category A wood doors: provide models indicated in hardware sets.
 2. Category B wood doors: provide NGP 9550 (or approved equal) Category G&H seals at jambs and meeting edges. If sound seals are indicated in hardware sets, provide the 9550 seals in addition to the sound seals.
 3. Category A and B hollow metal doors: provide models indicated in hardware sets.
- C. Air Leakage: Not to exceed 0.50 cfm per foot (0.000774 cu. m/s per m) of crack length for gasketing other than for smoke control, as tested according to ASTM E 283.
- D. Smoke-Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke-control ratings indicated, based on testing according to UL 1784.
1. Provide smoke-labeled gasketing on 20-minute-rated doors and on smoke-labeled doors.
- E. Fire-Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to NFPA 252 or UBC Standard 7-2.
1. Test Pressure: After 5 minutes into the test, neutral pressure level in furnace shall be established at 40 inches (1016 mm) or less above the sill.
- F. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated, based on testing according to ASTM E 1408.
- G. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
- H. Gasketing Materials:
1. Adhesive Seals. As specified in hardware sets or approved equal.
 2. Intumescent: As required.
 3. Screwed-on weatherstrip and sweeps. Neoprene.
 4. Panic type thresholds. Neoprene or polyprene.
- I. Available Manufacturers:
1. Hager Companies (HAG).
 2. National Guard Products (NGP).
 3. Pemko Manufacturing Co. (PEM).
 4. Reese Enterprises (RE).
 5. Door Hardware Systems, Inc. (DHS)

2.17 THRESHOLDS

- A. Standard: BHMA A156.21
- B. Accessibility Requirements: Where thresholds are indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)."
 - 1. Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 1/2 inch (13 mm) high.
- C. Thresholds for Means of Egress Doors: Comply with NFPA 101. Maximum 1/2 inch (13 mm) high.
- D. Fasteners: 1/4-20 machine screws and expansion anchors.
- E. Gasketing material: At panic-type thresholds: neoprene or polyprene.
- F. Available Manufacturers:
 - 1. Hager Companies (HAG).
 - 2. National Guard Products (NGP).
 - 3. Pemko Manufacturing Co. (PEM).
 - 4. Reese Enterprises (RE).
 - 5. Zero International (ZRO).

2.18 FABRICATION

- A. Manufacturer's Nameplate: Do not provide products that have manufacturer's name or trade name displayed in a visible location except in conjunction with required fire-rated labels and as otherwise approved by Architect.
 - 1. Manufacturer's identification is permitted on rim of lock cylinders only.
- B. Base Metals: Produce door hardware units of base metal, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18. Do not furnish manufacturer's standard materials or forming methods if different from specified standard.
- C. Fasteners: Manufacturer's standard, except as noted in product sections of this specification.

2.19 FINISHES

- A. Standard: BHMA A156.18, as indicated in door hardware sets.

- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Steel Doors and Frames: Comply with DHI A115 Series.
 - 1. Surface-Applied Door Hardware: Drill and tap doors and frames according to ANSI A250.6.
- B. Wood Doors: Comply with DHI A115-W Series.

3.3 INSTALLATION

- A. Mounting Heights: Mount door hardware units at heights indicated as follows unless otherwise indicated or required to comply with governing regulations.
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - 2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
- B. Mounting Locations:
 - 1. Floor Stops and Holders: Locate at least 20" out from hinge edge of door for maximum degree of opening before door encounters obstruction.

2. Wall Stops: Locate so that lockset spindle and wall stop share horizontal and vertical centerlines.
 3. Closers and Overhead Stop/Holders: Template and mount closers and overhead stops for maximum degree of opening before door encounters obstruction. When used with closers, template and locate overhead stops so that closer arm does not fully extend and bottom out.
- C. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 09 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
 2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
- D. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule. Document cross-indexing per manufacturer's instructions.
- E. Weatherstrip and Gasketing: Miter cut at butt joints as needed for neat appearance with no gaps between retainers or bulbs.
- F. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."
- 3.4 FIELD QUALITY CONTROL
- A. Provide Door Hardware Inspection Services and Field Quality Report as indicated below.
- B. Door Hardware Inspection Services
1. Scope
 - a. Inspection of all swinging doors and door hardware immediately following completion of installation.
 - b. Inspector to furnish a Field Quality Report, itemized per each individual opening, to the Architect within 7 days of the inspection, including:
 - 1) deficiencies in workmanship and standard industry practices,
 - 2) use of allowable products,
 - 3) use of manufacturer recommended fasteners,
 - 4) compliance with the ADA,
 - 5) proper door/frame/hardware clearances,
 - 6) problems related to function, security, aesthetics or maintenance.

- c. Follow-up inspections as required at additional fee.
- 2. Inspector Qualifications
 - 1) Certified Architectural Hardware Consultant.
 - 2) Entirely independent of the supply side of the project, having no familial or financial relationship with any manufacturer, manufacturer's representative, distributor, installer or supplier used on this project.
 - 3) Approved by Architect. Go to <http://www.dhi.org/> for searchable list of local Architectural Hardware Consultants.

3.5 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
- B. Overhead Stops/Holders: Set adjustable stops for maximum degree of opening before door encounters obstruction. Adjust friction to control door.
- C. Door Closers:
 - 1. Unless otherwise required by authorities having jurisdiction, adjust sweep period so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door.
 - 2. Adjust latch period so that door does not slam nor injure fingers.
 - 3. Adjust spring power so that door properly latches.
 - 4. Adjust backcheck to slow door down before hitting stop point so as to prevent damage to closer, arm, door, frame, and fasteners.
- D. Occupancy Adjustment: Approximately six months after date of Substantial Completion, Installer shall examine and readjust, including adjusting operating forces, each item of door hardware as necessary to ensure function of doors, door hardware, and electrified door hardware.

3.6 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by door hardware installation.
- B. Clean operating items as necessary to restore proper function and finish.
- C. Provide final protection and maintain conditions that ensure that door hardware is without damage or deterioration at time of Substantial Completion.

3.7 DOOR HARDWARE SETS (on following pages followed by Door-Set Index)

Hardware Set 01

(3) Butt Hinges	TA2714-454	652	MCK
(1) Classroom Lock	28-73-7P-7G37-LP	626	SAR
(1) Overhead Stop, MD, Surface		1540	689 SAR

Hardware Set 02

(3) Butt Hinges	TA2714-454	652	MCK
(1) Passage Set	28-10U15-LP	626	SAR
(1) Closer, Regular Arm	1331-O	689	SAR
(1) Kick Plate	K1050 x 8 x 2LDW x B4E	630	ROC
(1) Wall Stop, Convex	406	626	ROC
(1) Cat H Adhesive Jamb Seal Set		105	DBN DHS

Note: Miter-cut seals in corners.

3.8 DOOR-SET INDEX

Door	Set
01	01
02	01
03	01
04	01
05	01
06	01

07	02
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END OF SECTION 08710

SECTION 09 25 50 - GYPSUM BOARD ASSEMBLIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Gypsum board assemblies attached to wood framing and furring members.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 7 Section "Firestopping" for firestopping systems and fire-resistive-rated joint sealants.

1.3 DEFINITIONS

- A. Gypsum Board Construction Terminology: Refer to ASTM C 11 and GA-505 for definitions of terms related to gypsum board assemblies not defined in this Section or in other referenced standards.

1.4 ASSEMBLY PERFORMANCE REQUIREMENTS

- A. Sound Transmission Characteristics: For gypsum board assemblies indicated to have STC ratings, provide materials and construction identical to those of assemblies whose STC ratings were determined per ASTM E 90 and classified per ASTM E 413 by a qualified independent testing agency.

1.5 SUBMITTALS

- A. General: Submit the following according to Conditions of the Contract and Division 1 Specification Sections.
- B. Product data for each type of product specified.
- C. Product certificates signed by manufacturers of gypsum board assembly components certifying that their products comply with specified requirements.

1.6 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: Where fire-rated gypsum board assemblies are indicated, provide materials and construction identical to those of assemblies tested for fire resistance per ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.
 - 1. Fire Resistance Ratings: As indicated by reference to GA File Numbers in GA-600 "Fire Resistance Design Manual" or to design designations in UL "Fire Resistance Directory" or in the listing of another testing and inspecting agency acceptable to authorities having jurisdiction.
- B. Single-Source Responsibility for Steel Framing: Obtain steel framing members for gypsum board assemblies from a single manufacturer.

- C. Single-Source Responsibility for Panel Products: Obtain each type of gypsum board and other panel products from a single manufacturer.
- D. Single-Source Responsibility for Finishing Materials: Obtain finishing materials from either the same manufacturer that supplies gypsum board and other panel products or from a manufacturer acceptable to gypsum board manufacturer.
- E. Field Samples: On actual gypsum board assemblies, prepare field samples of at least 100 sq. ft. in surface area for the following applications. Simulate finished lighting conditions for review of in-place unit of Work.
 - 1. Wall surfaces indicated to receive nontextured paint finishes.
 - 2. Ceiling surfaces indicated to receive nontextured paint finishes.
 - 3. Surfaces indicated to receive textured paint finishes.
 - 4. Surfaces indicated to receive textured finishes specified in this Section.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original packages, containers, or bundles bearing brand name and identification of manufacturer or supplier.
- B. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes. Neatly stack gypsum panels flat to prevent sagging.
- C. Handle gypsum board to prevent damage to edges, ends, and surfaces. Do not bend or otherwise damage metal corner beads and trim.

1.8 PROJECT CONDITIONS

- A. Environmental Conditions, General: Establish and maintain environmental conditions for applying and finishing gypsum board to comply with ASTM C 840 and with gypsum board manufacturer's recommendations.
- B. Room Temperatures: For nonadhesive attachment of gypsum board to framing, maintain not less than 40 deg F (4 deg C). For adhesive attachment and finishing of gypsum board, maintain not less than 50 deg F (10 deg C) for 48 hours prior to application and continuously after until dry. Do not exceed 95 deg F (35 deg C) when using temporary heat sources.
- C. Ventilation: Ventilate building spaces, as required, for drying joint treatment materials. Avoid drafts during hot dry weather to prevent finishing materials from drying too rapidly.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Steel Framing and Furring:
 - a. Clark Steel Framing.
 - b. Consolidated Systems, Inc.

- c. Dale Industries, Inc.
- d. Dietrich Industries, Inc.
- e. Marino Industries Corp.
- f. Gold Bond Building Products Div., National Gypsum Co.
- g. Unimast Inc.
- 2. Gypsum Board and Related Products:
 - a. Domtar Gypsum.
 - b. Georgia-Pacific Corp.
 - c. Gold Bond Building Products Div., National Gypsum Co.
 - d. United States Gypsum Co.

2.2 GYPSUM BOARD PRODUCTS

- A. General: Provide gypsum board of types indicated in maximum lengths available to minimize end-to-end butt joints.
 - 1. Thickness: Provide gypsum board in thicknesses indicated or, if not otherwise indicated, in either 1/2 inch or 5/8 inch thicknesses to comply with ASTM C 840 for application system and support spacing indicated.
- B. Gypsum Wallboard: ASTM C 36 and as follows:
 - 1. Type: Regular for vertical surfaces, unless otherwise indicated.
 - 2. Type: Type X where required for fire-resistive-rated assemblies.
 - 3. Type: Sag-resistant type for ceiling surfaces.
 - 4. Type: Proprietary type as required for specific fire-resistive-rated assemblies.
 - 5. Edges: Tapered.
 - 6. Edges: Tapered and featured (rounded or beveled) for prefilling.
 - 7. Thickness: 5/8 inch, unless otherwise indicated.
 - 8. Available Products: Subject to compliance with requirements, products that may be incorporated in the Work where proprietary gypsum wallboard is indicated include, but are not limited to, the following:
 - 9. Products: Subject to compliance with requirements, provide one of the following products where proprietary gypsum wallboard is indicated:
 - a. Gyprock Fireguard C Gypsum Board, Domtar Gypsum.
 - b. Firestop Type C, Georgia-Pacific Corp.
 - c. Fire-Shield G, Gold Bond Building Products Div., National Gypsum Co.
 - d. SHEETROCK Brand Gypsum Panels, FIRECODE C Core, United States Gypsum Co.
 - e. SHEETROCK Brand Gypsum Panels, ULTRACODE Core, United States Gypsum Co.

2.3 TRIM ACCESSORIES

- A. Accessories for Interior Installation: Corner beads, edge trim, and control joints complying with ASTM C 1047 and requirements indicated below:
 - 1. Material: Formed metal, plastic, or metal combined with paper, with metal complying with the following requirement:
 - a. Sheet steel zinc-coated by hot-dip process.
 - b. Sheet steel coated with zinc by hot-dip or electrolytic processes, or with aluminum or rolled zinc.
 - 2. Shapes indicated below by reference to Fig. 1 designations in ASTM C 1047:
 - a. Cornerbead on outside corners, unless otherwise indicated.
 - b. LC-bead with both face and back flanges; face flange formed to receive joint compound. Use LC-beads for edge trim unless otherwise indicated.

- c. L-bead with face flange only; face flange formed to receive joint compound. Use L-bead where indicated.
- d. U-bead with face and back flanges; face flange formed to be left without application of joint compound. Use U-bead where indicated.
- e. One-piece control joint formed with V-shaped slot, with removable strip covering slot opening.

2.4 JOINT TREATMENT MATERIALS

- A. General: Provide joint treatment materials complying with ASTM C 475 and the recommendations of both the manufacturers of sheet products and of joint treatment materials for each application indicated.
- B. Joint Tape for Gypsum Board: Paper reinforcing tape, unless otherwise indicated.
 - 1. Use pressure-sensitive or staple-attached open-weave glass-fiber reinforcing tape with compatible joint compound where recommended by manufacturer of gypsum board and joint treatment materials for application indicated.
- C. Joint Tape for Cementitious Backer Units: Polymer-coated, open glass-fiber mesh.
- D. Setting-Type Joint Compounds for Gypsum Board: Factory-packaged, job-mixed, chemical-hardening powder products formulated for uses indicated.
 - 1. Where setting-type joint compounds are indicated as a taping compound only or for taping and filling only, use formulation that is compatible with other joint compounds applied over it.
 - 2. For prefilling gypsum board joints, use formulation recommended by gypsum board manufacturer for this purpose.
 - 3. For filling joints and treating fasteners of water-resistant gypsum backing board behind base for ceramic tile, use formulation recommended by the gypsum board manufacturer for this purpose.
 - 4. For topping compound, use sandable formulation.
- E. Drying-Type Joint Compounds for Gypsum Board: Factory-packaged vinyl-based products complying with the following requirements for formulation and intended use.
 - 1. Ready-Mixed Formulation: Factory-mixed product.
 - 2. Job-Mixed Formulation: Powder product for mixing with water at Project site.
 - 3. Taping compound formulated for embedding tape and for first coat over fasteners and face flanges of trim accessories.
 - 4. Topping compound formulated for fill (second) and finish (third) coats.
 - 5. All-purpose compound formulated for both taping and topping compounds.

2.5 ACOUSTICAL SEALANT

- A. Acoustical Sealant for Exposed and Concealed Joints: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834 and the following requirements:
 - 1. Product is effective in reducing airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies per ASTM E 90.
 - 2. Product has flame-spread and smoke-developed ratings of less than 25 per ASTM E 84.
- B. Acoustical Sealant for Concealed Joints: Manufacturer's standard nondrying, nonhardening, nonskinning, nonstaining, gunnable, synthetic

rubber sealant recommended for sealing interior concealed joints to reduce transmission of airborne sound.

- C. Available Products: Subject to compliance with requirements, acoustical sealants that may be incorporated in the Work include, but are not limited to, the following:
- D. Products: Subject to compliance with requirements, provide one of the following:
 - 1. Acoustical Sealant:
 - a. AC-20 FTR Acoustical and Insulation Sealant, Pecora Corp.
 - b. SHEETROCK Acoustical Sealant, United States Gypsum Co.
 - 2. Acoustical Sealant for Concealed Joints:
 - a. BA-98, Pecora Corp.
 - b. Tremco Acoustical Sealant, Tremco, Inc.

2.6 MISCELLANEOUS MATERIALS

- A. General: Provide auxiliary materials for gypsum board construction that comply with referenced standards and recommendations of gypsum board manufacturer.
- B. Laminating Adhesive: Special adhesive or joint compound recommended for laminating gypsum panels.
- C. Spot Grout: ASTM C 475, setting-type joint compound recommended for spot grouting hollow metal door frames.
- D. Fastening Adhesive for Wood: ASTM C 557.
- E. Fastening Adhesive for Metal: Special adhesive recommended for laminating gypsum panels to steel framing.
- F. Steel drill screws complying with ASTM C 1002 for the following applications:
 - 1. Fastening gypsum board to steel members less than 0.03 inch thick.
 - 2. Fastening gypsum board to wood members.
 - 3. Fastening gypsum board to gypsum board.
- G. Steel drill screws complying with ASTM C 954 for fastening gypsum board to steel members from 0.033 to 0.112 inch thick.
- H. Corrosion-resistant-coated steel drill screws of size and type recommended by board manufacturer for fastening cementitious backer units.
- I. Gypsum Board Nails: ASTM C 514.
- J. Asphalt-Saturated Organic Felt: ASTM D 226, Type I (No. 15 asphalt felt), nonperforated.
- K. Sound Attenuation Blankets: Unfaced mineral-fiber blanket insulation produced by combining mineral fibers of type described below with thermosetting resins to comply with ASTM C 665 for Type I (blankets without membrane facing):
 - 1 Mineral-Fiber Type: Fibers manufactured from glass.
- L. Thermal Insulation: Material indicated below, of thickness and width to fill voids formed by Z-furring members:
 - 1. Unfaced Mineral-Fiber Blanket Insulation: Unfaced mineral-fiber blanket insulation produced by combining mineral fibers of type

described below with thermosetting resins to comply with ASTM C 665 for Type I (blankets without membrane facing):

- a. mineral-Fiber Type: Fibers manufactured from glass.
2. Extruded Polystyrene Board Thermal Insulation: Rigid, cellular, thermal insulation with closed cells and integral high-density skin, formed by the expansion of polystyrene base resin in an extrusion process to comply with ASTM C 578 for Type IV, and with the following surface-burning characteristics:
 - a. Flame-spread and smoke-developed ratings of 75 and 450, respectively, per ASTM E 84.
- M. Polyethylene Vapor Retarder: ASTM D 4397, thickness and maximum permeance rating as follows:
 1. 6.0 mils, 0.13 perms.
- N. Vapor Retarder Tape: Pressure-sensitive tape of type recommended by vapor retarder manufacturer for sealing joints and penetrations in vapor retarder.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates to which gypsum board assemblies attach or abut, installed hollow metal frames, cast-in-anchors, and structural framing with Installer present for compliance with requirements for installation tolerances and other conditions affecting performance of assemblies specified in this Section. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Ceiling Anchorages: Coordinate installation of ceiling suspension systems with installation of overhead structural assemblies to ensure that inserts and other provisions for anchorages to building structure have been installed to receive ceiling hangers that will develop their full strength and at spacing required to support ceilings.
 1. Furnish concrete inserts and other devices indicated to other trades for installation well in advance of time needed for coordination with other construction.

