

PROJECT MANUAL

For

**Environmental Remediation and Demolition
Former Porter Oil Site
1439 Kentucky Avenue
St. Louis, Missouri**



City of St. Louis Land Reutilization Authority

March 2015

INVITATION

The Land Reutilization Authority of the City of St. Louis ("Authority") will receive sealed bids for **ENVIRONMENTAL REMEDIATION AND DEMOLITION, FORMER PORTER OIL SITE, 1439 Kentucky Avenue, St. Louis, Missouri** ("Project").

All bids are to be submitted pursuant to the terms and conditions in this Invitation, the Instructions to Bidders. The selected Bidder must be a qualified contractor licensed by the City of St. Louis. **The work required for the Project includes building demolition, removal and proper disposal of asbestos containing materials, household hazardous wastes, and demolition debris containing lead-based paint as well proper removal and disposal of approximately 100,000 gallons of oil/water with an additional estimated 15,000 gallons of liquid/sludge/emulsified oily waste, as required by the attached Contract and the identified Drawings, Technical Specifications and other Bid Documents (collectively, the "Contract Documents").** The Bidders will familiarize themselves with the Project site prior to submission of bids.

Bids will be received by the Authority at 1520 Market Street, Suite 2000, St. Louis, MO 63103, (Attention: Mr. Chadwick Howell) until 3:00 P.M. local time on May 8, 2015 at which time and place all bids shall be publicly opened. Potential Bidders may obtain all Bid Documents from the Authority at the following address:
www.stlouis-mo.gov/sldc/procurement.cfm .

A Certified Check or bank draft, payable to the Authority, or a satisfactory Bid Bond, executed by the Bidder and an acceptable Surety, in an amount equal to five (5) percent of the bid, shall be submitted with each bid. The bid security must be held for at least thirty (30) calendar days, or until the Contract is awarded to the successful Bidder. The bid security of any unsuccessful Bidder shall be returned to the Bidder within fifteen (15) calendar days after the Authority rejects the applicable bid.

Attention is called to the fact that no less than the minimum wages and salaries, as set forth in the Bid Documents, must be paid on this Project, and that the participating contractors shall insure that employees and applicants for employment are not discriminated against because of their race, creed, color, age, national origin, physical handicap, or sex, and shall take affirmative action in the employment of lower income residents of the City.

The work which the Contractor shall be required to perform under this Contract shall be commenced at the time stipulated by the Authority in the Notice to Proceed; **all work shall be scheduled and completed no later than August 31, 2015 as outlined in the Technical Specification. This schedule assumes no significant increase in volumes listed on the Bid Form.**

The maximum utilization of minority and women - owned business enterprises (MBE/WBE) will be sought for all work proposed in this Project, with goals of 25% minority-owned and 5% women-owned business enterprise utilization. Participating contractors must submit reports to the Authority, on forms approved by the Authority, which demonstrate contractors' good faith efforts to achieve said goals.

In order to be eligible to bid, Bidders must submit complete and acceptable documentation and information as required in these Bid Documents. The Authority does not warrant that a Contract will be awarded based on the submitted bids. The Authority reserves the right to reject any and

all bids, and the right to waive informalities in the bidding. In particular, the Authority reserves the right to reject any bid, notwithstanding its price, for any reason considered by the Authority to be relevant to the Bidder's potential performance, including but not limited to past performance on other projects, claims history, financial capacity and stability of the Bidder, workforce and management capability of performing the work within the required Time for Completion and consistent with the other requirements of the Contract Documents, relevant experience and qualifications (or lack thereof), the Bidder's willingness to execute the required Contract and any other information requested by or furnished in response to this Invitation in the attached Instructions to Bidders.

No bid shall be withdrawn for a period of ninety (90) calendar days subsequent to the opening of bids without the express written consent of the Authority.

Land Reutilization Authority of the City of St. Louis

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INSTRUCTIONS TO BIDDERS

1. USE OF SEPARATE BID FORMS

These Bid Documents (items as listed in the Index) include a complete set of Bid and Sample Contract Forms, which are for the convenience of Bidders and are not to be detached and filled out or executed. Separate copies of Bid Forms are furnished for that purpose.

2. INTERPRETATIONS

No oral interpretation will be made to any Bidder as to the meaning of the Bid Documents or any part thereof. Questions regarding any matter pertaining to the performance of the Project or the Bidder's response shall be made in writing to the St. Louis Development Corporation, acting on behalf of the **Land Reutilization Authority of the City of St. Louis**, (hereinafter called the "Authority"), 1520 Market Street, Suite 2000, St. Louis, Missouri 63103, (Attention: Mr. Chad Howell). Replies will be issued and posted on the website at <http://stlouis-mo.gov/government/departments/slhc/procurement.cfm>. Questions received five (5) or more calendar days prior to the date fixed for opening of bids will be given consideration. Every interpretation made to a Bidder will be in the form of an Addendum to the Bid Documents, and when issued will be on file in the office of the Authority, at least three calendar days before bids are opened.

3. PRE-BID CONFERENCE

A mandatory pre-bid conference will be held at **10:00 a.m. on May 1, 2015** at the offices of St. Louis Development Corporation, located at 1520 Market Street, Suite 2000, St. Louis, Missouri 63103. All questions asked during the pre-bid conference will be reduced to writing and written responses thereto will be circulated to all parties who have obtained copies of the Bid Documents from the Authority. All potential Bidders should attend this conference.

4. INSPECTION OF PROJECT SITE

The Project Site **will be made available from 11:00 a.m. to 1:00 p.m. on May 1, 2015**. In this regard, all prospective Bidders are directed to Section 7 of the General Conditions, which provides that the selected Contractor shall be responsible for, and shall bear all costs associated with, any conditions which are observed or are reasonably capable of observation pursuant to a thorough inspection of the Project site prior to execution of the Contract. A visit to the Project site to determine the site characteristics and the conditions under which the work will be performed will be critical to all Bidders. The day of the pre-bid conference may be the only opportunity to do so. The successful Bidder, by the execution of the Contract, shall in no way be relieved of any obligation due to its failure to review or examine any information made available to the Bidder prior to execution of the Contract, or its failure to visit the site and become fully acquainted with the conditions at the site. Pursuant to the Contract, the Contractor shall not be entitled to any claim for any increase in the Contract Price, any extension of the Time for Completion or any other damages or relief based on facts which the Contractor could have noted upon a thorough examination of all accessible aspects of the site and/or a review of all available information prior to the execution of the Contract.

5. BID DOCUMENTS

A complete set of Bid Documents will be available for review Monday through Friday, from 9:00 a.m. to 5:00 p.m. at the following locations:

Land Reutilization Authority of the City of St. Louis
c/o SLDC, 1520 Market Street, Suite 2000
St. Louis, Missouri 63103
314-657-3700
Contact: Chad Howell

MOKAN
5261 Delmar Boulevard, Suite B
St. Louis, MO 63108
314-454-9675
314-361-9806 (fax)
mokan@stlouis.missouri.org

Crossroads Repographics
1712 Macklind Ave.
St. Louis, MO 63110
314-678-0087
314-678-0087 (fax)
www.x-rhodes.com

6. ALTERNATIVE BIDS

Alternative bids will not be considered, unless specifically requested in the Form of Bid Proposal (Bid Form).

7. BIDS

- a. All bids must be submitted in triplicate on forms supplied by the Authority and shall be subject to all requirements of the Bid Documents, including the Contract, the Drawings, Technical Specifications and these INSTRUCTIONS TO BIDDERS. All Bids must be regular in every respect and no interlineations, excisions or special conditions shall be made or included in the Bid Form by the Bidder. However, the Authority reserves the right to waive informalities in the bidding, in the sole discretion of the Authority.
- b. Bid Documents, including but not limited to the Bid, the Bid Guaranty, the Non-Collusive Affidavits and Bidder's Qualifications, shall be enclosed in a SEALED envelope labeled with the words "**Environmental Remediation and Demolition, Former Porter Oil Site Bid Documents**," as well as the name of the bidder and date and time of Bid Opening, in order to guard against premature opening of bid.
- c. The Authority may consider as irregular any bid on which there is an alteration of or departure from the Bid Form hereto attached, and, in its sole discretion, may reject any Bid or Bids, so altered or changed.
- d. The Authority shall interpret the Contractor's act of submitting a bid proposal to the Authority to mean that the Contractor has satisfied itself as to the quantities and has

ascertained at the site by inspection, investigation, measurement, or otherwise, all circumstances affecting the cost of performing the work.