3.3 INSTALLING STEEL FRAMING FOR FURRED CEILINGS

- A. Screw furring members to wood framing.
 1. Do not connect or suspend steel framing from ducts, pipes or conduit.

3.4 APPLYING AND FINISHING GYPSUM BOARD, GENERAL

- A. Gypsum Board Application and Finishing Standards: Install and finish gypsum panels to comply with ASTM C 840 and GA-216.
- B. Install sound attenuation blankets where indicated prior to installing gypsum panels unless blankets are readily installed after panels have been installed on one side.
- C. Install ceiling board panels across framing to minimize the number of abutting end joints and avoid abutting end joints in the central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.

- D. Install wall/partition board panels to minimize the number of abutting end joints or avoid them entirely. Stagger abutting end joints not less than one framing member in alternate courses of board. At stairwells and other high walls, install panels horizontally with end abutting joints over studs and staggered.
- E. Install gypsum panels with face side out. Do not install imperfect, damaged, or damp panels. Butt panels together for a light contact at edges and ends with not more than 1/16 inch of open space between panels. Do not force into place.
- F. Locate both edge or end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Position adjoining panels so that tapered edges abut tapered edges, and field-cut edges abut field-cut edges and ends. Do not place tapered edges against cut edges or ends. Stagger vertical joints over different studs on opposite sides of partitions. Avoid joints at corners of framed openings where possible.
- G. Attach gypsum panels to steel studs so that the leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.
- H. Attach gypsum panels to framing provided at openings and cutouts.
- I. Do not attach gypsum panels across the flat grain of wide-dimension lumber including floor joists and headers. Instead, float gypsum panels over these members using resilient channels or provide control joints to counteract wood shrinkage.
- J. Spot grout hollow metal door frames for solid core wood doors, hollow metal doors, and doors over 32 inches wide. Apply spot grout at each jamb anchor clip and immediately insert gypsum panels into frames.
- K. Form control joints and expansion joints at locations indicated and as detailed, with space between edges of adjoining gypsum panels, as well as supporting framing behind gypsum panels.
- L. Cover both faces of steel stud partition framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chase walls that are braced internally.
 - 1. Except where concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. in area.
 - 2. Fit gypsum panels around ducts, pipes, and conduits.
 - 3. Where partitions intersect open concrete coffer, concrete joists, and other structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by coffer, joists, and other structural members; allow 1/4-to-1/2-inch-wide joints to install sealant.
- M. Isolate perimeter of non-load-bearing gypsum board partitions at structural abutments, except floors, as detailed. Provide 1/4-inch-to-1/2-inch-wide spaces at these locations and trim edges with U-bead edge trim where edges of gypsum panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
- N. Floating Construction: Where feasible, including where recommended by manufacturer, install gypsum panels over wood framing, with floating internal corner construction.
- O. Where STC-rated gypsum board assemblies are indicated, seal construction at perimeters, behind control and expansion joints, openings, and

penetrations with a continuous bead of acoustical sealant including a bead at both faces of the partitions. Comply with ASTM C 919 and manufacturer's recommendations for location of edge trim and closing off sound-flanking paths around or through gypsum board assemblies, including sealing partitions above acoustical ceilings.

- P. Space fasteners in gypsum panels according to referenced gypsum board application and finishing standard and manufacturer's recommendations.

3.5 GYPSUM BOARD APPLICATION METHODS

- A. Single-Layer Application: Install gypsum wallboard panels as follows:
 - 1. On ceilings, apply gypsum panels prior to wall/partition board application to the greatest extent possible and at right angles to framing, unless otherwise indicated.
 - 2. On partitions/walls, apply gypsum panels vertically (parallel to framing), unless otherwise indicated, and provide panel lengths that will minimize end joints.
 - 3. On partitions/walls, apply gypsum panels horizontally (perpendicular to framing), unless parallel application is required for fire-resistive-rated assemblies. Use maximum-length panels to minimize end joints.
 - 4. On Z-furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
- B. Single-Layer Fastening Methods: Apply gypsum panels to supports as follows:
 - 1. Fasten with screws.
 - 2. Fasten to wood supports with single nailing.
 - 3. Fasten to wood supports with double nailing.
 - 4. Fasten to wood supports with adhesive and supplementary nails or screws.
- C. Direct-Bonding to Substrate: Where gypsum panels are indicated as directly adhered to a substrate (other than studs, joists, furring members or base layer of gypsum board), comply with gypsum board manufacturer's recommendations, and temporarily brace or fasten gypsum panels until fastening adhesive has set.

3.6 INSTALLING TRIM ACCESSORIES

- A. General: For trim accessories with back flanges, fasten to framing with the same fasteners used to fasten gypsum board. Otherwise, fasten trim accessories according to accessory manufacturer's directions for type, length, and spacing of fasteners.
- B. Install corner beads at external corners.
- C. Install edge trim where edge of gypsum panels would otherwise be exposed or semiexposed. Provide edge trim type with face flange formed to receive joint compound except where other types are indicated.
 - 1. Install LC-bead where gypsum panels are tightly abutted to other construction and back flange can be attached to framing or supporting substrate.
 - 2. Install L-bead where edge trims can only be installed after gypsum panels are installed.
 - 3. Install U-bead where indicated.
 - 4. Install aluminum edge trim and other accessories where indicated.
- D. Install control joints at locations indicated, and where not indicated according to ASTM C 840, and in locations approved by Architect for visual effect.

- E. Install H-molding in exterior gypsum board assemblies where control joints are indicated. Install on cut or ends of gypsum panels, not on tapered edges.

3.7 FINISHING GYPSUM BOARD ASSEMBLIES

- A. General: Apply joint treatment at gypsum board joints (both directions); flanges of corner bead, edge trim, and control joints; penetrations; fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration and levels of gypsum board finish indicated.
- B. Prefill open joints, rounded or beveled edges, and damaged areas using setting-type joint compound.
- C. Apply joint tape over gypsum board joints except those with trim accessories having concealed face flanges not requiring taping to prevent cracks from developing in joint treatment at flange edges.
- D. Apply joint tape over gypsum board joints and to trim accessories with concealed face flanges as recommended by trim accessory manufacturer and as required to prevent cracks from developing in joint compound at flange edges.
- E. Levels of Gypsum Board Finish: Provide the following levels of gypsum board finish per GA-214.
 - 1. Level 4 for gypsum board surfaces unless otherwise indicated.
- G. For level 4 gypsum board finish, embed tape in joint compound and apply three separate coats of joint compound over joints, angles, fastener heads, and accessories. Touch up and sand between coats and after last coat as needed to produce a surface free of visual defects and ready for decoration. Use the following joint compound combination:
 - 1. Embedding and First Coat: Ready-mixed, drying-type, all-purpose or taping compound.
 - 2. Fill (Second) Coat: Ready-mixed, drying-type, all-purpose or topping compound.
 - 3. Finish (Third) Coat: Ready-mixed, drying-type, all-purpose or topping compound.

3.8 CLEANING AND PROTECTION

- A. Promptly remove any residual joint compound from adjacent surfaces.
- B. Provide final protection and maintain conditions, in a manner suitable to Installer, that ensures gypsum board assemblies remain without damage or deterioration at time of Substantial Completion.

END OF SECTION 09 25 50

SECTION 09 30 00 - CERAMIC TILE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Porcelain tile for restroom floor and all walls
 - 2. Stone thresholds.
- B. Related Sections: The following sections contain requirements that relate to this Section:
 - 1. Division 2 Section "Selective Demolition" for removal of existing tile.
 - 2. Division 7 Section "Joint Sealers" for sealing of expansion, contraction, control, and isolation joints in tile surfaces.
 - 3. Division 9 Section "Gypsum Board Assemblies" for glass mat water resistant gypsum backer units installed as part of gypsum wallboard systems.

1.3 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Product data for each type of product specified.
- C. Shop drawings indicating tile patterns and locations and widths of expansion, contraction, control, and isolation joints in tile substrates and finished tile surfaces.
 - 1. Locate precisely each joint and crack in tile substrates by measuring, record measurements on shop drawings, and coordinate them with tile joint locations, in consultation with Architect.
- D. Samples for initial selection purposes in form of manufacturer's color charts consisting of actual tiles or sections of tile showing full range of colors, textures, and patterns available for each type and composition of tile indicated. Include samples of grout and accessories involving color selection.

1.4 QUALITY ASSURANCE

- A. Single-Source Responsibility for Tile: Obtain each color, grade, finish, type, composition, and variety of tile from a single source with resources to provide products of consistent quality in appearance and physical properties without delaying progress of the Work.
- B. Single-Source Responsibility for Setting and Grouting Materials: Obtain ingredients of a uniform quality from one manufacturer for each cementitious and admixture component and from one source or producer for each aggregate.

- C. Installer Qualifications: Engage an experienced Installer who has successfully completed tile installations similar in material, design, and extent to that indicated for Project. Five years experience as tile installer, employed by a tile installing contractor.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirement of ANSI A137.1 for labeling sealed tile packages.
- B. Prevent damage or contamination to materials by water, freezing, foreign matter, and other causes.
- C. Handle tile with temporary protective coating on exposed surfaces to prevent coated surfaces from contacting backs or edges of other units. If despite these precautions coating does contact bonding surfaces of tile, remove coating from bonding surfaces before setting tile.

1.6 PROJECT CONDITIONS

- A. Maintain environmental conditions and protect work during and after installation to comply with referenced standards and manufacturer's printed recommendations.
- B. Vent temporary heaters to exterior to prevent damage to tile work from carbon dioxide buildup.
- C. Maintain temperatures at 50 deg F (10 deg C) or more in tiled areas during installation and for 7 days after completion, unless higher temperatures are required by referenced installation standard or manufacturer's instructions.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that match the existing tile, may be incorporated in the Work include, but are not limited to, the following:
 - 1. Unglazed Porcelain Tile:
 - a. Stonepeak; New Basics Collection,
 - b. Dal-Tile Corp.
 - c. Florida Tile Industries, Inc.
 - d. American Olean Tile Co., Inc.
 - 2. Dry-Set Mortars and Grouts:
 - a. American Olean Tile Co., Inc.
 - b. Boiardi Products Corp.
 - c. Bostik Construction Products Div.
 - d. Custom Building Products
 - e. C-Cure Chemical Co.
 - f. DAP Inc. Div.; USG Corp.
 - g. L & M Mfg. Inc.
 - h. Laticrete International Inc.
 - i. Mapei Corp.
 - j. Southern Grouts & Mortars, Inc.
 - k. Summitville Tiles, Inc.

- l. Syracuse Adhesives Co.
 - m. American Olean Tile Co., Inc.
 - n. Boiardi Products Corp.
 - o. Bostik Construction Products Div.
 - p. C-Cure Chemical Co.
 - q. DAP Inc. Div.; USG Corp.
 - r. Mapei Corp.
 - s. Southern Grouts & Mortars, Inc.
 - t. Summitville Tiles, Inc.
 - u. Syracuse Adhesives Co.
3. Acrylic Emulsions for Latex-Portland Cement Grouts:
- a. American Olean Tile Co., Inc.
 - b. Boiardi Products Corp.
 - c. Bostik Construction Products Div.
 - d. Custom Building Products
 - e. C-Cure Chemical Co.
 - f. DAP Inc. Div.; USG Corp.
 - g. L & M Mfg. Inc.
 - h. Laticrete International Inc.
 - i. Mapei Corp.
 - j. Southern Grouts & Mortars, Inc.
 - k. Summitville Tiles, Inc.
 - l. Syracuse Adhesives Co.

2.2 PRODUCTS, GENERAL

- A. ANSI Standard for Ceramic Tile: Comply with ANSI A137.1 "American National Standard Specifications for Ceramic Tile" for types, compositions, and grades of tile indicated.
1. Furnish tile complying with "Standard Grade" requirements unless otherwise indicated.
- B. ANSI Standard for Tile Installation Materials: Comply with ANSI standard referenced with products and materials indicated for setting and grouting.
- C. Colors, Textures, and Patterns: Where manufacturer's standard products are indicated for tile, grout, and other products requiring selection of colors, surface textures, patterns, and other appearance characteristics, provide specific products or materials complying with the following requirements:
1. Provide selections made by Architect from manufacturer's full range of premium price group colors.
 2. Provide tile trim and accessories that match color and finish of adjoining flat tile.
- D. Factory Blending: For tile exhibiting color variations within the ranges selected during sample submittals, blend tile in factory and package accordingly so that tile units taken from one package show the same range in colors as those taken from other packages and match approved samples.
- E. Mounting: Where factory-mounted tile is required, provide back- or edge-mounted tile assemblies as standard with manufacturer unless another mounting method is indicated.
1. Where tile is indicated for installation in swimming pools, on exteriors or in wet areas, do not use back- or edge-mounted tile assemblies unless tile manufacturer specifies that this type of mounting is suitable for these kinds of uses and has been successfully used on other projects.

- F. Factory-Applied Temporary Protective Coating: Where indicated under tile type, protect exposed surfaces of tile against adherence of mortar and grout by precoating them with a continuous film of petroleum paraffin wax, applied hot. Do not coat unexposed tile surfaces.

2.3 TILE PRODUCTS

- A. Unglazed Ceramic Tile: Provide factory-mounted flat tile complying with the following requirements:
 - 1. Composition: Porcelain.
 - 2. Nominal Facial Dimensions: 12x12
 - 3. Nominal Thickness: 1/4 inch.
 - 4. Face: matt finish for floor, polished for walls
- B. Trim Units: Provide tile trim units to match characteristics of adjoining flat tile and to comply with following requirements:
 - 1. Size: As indicated, coordinated with sizes and coursing of adjoining flat tile where applicable.
 - 2. Shapes: As follows, selected from manufacturer's standard shapes:
 - a. Base for Thinset Mortar Installations: Cove base, w/in & out corners,
 - b. Wainscot Cap for Thinset Mortar Installations: Surface bullnose.
 - c. External Corners for Thinset Installations: Surface bullnose.
 - d. Internal Corners: Field-buttet square corners, except use coved base and cap angle pieces designed to member with stretcher shapes.

2.4 STONE THRESHOLDS

- A. General: Provide stone that is uniform in color and finish, fabricated to sizes and profiles indicated or required to provide transition between tile surfaces and adjoining finished floor surfaces.

2.5 SETTING MATERIALS

- A. Dry-Set Portland Cement Mortar: ANSI A118.1.
- B. Latex-Portland Cement Mortar: ANSI A118.4, composition as follows:
 - 1. Latex additive (water emulsion) of type described below, serving as replacement for part or all of gauging water, combined at job site with prepackaged dry mortar mix supplied or specified by latex additive manufacturer.
 - a. Latex Type: Manufacturer's standard.

2.6 GROUTING MATERIALS

- A. Dry-Set Grout: ANSI A118.6, color as indicated.
- B. Latex-Portland Cement Grout: ANSI A118.6, color as indicated, composition as follows:
 - 1. Latex additive (water emulsion) serving as replacement for part or all of gauging water, added at job site with dry grout mixture, with type of latex and dry grout mix as follows:
 - a. Latex Type: Manufacturer's standard.
 - b. Dry Grout Mixture: Commercial portland cement specified or supplied by latex additive manufacturer.

- 1) Application: Use commercial portland cement grout combined with latex additive for grouting joints in floor tile unless otherwise indicated.

2.7 CEMENTITIOUS BACKER UNITS

- A. Cement-Coated Portland Cement Panels: ANSI A 118.9 high-density portland cement surface coating on both faces and lightweight concrete core composed of portland cement and expanded ceramic aggregate; fabricated in panels 7/16-inch thick by 36 inches wide by 36, 48, 60, 64, or 72 inches long and weighing 3.2 to 3.8 psf.
- B. Mortar Unit Finishing Materials: Tape and joint compounds as recommended by manufacturer of cementitious backer units.
- C. Available Products: Subject to compliance with requirements, cementitious backer units which may be incorporated in the Work include, but are not limited to, the following:
 1. "Wonder-Board"; Modulars Inc.
 2. "Durock Tile Backer Board"; Durabond Div., USG Industries, Inc.

2.8 MISCELLANEOUS MATERIALS

- A. Temporary Protective Coating: Provide product indicated below that is formulated to protect exposed surfaces of tile against adherence of mortar and grout, is compatible with tile and mortar/grout products, and is easily removable after grouting is completed without damaging grout or tile.
 1. Petroleum paraffin wax, fully refined, tasteless, odorless, containing at least 0.5 percent oil with a melting point of 120 deg F (49 deg C) to 140 deg F (60 deg C) per ASTM D 87.

2.9 MIXING MORTARS AND GROUT

- A. Mix mortars and grouts to comply with requirements of referenced standards and manufacturers including those for accurate proportioning of materials, water, or additive content; type of mixing equipment, selection of mixer speeds, mixing containers, mixing time, and other procedures needed to produce mortars and grouts of uniform quality with optimum performance characteristics for application indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and areas where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of installed tile.
 1. Verify that substrates for setting tile are firm, dry, clean, and free from oil or waxy films and curing compounds.
 2. Verify that installation of grounds, anchors, recessed frames, electrical and mechanical units of work, and similar items located in or behind tile has been completed before installing tile.
- B. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Blending: For tile exhibiting color variations within the ranges selected during sample submittals, verify that tile has been blended in factory and packaged accordingly so that tile units taken from one package show the same range in colors as those taken from other packages and match approved samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.

3.3 INSTALLATION, GENERAL

- A. ANSI Tile Installation Standard: Comply with parts of ANSI 108 series of tile installation standards included under "American National Standard Specifications for the Installation of Ceramic Tile" that apply to type of setting and grouting materials and methods indicated.
- B. TCA Installation Guidelines: TCA "Handbook for Ceramic Tile Installation"; comply with TCA installation methods indicated.
- C. Extend tile work into recesses and under or behind equipment and fixtures to form a complete covering without interruptions except as otherwise shown. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.
- D. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so that plates, collars, or covers overlap tile.
- E. Jointing Pattern: Unless otherwise shown, lay tile in grid pattern. Align joints when adjoining tiles on floor, base, walls, and trim are same size. Lay out tile work and center tile fields in both directions in each space or on each wall area. Adjust to minimize tile cutting. Provide uniform joint widths unless otherwise shown.
 - 1. For tile mounted in sheets, make joints between tile sheets same width as joints within tile sheets so that extent of each sheet is not apparent in finished work.
- F. Lay out tile wainscots to next full tile beyond dimensions indicated.
- G. Expansion Joints: Locate expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated during installation of setting materials, mortar beds, and tile. Do not saw cut joints after installation of tiles.
 - 1. Locate joints in tile surfaces directly above joints in concrete substrates.
- H. Grout tile to comply with the requirements of the following installation standards:
 - 1. For ceramic tile grouts (sand-portland cement, dry-set, commercial portland cement, and latex-portland cement grouts), comply with ANSI A108.10.

3.4 WALL TILE INSTALLATION METHODS

- A. Install types of tile designated for wall application to comply with requirements indicated below for setting-bed methods, TCA

installation methods related to subsurface wall conditions, and grout types:

1. Portland Cement Mortar: ANSI A108.1.
 - a. Masonry or Concrete, Interior: TCA W211 (bonded).
 - b. Solid Backing, Interior: TCA W222 (one-coat method).
 - c. Grout: Latex-portland cement.
2. Latex-Portland Cement Mortar: ANSI A108.5.
3. Dry-Set Portland Cement Mortar: ANSI A108.5.
 - a. Masonry, Interior: TCA W202.
 - b. Wood or Metal Studs, Interior: TCA W243.
 - c. Glass Mat Water Resistant Gypsum Board Backer Units, Interior: TCA W244.
 - d. Grout: Latex-portland cement.

3.5 CLEANING AND PROTECTION

- A. Cleaning: Upon completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.
 1. Remove latex-portland cement grout residue from tile as soon as possible.
 2. Remove temporary protective coating by method recommended by coating manufacturer that is acceptable to brick and grout manufacturer. Trap and remove coating to prevent it from clogging drains.
- B. Finished Tile Work: Leave finished installation clean and free of cracked, chipped, broken, unbonded, and otherwise defective tile work.
- C. Provide final protection and maintain conditions in a manner acceptable to manufacturer and installer that ensures that tile is without damage or deterioration at time of Substantial Completion.
 1. When recommended by tile manufacturer, apply a protective coat of neutral protective cleaner to completed tile walls and floors. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear.
 2. Prohibit foot and wheel traffic from tiled floors for at least 7 days after grouting is completed.
- D. Before final inspection, remove protective coverings and rinse neutral cleaner from tile surfaces.
- E. Cold Weather Note: The setting portland cement mortars are retarded by low temperatures. Finished work should be protected for an extended period of time.

END OF SECTION 09 30 00

SECTION 09 90 00 PAINTING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This section includes the following:
 - 1. Surface preparation, all preparation required to make all painted surfaces ready to paint, including sealants and sanding of surfaces.
 - 2. Surface finish schedule for painted items.
- B. Related Work under this section to include:
 - 1.) Painting of ferrous metal, including metal doors and frames.
 - 2.) Painting of wood items, interior misc. millwork and trim.
 - 3.) Painting of patched and repaired interior plaster surfaces.
 - 4.) Painting of all drywall wall and ceiling surfaces.
 - 5.) Painting of mechanical and electrical work, all pipes to be painted where exposed in mechanical spaces.

1.03 REGULATORY REQUIREMENTS

- A. Conform to the Kentucky Building Code for flame/fuel/smoke rating requirements for finishes.

1.04 SUBMITTALS

- A. Submit product data under provisions of Section 01001, Submissions.
- B. Provide product data on all finishing products and special coating.
- C. Submit manufacturer's application instructions under provisions of Section 01001.

1.05 DEFINITIONS

- A. Conform to ANSI/ASTM D16 for interpretation of terms used in this Section.

1.06 QUALITY ASSURANCE

- A. Product Manufacturer: Company specializing in manufacturing quality paint and finish products with 5 years experience.
- B. Applicator: Company specializing in commercial painting and finishing with 5 years documented experience.

1.07 FIELD SAMPLES

- A. Provide samples under provisions of Section 01001.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site under provisions of Section 01001.

- B. Store and protect products under provisions of Section 01001.
- C. Deliver products to site in sealed and labeled containers; inspect to verify acceptance.
- D. Container labeling to include manufacturer's name, type of paint, brand name, brand code, coverage, surface preparation, drying time, cleanup, color designation, and instructions for mixing and reducing.
- E. Store paint materials at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in well ventilated area, unless required otherwise by manufacturer's instructions.
- F. Take precautionary measures to prevent fire hazards and spontaneous combustion.

1.09 ENVIRONMENTAL REQUIREMENTS

- A. Provide continuous ventilation and heating facilities to maintain surface and ambient temperatures above 45 degrees F for 24 hours before, during, and 48 hours after application of finishes, unless required otherwise by manufacturer's instructions.
- B. Do not apply exterior coatings during rain or snow, or when relative humidity is above 50 percent, unless required otherwise by manufacturer's instructions.
- C. Minimum Application Temperatures for Latex Paints: 45 degrees F (7 degrees C) for interiors; 50 degrees F (10 degrees C) for exterior; unless required otherwise by manufacturer's instructions.
- D. Minimum Application Temperature for Varnish and Epoxy Finishes: 65 degrees F (18 degrees C) for interior or exterior, unless required otherwise by manufacturer's instructions.
- E. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

1.10 EXTRA STOCK

- A. Provide a one gallon container of each color and surface texture to Owner.
- B. Label each container with color, texture, room locations, and indicate if wall or trim paint in addition to the manufacturer's label.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS - PAINT

- A. Benjamin Moore Product: exterior and interior alkyd enamels and all latex enamels
- B. Sherwin Williams Paints Product: same
- C. ICI Product: same
- D. Porter Paint: same
- E. Substitutions: Under provisions of Section 01001.

2.02 ACCEPTABLE MANUFACTURERS - PRIMER-SEALERS

- A. Benjamin Moore Product: Moorcraft Latex Primer-Sealer
- B. Sherwin Williams
- C. ICI
- D. Porter Paint
- E. Substitutions: Under provisions of Section 01001.

2.04 MATERIALS

- A. Coatings: Ready mixed, except field catalyzed coatings. Process pigments to a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating.
- B. Coatings: Good flow and brushing properties; capable of drying or curing free of streaks or sags.
- C. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials not specifically indicated but required to achieve the finishes specified, of commercial quality.
- D. All surfaces shall be painted with materials from the same manufacturer from primer through finish coat.

2.05 FINISHES

- A. Refer to Room Finish Schedule, Door Schedule and Window Schedule for finish types and locations. Color Schedule will be submitted by Architect prior to primecoating.

PART 3 EXECUTION

3.01 INSPECTION

- A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- C. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 - 1. Plaster and Gypsum Wallboard: 12 percent.
 - 2. Masonry, Concrete, and Concrete Unit Masonry: 12%
 - 3. Interior Located Wood: 15 percent, measured in accordance with ASTM D2016.
 - 4. Concrete Floors: 7 percent.
- D. Beginning of installation means acceptance of existing surfaces.

3.02 PREPARATION

- A. Remove electrical plates, hardware, light fixture trim, and fittings prior to preparing surfaces or finishing.
- B. Correct minor defects and clean surfaces which affect work of this Section.
- C. Shellac and seal marks which may bleed through surface finishes.

- D. Impervious Surfaces: Remove mildew by scrubbing with solution of tri-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- E. Aluminum Surfaces Scheduled for Paint Finish: Remove surface contamination by steam or high pressure water. Remove oxidation with acid etch and solvent washing. Apply etching primer immediately following cleaning.
- F. Asphalt, Creosote, or Bituminous Surfaces Scheduled for Paint Finish: Remove foreign particles to permit adhesion of finishing materials. Apply latex based sealer or primer.
- G. Insulated Coverings: Remove dirt, grease, and oil from canvas and cotton.
- H. Gypsum Board Surfaces: Latex fill minor defects. Spot prime defects after repair.
- I. Galvanized Surfaces: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.
- J. Plaster Surfaces: Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.
- K. Uncoated Steel and Iron Surfaces: Remove grease, scale, dirt, and rust. Where heavy coatings of scale are evident, remove by wire brushing or sandblasting; clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Spot prime paint after repairs.
- L. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.
- M. Interior Wood Items Scheduled to Receive Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats. Apply sealant to all open cracks between adjacent so that paint will flow and seal all open gaps.
- N. Exterior Wood Scheduled to Receive Paint Finish: Remove dust, grit, and foreign matter. Seal knots, pitch streaks, and sappy sections. Fill nail holes with tinted exterior caulking compound after prime coat has been applied.
- O. Wood and Metal Doors Scheduled for Painting: Seal top and bottom edges with primer.

3.03 PROTECTION

- A. Protect elements surrounding the work of this Section from damage or disfiguration.
- B. Repair damage to other surfaces caused by work of this section.
- C. Furnish drop cloths, shields, and protective methods to prevent spray or droppings from disfiguring other surfaces.
- D. Remove empty paint containers from site.

3.04 APPLICATION

- A. Apply products in accordance with manufacturer's instructions.
- B. Do not apply finishes to surfaces that are not dry.
- C. Apply each coat to uniform finish.
- D. Apply each coat of paint slightly darker than preceding coat unless otherwise approved.
- E. Sand lightly between coats to achieve required finish.
- F. Allow applied coat to dry before next coat is applied.
- G. Where clear finishes are required, tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.
- H. Prime back surfaces of interior and exterior woodwork with primer paint.
- I. Prime back surfaces of interior woodwork scheduled to receive stain or varnish finish with gloss varnish reduced 25 percent with mineral spirits.
- J. After prime and first finish coat, Architect to inspect color. If contractor applies final finish coat, before Architect reviews first finish coat, the contractor will be required to repaint at no cost to the Owner.

3.05 FINISHING MECHANICAL AND ELECTRICAL EQUIPMENT

- A. Paint shop primed equipment, including all new steel pipe hand railings and guard screens. Minimum of two additional coats required.
- B. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- C. Prime and paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports which occur in rooms and areas receiving paint.
- D. Replace identification markings on mechanical or electrical equipment when painted accidentally.
- E. Paint interior surfaces of air ducts, and convactor and baseboard heating cabinets that are visible through grilles and louvers with one coat of flat black paint, to limit of sight line. Paint dampers exposed behind louvers, grilles, and convactor and baseboard cabinets to match face panels.
- F. Paint exposed conduit and electrical equipment occurring in finished areas.
- G. Paint both sides and edges of plywood backboards for electrical and telephone equipment before installing equipment.
- H. Color code equipment, piping, conduit, and exposed ductwork in accordance with requirements indicated. Color band and identify with

ladders, roof exhaust hoods, etc.

3.08 SCHEDULE - INTERIOR SURFACES

- A. Wood - Painted
 - 1. One coat alkyd prime sealer.
 - 2. Two coats alkyd enamel, semi-gloss.
- B. Concrete, Concrete Block
 - 1. One coat block filler mixed with latex primer.
 - 2. Two coats alkyd, semi-gloss
 - 3. Where schedule calls for epoxy/ester, install instead of finish coats, 2 coats; 5'4" high on wall. Paint line to match block coursing
- C. Steel - Unprimed
 - 1. One coat zinc chromate primer.
 - 2. Two coats alkyd enamel, semi-gloss.
- D. Steel - Primed
 - 1. Touch-up with original primer.
 - 2. Two coats alkyd enamel, semi-gloss.
- E. Steel - Galvanized
 - 1. One coat zinc chromate primer.
 - 2. Two coats alkyd enamel, semi-gloss.
- F. Plaster, Gypsum Board
 - 1. One coat latex primer-sealer.
 - 2. Two coats alkyd, semi-gloss.

3.09 SCHEDULE - COLORS

- A. Color Schedule to be submitted by Architect prior to prime coating procedures. Note architect will inspect and approve colors upon first finish coat. If final coats are applied without architect inspection, finish coats may have to be redone at contractor's expense.

END OF SECTION 09 90 00

SECTION 102166 SOLID PLASTIC TOILET COMPARTMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Solid plastic toilet compartments, floor mounted, head rail braced.

1.02 RELATED SECTIONS

- A. Section 102800 - Toilet and Bath Accessories.

1.03 SUBMITTALS

- A. Submit shop drawings and product data under provisions of Section 01001.
- B. Indicate on shop drawings, partition plan and elevation views, dimensions, details of wall, floor, ceiling supports, and door swings.
- C. Provide product data on panel construction, hardware, and accessories.
- D. Submit samples under provisions of Section 010000.
- E. Submit two samples 6" x 6" in size illustrating panel finish, color, and sheen.
- F. Submit manufacturer's installation instructions under provisions of Section 010000.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Bobrick Washroom Equipment
- B. Santana Products
- C. Trespa Products
- D. Substitutions: Under provisions of Section 01001.

2.02 MATERIALS

- 1. A. Stiles, Doors, and Panels: to be composed of high density polyethylene (HDPE), fabricated from polymer resins compounded under high pressure, forming single thickness panel with rounded edges.
 - 1. Stiles and doors: 1" thick
 - 2. Panels: 1/2" thick
 - 3. Flame Spread Index: 69.3 per ASTM E-84
 - 4. Smoke Develop Index: 93.1 per ASTM E-84
- B. Head Rails: Hollow aluminum tube, 1 x 1-5/8 inch size, with anti-grip strips and cast socket wall brackets.
- C. Attachments, Screws, and Bolts: Stainless steel; tamper proof type; heavy duty extruded aluminum brackets.

- D. Hardware: All hardware is to be Stainless Steel, type 304. Hinges shall be 16 ga. continuous piano hinge, 2" wide with 1/8" pin extending full length of door. gravity type, adjustable for door close positioning; nylon bearings; thumb turn door latch; door strike and keeper with rubber bumper; cast alloy chrome plated coat hook and bumper. Door stops; provide two 11 guage, stainless steel, pvc coated stops to prevent door from being kicked out of compartment. All door hardware shall be through-bolted with stainless steel one-way machine screws inside and outside of compartment. Threaded metal inserts shall be factory installed for mounting door hardware.
- E. Pilaster Shoes at Floor: Stiles shall have chromate treated, double zinc plated steel leveling device concealed by one piece, 4 inch high, type 304 stainless steel shoe with no. 4 satin finish to match hardware.
- F. Floor to Ceiling Posts: 1 1/4" square, type 304 stainless steel with stain finish.
- G. Wall Brackets: Provide 18 guage, stainless steel U-channels extending full height of panels for mounting panel to stile and panel to wall. Include one-way stainless steel screws, bolts and all anchoring devices as required for installations.

2.03 TOILET COMPARTMENTS

- A. Flush type, Series 1082, floor anchored, overhead braced solid panels: Color by architect.
 - 1. Dimensions: as indicated on drawings. Set panels 12 inches above floor, top panels 70 inches above floor.
 - 2. Doors shall stand open when not in use.
 - 3. Handicapped Stalls: doors shall swing out, min. of 2'8" clearance and stand open when not in use.
 - 4. Pilasters to be anchored to floor. Cover anchoring devices with pilaster shoe.
 - 5. Hardware:
 - a. Doors: one pair continuous piano hinges
 - b. One door slide latch, surface mounted
 - c. One coat hook and bumper.
- B. Doors, Panels, and Pilasters: Form and close edges, miter and trim corners, grind smooth.

2.04 URINAL SCREENS

- A. Flush type screens: floor anchored, solid panels.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that site conditions are ready to receive work and opening dimensions are as indicated on shop drawings.
- B. Verify correct spacing of plumbing fixtures.
- C. Verify correct location of built-in framing, anchorage, and bracing, where required.

- D. Beginning of installation means acceptance of existing surfaces and substrate.

3.02 INSTALLATION

- A. Install partitions secure, plumb, and level and in accordance with manufacturers' instructions.
- B. Maintain 3/8 to 1/2 inch space between wall and panels and between wall and end pilasters.
- C. Attach panel brackets securely to walls using anchor devices.
- D. Attach panels and pilasters to bracket with through sleeve tamperproof bolts and nuts. Locate headrail joints at pilaster center lines.
- F. Anchor urinal screen panels to walls with two panel brackets and vertical upright consisting of pilaster tubular headrail stock and sockets anchored to floor and ceiling.
- G. Provide adjustment for floor variations with screw jack through steel saddles integral with pilaster. Conceal floor fastenings with pilaster shoes.
- I. Equip each door with two hinges, one door latch, and one coat hook and bumper.
- J. Install door strike and keeper with door bumper on each pilaster in alignment with door latch.
- K. Adjust hinges to locate doors in partial opening position when unlatched. Return outswing doors to partial open position.

3.03 ADJUSTING

- A. Adjust and align hardware to uniform clearance at vertical edge of doors, not exceeding 3/16 inch (5 mm).

3.04 CLEANING

- A. Remove protective maskings. Clean surfaces.
- B. Field touch-up of scratches or damaged finish will not be permitted.
- C. Replace damaged or scratched materials and with new materials.

END OF SECTION

SECTION 10 28 00 - TOILET AND BATH ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes toilet and bath accessory items as scheduled.
- B. Ceramic tile accessories are specified in Division 9.

1.3 SUBMITTALS

- A. General: Submit the following according to Conditions of Contract and Division 1 Specifications Sections.
- B. Product data for each toilet accessory item specified, including construction details relative to materials, dimensions, gages, profiles, mounting method, specified options, and finishes.
- C. Samples of each toilet accessory item to verify design, operation, and finish requirements. Acceptable full-size samples will be returned and may be used in the Work.
- D. Schedule indicating types, quantities, sizes, and installation locations (by room) for each toilet accessory item to be provided for project.
- E. Setting drawings where cutouts are required in other work, including templates, substrate preparation instructions, and directions for preparing cutouts and installing anchorage devices.
- F. Maintenance instructions including replaceable parts and service recommendations.

1.4 QUALITY ASSURANCE

- A. Inserts and Anchorages: Furnish accessory manufacturers' standard inserts and anchoring devices that must be set in concrete or built into masonry. Coordinate delivery with other work to avoid delay.
- B. Single-Source Responsibility: Provide products of same manufacturer for each type of accessory unit and for units exposed to view in same areas, unless otherwise acceptable to Architect.

1.5 PROJECT CONDITIONS

- A. Coordination: Coordinate accessory locations, installation, and sequencing with other work to avoid interference with and ensure proper installation, operation, adjustment, cleaning, and servicing of toilet accessory items.

1.6 WARRANTY

- A. Warranty: Submit a written warranty executed by mirror manufacturer, agreeing to replace any mirrors that develop visible silver spoilage defects within warranty period.