8. BID GUARANTY

- a. The Bid must be accompanied by a Bid Guaranty which shall equal five (5) percent of the amount of the Bid, and at the option of the Bidder, may be Certified Check, Bank Draft, or a Bid Bond secured by a guaranty or a surety company listed in the latest issue of U.S. Treasury Circular 570. The amount of such Bid Bond shall be within the maximum amount specified for such company in said Circular 570. The practice of multiple sureties joining together to issue a satisfactory Bond, shall not be allowed. No Bid will be considered unless it is so guaranteed. Certified Check or Bank Drafts must be made payable to the order of the **Land Reutilization Authority of the City of St. Louis**. Cash deposits will not be accepted. The Bid Guaranty shall ensure the execution of the contract and the furnishing of Performance and Payment Bond by the successful Bidder, all as required by the Bid Documents. Bid Bonds must be submitted in triplicate.
- b. Revised bids, if representing an increase in excess of two (2) percent of the original bid, must have the Bid Guaranty adjusted accordingly; otherwise the original bid shall remain in force.
- c. In case the Bid Guaranty is in the form of a Certified Check or Bank Draft, the Authority may make such disposition of the same as will accomplish the purpose for which submitted.

9. NON-COLLUSIVE AFFIDAVIT

Each person or corporation submitting a bid for the work contemplated in the Bid Documents, shall execute an affidavit in the form herein provided, to the effect that is has not colluded with any other person, firm or corporation in regard to any bid submitted. Such affidavit shall be attached to the bid in triplicate.

Before executing any subcontract, the successful Bidder shall submit the name of any proposed subcontractor for prior notification, with an attached executed Non-Collusive Affidavit of Subcontractor form, provided herein.

10. BIDDER'S QUALIFICATIONS

The Authority shall have the right to take such steps as it deems necessary to determine the ability of the Bidder to perform the work and the Bidder shall furnish the Authority all such information and data for this purpose, as the Authority may request. The Authority reserves the right, in its sole, unrestricted discretion to reject any bid where an investigation of the evidence or information does not satisfy the Authority that the Bidder is qualified to carry out properly the terms of the Bid Documents.

11. CORRECTIONS

Erasures or other changes in the Bid Forms must be explained or noted over the signature of the Bidder. Failure to comply with this may result in the disqualification of the bid submitted.

12. TIME FOR RECEIVING BIDS

- a. Bids received prior to the advertised hour of opening will be kept sealed. The representative of the Authority whose duty it is to open them will decide when the specified time has arrived, and no bid received thereafter will be considered. Notwithstanding the foregoing, when a Bid arrives by mail after the time fixed for opening, but before the reading of all other Bids is completed, and it is shown to the satisfaction of the Authority that the non-arrival on time was due solely to delay in the mail service for which the Bidder was not responsible, such bid will be received and considered. The Authority will not be responsible for the premature opening of a Bid not properly addressed and identified.
- b. Bids or mid modifications received by facsimile will not be considered.
- c. Bidders are cautioned to allow ample time for transmittal of bids by mail or otherwise. Bidder should secure correct information relative to the probable time of arrival and distribution of mail at the place where bids are to be opened; and, so far as practicable, make due allowance for possible delays in order to avoid the necessity for investigations of claims that such delays in receipt of bids were due solely to delay in the mail, as provided for in this section.

13. OPENING OF BIDS

At the time and place fixed for the opening of bids, the Authority will cause to be opened and publicly read aloud, every bid received within the time set for receiving bids, irrespective of any irregularities therein. Bidders and other persons properly interested may be present, in person or by representative.

14. WITHDRAWAL OF BIDS

Bids may be withdrawn by written request dispatched by the Bidder in time for delivery in the normal course of business prior to the time fixed for opening; provided that written confirmation is placed in the mail and postmarked prior to the time set for bid opening. The Bid Guaranty of any Bidder withdrawing his bid in accordance with the foregoing conditions will be promptly returned. Negligence on the part of the Bidder in preparing his bid confers no right of withdrawal or modification of his bid after such bid has been opened.

15. REJECTION OF BIDS

- a. The Authority reserves the right to reject the bid of any Bidder for any reason considered by the Authority to be relevant to the Bidder's potential performance. This includes, but is not limited to, the Bidder's past performance on other projects, claims history, financial capacity and stability of the Bidder, relevant experience and qualifications (or lack thereof), availability of qualified personnel to supervise, manage and perform the work, existence of adequate bonding and insurance, past payment history of the Contractor with respect to subcontractor obligations and other bills for materials, supplies, labor or

related services, Bidder's willingness to execute the required Contract, the Bidder's ability to conform to the requirements of the Contract, Drawings, Technical Specifications and other Contract Documents and the Authority's assessment of whether the Contractor is capable of performing the work in a full, timely, complete and proper fashion, and any other information requested by or furnished in connection with this Invitation. In determining which Bidder, if any, the Authority concludes is the lowest responsible, responsive Bidder, the following elements, in addition to those above mentioned, will be considered: (1) the size, manpower resources and business structure of the Bidder and its capacity to perform the work; (2) whether the Bidder has adequate equipment available to do the work properly and expeditiously and in conformance with the Contract requirements; (3) whether the Bidder has suitable financial resources to meet the obligations incidental to the work; (4) whether the Bidder has appropriate technical experience; and (5) whether the bidder meets the EEO and MBE/WBE goals of the Contract.

- b. Based on the nature of the work to be performed, and the technical requirements, experience and capacity necessary in connection with UST removal, environmental remediation and related work required by the Contract, the Authority will evaluate each bid by determining the specific entity and individuals who will be performing the work on the Project. The Authority reserves the right to reject any Bidder as unqualified, if it proposes to perform the work principally through other companies who will participate in the bidding as a partner or joint venture with the Bidder.
- c. Each Bidder is required to provide a Performance Bond and Payment Bond as set forth in the Contract. In assessing the qualifications, responsibility and responsiveness of a Bidder, the Authority may consider whether the entity submitting the bid is capable of providing the Performance and Payment Bond in its own name, or instead is providing bonding or insurance through an affiliation with another entity.
- d. Other data required by the Bid Documents includes (but is not limited to) the submittals related to the City's MBE/WBE program as described in this "Instructions to Bidders", the MBE/WBE Index and Submission Instructions and the MBE/WBE forms included in this specification.

16. AWARD OF CONTRACT

The work required for the Project includes building demolition, removal and proper disposal of asbestos containing materials, household hazardous wastes, and demolition debris containing lead-based paint as well proper removal and disposal of approximately 100,000 gallons of oil/water with an additional estimated 15,000 gallons of liquid/sludge/emulsified oily waste. It is estimated that 80,000 gallons of the water has been profiled for direct discharge to an onsite MSD sewer inlet; residual oil will need to be disposed of alternately. The Authority has a limited budget for the performance of this work. Accordingly, each Bidder is requested to provide a grand total, lump sum bid for the activities. It is understood by the Authority that certain unknown site conditions may affect the final Project cost. The successful Bidder and the award of a Contract, however, will be based on the grand total bid, together with the other factors identified herein, and will be the result of the Authority's overall determination as to the lowest, responsible and responsive Bidder, considering, among other things, not only cost but adherence to specifications, past performance of the Bidder and such other factors as have been identified herein. The selected Bidder to whom an award is made will be notified at the earliest practicable date. The Authority however, reserves the right at its sole discretion to reject any and all bids and to waive any informality in the bids received. This includes, but is not limited to, the failure of a bidder to make reasonable good faith efforts to demonstrate the ability to meet the City's MBE/WBE goals prior to bid opening.

17. PERFORMANCE AND PAYMENT BOND; EXECUTING OF CONTRACT

- a. Subsequent to the award and within five working days after the prescribed forms are presented for signature, the successful Bidder shall execute and deliver to the Authority the Contract, in the form attached hereto.
- b. Having satisfied all conditions of award as set forth elsewhere in these documents, a successful Bidder shall, within the period specified in Paragraph "a" above, furnish a Performance and Payment Bond in a penal sum of at least 100% of the amount of the Contract as awarded, as security for the faithful performance of the Contract and for the payment of all persons, firms, or corporations to whom the successful Bidder may become legally indebted for labor, materials, tools, equipment, or services of any nature, including utility and transportation services, employed or used by him in performing the work. Such Bond shall be in substantially the same form included in the Bid Documents and shall bear the same date as, or a date subsequent to, the date of the Contract. This Bond shall be signed by a guaranty or a surety company listed in the latest issue of U.S. Treasury Circular 570 and the penal sum shall be within the maximum specified for such company in said Circular 570.