- B. Warranty Period: 15 years from date of Substantial Completion.
- C. The warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering toilet accessories that may be incorporated in the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide toilet accessories by one of the following:
 - 1. Acorn Washroom Accessories.
 - 2. American Specialties, Inc.
 - 3. Bobrick Washroom Equipment, Inc.
 - 4. Bradley Corporation.
 - 5. General Accessory Manufacturing Co.
 - 6. McKinney/Parker.

2.2 MATERIALS, GENERAL

- A. Stainless Steel: AISI Type 302/304, with polished No. 4 finish, 0.034-inch (22-gage) minimum thickness.
- B. Brass: Leaded and unleaded, flat products, ASTM B 19; rods, shapes, forgings, and flat products with finished edges, ASTM B 16; Castings, ASTM B 30.
- C. Sheet Steel: Cold-rolled, commercial quality ASTM A 366, 0.04-inch (20-gage) minimum. Surface preparation and metal pretreatment as required for applied finish.
- D. Galvanized Steel Sheet: ASTM A 527, G60.
- E. Chromium Plating: Nickel and chromium electro-deposited on base metal, ASTM B 456, Type SC 2.
- F. Baked Enamel Finish: Factory-applied, gloss white, baked acrylic enamel coating.
- G. Mirror Glass: Nominal 6.0-mm (0.23-inch) thick, conforming to ASTM C 1036, Type I, Class 1, Quality q2, and with silvering, electro-plated copper coating, and protective organic coating.
- H. Stainless Steel Mirror Surfaces: Not less than 0.04-inch (20-gage) AISI Type 302/304 stainless steel sheet, stretcher-leveled with No. 8 polished mirror finish. Bond to 1/4-inch minimum hardboard backing.
- I. Galvanized Steel Mounting Devices: ASTM A 153, hot-dip galvanized after fabrication.
- J. Fasteners: Screws, bolts, and other devices of same material as accessory unit, or of galvanized steel where concealed.

2.3 MIRROR UNITS

- A. Stainless Steel Framed Mirror Units: Fabricate frame with angle shapes not less than 0.05 inch (18 gage), with square corners mitered, welded, and ground smooth. Provide in No. 4 satin polished finish. Similar to Bradley unbreakable stainless steel mirror #7481
- B. Fixed-Tilt, Stainless Steel Framed Mirror Units: Fabricate frame of not less than 0.04-inch (20-gage) stainless steel, with all joints mitered, welded, and ground smooth. Construct frame so that taper is not less than 3 inches from top to bottom.

2.4 TOILET PAPER DISPENSER

- A. Toilet Paper Dispenser: Fabricate of 22-gage stainless steel, satin finish, surface mounted, holds Georgia Pacific 892-305 rolls, hinged access bottom door, with lock, similar to Bradley 515.

2.5 NAPKIN DISPOSAL

- A. Napkin Disposal: Fabricate of 22-gage stainless steel, satin finish, surface mounted, single stall or double stall, push-flap door, key lock, stainless steel removable receptacle holds wax paper liners.

2.6 GRAB BARS

- A. Grab Bars: 1-1/2 inch o.d. 18 ga stainless steel tubing. 3-1/8 inch diameter 13 ga flanges; 22 ga stainless steel escutcheons. Satin Safety grip, satin finishes, for water closet locations. Provide custom mounting hardware required for renovation project.

2.7 FABRICATION

- A. General: No names or labels are permitted on exposed faces of toilet and bath accessory units. On either interior surface not exposed to view or on back surface, provide identification of each accessory item either by a printed, waterproof label or a stamped nameplate indicating manufacturer's name and product model number.
- B. Surface-Mounted Toilet Accessories, General: Except where otherwise indicated, fabricate units with tight seams and joints, exposed edges rolled. Hang doors or access panels with continuous stainless steel piano hinge. Provide concealed anchorage wherever possible.
- C. Recessed Toilet Accessories, General: Except where otherwise indicated, fabricate units of all-welded construction, without mitered corners. Hang doors or access panels with full-length, stainless steel piano hinge. Provide anchorage that is fully concealed when unit is closed.
- D. Framed Mirror Units, General: Fabricate frames for glass mirror units to accommodate wood, felt, plastic, or other glass edge protection material. Provide mirror backing and support system that will permit rigid, tamperproof glass installation and prevent moisture accumulation, as follows:
 - 1. Provide galvanized-steel backing sheet, not less than 0.034 inch (22 gage) and full mirror size, with nonabsorptive filler material. Corrugated cardboard is not an acceptable filler material.
- E. Mirror Unit Hangers: Provide system for mounting mirror units that will permit rigid, tamperproof, and theftproof installation, as follows:

1. One-piece, galvanized-steel, wall-hanger device with spring-action locking mechanism to hold mirror unit in position with no exposed screws or bolts.
2. Heavy-duty wall brackets of galvanized steel, equipped with concealed locking devices requiring a special tool to remove.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install toilet accessory units according to manufacturers' instructions, using fasteners appropriate to substrate as recommended by unit manufacturer. Install units plumb and level, firmly anchored in locations and at heights indicated.
- B. Secure mirrors to walls in concealed, tamperproof manner with special hangers, toggle bolts, or screws. Set units plumb, level, and square at locations indicated, according to manufacturer's instructions for type of substrate involved.
- C. Install grab bars to withstand a downward load of at least 250 lbf, complying with ASTM F 446.

3.2 ADJUSTING AND CLEANING

- A. Adjust toilet accessories for proper operation and verify that mechanisms function smoothly. Replace damaged or defective items.
- B. Clean and polish all exposed surfaces strictly according to manufacturer's recommendations after removing temporary labels and protective coatings.

END OF SECTION 10 28 00

MECHANICAL INDEX

SECTION NUMBER

DIVISION 22 - PLUMBING

220100	GENERAL PROVISIONS FOR PLUMBING WORK
220200	PIPE TRENCHING
220300	BASIC MATERIALS FOR PLUMBING WORK
220700	PIPING INSULATION
223300	MISCELLANEOUS PLUMBING EQUIPMENT
224000	PLUMBING FIXTURES

SECTION 220100 - GENERAL PROVISIONS FOR PLUMBING WORK

1.1 GENERAL

- A. The General Conditions and Special Conditions and all other Contract Documents shall apply to this Division of the work as well as to all other Divisions.

1.2 SCOPE

- A. This branch of the work includes coordination with all utility companies; providing utility meters; utility tap on fees; agency review fees and all inspection fees; all labor, materials, tools, excavation and backfill and all equipment necessary for the installation of Fire Protection and Plumbing Systems as shown on the Drawings and Specifications and/or as required for complete and operating systems. The work shall include starting, balancing and the necessary and required tests to insure the proper operation of the complete system.
- B. A complete and operating plumbing system shall be provided. See plans for diagrams and details. Domestic hot water shall be provided with electric water heaters in mechanical rooms. All piping, valves, pumps, heat exchangers and associated materials connected into domestic water system shall be copper, brass, bronze, or stainless steel.
- C. All work for this project must comply and be in strict accordance with the Kentucky Building Code, Kentucky Plumbing Code, Kentucky Boiler Code, NFPA, ADA, NEC and all local codes and regulations.
- D. In general (as a minimum) all materials and equipment must be installed in strict accordance with manufacturer's requirements; and provided with all required controls, internal fusing, relays, piping connections, electrical connections, ductwork connections, etc., to provide for complete and operable systems.
- E. Contractor shall be responsible to comply with requirements of specifications section 013100 - PROJECT MANAGEMENT AND COORDINATION.

1.3 PERMITS, CODES, AND APPROVALS

A. Permits and Fees

- 1. All permits, tap on fees and agency review and inspection fees necessary for the complete Plumbing systems shall be included in the contract via allowance. The cost of all permits shall be borne by the Contractor. Refer to front end documents for allowance requirements and coordinate with other trades.

B. Codes

- 1. The minimum standard for all plumbing work shall be the requirements of the Kentucky State Plumbing Law, Regulation and Code, Kentucky Building Code, ADA, The Division of Water Quality and local ordinances. All plumbing and fire protection for this project must as a minimum comply and be in strict accordance with the Kentucky Building Code, Kentucky Plumbing Code, Kentucky Boiler Code, NFPA, ADA,

NEC, The Division of Water Quality and the "Standards of Safety" of the Commonwealth of Kentucky.

C. Approvals

1. All work must be approved by the Architect/Engineer, Owner and all related Code Agencies before final payment will be made.
2. As a minimum, the following approval Certificates of Inspection and Approval shall be required:
 - a. Plumbing Inspection
 - b. Health Department Inspection
 - c. Electrical Inspection
 - d. Local and State Building Inspections.
3. Final payment will be contingent upon all Approval Certificates.

1.4 PLUMBING DRAWINGS AND SPECIFICATIONS

- A. The Drawings and Specifications are intended to cover all work enumerated under the respective headings. The Drawings are diagrammatic only as far as final location of pipes, ducts relative size, etc., is concerned. Any item of work not clearly included, specified and/or shown, errors or conflict between Plans (Mechanical, Architectural, Structural or Electrical), Specifications, codes and field conditions, shall be clarified by a written request to the Architect by the Bidder before bidding; otherwise, the bidder shall, at his own expense, supply the proper labor and materials to include these items of work and to make good any damages or defects in his work caused by such error, omission or conflict. Under no circumstances shall a Contractor scale the Drawings for the location of equipment and work.
- B. Piping schematics, risers, motors and details shown on the Drawings are for the equipment specified hereinafter. All revisions, modifications or changes in piping, accessories etc., due to using equipment of a different manufacturer than specified hereinafter, shall be the responsibility of the bidder and shall be made at no additional cost to the Owner. All modifications or changes shall be submitted to the Architect in writing and meet with his approval before the equipment is released for shipment.
- C. The Contractor shall be responsible for all revisions, modifications or changes necessary in the structural, architectural or electrical drawings and/or work to accommodate the equipment to be furnished under this section of the Specifications. This shall be made at no additional cost to the Owner.
- D. Plumbing as built "Record Drawings" shall be kept up to date each day. "Record Drawings" shall be reviewed by Architect/Engineer each month with contractor's pay request review.
- E. Any deviation in work as shown on plans and specifications must be approved in writing by Architect/Engineer prior to installation.

1.5 MATERIAL AND WORKMANSHIP

- A. Material and workmanship shall comply with the General Conditions of these Specifications.
- B. All material and equipment and locations of same shall at least conform with the standards of the Underwriters' Laboratories, Inc., whenever applicable.

1.6 ACCESSIBILITY

- A. All equipment, valves, motors, damper operators, traps, unions and all other items which require adjustment, maintenance, repair and observation shall be installed in such a fashion that such maintenance, repair and observation can be readily achieved without undue difficulty including complete removal of heat pump units. Where the drawings show these items in locations not conforming to the above, the Contractor shall advise the Architect/Engineer of this conflict prior to bid Date otherwise he shall, at his own expense, relocate such items as directed by the Architect/Engineer. Where such items are installed above inaccessible ceilings or in or behind walls, this contractor shall provide approved access panels unless otherwise directed in these Specifications.

1.7 ARCHITECTURAL DRAWINGS AND SPECIFICATIONS

- A. Each Contractor shall refer to the Architectural and Structural Drawings and Specifications for the general construction of the building, for floor and ceiling heights, for location of walls, partitions, beams etc., and shall be guided accordingly for the setting of all sleeves and equipment.
- B. Under no circumstances shall a Contractor scale the Drawings for the locations of equipment and work.

1.8 COOPERATION WITH OTHER CONTRACTORS

- A. Each Contractor shall demand and examine all Drawings and Specifications pertaining to the construction before installing the work described and shown under these Drawings and Specifications. Each Contractor shall cooperate with all other contractors in locating piping, openings, chases and equipment in order to avoid conflict with any other contractor's work. It is the responsibility of all trades to examine all shop drawings of other trades that would require equipment to occupy the same space and plane within the building to eliminate any potential conflicts. No extra payment will be allowed for relocation of piping, ductwork, and equipment not installed in accordance with the above instructions, and which interferes with work and equipment of other contractors.

1.9 INSTALLATION OF EQUIPMENT

- A. All appliances, materials and equipment shall be installed and connected in accordance with the best engineering practice and in accordance with manufacturer's instructions and recommendations. All auxiliary piping, special controls, water seals, valves, electrical connections, drains, etc., recommended by the manufacturer, required for proper operation, or required by code shall be furnished and installed complete.

- B. All equipment designed and constructed for indoor use shall not be shipped to the site until such time that the equipment is ready for permanent installation in a dry building or may be stored on site provided equipment is stored in a water and moisture tight storage building or job trailer. Covering equipment outdoors with plastic or tarp is not acceptable.

1.10 PROTECTION

- A. No piping shall be installed in any part of the building where danger of freezing may exist without adequate protection being given, whether or not insulation is specified for the particular piping. All damage resulting from leaking pipes shall be borne by the Contractor under this Division.
- B. All work, equipment and materials shall be protected at all times. All pipe openings shall be closed with caps or plugs during construction. All equipment and accessories shall be tightly covered and protected against dirt, water or other injury during the period of construction.
- C. Before the building is turned over to the Owner all of the equipment must be carefully cleaned of debris and dust and new filters installed

1.11 OPENINGS AND ESCUTCHEONS

- A. The Contractor under this Division shall be responsible for the openings he may require in floors, walls or ceilings of any type construction whether or not shown on the Architectural and/or Structural Drawings.
- B. Openings that have been shown on the Architectural and/or Structural Drawings will be provided under other Divisions; however, the responsibility for the correct size and location of such openings shall be that of the Contractor under this Division.
- C. Openings that have not been shown on the Architectural and/or Structural Drawings shall be provided by the Contractor under this Division unless noted otherwise as follows:
 - 1. Passages for pipe through masonry and concrete walls and floors shall be by means of standard weight steel pipe sleeves. With the approval of the Architect, holes may be cut and sleeves may be omitted in areas having thin or lightweight construction. Holes shall be cut by means of rotating drill bits or saws, producing a neat and accurate fit for the pipes. No hammer devices will be permitted. Such holes shall be not more than one half inch (1/2") greater in diameter than the external diameter of the pipe. Cutting of holes in structural slabs or members will not be permitted without approval of the Architect/Engineer.
 - 2. Openings for insulated piping such as heating, domestic hot and cold water, etc., shall be of sufficient size to allow the insulation to pass through uninterrupted with the piping.
 - 3. Cast iron sleeves shall be installed through walls where pipes enter the building below grade and at all fire rated assemblies. Sleeves shall be flush with each face of the

wall and shall be sufficiently larger than the entering pipe to permit thorough caulking with lead and oakum between pipe and sleeve for waterproofing.

4. Openings for ductwork fixtures, equipment, etc., through floors, walls or ceilings, shall be located and sized by the Contractor under this Division who shall provide and set necessary sleeves or sheet metal forms for all such openings through concrete walls, floors or the roof slab. For openings required through ceilings, walls or roof construction, the Contractor under this Division shall furnish and install all necessary frames, supports, lintels, etc., required for the openings, such as plaster frames for registers and recessed equipment frames.

D. Smoke and Firestopping

1. Shall be provided between ductwork and its opening through all walls, floors and partitions. Firestopping shall be provided between sleeves and piping which pass through walls, floors or partitions. This contractor shall furnish and install fire protection sealant where pipes pass through fire rated walls, partitions, ceilings or floors. The fire rated integrity of the assemblies must be maintained.
2. The materials used shall be UL 263 and UL 1479 classified and meet ASTM E814 standards and be rated for assemblies where applied. Material shall be installed in strict accordance with manufacturer's recommendations and published literature.
3. Furnish and install 3M "Interam Fire Protection Systems", DOW CORNING or Hilti "Fire Stop" System.

E. All exposed piping passing through floors, ceilings and walls in finished areas shall be fitted with a chrome plated escutcheon of sufficient outside diameter to amply cover the sleeved opening and an inside diameter to closely fit the pipe around which it is installed.

F. Galvanized sheet metal collars shall be provided around all ducts, equipment, etc., exposed in finished areas. Where such openings are finished and the space around the unit is small, the collar may be omitted with the approval of the Architect.

1.12 CUTTING AND PATCHING

- A. No cutting and patching of new finished work will be permitted without the approval of the Architect, and such work shall be done only under his direction. Coordinate all openings with Architectural specifications.
- B. All work improperly done or not done at all, as required in preceding article "Openings and Escutcheons", will be performed as directed by the Architect/Engineer and at the expense of the Contractor whose work is affected.

1.13 SERVICE AND GUARANTEE

- A. Contractor shall be responsible for guaranteeing all work, including equipment, materials and workmanship furnished under this section of the Specifications.
- B. The warranty created by Article 3.5 of the General Conditions remains enforceable throughout the period of the Kentucky statute of limitations. The Warranty is different from the one-year correction period defined in General Conditions Article 12.2.2. except for items of equipment requiring explicit extended warranties, refer the Bidder/Contractor to General Conditions Articles 3.5 and 12.2.2 for warranty and correction of work.
- C. Any defective work, equipment, materials and/or workmanship that develops within the guarantee period, which is not caused by ordinary wear, damage or abuse by others, shall be replaced and/or corrected without additional cost to the Owner.
- D. Make a minimum of two (2) service calls during guarantee period, free of charge, to check with Owner and to check and repair malfunctioning equipment which was installed. Service calls shall be in middle and end of guarantee period and as required to maintain systems operation. Dates shall be listed in operating and maintenance manuals, along with contractor's name and phone number.

1.14 SHOP DRAWINGS

- A. Each Shop Drawing and/or manufacturer's descriptive literature shall have the project name indicated thereon and shall be clearly referenced to the specification, section number, schedule, material, etc., so the Engineer may readily determine the particular item the Contractor or subcontractor proposes to furnish. Each submission shall also contain Date Submitted. If Shop Drawings and/or other items are transmitted by correspondence, each item of correspondence shall bear project name. (The shop drawings shall be submitted in ACCO Model 25071 Series binders with Presstex covers). At the Engineer's discretion, the Contractor shall submit additional shop drawings as deemed necessary.
- B. The Plumbing Contractor must carefully review and stamp all shop drawings before submitting to Architect/Engineer. The Contractor must verify all quantities, sizes, left and right-hand connections, access door locations, horsepower, voltage, insure adequate clearance for installation and service, etc.
- C. The Plumbing Contractor must coordinate all submittals with the Electrical Contractor to insure proper clearances with electrical equipment and to insure that all equipment with electrical connections are being submitted with proper voltage, proper left and right-hand electrical connections, proper relays, proper contactors, proper starters, etc.
- D. Descriptive literature and Schedules shall be submitted as a minimum (but not limited to) the following:

Plumbing Fixtures & Trim	Drainage Specialties	Grease
Traps		
Water Heaters	Water Softeners	Pumps
Water Supply Specialties	Sprinkler System	

Tempering Valves

Insulation

1.15 CLEANING

- A. After the Architect/Engineer has complete examination, this Contractor shall remove all stickers, tags, etc., and shall thoroughly clean all equipment, fixtures, and materials installed under his section of the work.
- B. Surplus material, rubbish and equipment resulting from the work shall be removed from the building and premises by the Contractor upon completion of the work in accordance with the General Conditions.
- C. All equipment shall be thoroughly cleaned to "Factory New" condition prior to turning over to owner. Touch up or completely repaint equipment as required.

1.16 EXAMINATION OF SITE

- A. Bidders shall visit the site before submitting proposals to satisfy themselves as to the nature and scope of the work and any difficulties attending to the execution.
- B. The submission of a proposal will be construed as evidence that such an examination has been made. Later claims for labor, equipment, materials, etc., required for difficulties encountered which could have been foreseen had such an examination been made, will not be recognized.

1.17 PAINTING

- A. All exposed interior and exterior piping, ductwork and equipment not prefinished by equipment manufacturer or new equipment or items installed under this division shall be thoroughly cleaned and readied for painting. Painting shall be provided under the general contract. Consult painting contractor for special surface preparations that may be required. See other paragraphs contained herein for pipe color coding for "Piping Identification".

1.18 SINGULAR NUMBER

- A. In all cases where a device or piece of equipment is referred to in the singular number (such as grille, lavatory, etc.), it is intended that such reference shall apply to as many such items as are required to complete the installation.

1.19 CONCEALMENT OF PIPING AND DUCTWORK

- A. In general, furred ceilings and joist spaces are provided in parts of the building to conceal horizontal piping and ductwork. Vertical risers serving downfeed heating and air conditioning units shall be installed concealed, unless shown otherwise on the Drawings.
- B. In the Mechanical Room, attic and areas without ceilings and similar unfinished areas, piping and ductwork shall be installed exposed.
- C. All work installed exposed shall be installed neatly to insure a pleasing final appearance. Vertical piping shall be perfectly plumbed.

- D. Particular care shall be exercised in the location of ceiling diffusers and outlets to avoid conflict with the work of other Divisions. Surface units in the Ceiling shall fit into the acoustical ceiling suspension system and shall, in general, be symmetrical with the light fixtures.
- E. Refer to the Architectural Room Finish Schedules for the areas having suspended ceilings and install the work accordingly.

1.20 CONCRETE WORK AND ANCHOR BOLTS

- A. The Contractor under this Division shall provide all concrete bases, curbs and pads for all floor and ground mounted equipment unless otherwise indicated.
- B. The Contractor under this Division shall verify the sizes and locations of all supports, bases and pads prior to pouring of same to be certain that the installed units will be compatible.
- C. The Contractor under this Division shall set anchor bolts for the equipment prior to pouring of concrete. Sizes and exact locations of bolts shall be determined by the manufacturer's recommendations for the equipment served.
- D. Concrete work must be provided in strict accordance with Section 03310 Concrete Work As a minimum provide pads using 3500 psi concrete reinforced with WI.4 x WI.4 welded wire fabric. Chamfer top and edge corners with 3/4" preformed chamfer strips. Slope top to floor drain if drain is provided in pad.

1.21 WORK AND EQUIPMENT UNDER OTHER DIVISIONS

- A. The Contractor under Division 23 will provide all power wiring and conduit and install and connect each item of electrical equipment furnished under this Division unless specified otherwise. He will also provide starting equipment for motors not specified to have starting equipment furnished under this Division.
- B. The Contractor under other Divisions will provide the following:
 - 1. Painting of all mechanical work throughout.
 - 2. Electrical work as noted in Paragraph (A) above.
 - 3. Furnish and install all access doors shown on the Architectural Drawings.

1.22 FLASHINGS

- A. The Contractor under this Division shall furnish and install all required flashing necessary for ducts, piping, fans, equipment, etc., which rest on or pass through the exterior walls and roof to insure a watertight installation. All penetrations shall be in strict accordance with Architects instructions. Verify prior to construction. Coordinate all roof flashing materials and procedures with Roofing Contractor.
- B. Flashings for plumbing vents and drains shall be sheet lead weighing no less than 3 pounds per square foot or as required by Architect/Engineer and roofing manufacturer.
- C. Flashings for all equipment must be in strict accordance with Architect/Engineer and roofing manufacturer's requirements.

1.23 VALVE TAGS AND CHARTS

- A. The Contractor under this Division shall attach a numbered brass tag to each valve installed under this Contract. Each number shall be prefixed with the letter "H" for heating valves and "P" for plumbing valves. Tags shall be attached to the valves by means of brass "S" hooks. Tags shall be Seton Name Plate Co., C.H. Hanson Co. or Identifications.
- B. A chart headed "PLUMBING VALVE CHART" shall be prepared. Three original charts shall be prepared and approved by the engineer. One of each approved type chart shall be framed under glass and mounted on the wall in the main mechanical room where directed. Three photocopies of each chart shall be made and shall be submitted through normal shop drawing channels for approval and subsequent owner's files. Each chart shall be formatted as shown below: (All normally closed valves shall have a brass tag marked Normally Closed.)

PLUMBING VALVE CHART

PROJECT NAME

DATE

TAG NO.	VALVE LOCATION	VALVE TYPE/SIZE	VALVE FUNCTION
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1.24 WIRING DIAGRAMS

- A. The Contractor under this Division shall submit complete wiring diagrams to the Architect/Engineer for approval. Wiring diagrams shall show all electrical connections for air conditioning units, starters, switches, motors, controls, etc.
- B. Standard wiring diagrams of manufacturer's equipment will not be acceptable for this project unless they are altered to agree with the project requirements. Wiring diagrams shall include all interlocks with other equipment, whether furnished by the manufacturer or not.
- C. After review by the Architect/Engineer, a copy of the wiring diagrams shall be given to the Contractor under Division 23.
- D. Unless specified otherwise, power supply wiring to power connections on equipment will be provided by the Contractor under Division 16. The Contractors under Division 15 shall be responsible for the control wiring and correct sequence of operation of all mechanical equipment after all wiring has been completed. Control wiring shall include wire, conduit and miscellaneous materials required for connecting control devices. The Control Contractor shall provide power wiring and connections to control equipment if this required power wiring is not shown on the Electrical Drawings and Specifications.

1.25 ACCESS PANELS

- A. Access panels shown on the Architectural Drawings will be furnished and installed under Division 8. In addition, the Contractor under this Division shall furnish all other access panels needed for access to valves, vents, fire dampers, heat pump units, etc., in inaccessible locations installed under this Division of the work.
- B. Access panels shall have a minimum size of 12" x 12" and shall be centered beneath equipment for accessibility and maintenance.

Access panels must be of adequate size to service, observe, remove and maintain equipment.

- C. Access panels shall be equal to the types specified under the Architectural Specifications. As a minimum the access panels shall be equivalent to CESCO Products style FB/FB SS, Besco, Inryco/Milcor, Phillips or equivalent, 14 gauge with vandal proof lock and frame as selected by Architect.

D. Ceiling Types

1. In areas with suspended acoustical tile ceilings (installed on exposed metal grid suspension system so that the tile may be readily removed), equipment, valves, etc., install above these ceilings will be considered to be accessible. Metal grid must be installed at heat pumps in such a manner as to be removable for removal of heat pump units.
2. All plastered ceilings or ceilings having concealed spline type of suspension system will be considered as not removable for accessibility to equipment; therefore, access panels will be required.
3. See Architectural Drawings and Specifications for the types of ceilings throughout the building.

1.26 EQUIPMENT DRAINS

- A. Provide a drain line from each item of equipment requiring a drain (cooling coil drain pans, pumps, backflow preventers, heat pumps, etc.) to the nearest floor drain, roof drain open receptacle, to outside of the building, or as shown.
- B. Drains from units shall be trapped to provide easy water flow through the drain line. Install in strict accordance with manufacturer's recommendations.

1.27 EQUIPMENT IDENTIFICATION

- A. Furnish and install on each item of equipment, such as pumps, water heaters etc., a nameplate giving its name and function.
- B. Nameplates shall be engraved bakelite (white letters on black background and shall be equal to Seton Nameplate Co., C.H. Hanson Co., or self-adhesive label).
- C. All names and numbers for equipment and rooms shall be approved by the Architect before nameplates are prepared so that correct identification will be used.

1.28 UNDERGROUND UTILITIES TRACE TAPE

- A. Install in open trench approximately 12" above pipe, (but no more than 24" below finished grade), 4" wide trace tape to indicate location of water line. Tape shall be manufactured to be traceable with pipe detector above finish grade. Tape shall be bright yellow in color and stamped with the word "WATER" at regular intervals. The tape shall be Terr Tape as manufactured by Griffolyn Co.; C. I. Thornburg, Seton Co., Bradey Co. or Craftmark.
- B. Tracer tape similar to tracer tape specified above shall be provided over sanitary sewer marked "Sanitary Sewer" and over the storm sewers marked "Storm Sewers," and over gas mains marked "Gas".

1.29 OPERATIONAL INSTRUCTIONS

- A. Furnish services of a fully competent operational instructor for a total of two (2) one day sessions days, unless otherwise specified, as directed by Architect/Engineer to instruct operating personnel in operations and care of all equipment and systems (including control systems) and their various components.

1.30 CONNECTIONS TO EQUIPMENT SPECIFIED IN OTHER SECTIONS

- A. Examine all Contract Documents and be thoroughly familiar with all items of equipment in other sections or by Owner, unless otherwise specified or indicated on Drawings. Rough-in for and make final connections to all equipment which requires any of the services specified in this Section and including furnishing and install all valves, P-traps, unions, vacuum breakers and all other specialties as required to make all work and equipment final and operating. It is the intent of the Contract Drawings to detail and indicate all such equipment; however, be responsible for notifying Architect/Engineer in writing of major discrepancies seven (7) days prior to Bid Date; otherwise, all such connections shall be made at no extra cost.
- B. Unless specified otherwise, all conduit, wiring and connections for power to mechanical equipment will be provided by Electrical Contractor. Be responsible for correct sequences of operation of all mechanical equipment after all wiring has been completed.

1.31 PLATFORMS AND SUPPORTING STANDS

- A. Provide each piece of equipment or apparatus suspended from ceiling or mounted above floor level with suitable structural support, pipe stand, platform or carrier in accordance with best recognized practice, as approved by Architect/Engineer as indicated on Drawings. Such supporting or mounting means shall be provided by each Contractor for all equipment furnished by him, unless otherwise specified. Exercise extreme care that structural members of building are not overloaded by such equipment. Submit shop drawings on prefabricated or field erected equipment supports not detailed on Drawings.

1.32 EXPANSION COMPENSATORS

- A. Erect piping to provide for expansion and contraction without harmful strain to building structural members, pipe and vibrating equipment. Provide expansion bends or devices other than those indicated, if, in Architect's/Engineer's opinion, such devices are required by field conditions. Unless indicated otherwise, expansion bends are preferred to use of expansion joints and shall not be substituted without Architect's/Engineers written permission.

1.33 VIBRATION AND SOUND CONTROL

- A. Be responsible for unnecessary or undue vibration or sound transmitted throughout building due to negligence of improper installation of material and equipment and be responsible for correction of such conditions.

1.34 CLEANING OF PIPING AND EQUIPMENT

- A. Install and maintain pipe and equipment which is clean and free of dust, dirt and scale. Where roughed in only, provide temporary air-tight covers at all pipe, duct and equipment openings. Provide protection from elements.
- B. Upon completion of work, thoroughly clean and lubricate all equipment; clean and flush all piping as often as necessary to satisfy Architect/Engineer and Owner that system is clear of oil, dirt, scale or other foreign matter; clean all strainers after flushing operation and prior to balancing;
- C. Keep all nameplates on equipment clean and exposed for easy reading.

1.35 WRENCHES - TOOLS

- A. Furnish special wrenches or tools necessary to dismantle or service equipment or appliances installed. Wrenches shall include necessary keys, handles and operators for valves, cocks and hydrants. Number of wrenches furnished in proportion to devices installed shall be on a 50% basis, but not less than two (2) of each type shall be provided. All wrenches shall be neatly mounted on a three-quarter inch plywood panel properly marked with laminated plastic plates. Panel shall be fastened to wall where designated by Architect/Engineer.

1.36 TESTS

- A. See Section 220300 - Basic Materials and Methods.

1.37 STERILIZATION

- A. Sterilize interior and exterior water distribution system as soon as water distribution system has been flushed out. System shall be sterilized by the following or other methods satisfactory to Architect/Engineer and State Department of Health. A written certification of the sterilization test & method of testing shall be submitted to Architect/Engineer for their review.
- B. Introduce chlorine or a solution of calcium or sodium hypochlorite into entire system of domestic water piping. Fill lines slowly and apply chlorine solution at concentration of 50 parts per million. Open and close all valves and hydrants while system is being chlorinated. Let chlorine solution stand in system 24 hours and test for residual chlorine. Test shall be taken at farthest point in piping system from where chlorine is introduced. If less than 25 ppm is indicated, drain system and repeat sterilization process. After a chlorine residual of at least 25 ppm is obtained, flush system until chlorine content equals that of water supplied by public water system. Architect/Engineer shall be notified 48 hours in advance of above test and his representative shall be present when test is run.
- C. The Contractor shall take four (4) water samples as directed by Architect/Engineer and have samples tested by an independent testing agency or as directed by the local Health Department. Test results shall be submitted to the Architect/Engineer.
- D. Architect/Engineer reserves right to test water again at any time prior to final acceptance of work and if found unsafe bacteriologically, to require Contractor to rechlorinate system until water is proven equal to that supplied by public system.

1.38 PIPING IDENTIFICATION

- A. Stencil all exposed piping, piping above lay-in ceiling, exposed piping located behind and within 4' 0" of all access panels.
- B. Stencils shall be machine cut, applied after the final coat of paint using enamel paint, shall be installed on the piping at not over 20 foot intervals (or in each room whichever is greater) and shall have the following heights:
 - 1. On pipe sizes 3" and over letters shall be 2" in height.
 - 2. On pipe sizes smaller than 3", letters shall be 1" in height, colors for lettering shall be as scheduled herein.
- C. In addition to the preceding stencils giving identification, provide arrows at each stencil giving the direction of flow of the material. Where flow can be in either direction, provide double ended arrows. All zones shall be properly marked by zone numbers as noted on the Drawings.
- D. All stencils and arrows shall be properly orientated so that descriptive name may be easily read from the floor. Install stencils and arrows on lower curvature of overhead piping and on side panel near bottom or on bottom of ductwork. (Glue-on or stick-on labels are acceptable.)
- E. Schedule Examples

Pipe	Abbr.	Pipe Color Code
Domestic Cold Water	DCW	Blue with Black Letters
Domestic Hot Water	DHW	Blue with Black Letters
Domestic Recirculating Hot Water	DRHW	Blue with Black Letters

1.39 CATALOG DATA FOR THE OWNER (MAINTENANCE, OPERATION AND INSTRUCTION MANUALS)

- A. The contractor under this Division shall prepare three (3) loose leaf, plastic bound 3 ring binders labeled on front cover, title page and binder edge "Job Title" (as indicated on the contract document) " Fire Protection and Plumbing Operations and Maintenance Data." Each manual shall be subdivided with section tabs and shall contain a title page and index. The title page shall contain the following information:
 - 1. Job Title
 - 2. Heating, Air Conditioning, Fire Protection, Plumbing Operation and Maintenance Manual
 - 3. All Contractor Names, Address, Phone # and Contact Person
 - 4. Architect and Engineer's Name, Address and Phone #
- B. Each manual shall contain the following information:
 - 1. Name and address of Consulting Engineer, Contractor, and index of equipment, including vendor (name and address).
 - 2. Complete brochures, descriptive data, etc., on each piece of equipment, including all approved shop drawings. (The

contractor must retain three (3) sets of approved shop drawings for this purpose).

3. Complete maintenance and operating instructions and parts list, prepared by the manufacturer, on each major piece of equipment. This includes blow-out views with labeled parts list.
4. All wiring diagrams for equipment and systems and control schematics. See paragraph on wiring diagrams listed herein before.

C. Manuals shall be submitted to the Architect prior to final inspection of the buildings.

1.40 TEMPORARY HEAT AND WATER

A. See Division 1 for temporary heat and water requirements.

1.41 ACCEPTANCE OF MATERIAL AND MANUFACTURERS

- A. The Architect/Engineer reserves the right to determine if the contractor's proposed materials and equipment of any one manufacturer is acceptable in lieu of the specified material or equipment.
- B. Where materials and equipment are listed on Drawings and specifications as acceptable or equivalent, this does not relieve the contractor and/or manufacturer from providing and proving to Architect/Engineer that their materials and equipment are equivalent to items the Architect/Engineer used as a guide specification.
- C. The contractor and manufacturer must confirm to the Architect/Engineer that their equipment and materials will meet the space requirements of the project and that the equipment is easily accessible for maintenance and operation.

1.42 CLOSEOUT DOCUMENTS

- A. Prior to this project to be considered as "Substantially Complete" the following documents must be presented and approved.
 1. All required approval/inspection letters from the state and local government levels; to include but not limited to:
 - a. Certificate of Inspection and Approval - Kentucky State Department of Health Plumbing Inspector.
 - b. Kentucky Department of Housing, Buildings and Construction Approval Letter.
 - c. Division of Fire Prevention Approval Letter.
 - d. Kentucky Department of Environmental Protection/Division of Water Approval.
 - e. Kentucky Cabinet of Human Resources Approval Letter.
 2. Owner's Operation and Maintenance Manuals.
 3. Approved and mounted valve tag charts.
 4. Domestic water (interior and exterior) sterilization report.

Carver Community Center Rest Room Renovation
Phase 2

General Provisions

5. Record drawings approved and returned to the Architect/Engineer.
6. Evidence that all guarantees and warranties have been submitted on behalf of the owner.

END OF SECTION 220100

SECTION 220200 - PIPE TRENCHING

1.1 GENERAL

- A. The General Conditions, Special Conditions, Site Work and other Contract Documents shall apply to this Division of the work as well as to all other Divisions.
- B. The Contractor under this Division shall do all excavation, backfilling, and grading required for this part of the work. Excavation shall include all earth, rock and other materials necessary for the installation of the new work. No sub surface data available except as noted in site work of the Specifications. All trenching work is unclassified except as noted in site work Specification..
- C. See Site Utility Plans for utility work.
- D. Lay in all pipe in open trenches. Open the trench sufficiently ahead of pipe laying to reveal obstruction.
- E. Provide trench crossings as necessary to accommodate public travel.
- F. See the following Articles for special requirements for Plumbing work.
- G. No blasting will be allowed on this project unless approved by Architect.
- H. Contractors must use extreme care in all excavation work and protect all existing utilities.
 - 1. Contractors must comply with local utility companies requirements if more stringent than listed herein.