The practice of multiple sureties joining together to issue a satisfactory Bond, shall not be allowed.

- c. On each Bond, the rate of premium shall be stated, together with the total amount of the premium charged. The current power of attorney for the person who signs for any surety company shall be attached to such Bond.
- d. The failure of the successful Bidder to execute the Contract in the form attached hereto and to supply the required Bond within five working days after the prescribed forms are presented for signature, or within such extended period as the Authority may grant

based upon reasons determined adequate by the Authority, shall constitute a default, and the Authority may either award the Contract to the next lowest responsive Bidder or re-advertise for bids, and may charge against the Bidder the difference between the amount of the bid and amount for which a Contract for the work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the Bid Guaranty. If a more favorable bid is received by re-advertising, the defaulting Bidder shall have no claim against the Authority for a refund.

18. WAGES AND SALARIES

- a. The contract resulting from this opportunity is subject to the Davis-Bacon Act, as amended (40 U.S.C. 276a to a-7) and as supplemented by Department of Labor regulations (29 CFR part 5, "Labor Standards Provisions Applicable to Contracts Governing Federally Financed and Assisted Construction"). Under this Act, contractors shall be required to pay wages to laborers and mechanics at a rate not less than the minimum wages specified in a wage determination made by the Secretary of Labor. In addition, contractors shall be required to pay wages not less than once a week. The current prevailing wage determination issued by the Department of Labor is provided in Appendix F-5.
- b. This Contract is subject to State of Missouri Prevailing Wage Laws. Not less than the prevailing wage rate must be paid to all workers performing work under this Contract. The contractor will forfeit a penalty of \$100 per day (or portion thereof) if a worker is paid less than the prevailing wage rate for any work done under this Contract by the contractor or subcontractor. Missouri prevailing wages are provided in Appendix F-5.

For more information, refer to Chapter 290 ("Wages, Hours and Dismissal Rights") of the Missouri Revised Statutes which is available online at:

<http://www.moga.mo.gov/mostatutes/stathtml/29000002501.HTML>

Or, contact:

Missouri Dept. of Labor and Industrial Relations
Division of Labor Standards - Prevailing Wage Section
PO Box 449
Jefferson City, MO 65102-0449
573-751-3403
www.dolir.mo.gov/sl/prevailingwage
E-mail: prevailingwage@dolir.mo.gov

- c. Where the Federal and State rates differ for the same classification, the contractor is required to pay the higher rate.
- d. The rates of pay requirements set forth under the Bid Documents are the minimum rates to be paid during the life of the Contract. It is, therefore, the responsibility of Bidders to inform themselves as to the local labor conditions, such as the length of the work day and work week, overtime compensation, health and welfare contributions, labor supply and prospective changes or adjustments of rates.

- e. Any worker classification not included in Appendix C or Appendix D shall be brought to the Authority's attention immediately by the Bidder.
- f. Notwithstanding "a-e" above, no person shall be paid less than that required by the City of St. Louis' "Living Wage" as contained in Ordinance 65597.

19. EQUAL EMPLOYMENT OPPORTUNITY

- a. Contractor agrees that in performing under this Contract neither the Contractor nor anyone under Contractor's control will permit discrimination against any employee, worker, or applicant for employment because of race, marital status, color, age, religion, sexual orientation, familial status, disability, national origin or ancestry. Such action shall include but not be limited to any action to bar employ, upgrade, or recruit, expel, discharge, demote, or transfer; layoff, terminate, or create intolerable conditions; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- b. Contractor, during its performance under this Contract, will in all printed or circulated solicitations, or other advertisement or publication for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive meaningful consideration for employment without regard to race, marital status, color, age, religion, sexual orientation, familial status, disability, national origin or ancestry. The Contractor will not make any inquiry in connection with prospective employment which expresses directly or indirectly any limitation, specification or discrimination because of race, marital status, color, age, religion, sexual orientation, familial status, disability, national origin or ancestry.
- c. Contractor will permit reasonable access by the Authority to such persons, reports, and records as are necessary for the purpose of ascertaining compliance with fair employment practices.
- d. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this Contract, or to furnish information or permit his books, records, and accounts to be inspected, within twenty days from date requested, this Contract may be cancelled, terminated, or suspended in whole or part and Contractor may be declared ineligible for further Authority Contracts for a period of one year, by the option of the Authority. In the event this Contract is cancelled, terminated, or suspended for failure to comply with fair employment practices, the Contractor shall have no claims against the Authority for damages as a result of such cancellation termination or suspension.
- e. Contractor further agrees that these clauses ("a" through "d") on discrimination and equal opportunity practices in all matters of employment and training for employment will be incorporated by Contractor in all Contracts or agreements entered into with suppliers of materials or services, Contractors, and subcontractors and all labor organizations furnishing skilled, unskilled, and craft union skilled labor, or who may performed any such labor or services in connection with this Contract.
- f. Whenever the Contractor is sued or threatened with litigation by a subcontractor, vendor, individual, group or association, as a result of compliance with the clauses "a" through "e", of these provisions relating to fair employment practices, the Contractor shall notify the General Counsel of the Authority in writing of such suit or threatened suit within ten days.

20. MINORITY AND WOMEN-OWNED (MBE/WBE) BUSINESS ENTERPRISES:

The City of St. Louis is committed to involving Minority and Women-owned Business Enterprises (MBE/WBE) in meaningful roles. It is the policy of the Authority that MBE/WBE firms shall have an equal opportunity to participate in the performance of this contract. The Mayor's Executive Order 28 has established goals of 25% MBE and 5% WBE participation. A Bidder who, in accordance with the documentation requirements of this specification, has achieved the 25% MBE and 5% WBE goals shall be in compliance with this specification.

The Authority will work with the City's Disadvantaged Business Enterprise (DBE) Program Office located at the St. Louis Airport to monitor M/WBE participation. A current directory containing the names of firms that have been certified as eligible to participate as MBE/WBEs on City contracts can be obtained from the DBE Program Office. The Authority will only count towards the MBE/WBE goals firms who, at time of Bid Opening, are certified by the DBE Program Office. Bidders should contact the DBE Program Office at 314-551-5000 to verify the status of a firm's certification. The MBE/WBE Directory is also accessible at www.mwdbe.org.

A Bidder who cannot achieve the 25% MBE and 5% WBE goals must provide documentation of the reasonable good faith efforts to meet the goal(s) and request a waiver from the goal(s), as prescribed in this specification. In such an instance the Bidder must be able to demonstrate that the required "good faith efforts" were initiated prior to submittal of the Bid. If the Bidder cannot demonstrate such "good faith efforts" to the satisfaction of the Authority, the Bid will be rejected as non-responsive.

M/WBE forms and additional information are provided in Exhibit F-4.

- a. **Pre-Contract Award Obligations:** A bid, properly executed, shall certify that the bidder has undertaken the required good faith efforts to achieve the stated MBE/WBE goals. Each bidder will be required to submit the MBE/WBE Utilization Statement with its bid. Failure to submit the MBE/WBE Utilization Statement as required herein will result in the bid being rejected as non-responsive.

The apparent low bidder and all other bidders still desiring to be considered for contract award must submit the MBE/WBE Utilization Plan, the Subcontractor List, the Good Faith Efforts Report and Statement, a copy of the bid solicitation to all subcontractors and, where appropriate a request for waiver, within 48 hours after bid opening. Firms bidding as a joint venture must submit a fully executed copy of the joint venture Contract at this time. Failure to submit each of the aforementioned documents will render a bid non-responsive.

To establish a responsive bid, the bidder must either document (on the MBE/WBE Utilization Plan) how the proposed utilization achieves the stated goals, or document bidder's good faith efforts expended (on the Good faith Efforts Report and Statement) prior to bid opening. For the purpose of determining the degree of goal attainment, the bidder should refer to Section Four, "Public Works Contracts" of Mayor's Executive Order #28, attached as Exhibit F-3.

- b. **Requests for Waiver:** If the MBE/WBE Utilization Plan does not meet the project goals, the bidder shall seek a partial or total waiver of the project goals. The application for

waiver for all or part of the project goals shall include full documentary evidence of the bidder's good faith efforts to meet the project goals and why the request for waiver should be granted. The application shall be in writing and submitted within 48 hours after bid opening. The application must include a narrative, affidavits or exhibits which verify the actions taken by the bidder to meet the project goals.