1.2 EXCAVATION

- A. Separate Trenches
 - 1. Unless otherwise shown or required, provide separate trenches for all services (sewers, water lines, etc.) with a minimum of three feet (3') of undisturbed earth between trenches. (All utilities installation must be coordinated with local utility companies and comply with their requirements; this includes materials and installation procedures).
- B. Width of Trench
 - 1. Excavate trenches of sufficient width for proper installation of work. When depth of backfill over sewer pipe exceeds ten feet (10') keep the trench at the level of the top of pipe as narrow as practicable.
- C. Shoring and Bracing
 - 1. Shore and brace trench as necessary to protect workmen and adjacent structures. Comply with local regulations or in the absence thereof, with the "Manual of Accident Prevention in Construction", of the associated General Contractors of America, Inc. Do not remove shoring until trench is backfilled sufficiently to protect pipe and prevent injurious caving.

D. Water Removal

1. Keep trenches free from water while construction therein is in progress. Under no circumstances lay pipe or appurtenances in water. Pump or bail water from bell hole to permit proper jointing of pipes. Conduct the discharge from trench dewatering to drains or natural drainage channels.

E. Disposition of Utilities

1. Local and state rules and regulations governing the utilities in this area shall be observed in executing all work under this heading. Active utilities shall be protected or relocated in accordance with instructions of the Architect, Owner, and Local Utility. Inactive and abandoned utilities encountered in trenching operations shall be removed, plugged or capped. In absence of specified requirements, plug or cap such utility lines at least three feet (3') from utility line to be installed or as required by the local regulations. Extreme care must be taken in all excavation work, since active utility lines are present throughout the area. Repair all damaged utility lines in strict accordance with the respective utility company's requirements. Coordinate with all local utility companies and the Owner prior to any excavation work.

F. Grading Trench Bottom

1. Grade the bottom of trenches evenly to insure proper slope for drainage. Perform final grading of trench bottom by hand and carry machine excavation only to such depths that soil bearing for pipes will not be disturbed. For piping to be laid on a grillage, excavate trenches to at least four inches (4") below the required bottom levels and refill to the proper grade with grillage specified hereinafter under Backfilling.

1.3 BACKFILLING

- A. The utility piping systems shall be laid on a grillage of at least 6" of No. 9 crushed stone. After the systems have been installed and tested, install at least 12" of No. 9 crushed stone over piping and firmly compacted using mechanical tamper or backhoe bucket.
- B. Backfill trenches only after piping has been inspected, and locations of pipe lines and appurtenances have been recorded.
- C. For depth of at least 12 inches above the top of the compacted crushed stone noted above, backfill with clean earth or crushed stone (free from stones, rock fragments, roots, sod, cinders, junk, refuse, scrap iron, and unused portions of welding rods). Tamp this backfill thoroughly (using mechanical tamper or backhoe bucket) in layers not exceeding 12" in thickness, taking care not to disturb the pipe or injure the pipe coating.
- D. For the remaining trench depth, backfill with earth as specified in the preceding paragraph, except that the material may contain stones, rocks, concrete or masonry materials (but no cinders) with a maximum dimension of four inches (4"), providing the voids

in such coarse materials are completely filled with earth or granular material. In the event that sufficient suitable material, as specified here for trench backfill, is not available from trenching or other excavation for the project, the Contractor shall supply and place the requisite additional material without increase in the Contract Price. Compact thoroughly the backfill herein referred to with an approved mechanical tamper or backhoe bucket. Compaction must be similar to surrounding conditions. Backfill under all sidewalks, concrete slabs, and pavements shall be 100% #9 crushed stone or dense grade aggregate to under side of slab or pavement. Compact solidly with mechanical tamper in layers not more than six (6) inches.

1.4 GRADING

- A. Finish grading of trenches on the site shall be as shown on the Architectural Drawings and stated in Division 31, and as directed by Architect.
- B. For off site trenching or trenching beyond the normal construction limits, backfill shall be brought to existing grades.
- C. Excess earth and other excavated material shall be removed from the property, unless otherwise directed by Owner.

1.5 RESTORATION OF SURFACES

- A. The Contractor under this Division shall restore to their original conditions all sod, paving, curbing, surfaces, drainage ditches and structures, fences, curbs, and other items damaged or removed by his operations, which are not covered under other sections of the specifications to be replaced or repaired. Replacement and repairs shall be in accordance with good construction practice and shall match material employed in the original construction of the item to be replaced.

END OF SECTION 220200

SECTION 220300 - BASIC MATERIALS FOR PLUMBING WORK

1.1 TESTS

- A. The Architect/Engineer shall be notified by the Contractor under this Division forty eight (48) hours in advance of any tests so that the Architect/Engineer, or his representative may be present when the tests are run. Leaks or imperfections found shall be corrected and a new test shall be run to the satisfaction of the Architect/Engineer. Upon successful completion of the test, pipe covering may be applied and piping may be concealed. A successful test, even if witnessed, however, does not relieve the Contractor under this Division of the responsibility for any failure during the guarantee period.
- B. After pipe fabrication has been completed, all water piping shall be subjected to a hydrostatic test of 100 psi and proven tight and free of leaks for a 24 hour period. Tests shall be applied to the piping before being attached to any equipment which would be damaged by the test pressure. Damage to equipment caused by testing shall be repaired or replaced without additional cost to the Owner.
- C. The sanitary sewer piping and sanitary waste, vent and drainage piping installed under this Division in, under or outside the building shall be tested by means of water, smoke or air in accordance with the Kentucky State Plumbing Law, Regulation and Code, Division of Water Quality and the local utility company requirements. These shall be made in the presence of the Plumbing Inspector and the Architect/Engineer.
- D. Exterior water piping shall be tested in strict compliance with local water company. The minimum hydrostatic test pressure is 1 1/2 times the water pressure serving the site.
- E. No insulation, paint, backfill or other prohibitive covering shall be applied to piping prior to the above tests.
- F. Provide all temporary equipment, materials, valves, gauges, etc., required for the preceding tests.
- G. The expense of all tests shall be borne by the Contractor under this Division.

1.2 EXPANSION OF PIPING

- A. Risers and horizontal runs shall be equipped with the necessary expansion loops or arms to accommodate maximum expansion anticipated. Runouts to risers shall have offset swings between main and riser.
- B. Provide expansion loops at the locations and of the dimensions shown on the Drawings and as required per field conditions.

1.3 GRADING OF PIPING

- A. Domestic Hot and Cold Water Piping
 - 1. Water piping, except that installed "dead level" as necessary
- B. Soil, Waste, Drainage and Vent Piping, Roof Leaders

1. Soil, waste, drainage and vent piping shall pitch 1/4" per foot where practicable, but in no case shall the pitch be less than 1/8" per foot.

1.4 PIPE ANCHORS

- A. Provide anchors at the locations shown on the Drawings and as required per field conditions.
- B. Anchors shall consist of heavy steel collars welded to pipe and secured to the building structure to prevent movement of piping.
- C. Anchors shall be approved by the Architect/Engineer before installation is started.

1.5 UNDERSLAB PIPING

- A. All piping under slab the building shall be supported by hangers cast into the poured slab. Refer to drawings for detail.
- B. All piping under slab shall be supported as if suspended above grade.
- C. At a minimum, hangers shall be placed at each pipe joints, fitting, and per Kentucky Plumbing Code, a maximum of 10' apart.

1.6 PIPE SUPPORTS

- A. Piping shall be run parallel to the building walls and shall be grouped in neat rows. Piping shall be supported to maintain required grading and to prevent vibration and shall be arranged to allow for expansion and contraction. Hanger rods longer than three feet (3') shall be restrained to prevent swinging of the pipes. Hangers shall be sized in accordance with the manufacturer's recommendations.
- B. Where piping is to be supported from the concrete construction, provide inserts installed directly in the slabs. Concrete inserts shall be malleable iron; Grinnell Figure 282.
- C. Where piping is to be supported from steel joist construction, provide supplementary steel angles or steel pipe welded between joists, or the use of approved joist and beam clamps. Steel members spanning between joists shall be attached to the top chord of joists not bottom chords. Where piping is to be supported from wood joist construction, hangers shall be supported by bolts thru center of joist.
- D. In areas where concrete floors over steel decking is used, drill holes through deck into concrete and use expansion shields. Proof load of expansion shields in pull out shall be four times applied load. Steel decking alone shall not be used to support ductwork, piping, equipment, etc.
- E. Piping, except as hereinafter specified, shall be supported by hangers, supports and/or stands, of the following Grinnell Figure Numbers:

1. Hangers

PIPE SIZES

HANGER

5" and smaller

260, steel clevis

Bare copper

CT 99 (copper plated), or

CT 99C (plastic coated)

2. Stands

PIPE SIZES

FIGURE NUMBER

All sizes

274, adjustable prior pipe roll

- F. Hangers and stand supports for all horizontal cold water lines shall be sized for the outside diameter of the insulated pipe. Insulation shall pass unbroken through the hanger and shall rest on insulation protector saddles fabricated from 20 gauge sheet steel. Saddles shall be 9" long and have an arc of approximately 120 degrees. Saddles may be job made or shall be Grinnell Figure No. 167.
- G. Brackets for downfeed piping serving heating units shall be Fee and Mason No. 302 split ring extension hanger. Brackets shall be sized to fit the bare pipe.
- H. Vertical plumbing piping shall be supported by Figure 261 riser clamps at each floor.
- I. Steel supports, other than designed building structural members, required for support of piping installed under this Section of the Specifications, shall be furnished and installed under this Division.
- J. Piping supports shall not be attached to any equipment having moving parts. Supports shall be independent of equipment by brackets to the floor, walls, or columns.
- K. Maximum spacing of supports shall be as follows:
- | PIPE SIZES | SPACING |
|---------------------|---------------------------|
| 1 1/2" and smaller | 8' |
| 2" and larger | 8' |
| Polyethylene Piping | 5' |
| Cast iron pipe | Each length or 8' maximum |
- L. Comparable hangers, supports, etc., as manufactured by Fee and Mason, Elcen, or B-Line, Gateway will be considered equal to the Grinnell products providing the specifications are fully met. 1/2" through 2" pipe shall have 3/8" diameter hanger rods; 2 1/2" and 3" pipe shall have 1/2" diameter hanger rods; 4" through 5" pipe shall have 5/8" diameter hanger rods; 6" through 8" pipe shall have 3/4" diameter hanger rods.

1.7 PIPE AND PIPE FITTINGS

A. General

1. The General Conditions, Special Conditions, and the applicable portions of Division 1 of the Specifications are a part of this section.
2. The Contractor for this work shall be governed by any Alternate Bids requested insofar as they affect his work.

B. Scope

1. This work includes the furnishing of all pipe and pipe fittings, materials, equipment, labor, etc., necessary for

the proper and complete installation of systems and equipment as shown on the drawings and/or herein specified.

C. Installation

1. All sanitary soil, waste and vent piping shall be installed in accordance with the latest revisions of the Kentucky State Plumbing Code.
2. In general, all piping shall be installed concealed except in mechanical, storage, janitor rooms and etc., and shall be installed underground or beneath concrete slab on grade only where indicated. All lines at ceilings shall be held as high as possible and be run to avoid conflicts with other trades, and to facilitate the owner's use and access.
3. Piping shall be installed straight and true, parallel or perpendicular to walls, with approved offsets around obstructions. Standard pipe fittings shall be used for changing direction of piping. No mitered joints or field fabricated pipe bends are permitted, except that copper pipe 1/2" and smaller may be bent in the field with approved bending equipment, if authorized by the Engineer.
4. Tee connections for welded pipe shall be made up with welding fittings. Where the size of the side outlet is such that a different connection technique than on the run is required, a weld o let, socket o let, or thread o let type fitting may be used for the side outlet in place of reducing tees only where the outlet is 2/3 of the run size, or smaller.
5. Short radius elbows may be used only where specifically authorized by the Architect/Engineer.
6. Unless otherwise indicated on the Drawings, all piping shall be pitched to permit drainage and venting. Air vent lines shall be provided in all liquid under pressure at all high points and at drops in direction of flow and where otherwise indicated. Air vent valves in all water lines, except potable water lines, shall be manual type unless otherwise indicated and be piped to drain or as directed by the Architect/Engineer. All vents shall be installed easily accessible locations with extensions to cabinet face where installed in radiation cabinets.
7. Piping shall be erected to provide for expansion and contraction without harmful strain to building structural members, pipe and vibrating equipment. Provide expansion bends or devices other than those indicated if, in the opinion of the Engineer, such devices are required by field conditions. Unless indicated otherwise, expansion bends are preferred to the use of expansion joint and shall not be substituted without the permission of the Engineer. Expansion bends in steel pipe shall be made using long radius welding elbows. Expansion loops shall be cold sprung and welded into the line, which shall be anchored before removing the spreader from the expansion U bends.
8. Expansion loops, swing ells of joints shall be installed where indicated and where specified herein. Design and

installation of expansion joints shall be such as to provide for the stresses and strains imposed by connected piping and vibrating equipment and by operating pressures, test pressures and temperatures.

9. Ream all pipe ends and thoroughly clean dirt, chips and foreign matter from all piping, fittings, valves and other accessories before joint connections are made.
10. Screwed joints shall be made with oil and graphite or other approved compound. Joint compound shall be applied to the male threads only and care shall be exercised to prevent compound from reaching the interior of the pipe.
11. Screwed unions, welded unions or bolted flanges shall be provided as required to permit convenient removal of equipment, valves and piping accessories from the pipe system. In concealed locations, union nuts shall be center punched to prevent loosening from vibration. Leave adequate clearances for rodding, motor lubrication, etc.
12. Copper tubing connections for water piping shall be made up with 95/5 tin antimony solder (50/50 solder not acceptable) in accordance with the recommendations of the manufacturer. Brass valves for use in copper piping 2" and larger shall have screwed or flanged ends with screwed or companion flanges and adapters to suit. Brass valves smaller than 2" may be soldered, but extreme care must be taken to prevent heat damage to valve.
13. Dielectric insulating unions or dielectric couplings shall be used wherever the adjoining materials being connected are of dissimilar material such as connections between copper tube and steel pipe.
14. Flanged joints shall be assembled with appropriate flanges, gaskets and bolting. The clearance between flange faces shall be such that the connections can be gasketed and bolted tight without imposing undue strain on the piping system. Flange faces shall be parallel and the bores concentric; gaskets shall be centered on the flange faces so as not to project into the bore. Bolting shall be lubricated before assembly to insure uniform bolt stressing. The flange bolts shall be drawn up and tightened in staggered sequence in order to prevent unequal gasket compression and deformation of the flanges. Wherever a flange with a raised face is used, the face shall be machined down to a smooth matching surface and a full face gasket shall be used.
15. Piping shall not be installed in locations subject to freezing; if in doubt, consult Engineer. Exterior lines shall have a minimum earth cover of 36 inches unless otherwise noted.
16. Eccentric reducers shall be used where required to permit proper drainage and venting of pipe lines; bushings are not permitted for this purpose. Drain valves shall be provided in all piping systems at low points and otherwise

- indicated. Blow off valves shall be provided in all piping at strainers where indicated hereinafter.
17. Provide pipe anchors as noted hereinbefore. Anchors shall consist of heavy steel collars welded to pipe and secured to the building structure to prevent movement of piping. All anchors shall be approved by the Architect/Engineer, before installation is started.
 18. Condensate drain lines from cooling equipment shall be pitched and installed with brass plug cleanouts at each change in direction and/or at 20' intervals.
 19. At each fixture and piece of equipment, provide appropriate shutoff valves and unions.
 20. Materials shall be new and of the best grade and quality; workmanship shall be first class in every respect.
 21. All thread shall conform to ANSI B16.3 for American Standard Taper Pipe Threads.
 22. Chain or wire rope slings for handling pipe shall not be allowed unless padded to prevent marring of protective coating on pipe.
 23. Lock type mechanical joints shall be made up tight, but shall allow for 1/8" contraction of the pipe at each joint.
 24. Pipe shall be kept clean at all times, especially the interior and joint surfaces. When no work is in progress the pipe shall be capped or plugged to prevent the entrance of water or dirt. Before any cast iron or ductile iron pipe is laid, it shall be lightly tapped with a hammer while suspended above the ground; sound pipe will emit a clear ring sound, unsound pipe will emit a dull sound. Unsound pipe shall not be laid and shall be rejected.
 25. All steel surfaces such as tie rods, flanges, bolts, nuts, etc., to be buried in the earth, shall be protected with a 1/4" minimum coating of filtrated bituminous compound after installation and prior to backfill. Protective coating shall be Sonneborn "Hydrocide Mastic", Lambers "Waterban #60M", Emulsified Asphalts "Multiseal" or equivalent. Application shall be in strict accordance with manufacturer's directions. All existing steel surfaces uncovered by excavation shall be thoroughly cleaned and treated in a like manner.
 26. Plastic piping shall not be installed in any facility in a manner that would require penetration of one hour or greater fire resistive wall, ceiling or shaft. Unprotected plastic piping shall not be installed in any area that is used for the transfer of environmental air in accordance with the Kentucky State Building Code.
 27. Solder joints for water systems; use 95/5 tin antimony (50/50 solder not acceptable).
 28. Material shall be new and of the best grade and quality; workmanship shall be first class in every respect.

29. Soil, waste, and vent piping shall pitch 1/4" per foot where practicable, but not less than 1/8" per foot or as indicated.
30. All piping must be installed to allow proper access to equipment, access doors, valves, motors, etc.

D. Standards

1. Steel Pipe: ASTM A 120 or A 53; plain and galvanized.
2. Copper Tube: Type K, L, M; ASTM B 88.
3. Copper Tube: Type DWV; ASTM B 306.
4. Soil Pipe: ASTM A 74.
5. Welded Fittings: ANSI B 16.9.
6. Weld Flanges: ANSI B 16.5.
7. Cast Iron Screwed Fittings: ANSI B 16.4, Plain and galvanized.
8. Malleable iron screwed fittings: ANSI B 16.3.
9. Cast iron drainage fittings: ANSI B 16.22; Plain and galvanized.
10. Cast iron flanged fittings: ANSI B 16.1.
11. Wrought copper flanged fittings: ANSI B 16.1.
12. Cast bronze drainage fittings: ANSI B 16.23.
13. Cast iron soil pipe fittings; ASTM A 74.
14. Solder: Handy and Harman, United Wire and Supply and Air Reduction Company.