- c. **Post Contract Award Compliance:** Within fifteen (15) calendar days after the Pre-Construction Conference, fully executed copies of each MBE/WBE subcontract must be submitted to the Authority. If a bidder fails to submit the required documentation within the specified time period, the Authority may withdraw the notice of award and the bid security of that bidder may be forfeited to the Authority. In any event, the Authority will not issue a "Notice to Proceed" until the required documentation is submitted.

During construction the Contractor shall submit the Monthly MBE/WBE Utilization Report to the Authority. Changes to the approved MBE/WBE Utilization Plan will be considered by the Authority only for one of the following reasons:

1. The named MBE/WBE firm is unable to meet the delivery requirements of the construction schedule.
2. The named MBE/WBE firm is dilatory in complying with requirements of the Bid Documents.
3. The name MBE/WBE firm is prevented from performing due to bankruptcy, insolvency or otherwise.

The Contractor shall promptly report any and all proposed changes in the utilization of MBE/WBE firms to the Authority, in writing, using the Subcontractor or Supplier Substitution Form included as part of this specification.

- d. **Penalties:** If SLDC determines that a contractor or bidder has failed to comply with the City's program regarding utilization of minority and women's business enterprises, it shall report its finding to the Mayor.

The Mayor, pursuant to Article VII, Section 1 of the Charter, may subject the offending party to any or all of the following penalties and sanctions:

1. Withholding of contract award;
2. Suspension of contract;
3. Withholding of payments;
4. Rescission of contract based upon a material breach of contract pertaining to MBE and/or WBE participation;
5. Refusal to accept a proposal;
6. Disqualification of a bidder or contractor from eligibility for providing goods or services to the City for a period not to exceed one year;

21. NATURE OF THE BIDDER

Based upon the technical requirements of the Contract, Drawings and Technical Specifications and the requirements for the performance of **building demolition, removal and proper disposal of asbestos containing materials, household hazardous wastes, and demolition debris containing lead-based paint as well proper removal and disposal of approximately 100,000 gallons of oil/water with an additional estimated 15,000 gallons of**

liquid/sludge/emulsified oily waste, the Authority will assess each submitted bid by reviewing the specific persons and companies who will be performing the work. In this regard, if any Bidder is a joint venture, partnership or other affiliation of more than one company, the Bidder shall provide all information requested by the Authority to identify the precise nature of the partnership, joint venture or other affiliation (including but not limited to a copy of the written agreement establishing the joint venture, partnership or other affiliation), and shall identify precisely the persons who will be supervising the work, and performing each principal portion of it, and identify which company will be the employer of such persons, identify the specific company that will be providing the Performance and Payment Bond and applicable insurance for the Project, and identify precisely which company will be providing the financial resources necessary for the performance of the work. In addition, any such Bidder shall provide complete and detailed financial information with respect to both companies so that the Authority may determine the financial capacity of each. In the event the selected Contractor is a joint venture, each member of the joint venture shall be jointly and separately liable to the Authority for the performance of the Contract and for any damages or other liabilities arising there under. In this regard, the Authority shall have the right, in its sole discretion, to enforce the Contract individually, severally and successively against any one of the participants in the joint venture without impairing or affecting the rights of the Authority against the other.

22. EMPLOYMENT OF UNAUTHORIZED ALIENS PROHIBITED

Prior to contract execution and as a condition of final award, the selected Contractor shall by sworn Affidavit and provision of documentation, affirm its enrollment and participation in a federal work authorization program with respect to the employees working in connection with this project. The Contractor shall sign an Affidavit affirming that it does not knowingly employ any person who is an unauthorized alien in connection with this project pursuant to the provisions of Sections 285.525 through 285.555 of the revised Statutes of Missouri, 2000, as amended. Notice and instructions regarding the requirements of this provision are included in Exhibit F-6.

PROCESS

1. Pre-Bid

The Bidder must fulfill and document each of the following requirements:

- A. Any firm that intends to bid for the prime contract must have a notice of its intention delivered to the construction clearinghouse as soon as feasible, but no fewer than seven calendar days before the date on which the firm desires to have all quotes in hand. The notice may be delivered by fax or E-mail, but must be in writing. In addition, the notice must at a minimum contain the following:
1. The name, street address, mailing address if different from the street address, telephone and fax numbers and E-mail address of a contact person.
 2. An identification of specific items of work that the plan holder may subcontract, and
 3. Expressly encourage MBE/WBEs to quote those items.

This contact shall be recorded in the Monthly Follow-Through Report, EEO-2.

The clearinghouses are:

MOKAN (St. Louis CCAC)
5261 Delmar Blvd., Suite B
St. Louis, MO 63108
(314) 454-9675

- B. Contact the organizations listed below and solicit assistance in obtaining minority workmen to be employed under the contract. These contacts shall also be recorded in the Monthly Follow-Through Report, EEO-2.

St. Louis Construction Orientation
Intake Center
1520 Market St., Suite 3050
St. Louis, Missouri 63103 Phone: 657-3601

AGC Construction Training School (apprentices only)
6301 Knox Industrial Drive
St. Louis, Missouri 63139 Phone: 644-1525

- C. Register with appropriate agencies of the City of St. Louis ("City"). This applies also to partnerships and joint ventures.
- D. Be licensed to do business in the City. The Bidder may check with the following: License Collector, Room 104 City Hall, 1200 Market Street, St. Louis, MO 63103; Phone: 622-4528.

- E. Have paid all appropriate taxes before the Contract can be approved. The Bidder may contact the following: Collector of Revenue, Room 410 City Hall, 1200 Market Street, St. Louis, MO 63103; Phone: 622-3291.

Participants in partnerships and joint ventures additionally shall individually have complied with the above requirements.

2. Bid

Each Bidder shall submit, in triplicate (3 copies), the following: (See also the Form of Bid Proposal). **A bidder who fails to submit fully executed copies of each of the following may be deemed non-responsive.**

- A. Bid Proposal Form
- B. Bid Bond
- C. Non-Collusive Affidavit
- D. Bidder's Qualifications
- E. MBE/WBE Utilization Statement (see Exhibit F-4).

3. Pre-Award Requirements

Within 48 Hours Following Bid Opening all bidders still desiring to be considered for contract award **must** submit the following: **A bidder who fails to submit fully executed copies of each of the following may be deemed non-responsive.**

- 1. Subcontractor List
- 2. MBE/WBE Forms in Exhibit F-4 as applicable
- 3. Copy of Bid Solicitation to Subcontractors
- 4. Request for Waiver of MBE and/or WBE goals, if applicable
- 5. Executed Joint Venture Contract, if applicable

4. Pre-Award Conference

At the pre-award conference, the selected Bidder shall submit, in triplicate (3 copies), of the following: **A bidder who fails to submit fully executed copies of each of the following may be deemed non-responsive.**

- A. Certification of Agreed MBE/WBE Utilization
- B. Subcontractor Participation Form
- C. For each proposed Subcontractor with a subcontract in excess of \$500,000:
 - 1. Contractor's Compliance Report.
 - 2. Compliance Evaluation Form.

- D. Bar Chart Construction Schedule

5. Award

Successful Bidder (“Contractor”) shall submit the following:

- A. Executed Contract
- B. Executed Acknowledgement
- C. Performance and Payment Bond with Power of Attorney
- D. Required Insurance Certificates

6. Pre-Construction Conference

Contractor shall submit the following:

- A. Copies of all required permits
- B. Subcontractor approval package(s), which include the following:
 - 1. Executed Subcontractor Request for Approval Form
 - 2. Non-Collusive Affidavit executed by each subcontractor
 - 3. Required Subcontractor Insurance Certificates

7. Notice to Proceed

The Authority will not issue a notice to Proceed until fully executed copies of all MBE/WBE subcontracts are received.

8. Construction Phase

Contractor shall submit the following:

- A. For every partial payment request, including the initial request, the following reports must be submitted to the Authority:
 - 1. Periodic Estimate for Partial Payment, on an acceptable form.
 - 2. Record of Payments to Subcontractors, material Suppliers and other vendors, in triplicate (see Exhibit F-4).
 - 3. Weekly payroll documentation for Prime Contractor and all Subcontractors, in triplicate.
 - 4. Monthly Manpower Utilization Report.
 - 5. All documentation and report needed to fully comply with the Executive Orders of the Mayor of the City of St. Louis (see Exhibit F-3).
 - 6. Partial lien waivers for the contractor and all subcontractors and suppliers, for the previous pay period.