E. Relief Valve Piping

1. Piping shall be Type "L" Hard Copper.
2. Fittings shall be wrought copper or precast brass with solder joint; 95/5 tin antimony solder.

F. Soil, Waste, and Vent Piping (Interior)

1. Soil and waste piping below slab and in earth inside building shall be service weight cast iron with cast iron hub and spigot fittings and approved neoprene compression gaskets, meeting the requirements of the Kentucky Plumbing Code, .
2. Refer to detail for installation and support of under slab piping.
3. All other soil, waste and vent piping shall be service weight cast iron hub and spigot, service weight cast iron no hub, DWV copper, or PVC plastic, as per Kentucky State Plumbing Code will allow. Use of PVC requires installation of cast iron to PVC adapters when connecting to cast iron drain line. PVC pipe shall not be used in return air plenums and relief air plenums.

G. Acid Waste

1. Acid waste and vent piping to be schedule 40 polypropylene and shall be produced and labeled as ASTM C-4101-85. Piping material to be listed for use in acid waste systems per the Kentucky State Plumbing Code. All drainage joints to be heat fused. All joints below grade and in walls to be heat fused. All other joints can be mechanical.
 2. Provide proper fittings for the installation and connection of all lines. In general, provide a Y-branch and a 1/8 curve for each branch connection except at manholes. Provide exterior cleanouts as required and as noted on drawings.
- H. Domestic Hot Water, Cold Water and Recirculating Hot Water (Interior)
1. Piping
 - a. Piping above slab shall be Type L hard copper.
 - b. Piping below slab shall be Type "K" copper. Solder joints with silver solder brazing alloy.
 2. Fittings shall be wrought copper or precast brass, solder joint type. T-drill method with brazed joint is acceptable.
 3. Furnish and install hot and cold water piping to all fixtures and equipment requiring these respective services. The piping shall be installed at locations and of the size shown on the Drawings or as required for a complete and operating system.
- I. Unions
1. Copper pipe 2" and less; 125#; brass; solder end; ASA.
 2. Copper pipe 2 1/2" and more; 150#; brass; solder end.
 3. Flange unions to have proper gaskets for applicable service.
- J. Polyvinyl Tape
1. Johns Manville, Minnesota Mining and Mfg., Union Carbide or equivalent; similar to Johns Manville No. V 20; 0.02" thick; polyvinyl.
- K. Escutcheons
1. Escutcheons shall be Beaton and Caldwell; Carpenter and Patterson; Fee and Mason or approved equivalent. Escutcheons shall be set screw type for permanent installation.
 2. Exposed bare and insulated piping passing through floors, walls, or ceilings of finished rooms shall be provided with chrome plated escutcheons. Plates shall be of the split, hinged type of sufficient outside diameter to amply cover up the sleeve openings for the pipe. Beaton and Caldwell No. 10.
 3. The Contractor's attention is called to the fact that most of the escutcheons will be installed around insulated pipe. It will be necessary that the plates fit snugly around the

insulation and will be firmly held in place. Insulation shall not be cut or notched in any way.

4. Provide chrome plated escutcheons for hanger rods in finished ceilings. Carpenter and Patterson #182.

L. Insulating Dielectric Unions and Couplings

1. Epco type GX or DX as required, Walter Vallett Co., Capitol Mfg. Co., Victaulic, or equivalent, for use in connecting dissimilar metals.

1.8 VALVES

A. Installation

1. Where required for ease of operation of valves and wherever elsewhere required by the Drawings, valves shall have extension stems.
2. All valves shall be of the same manufacturer insofar as possible.
3. In no case shall valves be installed with the stems below the horizontal.
4. Valves located above ceilings and in accessible pipe chases shall be provided with access panels.
5. Valves for water service shall be built for not less than 125 lbs. W.S.P., 200 lbs. W.O.G., 450 degrees F flanged valves shall have standard weight flanges.
6. Provide the required wrenches or handles to operate valves and cocks. A set of wrenches of handles shall be mounted on a finished plywood panel and installed in the Boiler Room where directed.
7. Brass valves for use in copper piping 1/2" and larger shall have screwed or flanged ends with screws or companion flanges and adapter to suit. Brass valves smaller than 2 1/2 inches may be soldered but extreme care must be taken to prevent heat damage to valve. Comply strictly with manufacturer's requirements.
8. Valves shall be the same size as the line in which they are installed unless otherwise noted.
9. The following paragraphs mention usually Nibco and Dezurik No.'s to establish desired quality. Comparable valves by Milwaukee, Grinnell, Crane, Kennedy, Lunkenheimer, Walworth, Jenkins, Jamesbury, Apollo, Keystone, Kunkle, Mueller, Pegler, Homestead, Red/White and Stockham will be considered equal.

B. Swing Check Valves

1. Check valve 2" and smaller, Nibco No. T 413 Y, screwed, bronze, swing check, renewable TFE disc, 125 lbs. steam/200 lbs. WOG, working pressure.
2. Check valve 2 1/2" and larger, Nibco No. F 918 B, I.B.B.M., flanged, with bolted cap, swing check, renewable seat and disc, 125 lbs. steam/200 lbs. WOG, working pressure.

C. Ball Valves

1. Nibco No. T 585 70; anti blowout stem; Body shall be bronze or brass, two piece, with screwed ends. Ball shall be hard chromium plated bronze or brass. Seats, stem packing seal and thrust washer shall be RTFE. Valve handle and nut shall be cadmium or zinc plated steel, with non heat vinyl grip. Valve shall be operated from full open to full closed by turning the valve handle one quarter turn (90 degrees) and the valve handle shall indicate ball position. Valve shall be suitable for flow in either direction. Valve assembly shall be rated 150 P.S.I. SWP and 600 P.S.I. WOG, for 1/4" through 2" sizes; valves shall be full port 1/4" thru 1" and conventional port 1 1/4" thru 3".

D. Balancing Valve Flow Indicator (Plumbing Domestic Hot Water)

1. Balancing valves shall be Flowset, Accusetter, Armstrong, Gerand, or equivalent, with flow indicator and memory stop for shut off use without changing balance set point. Provide a minimum of 24" of straight run of piping on each side of balancing valve/flow indicator assembly.

E. Relief Valves

1. Provide relief valves for all pressure systems including domestic hot water heaters, boilers, storage tanks, water source heat pump loop piping as required by manufacturers, prevailing codes or insurance requirements.
2. Relief valves for domestic water heaters and storage tanks shall be combination pressure and temperature type with pressure setting of 125 psi and temperature setting of 210 degrees F.
3. Discharge these relief valves over to floor drain or as shown and noted on Drawings.
4. All relief valves shall be lever handle operated, A.S.M.E. approved as manufactured by Watts, McDonnell Miller, Kunkle, or equivalent. Coordinate relief valve setting and sizing with equipment manufacturers.
5. Water heaters and boilers shall be provided from the factory with code approved relief valves sized, located and installed in strict accordance with code and manufacturer's requirements.

F. Silent Check Valves

1. Silent check valves 2" and smaller, Nibco No. T-480Y; screwed; 125 p.s.i. steam/250 p.s.i. WOG; 3 lb. stainless steel spring; bronze body; stainless steel stem; TFE disc and seat ring.
2. Silent check valves, 2 1/2" and larger, Nibco No. W-960 (wafer) or F-960 (flanged); cast iron body; type 302 stainless spring; bronze disc; Buna N bonded to bronze seat; 250 lb. W.O.G.
3. All check valves at pumps shall be silent type.

G. Gauge Cocks

1. Ashcroft No. 1092; 150 PSIG maximum working pressure; bronze; 1/4" screwed connections; tee handle.
2. All pressure gauges shall be installed with a gauge cock.

1.9 MISCELLANEOUS PLUMBING. SPECIALTIES

A. Thermometers

1. Weiss No. 9VS type vari-angle 9" mercury filled heavy duty type; Marshalltown, Ashcroft, Marsh, or equivalent, Accuracy within 2% of scale span. Brass 3 1/2" (min.) stem complete with separable socker. Stem and socket must be of adequate length to give accurate temperature readings. Install in piping system in strict accordance with manufacturer's requirements. Increase pipe sizing at thermometer as required. Range 30 to 240 degrees F. for hot water piping, and 0 120 degrees F, for heat pump loop water, unless other standard range selected upon submittal. Contractor shall adjust case for readability from floor line.

B. Pressure Gauges

1. Weiss Series UG 1, Ashcroft, Marsh, Marshalltown or equivalent. 4 1/2" dial, range selected upon submittal; with maximum pointer; brass bourdon tube and socket; 1% accuracy.
2. All pressure gauges shall be installed with lever handle gauge cock and brass straight coil siphon tube.

C. Strainers

1. Strainers shall be Y type equal to Leslie, Illinois, or Mueller. Sizes 2 1/2" and larger shall be flanged; sizes 2" and smaller shall be screwed.
2. Water strainers shall be cast iron or brass, designed for 125 lb. steam/200 lbs. WOG working pressure.
3. Strainers shall have a free area of strainer screen a minimum of twice the area of the adjoining pipe. Strainer baskets shall be fabricated from stainless steel or monel sheet metal; baskets shall have 0.045" (3/64") perforations for water service.
4. Strainers shall have short nipple and ball valve provided on blow off, sized the same as blow off size. Where strainers are located more than 3' above floor, blow off line shall be offset to wall or column and extended down to 3' level and then valve provided. Provide nipple and cap on smaller strainers, in addition to ball valve, at AHU's, FCU's and UV's for easy maintenance blow-off.

END OF SECTION 220300

SECTION 220700 - PIPING INSULATION

1.1 GENERAL

- A. The General Conditions, Special Conditions and the applicable portions of Division 1 of the Specifications are a part of this Section.
- B. The Contractor for this work shall be governed by any Alternate Bids requested insofar as they affect this work.

1.2 SCOPE

- A. This work includes the furnishing of all insulation and labor, materials, equipment, etc., necessary for the proper and complete installation of insulation as shown on the Drawings and/or herein specified.

1.3 SHOP DRAWINGS

- A. Shop Drawing shall be submitted on all insulation including name of manufacturer, materials of construction, manufacturer's details of installation, procedures, mastics, tape, glass cloth, molded fittings, etc. Shop drawings shall include all equipment, materials and accessories incidental to a proper and complete installation.

1.4 ACCEPTABLE INSULATING MATERIAL MANUFACTURERS

- A. Insulations having the thermal and physical properties of the specific materials specified hereinafter, of any of the following manufacturers, or approved equal, are acceptable.

Armstrong Cork

Knauf

Johns Manville

Certain Teed/Saint Gobain

Owens Corning

Pittsburgh Corning

Rubatex

- B. The Architect reserves the right to determine if the proposed insulating materials of any one manufacturer are acceptable in lieu of the specific insulation selected for the following applications.

1.5 INSTALLATION

- A. All workmanship shall reflect the best current practices in the trade. Installation shall be applied by an approved company regularly engaged in the application of insulation. A neat and workmanlike job will be required. No covering shall be applied to pipe lines equipment until they have been tested and accepted by the A/E.
- B. Contours on exposed work shall be smooth and continuous. Cemented laps, flaps, bands and tapes shall be smoothly and securely pasted down; adhesives shall be liberally used in conformity with the requirements of the manufacturer.
- C. Where more than one thickness of insulation is required, joints (both longitudinal and transverse) shall be staggered. All joints shall be tight and with insulation lengths tightly butted against each other. Where lengths are cut, cuts must be smooth and square and without breakage of end surfaces. Where

insulation terminates at unions, equipment, etc., ends shall be neatly tapered and effectively vapor sealed where insulation is vapor sealed. All insulation shall be continuous through wall and ceiling openings and sleeves. Penciling and stove piping of pipe insulation will not be permitted.

- D. On vapor sealed insulation, the vapor barrier shall be continuous over all insulation. Insulation (and vapor seal if required) shall be continuous through pipe sleeves and pipe hangers, unless otherwise specified.
- E. It shall be understood that except where they deviate from specific requirements hereinafter written, all material shall be applied in strict accordance with the recommendations of the manufacturer, using their recommended mastics, clips, etc., and installation procedures.
- F. Provide canvas jacket in addition to standard jacket on all exposed insulated piping (up to 6 ft. above finished floor) in Mech Room and size for painting. Canvas shall be 8 ounce enameling canvas attached with polyvinyl acetate adhesive.
- G. Insulation shall extend through hanger and support shield for all cold water piping to be hung in horizontal. Where piping is 2 1/2" and larger, a high compression cork or wood pipe support shall be installed under pipe.
- H. For vertical piping, the bracket shall fit directly to pipe and insulation shall be applied around bracket and support rod.
- I. Insulation on adjacent piping to flanges shall terminate a sufficient distance back from the flange faces to permit removal of bolts. Terminate by beveling tightly into piping. Flange insulation shall extend along and overlap pipe insulation by at least 2" and shall terminate with a snug fit into pipe insulation with beveled edge. Unions on cold and chilled water shall be insulated in the same manner as flanges. Taper and seal (ground) insulation in continuous runs of vapor sealed pipe at 20 foot intervals, similarly.
- J. Any piping exposed in the air stream inside an air handling unit shall be covered with 20 mil PVC jacket pipe covering and sealed watertight in strict accordance with manufacturer's requirements.
- K. Insulation shall meet the following fire hazard requirements as tested under procedure ASTM E 84, NFPA 255 and UL 723.
 - 1. Flame spread, less than 25.
 - 2. Smoke developed, less than 50.
 - 3. Fuel Contribution, less than 50.

1.6 ITEMS TO BE INSULATED

- A. Domestic hot, cold and recirculating piping
- B. Exposed piping (waste, HW and CW) at handicapped sinks. (Provide with PVC jacket).

1.7 REQUIRED COVERING AND APPLICATION

- A. Domestic Hot, Cold and Recirculation Water Piping

1. Owens-Corning or Johns Manville fiberglass insulation with Type AP all purpose jacket; perm rating of .02 perms. "K" factor of .23 @ 75 degrees mean temperature. Insulation thickness shall be 1", except condensate drains shall be 1/2" thick. Jackets shall be double self-sealing lap (stapled when required) and joints sealed with vapor proof mastic. Wrap joints with J M Dutch Brand pressure sensitive tape; 2" width. Fittings 2" and larger shall be made of mitered segments of insulation and vapor sealed with (2) coats of vapor barrier adhesive reinforced with glass cloth between coats. Fittings 1 1/2" and smaller shall be wrapped with two (2) coats of vapor barrier adhesive reinforced with glass cloth between coats. In addition to the above in finished areas premolded PVC fittings shall be used. Premold fittings shall be stapled in place, wrapped with 2" wide pressure sensitive tape and the edges sealed with vapor proof mastic.
 2. Manufacturers offering products complying with requirements include:

Johns Manville; Glass Fiber with Type AP Jacket
Owens Corning; Fiberglas ASJ/SSL-11 All-Service Jacket
Certain Teed
Knauf
- B. Exposed Waste Piping and HW and CW Piping at Handicapped Sinks
1. Piping drops inside walls can be insulated with 1/2" Armstrong Armoflex polyethylene closed cell or equivalent insulation in lieu of 1" fiberglass noted above. Insulation shall be non split type and slipped over pipe before joints are soldered together. All fittings and connections shall be factory pre molded type and applied with factory recommended adhesive. Exposed piping (waste, HW and CW) at handicapped sinks shall have 20 mil PVC jacket (pre-manufactured system can be used at Contractor's option).
- C. Domestic Water Below Slab and to 10' 0" Outside Building
1. Piping shall be insulated with 1/2" Armstrong Armoflex polyethylene closed cell or equivalent insulation. Insulation shall be non-split type and slipped over pipe before joints are soldered together. All fittings and connections shall be factory pre-molded type and applied with factory recommended adhesive.
- D. NOTE: All areas in the piping system which requires general maintenance (example: valve handles, motorized valve operators, strainers in piping, strainers in suction diffusers, access doors) shall be insulated such that maintenance functions can be made without damaging the insulation.

END OF SECTION 220700

SECTION 223300 - MISCELLANEOUS PLUMBING EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following miscellaneous plumbing equipment:
 - 1. Recirculating Pumps
 - 2. Trap Primers

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. Provide Shop Drawings for each of the following plumbing miscellaneous items.
 - a. Recirculating Pumps
 - b. Trap Primers
 - 2. Product Data: For each plumbing specialty indicated. Include rated capacities of selected equipment and shipping, installed, and operating weights. Indicate materials, finishes, dimensions, required clearances, and methods of assembly of components; and piping and wiring connections for the following plumbing specialty products:
- B. Operation and Maintenance Data:
- C. Warranty: Special warranty specified in this Section.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain same type of electric water heaters through one source from a single manufacturer.
- B. Product Options: Drawings indicate size, profiles, dimensional requirements, and characteristics of plumbing specialties and are based on the specific types and models indicated. Other manufacturers' products with equal performance characteristics may be considered. Refer to Division 1 Section "Substitutions."
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- D. ASHRAE/IESNA 90.1-2004 Compliance: Applicable requirements in ASHRAE/IESNA 90.1-2004.
- E. ASME Compliance: Where indicated, fabricate and label commercial water heater storage tanks to comply with ASME Boiler and Pressure Vessel Code: Section VIII, Division 1.

1.5 COORDINATION

- A. Coordinate size and location of concrete bases with Architectural and Structural Drawings.
- B. Coordinate locations of all plumbing equipment with all other trades prior to installation. Notify engineer of any conflicts.

1.6 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of electric water heaters that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures including storage tank and supports.
 - b. Faulty operation of controls.
 - c. Deterioration of metals, metal finishes, and other materials beyond normal use.
 - 2. Warranty Period(s): From date of Substantial Completion:
 - a. Electric Water Heaters:
 - (1) Storage Tank: 5 years.
 - (2) Controls and Other Components: 3 years.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.

2.2 RECIRCULATING PUMP: RP-1

- A. RP-1:
 - 1. Recirculation Pumps shall be designed for continuous operation, be bronze construction, be provided with thermal overload protection and shall be supported by the water piping. Control of the hot water recirculating pumps shall be by means of an immersion adjustable range aquastat with visible scale and detachable well and interlocked with the building automation system
 - 2. Flange size:
 - a. RP-1: 3/4"
- B. See pump schedule and details herein and on Drawings for locations and capacities
- C. Equivalents:
 - 1. Manufacturers offering Pumps complying with requirements include, but not limited to: Taco, Bell & Gossett, and Liberty.

2.3 TRAP PRIMERS:

A. Manual Trap Primers: Sioux Chief Model #695-D432F.

1. 90 GPM pressure drop across valve at 5 PSI

PART 3 - EXECUTION

3.1 PLUMBING SPECIALTY INSTALLATION

- A. General: Install plumbing specialty components, connections, and devices according to manufacturers written instructions.
- B. Install backflow preventers of type, size, and capacity indicated, at each water-supply connection to mechanical equipment and systems, and to other equipment and water systems as indicated. Comply with authorities having jurisdiction. Locate backflow preventers in same room as connected equipment. Install air-gap fitting on units with atmospheric-vent connection and pipe relief outlet drain to nearest floor drain. Do not install bypass around backflow preventer.
- C. Install pressure regulators with inlet and outlet shutoff valves and balance valve bypass. Install pressure gages on inlet and outlet.
- D. Install hose bibbs with integral or field-installed vacuum breaker.
- E. Install wall hydrants with integral or field-installed vacuum breaker.
- F. Install trap seal primer valves with valve outlet piping pitched down toward drain trap a minimum of one percent and connect to floor-drain body, trap, or inlet fitting. Adjust valve for proper flow.
- G. Install expansion joints on vertical risers, stacks, and conductors as indicated.
- H. Install cleanouts in aboveground piping and building drain piping as indicated, and where not indicated, according to the following:
 - 1. Size same as drainage piping up to 4-inch NPS (DN100). Use 4-inch NPS (DN100) for larger drainage piping unless larger cleanout is indicated.
 - 2. Locate at each change in direction of piping greater than 45 degrees.
 - 3. Locate at minimum intervals of 50 feet (15 m) for piping 4-inch NPS (DN100) and smaller and 100 feet (30 m) for larger piping.
 - 4. Locate at base of each vertical soil and waste stack.
- I. Install cleanout deck plates, of types indicated, with top flush with finished floor, for floor cleanouts for piping below floors.
- J. Install cleanout wall access covers, of types indicated, with frame and cover flush with finished wall, for cleanouts located in concealed piping.

- K. Install flashing flange and clamping device with each stack and cleanout passing through floors with waterproof membrane where applicable.
- L. Install vent flashing sleeves on stacks passing through roof. Secure over stack flashing according to manufacturer's written instructions.
- M. Install frost-proof vent caps on each vent pipe passing through roof. Maintain 1-inch (25-mm) clearance between vent pipe and roof substrate.
- N. Install floor drains at low points of surface areas to be drained. Set grates of drains flush with finished floor or as indicated. Size outlets as indicated.
- O. Set floor drains below elevation of surrounding finished floor to allow floor drainage. Set with grates depressed according to the following drainage area radii:
 - 1. Radius, 30 Inches (750 mm) or Less: Equivalent to 1 percent slope, but not less than 1/4-inch (6.35-mm) total depression.
 - 2. Radius, 30 to 60 Inches (750 to 1500 mm): Equivalent to one percent slope.
 - 3. Radius, 60 Inches (1500 mm) or Larger: Equivalent to 1 percent slope, but not greater than 1-inch (25-mm) total depression.
- P. Install individual traps for floor drains connected to sanitary building drain, unless otherwise indicated.
- Q. Install floor-drain flashing collar or flange so no leakage occurs between drain and adjoining flooring. Maintain integrity of waterproof membranes where penetrated.
- R. Position floor drains for easy access and maintenance.
- S. Fasten wall-hanging plumbing specialties securely to supports attached to building substrate if supports are specified and to building wall construction if no support is indicated.
- T. Fasten recessed, wall-mounting plumbing specialties to reinforcement built into walls.
- U. Secure supplies to supports or substrate.
- V. Install individual stop valve in each water supply to plumbing specialties. Use ball, valve if specific valve is not indicated.
- W. Install water-supply stop valves in accessible locations.
- X. Install traps on plumbing specialty drain outlets. Omit traps on indirect wastes unless trap is indicated.
- Y. Locate drainage piping as close as possible to bottom of floor slab supporting fixtures and drains.
- Z. Install escutcheons at wall, floor, and ceiling penetrations in exposed finished locations and within cabinets and millwork. Use deep-pattern escutcheons if required to conceal protruding pipe fittings.

- AA. Include wood-blocking reinforcement for recessed and wall-mounting plumbing specialties.

3.2 CONNECTIONS

- A. Piping installation requirements are specified in other Division 22 Sections. Drawings indicate general arrangement of piping, fittings, and specialties. The following are specific connection requirements:
 - 1. Install piping connections between plumbing specialties and piping specified in other Division 22 Sections.
 - 2. Install piping connections indicated between appliances and equipment specified in other Sections; connect directly to plumbing piping systems.
 - 3. Install piping connections indicated as indirect wastes from appliances and equipment specified in other Sections, to spill over receptors connected to plumbing piping systems.
 - 4. Supply Runouts to Plumbing Specialties: Install hot- and cold-water-supply piping of sizes indicated, but not smaller than required by authorities having jurisdiction.
 - 5. Drainage Runouts to Plumbing Specialties: Install drainage and vent piping, with approved trap, of sizes indicated, but not smaller than required by authorities having jurisdiction.

3.3 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Provide services of factory-authorized service representative to supervise the field assembly of components and installation of grease recovery units, including piping and electrical connections, and to report results in writing.
 - 1. Test and adjust plumbing specialty controls and safeties. Replace damaged and malfunctioning controls and components.

3.4 COMMISSIONING

- A. Before startup, perform the following checks:
 - 1. System tests are complete.
 - 2. Damaged and defective specialties and accessories have been replaced or repaired.
 - 3. Clear space is provided for servicing specialties.
- B. Before operating systems, perform the following steps:
 - 1. Close drain valves, hydrants, and hose bibbs.
 - 2. Open general-duty valves to fully open position.
 - 3. Remove and clean strainers.
 - 4. Verify that drainage and vent piping are clear of obstructions. Flush with water until clear.

- C. Startup Procedures: Follow manufacturer's written instructions. If no procedures are prescribed by manufacturer, proceed as follows:
 - 1. Energize circuits for electrically operated units. Start and run units through complete sequence of operations.
- D. Adjust operation and correct deficiencies discovered during commissioning.

3.5 PROTECTION

- A. Protect drains during remainder of construction period to avoid clogging with dirt and debris and to prevent damage from traffic and construction work.
- B. Place plugs in ends of uncompleted piping at end of each day or when work stops.

END OF SECTION 223300

SECTION 224000 - PLUMBING FIXTURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following conventional:
 - 1. Plumbing fixtures and related components:
 - a. Water closets
 - b. Urinals
 - c. Lavatories
 - d. Drinking Fountains
 - e. Other Specialties
 - (1) Hose Bibs
 - f. Floor Drains, Floor Sinks and Cleanouts
 - (1) Floor Drains
 - (2) Cleanouts
 - (3) Access panels
 - g. Water Hammer Arrestors
- B. Related Sections include the following:
 - 1. Division 10 Section "Toilet, Bath, and Laundry Accessories."

1.3 DEFINITIONS

- A. Accessible Fixture: Plumbing fixture that can be approached, entered, and used by people with disabilities.
- B. Fitting: Device that controls the flow of water into or out of the plumbing fixture. Fittings specified in this Section include supplies and stops, faucets and spouts, shower heads and tub spouts, drains and tailpieces, and traps and waste pipes. Piping and general-duty valves are included where indicated.

1.4 SUBMITTALS

- A. Shop Drawings: For each type of plumbing fixture indicated. Include selected fixture and trim, fittings, accessories, appliances, appurtenances, equipment, and supports. Indicate materials and finishes, dimensions, construction details, and flow-control rates.
- B. Operation and Maintenance Data: For plumbing fixtures to include in emergency, operation, and maintenance manuals.
- C. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE

- A. Source Limitations: Obtain plumbing fixtures, faucets, and other components of each category through one source from a single manufacturer.
 - 1. Exception: If fixtures, faucets, or other components are not available from a single manufacturer, obtain similar products from other manufacturers specified for that category.
- B. Select combinations of fixtures and trim, faucets, fittings, and other components that are compatible.
- C. Special Warranties: Manufacturer's standard form in which manufacturer agrees to repair or replace components of whirlpools that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures of unit shell.
 - b. Faulty operation of controls, blowers, pumps, heaters, and timers.
 - c. Deterioration of metals, metal finishes, and other materials beyond normal use.
 - 2. Warranty Period for Commercial Applications: One year from date of Substantial Completion.

1.6 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Faucet Washers and O-Rings: Equal to 10 percent of amount of each type and size installed.
 - 2. Faucet Cartridges and O-Rings: Equal to 5 percent of amount of each type and size installed.
 - 3. Flush Valve, Repair Kits: Equal to 10 percent of amount of each type installed, but no fewer than 12 of each type.
 - 4. Provide hinged-top wood or metal box, or individual metal boxes, with separate compartments for each type and size of extra materials listed above.
 - 5. Toilet Seats: Equal to 5 percent of amount of each type installed.

1.7 OTHER NOTES:

- A. Provide all plumbing fixtures complete with trim required, and connect in a manner conforming to the state and local plumbing codes. Certain fixtures will be furnished by others under other sections of these Specifications. Provide rough-in and final connections including all valves, traps, specialties, etc. required.

- B. Provide traps for all waste connections where not furnished with the fixture and or equipment; unions; and stops or shut-off valves for all water connections to all sinks and other items of equipment as required. All exposed pipe and metal, including that within cabinets, shall be chrome plated brass.

PART 2 - PRODUCTS

2.1 WATER CLOSETS:

A. Carrier:

- 1. Provide wall carrier attached to floor.

B. Flush Valve:

- 1. Unit shall be complete with screwdriver angle stop/check, vandal resistant stop cap, supply cover tube w/ bushing and sweat solder adapter kit, and cast wall flange w/ set screw

C. Equivalents:

- 1. Manufacturers offering water closets complying with requirements include, but not limited to: Zurn, Kohler
- 2. Manufacturers offering Flush Valves complying with requirements include, but not limited to: Sloan, Zurn

2.2 URINALS:

A. Urinal

- 1. Wall hung, white vitreous china, 1.0 gpf, 3/4" top spud.
- 2. Unit shall be complete with screwdriver angle stop/check, vandal resistant stop cap, supply cover tube w/ bushing and sweat solder adapter kit, and cast wall flange w/ set screw

B. Carrier:

- 1. Provide wall carrier attached to floor.

C. Flush Valve:

- 1. Unit shall be complete with screwdriver angle stop/check, vandal resistant stop cap, supply cover tube w/ bushing and sweat solder adapter kit, and cast wall flange w/ set screw.

D. Equivalents:

- 1. Manufacturers offering urinals complying with requirements include, but not limited to: Zurn, Kohler
- 2. Manufacturers offering Flush Valves complying with requirements include, but not limited to: Sloan, Zurn

2.3 LAVATORIES:

A. Trim:

- 1. Chrome plated perforated grid drain, 17 gauge tailpiece, p-trap, and waste Chrome plated brass 1/2"x3/8" loose key operated angle stops and supply risers Complete rough-in for supplies, waste and vent, and all final connections

B. Equivalents:

1. Manufacturers offering lavatories complying with requirements include, but not limited to: Zurn, Crane, Kohler
2. Manufacturers offering faucets complying with requirements include, but not limited to: T&S Brass, Delta, Zurn

2.4 DRINKING FOUNTAIN:

A. DF1, DF1A:

1. Wall mounted bi-level drinking fountain, one-piece construction, vandal resistant bubblers, fully assembled front push-buttons, flow regulator 20-105 psi, drain and trap assemblies, vandal resistant bottom cover plates.
2. Provide with bottle filler station.

B. Equivalents:

1. Manufacturers offering drinking fountains complying with requirements include, but not limited to: Halsey Taylor, Oasis

2.5 OTHER SPECIALTIES:

A. HB - Hose Bibbs

1. Box type
2. Anti-siphon vacuum breaker protected wall faucet with 3/4" hose connection

2.6 FLOOR DRAINS AND CLEANOUTS:

- A. Floor drains shall be equipped with membrane clamping collar and provided with membrane flashing as approved by the state plumbing code. Provide inside caulk type drains for connection to cast iron pipe.
- B. All interior floor drains and open receptacles shall be furnished with a 1/2" trap primer connection.
- C. All floor drains and open receptacles shall be provided with trap primers; with no more than four (4) drains served by one (1) trap primer. All trap primers must be installed in an easily accessible location.
- D. Cleanouts:
 1. Provide cleanouts in soil, and waste piping at the following locations: base of all stacks, 50' max intervals in horizontal lines, changes in entire system and/or as indicated on the Drawings. Closets or other fixtures shall not be accepted as cleanouts. Cleanouts and/or test tees concealed in inaccessible pipe spaces and walls shall have 8" by 8" access panel. Cover plates and/or access panels shall be set flush with finished floor and walls. Provide membrane clamping collar where applicable.
- E. Access Doors:

1. Square wall access panel and frame, with vandal-proof screws
2. Coordinate installation height prior to installation.
3. Nickle bronze with polished stainless steel cover.

2.7 WATER HAMMER ARRESTORS

A. Equivalents:

1. Manufacturers offering water hammer arrestors complying with requirements include, but not limited to: Sioux Chief, Watts, Smith

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine roughing-in for potable, hot- and cold-water supply piping systems; soil, waste, and vent piping systems; and supports. Verify that locations and sizes of piping and locations and types of supports match those indicated, before installing and connecting fixtures. Use manufacturer's roughing-in data when roughing-in data are not indicated.
- B. Examine walls, floors, and cabinets for suitable conditions where fixtures are to be installed.
- C. Do not proceed until unsatisfactory conditions have been corrected.

3.2 APPLICATIONS

- A. Domestic Cold Water, Piping, Valves and Fittings. Refer to Division 22 for plumbing insulation requirements.

3.3 PLUMBING FIXTURE INSTALLATION

- A. Assemble plumbing fixtures and trim, fittings, faucets, and other components according to manufacturers' written instructions.
- B. Install fixtures level and plumb according to manufacturers' written instructions, roughing-in drawings, and referenced standards.
- C. Install floor-mounted, back-outlet water closets with fittings and gasket seals.
- D. Install wall-hanging, back-outlet water closets with support manufacturer's tiling frame or setting gage.
- E. Install toilet seats on water closets.
- F. Install wall-hanging, back-outlet urinals with gasket seals.
- G. Install flush valves for accessible water closets and urinals with handle mounted on wide side of compartment. Install other actuators in locations that are easy for handicapped people to reach.
- H. Fasten wall-hanging plumbing fixtures securely to supports attached to building substrate when supports are specified, and to building wall construction where no support is indicated.
- I. Fasten recessed, wall-mounted fittings to reinforcement built into walls.

- J. Fasten wall-mounted fittings to reinforcement built into walls.
- K. Fasten counter-mounting plumbing fixtures to casework.
- L. Secure supplies to supports or substrate within pipe space behind fixture.
- M. Set shower receptors and mop basins in leveling bed of cement grout as specified by Architect.
- N. Install individual stop valve in each water supply to fixture. Use gate or globe valve where specific stop valve is not specified.
 - 1. Exception: Omit stop valves on supplies to emergency equipment, except when permitted by authorities having jurisdiction. When permitted, install valve chained and locked in OPEN position.
- O. Install water-supply stop valves in accessible locations.
- P. Install faucet, laminar-flow fittings with specified flow rates and patterns in faucet spouts when faucets are not available with required rates and patterns. Include adapters when required.
- Q. Install supply, flow-control fittings with specified flow rates in fixture supplies at stop valves.
- R. Install faucet, flow-control fittings with specified flow rates and patterns in faucet spouts when faucets are not available with required rates and patterns. Include adapters when required.
- S. Install shower, flow-control fittings with specified maximum flow rates in shower arms.
- T. Install traps on fixture outlets. Omit traps on fixtures having integral traps. Omit traps on indirect wastes, except where otherwise indicated.
- U. Install disposers in sink outlets. Install switch where indicated, or in wall adjacent to sink if location is not indicated.
- V. Install escutcheons at wall, floor, and ceiling penetrations in exposed, finished locations and within cabinets and millwork. Use deep-pattern escutcheons where required to conceal protruding pipe fittings.
- W. Seal joints between fixtures and walls, floors, and counters using sanitary-type, 1-part, mildew-resistant, silicone sealant. Coordinate this requirement with Architectural trades.

3.4 CONNECTIONS

- A. Piping installation requirements are specified in other Division 22 Sections. Drawings indicate general arrangement of piping, fittings, and specialties. The following are specific connection requirements:
 - 1. Install piping connections between plumbing fixtures and piping systems and plumbing equipment specified in other Division 22 Sections.

- B. Supply and Waste Connections to Plumbing Fixtures: Refer to plumbing fixture schedules for fitting sizes and connection requirements for each plumbing fixture.
- C. Supply and Waste Connections to Equipment Specified in Other Sections: Connect equipment with supply inlets, supply stops, supply risers, and traps specified in this Section. Use fitting sizes required to match connected equipment. Connect fittings to plumbing piping.
- D. Ground equipment.
 - 1. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. Where manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.
- E. Arrange for electric-power connections to fixtures and devices that require power. Electric power is specified in Division 26 Sections and individual equipment sections.

3.5 FIELD QUALITY CONTROL

- A. Verify that installed fixtures are categories and types specified for locations where installed.
- B. Check that fixtures are complete with trim, faucets, fittings, and other specified components.
- C. Inspect installed fixtures for damage. Replace damaged fixtures and components.
- D. Test installed fixtures after water systems are pressurized and demonstrate proper operation. Replace malfunctioning fixtures and components, then retest. Repeat procedure until units operate properly.

3.6 ADJUSTING AND CLEANING

- A. Operate and adjust faucets and controls. Replace damaged and malfunctioning fixtures, fittings, and controls.
- B. Operate and adjust disposers, hot-water dispensers, and controls. Replace damaged and malfunctioning units and controls.
- C. Adjust water pressure at drinking fountains, electric water coolers, faucets, shower valves, and flushometer valves having controls, to produce proper flow and stream.
- D. Replace washers and seals of leaking and dripping faucets and stops.
- E. Clean fixtures, faucets, and other fittings with manufacturers' recommended cleaning methods and materials. Include the following:
 - 1. Remove faucet spouts and strainers, remove sediment and debris, and reinstall strainers and spouts.
 - 2. Remove sediment and debris from drains.

3.7 PROTECTION

- A. Provide protective covering for installed fixtures and fittings.

Carver Community Center Rest Room Renovation
Phase 2

Plumbing Fixtures

- B. Do not allow use of fixtures for temporary facilities, except
when approved in writing by Owner.

END OF SECTION 224000