- B. Final payment request with the following reports:
1. Required reports for partial payment request (see above paragraph).
 2. Executed Certificate and Release, in triplicate.
 3. MBE/WBE Final Report of Payments Report (see Appendix #2).
 4. Final lien waivers from contractor and all subcontractors and suppliers.
- C. Submit MBE/WBE Substitution Form if any subcontractor/supplier is being replaced on the project (see Exhibit F-4).

**FORM OF CONTRACTOR BID FORM
ENVIRONMENTAL REMEDIATION AND DEMOLITION
FORMER PORTER OIL SITE
1439 KENTUCKY AVENUE
ST. LOUIS, MISSOURI**

Bidder: _____

Address: _____

City, State, and Zip Code: _____

Telephone Number: _____

Grand Total Bid: _____

TO: Land Reutilization Authority of the City of St. Louis
1520 Market Street, Suite 2000
St. Louis, Missouri 63103
Attention: Mr. Chad Howell

1. **General:** The Bidder, having familiarized itself with the existing conditions in the area of the work affecting the cost of the work, with the Bid Documents, which included the Invitation, Instructions to Bidders, the Form of Bid Proposal, the Bid Guaranty requirements, the Form of Non-Collusive Affidavit, the Form of Contract, the Performance and Payment Bond requirements, the General Conditions, the Special Conditions, the Technical Specification, Bid Documents, and Drawings and Addenda, if any thereto, as prepared by the Land Reutilization Authority (Authority), 1520 Market Street, Suite 2000, St. Louis, Missouri 63103, and the Engineers, hereby proposes to furnish at the price indicated on this Bid Proposal, all technical personnel, labor, materials, equipment and services required to perform and complete all work required for the **ENVIRONMENTAL REMEDIATION AND DEMOLITION.**

2. **Qualifications:** For the undersigned's Proposal to be considered for award of the contract, the following qualification documents, executed where necessary, are submitted herewith:
 - a. Contractor's Qualifications, including AIA Document 305 signed by an officer of the company;

 - b. If the Bidder is a partnership or joint venture, provide a copy of the partnership or joint venture contract;

 - c. The number of years Contractor has been engaged in demolition/remediation work of a similar nature to this project.

- d. List of full time on-site supervisory personnel to be engaged in the contract, their name, title, resumes, references, length of service with Contractor's company, specific experience including the size and dollar value of projects supervised for the on site supervisor who will be responsible for the work under this project. The identified supervisory official shall have complete authority to speak for and make commitments for the Contractor. The supervisory official shall have a minimum of five (5) years experience in projects of similar size and scope, and submit a list of owner contacts for projects performed within that time frame.
- e. A complete list of contracts performed by the Bidder involving work similar in nature, scope or technical requirements to that required for this Project, including names, addresses, telephone numbers and contact persons of the owners.
- f. A detailed description of the means, methods or procedures that will be employed by the Bidder in connection with the performance of the work on the Project.
- g. Detailed project schedule for all work reflecting completion by **August 31, 2015**.
- h. Evidence of Contractor's ability to obtain Performance and Payment Bond as required by the Bid Documents, shown by a letter signed by the Contractor's bonding company.
- i. Evidence of Contractor's ability to obtain insurance as required by the Bid Documents, shown by a letter signed by the Contractor's insurance company, and addressing specifically each item under the General Conditions, Section 30, Insurance.
- j. Credentials and copies of licenses of the landfill site and operator to be used for waste materials/debris.
- k. Each Bidder shall (i) submit with its Proposal, a notarized statement describing any citations and /or violations issued by any regulatory agency concerning performance on previous contracts, (ii) briefly describe the circumstance(s) involving the job(s) and citation(s)/ violation(s) and involved persons and agencies, (iii) discuss the outcome(s) of any violation(s) and (iv) answer the question, "has your firm or its agents been issued a Stop Work Order on any project within the last 24 months?" If the answer to the questions is "yes", provide details as specified above.
- l. Each Bidder shall answer the question, "Are you now or have been in the past, a party to any litigation or arbitration arising out of your performance of any contract?" If the answer to the question is "yes", provide details as specified in (1) above. You shall describe any liquidated damages assessed against you within the last 24 months.

Failure to report properly or truthfully any of the required information in Section 2, Qualifications, shall be considered sufficient cause for the Authority's rejection of the submitted Bid. In addition, the Authority reserves the right to take such steps as it deems necessary to determine the ability of each Bidder to perform the work. The Bidder shall provide to the Authority such additional information and data for this purpose as the Authority may request. The Authority reserves the right to reject any

bid or Bidder for any reason considered by the Authority to be relevant to the Bidder's potential performance, including but not limited to the Authority's investigation or consideration of the information submitted by such Bidder.

The Bidder has indicated, in figures, a Price for each of the separate items called for in the Proposal, and has shown the Gross Sum ("Grand Total Bid") in the place indicated in the Proposal as the summation of said items.

In case of Discrepancy between the Gross Sum shown in the Proposal and that obtained by adding the items of the work, the Bidder agrees that the sum of the items shall govern, and any errors found in said Sum may be corrected by the Authority.

Unbalanced proposals on which the prices for some items are out of proportion to the prices for other items will be considered as sufficient cause for the disqualification of a Bidder and the rejection of its proposal.

The Bidder agrees that the Authority may reject its bid for any or no reason and award the contract to another party, and hereby waives any claim of damages for said.

If written notice of acceptance of the above bid is mailed, telegraphed, faxed, or delivered to the Bidder within ninety (90) calendar days after the opening thereof, or at any time thereafter before this bid is withdrawn, the Bidder agrees to execute and deliver a Contract in the prescribed form and to furnish the required bond and insurance within five working days after the Contract is presented to it for signature.

Security in the sum of _____ Dollars
(\$ _____) in the form of _____ is
submitted herewith in accordance with the Instructions to Bidders.

Attached hereto is an affidavit of proof that the Bidder has not colluded with any person with respect to this bid or any other bid submitted for this Contract.

The Bidder has submitted or has enclosed financial and experience statements in accordance with the Bid Documents.

Receipt is hereby acknowledged of the following addenda:

<u>Addendum No.</u>	<u>Dated</u>	<u>Acknowledged</u>
_____	_____	_____
_____	_____	_____

3. Prices: The following price breakdown must be filled out for the purpose of bid evaluation and to establish a schedule of values for the work. Bidders are reminded that the goal of this project is **to properly abate and demolish onsite buildings and properly dispose miscellaneous liquid wastes in the basement of the Wittenberg Warehouse building. The Grand Total Bid will be used in determining the selected bidder, but it is likely that some bid items will not be included in the final contract.** The bid prices shall include all labor, materials, overhead, profit, insurance, taxes, fees, permits, etc. to cover the finished work. Successful bidder agrees to:

- Accomplish the scope-of-work in accordance with requirements of the Bid Document;
- Maintain compliance with all regulatory requirements and accepted industry standards;
- Follow the HASP to maintain a safe environment during performance of the work; and
- Perform the scope-of-work in a manner that minimizes disruption to the site operations.

LUMP-SUM PRICING:

Lump-sum price includes all labor, materials, profit, insurance, taxes, and fees to complete the abatement, demolition and liquid waste disposal work as specified in the Bid Document.

Abatement/Demolition of Wittenberg Warehouse Building

Abate and properly dispose asbestos containing materials, remove and properly dispose all household hazardous wastes and properly dispose demolition debris containing lead-based paint associated with the Wittenberg Warehouse building. Lump-sum price includes all labor, materials, profit, insurance, taxes, and fees to complete the abatement and demolition activities for the Wittenberg Warehouse building as specified in Part 2 and Part 3 of the Bid Document.

\$ _____

Basement Oil/Water Disposal

Remove, containerize (as necessary), characterize (includes profile acceptance); transport and dispose of the oil and water in the basement of the Wittenberg Warehouse building (assumed 80,000 gallons of water direct discharged to MSD, 20,000 gallons of oil/water from the basement and 15,000 gallons of oil/water from the vaults will be disposed offsite at an approved disposal/recycling facility); cover and secure elevator shaft at south loading dock sufficient to prevent further flooding of the basement during rain events. Lump-sum price includes all labor, materials, profit, insurance, taxes, and fees to complete the removal and disposal of liquid wastes as specified in Part 4 of the Bid Document.

\$ _____

GRAND TOTAL BID:

\$ _____

ADD ALTERNATE (NOT CONSIDERED FOR GRAND TOTAL BID):

Abatement/Demolition of Office Building and Pump House

Abate and properly dispose asbestos containing materials, remove and properly dispose all household hazardous wastes and properly dispose demolition debris containing lead-based paint associated with the Office Building and Pump House. Lump-sum price includes all labor, materials, profit, insurance, taxes, and fees to complete the abatement and demolition activities for the Office Building and Pump House as specified in Part 2 and Part 3 of the Bid Document.

\$ _____

UNIT-RATE PRICING:

Unit rates will apply in addition to the lump-sum pricing for the following tasks. Add/deduct pricing will adjust Grand Total Bid for actual site conditions versus what is assumed for individual lump-sum pricing.

Disposal of Basement Liquids

Provide a unit-rate price for removal, transportation, and off-site disposal of basement liquids as specified in Section 4.1.2 of the Bid Document.

Characterizing and Profiling Fee \$ _____

Waste Disposal (Bulk Liquid) – Direct Discharge \$ _____ add/deduct per gallon

Waste Disposal (Bulk Liquids) – Beneficial Re-Use \$ _____ add/deduct per gallon

Waste Disposal (Bulk Liquid) – Non-Hazardous \$ _____ add/deduct per gallon

Waste Disposal (Bulk Liquid) – Hazardous \$ _____ add/deduct per gallon

Waste Disposal – Non-Hazardous Solids/Sludges \$ _____ add/deduct per gallon

Waste Disposal – Hazardous Solids/Sludges \$ _____ add/deduct per gallon

NOTE TO BIDDERS: Each unit item identified above shall include all costs to accomplish the specified item (including necessary supervision, labor, equipment, applicable permits, taxes, etc.). Please note that quantity estimates on the bid sheet are provided for bid comparison purposes only. Payment will be based upon actual quantities as determined by Engineer (or its representative's) field observations and measurements.

ITEMIZED FEE SCHEDULE: Bidder will submit an itemized fee schedule with their Bid Form indicating unit rates for labor, materials, and equipment for performing the UST work. The fee schedule will become part of the subcontract agreement.

The contract resulting from this opportunity is subject to the Davis-Bacon Act, as amended (40 U.S.C. 276a to a-7) and as supplemented by Department of Labor regulations (29 CFR part 5, "Labor Standards Provisions Applicable to Contracts Governing Federally Financed and Assisted Construction"). Under this Act, contractors shall be required to pay wages to laborers and mechanics at a rate not less than the minimum wages specified in a wage determination made by the Secretary of Labor. In addition, contractors shall be required to pay wages not less than once a week. The current prevailing wage determination issued by the Department of Labor is provided in Appendix F-5.

BID EXECUTION:

Bidder agrees that the bid pricing will remain firm for a period of 60 calendar days following the bid-closing time. The Bid Form will be executed by an authorized agent of the company binding the Bidder to a legal subcontract agreement.

4. Subcontractors. The names and addresses of the major subcontractors who will be used on the project are (use additional sheets as necessary):

<u>Name</u>	<u>Address</u>	<u>Specialty</u>
a. _____	_____	_____
_____	_____	_____
b. _____	_____	_____
_____	_____	_____
c. _____	_____	_____
_____	_____	_____

The undersigned further declares that it has carefully examined the Bid Documents, plans, specifications, and the job site, and has satisfied itself as to all quantities and conditions and understands that in signing this proposal, it waives all right to plead any misunderstanding regarding these documents and conditions.

The total fee proposed to accomplish all of the work indicated on the plans and specifications shall be reflected in the above line item breakdown. In the event that

there is some doubt as to where a specific material or labor cost should be included, Contractor shall verify with the Authority or provide a written clarification as to the description of work included in a specific category. This proposal shall be binding on all of the heirs, successors, assigns, executors, and administrators of the undersigned.

Company: _____

Address: _____

City, State, and Zip Code: _____

Telephone Number: _____

Authorized Agent: _____

Title: _____

Signature: _____

Date: _____

APPENDIX A: NON-COLLUSIVE AFFIDAVIT

State of Missouri)
)SS
City of St. Louis)

_____being first duly sworn, deposes and says:

That he/she is _____
of _____,
_____, the party making the foregoing proposal or bid, that such proposal or bid is genuine and not collusive or sham; that said bidder has not colluded, conspired, connived or agreed, directly, or indirectly, with any bidder or person, to put in a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly, sought by Contract or collusion or communication or conference, with any person, to fix the bid price of affiant or of any other bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any other bidder, or to secure any advantage against the St. Louis Development Corporation, acting on behalf of the **Land Reutilization Authority** of the City of St. Louis, or any person interested in the proposed contract; and that all statements in said proposal of bid are true, that the prices quoted in the attached bid are fair and proper and not tainted by any collusion, conspiracy and connivance and place responsibility on, in addition to the bidder, its agents, representatives, owners, employees, or parties in interest.

Signature of Bidder:

By: _____

subscribed and sworn to before me this _____ day of _____
20____.

(Notary Public)

My Commission Expires: _____.

APPENDIX B: SAMPLE CONTRACT FORM

THIS CONTRACT, MADE THE _____ day of _____, 2015, by between _____ hereinafter called the "Contractor", and the **Land Reutilization Authority** of the City of St. Louis, hereinafter called the "Authority".

WITNESSETH: That the Contractor and the Authority, for the consideration stated herein, mutually agree as follows:

ARTICLE 1: The Contractor shall furnish all supervision, technical personnel, labor, material, machinery, tools, equipment and services, including utility and transportation services, and perform and complete all work required for **ENVIRONMENTAL REMEDIATION AND DEMOLITION, FORMER PORTER OIL SITE, 1439 KENTUCKY AVENUE, ST. LOUIS, MISSOURI.**

ARTICLE 2: The Contract Price. The Authority will pay the Contractor for performance of this Contract in current funds subject to additions and deductions as provided for in the "Changes in Work" Section, GENERAL CONDITIONS, the sum of _____ (\$ _____)

ARTICLE 3: The executed Bid Documents will consist of the following:

- a. This Contract
- b. Project Manual
- c. Signed Bid Proposal Form
- d. Bid Bond
- e. Non-Collusive Affidavit
- f. Non-Collusive Affidavit-Subcontractor
- g. Performance and Payment Bond

THIS CONTRACT, together with the other documents enumerated in Article 3 herein, which said other documents are as fully a part of the Contract as if hereto attached or herein repeated, form the Contract between the parties hereto. In the event that any provision of any component part of this Contract conflicts with any provision of any other component part, the provision of the component part first enumerated in this Article 3 shall govern, except as otherwise specifically stated.

IN WITNESS WHEREOF, the parties hereto have caused this Contract to be executed in _____ original copies on the day and year first above written.

SEAL:

**Land Reutilization Authority
of the City of St. Louis**

ATTEST:

BY:

TITLE:

Otis Williams
Executive Director

APPROVED FOR LEGAL FORM AND ADEQUACY:

JACQUELINE HARRIS Assistant City Counselor

SEAL:

(Contractor)

ATTEST:

BY: _____

TITLE: _____

APPENDIX C: ACKNOWLEDGEMENT

STATE OF MISSOURI)
)SS
CITY OF ST. LOUIS)

On this _____ day of _____, 2015, before me appeared Otis Williams, to me personally known, who, being by me duly sworn, did say that he is the Executive Director of the **Land Reutilization Authority of the City of St. Louis**, a public body corporate and politic of the State of Missouri, and that the seal affixed to the forgoing instrument is the corporate seal of said corporation, and said instrument was signed and sealed in behalf of said corporation by authority of its Board of Commissioners, and said Otis Williams acknowledged said instrument to be the free act and deed of said corporation.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal in the City and State aforesaid, the day and year first above written.

Notary Public

My Commission Expires: _____

STATE OF MISSOURI)
)SS
CITY OF ST. LOUIS)

On this _____ of _____, 2015, before me personally appeared _____, to me personally known, who, being by me duly sworn, did say that he is _____ of _____, that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said acknowledged said instrument to be the free act and deed of said corporation.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal in the City and State aforesaid, the day and year first above written.

NOTARY PUBLIC

My Commission Expires: _____

APPENDIX D: GENERAL CONDITIONS

1. DEFINITIONS

Wherever used in any of the Bid Documents, the following meanings shall be given to the terms herein defined:

- a. The term "Contract" means the Contract executed by the Authority and the Contractor, of which the General Conditions form a part.
- b. The term "Authority", "Local Authority", or "Local Public Agency" means the St. Louis Development Corporation acting on behalf of the Land Reutilization Authority of the City of St. Louis, which is authorized to undertake this Contract.
- c. The term "Contractor" means the person, firm or corporation, partnership or joint venture, entering into the contract with the Authority to perform the work to be done under this Contract.
- d. The term "Contracting Officer" means the person within the Authority's organization duly authorized by the governing body thereof to administer contracts for and in the name of the Authority. It does not necessarily mean the person executing this Contract. The Authority will advise the Contractor of the name of the person or official who is designated as the Contracting Officer.
- e. The term "Engineer" means the Engineer in charge serving the Authority, its successor or any other person or persons designated or employed by the Authority for the purposes of directing or having charge of the work embraced in this Contract and/or having provided technical documents. The Authority will advise the Contractor of the name of the person or official who is designated as the Engineer.
- f. The term "Bid Documents" means and shall include the following: Executed Contract, Addenda (if any), Invitation for Bids, Instructions to Bidders, Signed Copy of the Bid, Form of Bid Bond, Form of Non-Collusive Affidavits, Form of Performance and Payment Bond, the General Conditions, the Exhibits, Special Conditions, Technical Specifications, the Drawings, and all other documents listed in the Index of Bid Documents.
- g. The term "Drawings" means the drawings listed under the "Schedule of Drawings", and/or included in the drawings obtained by the Contractor.
- h. The term "Technical Specifications" means that part of the Bid Documents which describes, outlines and stipulates the quality of any materials to be furnished: the quality of workmanship required; and the manner and methods to be employed in the work to be done under this Contract.
- i. The term "Addendum" or "Addenda" means any changes, revisions or clarifications of the Bid Documents which have been duly issued by the Authority to prospective Bidders prior to the time of receiving bids.
- j. The term "Work Day" shall refer to an eight (8) hour period, Monday through Friday, excluding federal holidays, beginning no earlier than 6:00 AM and ending no later than 5:00 PM.

2. COMMUNICATIONS

- a. All notices, demands, requests, instructions, approvals, proposals, and claims must be made in writing.
- b. Any notice to or demand upon the contractor shall be sufficiently given if delivered at the office of the Contractor stated on the signature page of the form of Bid Proposal (or at such other office as the Contractor may, from time to time, designate in writing to the Authority), or if deposited in the United States Mail in a sealed, postage-prepaid envelope, or delivered with charges prepaid to any telegraph or delivery company for transmission, in each case addressed to such office.
- c. All papers required to be delivered to the Authority shall, unless otherwise specified in writing to the Contractor, be delivered to the office of the St. Louis Development Corporation, 1520 Market Street, Suite 2000, St. Louis, Missouri 63103 (Attention: Chad Howell), and any notice to or demand upon the Authority shall be sufficiently given if so delivered or if deposited in the United States Mail in a sealed, postage prepaid envelope, or delivered with charges prepaid to any telegraph or delivery company for transmission to said Authority at such address, or to such representatives of the Authority or to such other address as the Authority may, from time to time, subsequently specify in writing to the contractor for such purpose.

3. SUPERINTENDENCE BY CONTRACTOR

- a. Except where the Contractor is an individual and gives his personal superintendence to the work, the Contractor shall provide a competent superintendent, (or more than one superintendent if double shifts are performed) satisfactory to the Authority and the Engineer, on the work at all times during working hours with full authority to act for it. The Contractor shall also provide an adequate staff for the proper coordination and expediting of work.
- b. The Contractor shall lay out its own work and it shall be responsible for all work executed by it under the Contract. It shall verify all figures and elevations before proceeding with the work and will be held responsible for any error resulting from its failure to do so.

4. SUBCONTRACTS

- a. The Contractor shall not execute a Contract with any subcontractor or permit any subcontractor to perform any work included in this Contract until it has submitted a non-collusive affidavit from the subcontractor in substantially the form provided, has submitted the subcontractor's insurance certificate, and has received written approval of such subcontractor from the Authority. Said approval shall in no way make the Authority liable for any act or deed, or result of the use of, the Contractor's subcontractor.
- b. No proposed subcontractor shall be disapproved by the Authority except for cause.
- c. The Contractor shall be fully responsible to the Authority for the acts and omissions of its subcontractors, and of persons either directly or indirectly employed by them, as it is for the acts and omissions of persons directly employed by it.

- d. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to require compliance by each subcontractor with all provisions of the Contract and Bid Documents.
- e. Nothing contained in the Contract shall create any contractual relation between any subcontractor and the Authority.

5. CONTRACTS

The Authority or other entities may award, or may have awarded, other contracts for additional work at or near the project area, and the Contractor shall cooperate fully with such other Contractors, by scheduling his own work with that to be performed under other Contracts as may be directed by the Authority. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other Contractor as scheduled.

The laws of the State of Missouri shall govern the interpretation and enforcement of this Contract.

This Contract constitutes the entire Contract between the parties with respect to the subject hereof and neither has been induced to make or enter into this Contract by reason of any oral or written Contract or representation other than as contained herein.

The failure of the Authority in any instance to insist upon strict performance of any of the terms hereunder or to exercise any rights conferred herein shall not be construed as a waiver or relinquishment to any extent of the right to assert or rely upon any such terms or rights on any future occasion.

Financial records, supporting documentation, statistical records and all other records pertinent to any activity under this contract shall be retained by the Contractor for a period of three (3) years from the date of final payment under this contract.

6. SCHEDULING AND COORDINATION OF THE WORK

- a. The Contractor shall be responsible for the proper scheduling of all work and for the coordination of the operations of all trades, subcontractors, or material persons engaged upon this Contract. It shall be prepared to guarantee to each of its subcontractors, the locations and measurements which they may require for the fitting of their work to all surrounding work.
- b. The Contractor shall coordinate all of the work under this Contract with work to be done by others.
- c. The Contractor shall conduct its work so as not to interfere with functioning of existing sewers. Extreme care shall be observed to prevent debris from entering existing sewers as a result of his work. This section "c" shall not apply to sewers which are currently unused, are not to be used in the future, and are to be demolished as part of this contract.
- d. The Contractor shall make allowance for and pay for all incidental and overhead expense of coordinating its work and work by others.

- e. The work must be scheduled and accomplished in stages as approved by the Engineer.

7. RESPONSIBILITIES OF CONTRACTOR

Except as otherwise specifically stated in the Bid Documents and Technical Specification, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, heat, power, transportation, superintendence, temporary construction of every nature, charges, levies, fees, permits, or other expenses and all other services and facilities of every respect and within the specified time.

If, through acts of neglect on the part of the Contractor, any other Contractor or any subcontractor shall suffer loss or damage on the work, the Contractor shall settle with such other Contractor or subcontractor by Contract or arbitration, if such other Contractor or subcontractor will so settle. If such other Contractor or subcontractor shall assert any claim against the Authority on account of any damage alleged to have been so sustained, the Authority will notify this Contractor, who shall defend at this own expense any suit based upon such claim, and, if any judgment or claims against the Authority shall be allowed, the Contractor shall pay or satisfy such judgment or claim and pay all costs and expenses in connection therewith.

Contractor acknowledges that the work is to be performed in strict conformance with all means, methods and procedures specified in the Contract Documents (including but not limited to any disposal procedures, wrecking or abatement methodologies or dust mitigation and control requirements set forth therein). Contractor agrees that alternative methods and procedures to those that are specified in the Contract Drawings will not be allowed, even if they are otherwise permitted by applicable law, regulation or industry practice. The Contract Price will not be increased, and the Time for Completion will not be extended, based on any claim by the Contractor that it expected or assumed it could employ different or alternative means, methods or procedures from those required by the Contract Documents, regardless of whether such different or alternative means, methods or procedures are or have been permitted on other projects (whether by the Authority or any other entity) or are or have been allowed by any applicable law or regulation or any industry custom, standard or practice.

In addition, Contractor acknowledges, that except for those means, methods or procedures that are specified in the Contract Documents, Contractor is solely responsible to develop, determine and implement such means, methods and procedures as are required to perform the work in a full, timely, complete and proper fashion, in accordance with all requirements of the Contract Documents and applicable law. In this regard, Contractor represents that it has visited the Project site, has examined carefully all of the Contract Documents, has reviewed all reports and other information relating to the conditions at the Project site that have been identified to the Contractor in connection with the solicitation or submission of the Contractor's bid and the negotiation of this Contract, and has made a reasonably thorough inspection of the Project site (during which inspection the Contractor has correlated its personal observations with the requirements of the Contract Documents and has acquainted itself with all physical and observable conditions under which the work will be performed). Based on the foregoing, the Contractor assumes responsibility for (and shall not be entitled to any increase in the Contract Price or extension of the Time for Completion or to any other damages or additional compensation based on) any conditions at the site that the Contractor reasonably should have anticipated or detected, based on the information made available to the Contractor prior to the execution of the Contract (including a reasonably thorough inspection of the Project site).

Specifically in this regard, Contractor acknowledges and agrees that the Contract Price will not be increased, and the Time for Completion will not be extended, based on any expectation or assumption by Contractor that any particular means, methods, procedures or sequences could be employed in connection with the work (other than those specified in the Contract Documents) if the reason such means, methods, procedures or sequences cannot be employed, is a condition that was observable by, or disclosed to, the Contractor prior to the execution of this Contract.

8 BID DOCUMENTS AND DRAWINGS

The Authority, if requested by the Contractor, will furnish the Contractor, without charge, up to six (6) copies of the Bid Documents, including Technical Specifications and Drawings. Additional copies requested by the Contractor will be furnished at cost.

9. JOB OFFICES

The Contractor may provide such job site offices as needed for this project at its sole expense. Authority must approve of its location on site.

10. PAYMENTS TO CONTRACTOR

i. Partial Payments

- a. The Contractor shall prepare its requisition for partial payment, as described in "Process" Section 8 (page 21), as of the last day of the month and submit it, with the required number of copies, to the Engineer for approval. The amount of the payment due the Contractor shall be determined by deducting from the total value of work complete to date, (1) ten percent (10%) of the total amount, to be retained until final payment and (2) the amount of all previous payments. The total value of work complete to date shall be based on the estimated quantities of work completed and on the unit price and lump sum amounts contained in the Bid Documents. Copies of all contractor and subcontractor invoices and documentation shall be available for inspection by the Engineer.

The Contractor, upon payment by the Authority, shall within ten (10) calendar days issue payment to all subcontractors and suppliers owed monies for that monthly payment period.

- b. Monthly or partial payments made by the Authority to the Contractor are monies advanced for the purpose of assisting the Contractor to expedite the work of construction. All material and completed work covered by such monthly or partial payments shall remain the property of the Contractor and he shall be responsible for the care and protection of all materials and work upon which payments have been made. Such payments shall not constitute a waiver of the right of the Authority to require the fulfillment of all terms of the Contract and the delivery of all work embraced in this Contract complete and satisfactory to the Authority in all details. Retainage on this Project may at the option of the Authority be reduced to five percent (5%), once the Project has reached a minimum of ninety-five percent (95%) completion.

ii. **Final Payment**

- a. After final inspection and acceptance by the Engineer and the Authority of all work under Contract, the Contractor shall prepare its requisition for final payment, as described in "Appendix to the Instructions to Bidders VIII" on page 24, which shall be based upon the carefully measured or computed quantity of each item of work at the applicable unit prices and/or lump sums stipulated in the Contract. Contractor and all subcontractors agree that the Authority's measured or computed quantities will control with respect to payment.

The total amount of the final payment due the Contractor under this contract shall be the amount computed as described above less all previous payments.

Final payment to the Contractor shall be made subject to its furnishing the Authority with a release in satisfactory form of all claims against the Authority arising under and by virtue of its contract, other than such claims, if any, as may be specifically excepted by the Contractor from the operation of the release as provided under Section 15 DISPUTES, GENERAL CONDITIONS.

- b. The Authority, before paying the final estimate, may require the Contractor to furnish releases or receipts from all subcontractors having performed any work and all persons having supplied materials, equipment and services to the Contractor, if the Authority deems the same necessary in order to protect its interest. The Authority, however, may make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts and any payments so made shall in nowise impair the obligations of any surety or sureties furnished under this Contract.
- c. Withholding of any amount due the Authority under the section entitled "Liquidated Damages" in the SPECIAL CONDITIONS, shall be deducted from the final payment due the Contractor.

iii. **Withholding Payments**

The Authority may withhold from any payment otherwise due the Contractor so much as may be necessary to protect the Authority, and if it so elects, may also withhold any amounts due from the contractor to any subcontractors or material dealers, for work performed or material furnished by them. The foregoing provisions shall be construed solely for the benefit of the Authority and will not require the Authority to determine or adjust any claims or disputes between the Contractor and his subcontractors or material dealers, or to withhold any monies for their protection unless the Authority elects to do so. The failure or refusal of the Authority to withhold any monies from the Contractor shall in nowise impair the obligations of any surety of sureties under any bond or bonds furnished under this Contract. The Authority at its option and expense may additionally utilize escrow agents for the disbursement of funds, and/or make joint payments to contractor and subcontractor as it deems necessary.

The Authority may withhold an appropriate amount of payment of a monthly estimate if the Contractor should fail to comply with any of the requirements set forth in the Contract. In addition, if the Contractor employs the services of other persons to execute any specific portions of work included in this Contract, the Contractor shall make

Contract to make monthly payments thereto. If any person so employed presents to the Authority evidence that such monthly payments have not been made, whereupon an investigation reveals the evidence to be true, then the Authority may withhold payment to the Contractor until such time as a Contract, satisfactory to the Authority, has been reached between the Contractor and the person employed.

To ensure that the obligations under subcontracts awarded to subcontractors are met, the Authority will review the Contractor's efforts to promptly pay subcontractors, vendors or suppliers for work performed in accordance with the executed subcontracts. The contractor shall pay subcontractors, suppliers and vendors, including MBE/WBEs their respective subcontract amount within 10 calendar days after the contractor receives payment from the Authority for the items performed by the subcontractors. The contractor shall provide the subcontractors with a full accounting to include quantities paid and deductions made from the subcontractor's partial payment at the time the check is delivered. Failure to do so without cause may result in an amount equal to the amount owed the subcontractor, vendor or supplier, plus 10% of the amount, being withheld by the Authority from the contractor on the next partial payment. Said amount will continue to be withheld by the Authority until the subcontractor is paid the amount due plus interest equal to the prime rate plus 1.5%. Notification from the subcontractor that payment has been received will be required if this clause is invoked. The Authority may require the contractor to certify the amount paid to subcontractors.

iv. Payments Subject to Submission of Certificates

Each payment to the Contractor by the Authority shall be made subject to submission by the Contractor of all written certifications required of him and his subcontractors by the section entitled CONTRACTOR'S CERTIFICATES under GENERAL CONDITIONS, and as elsewhere required in the Bid Documents.

11. CHANGES IN THE WORK

- a. The Authority may make unilateral changes in the scope of the work required to be performed by the Contractor under the Contract, by making additions thereto, or by omitting work therefrom, without invalidating the Contract, and without relieving or releasing the Contractor from any of its obligations under the Contract or any guarantee given by it pursuant to the Contract provisions, and without affecting the validity of the guaranty bonds, and without relieving or releasing the surety or sureties of said bonds. All such work shall be executed under the terms of the original Contract unless it is expressly provided otherwise.
- b. Except for the purpose of affording protection against any emergency endangering life or property, the Contractor shall make no change in the materials used, or in the specified manner of work, or supply additional labor, services or materials beyond that actually required for the execution of the Contract, unless in pursuance of a written order from the Authority authorizing the Contractor to proceed with the change. No claim for an adjustment of the Contract Price, will be valid unless so ordered by the Authority in writing.
- c. If applicable unit prices are contained in the Contract (established as a result of either a unit price bid or a Supplemental Schedule of Unit Prices) the Authority may order the Contractor to proceed with desired changes in work, the value of such changes to be

determined by the measured quantities involved and the applicable unit prices specified in the Contract; provided that, the net value of all changes does not increase or decrease the original total amount shown in the Contract by more than ten percent (10%) in accordance with the section entitled UNIT PRICES under INSTRUCTIONS TO BIDDERS.

d. If applicable unit prices are not contained in the Contract, or if the total net change increases or decreases the total Contract Price more than ten percent (10%), the Authority shall, before ordering the Contractor to proceed with desired changes, request an itemized proposal from it covering the work involved in the change after which the procedure shall be as follows:

(1) If the proposal is acceptable the Authority will prepare the change order in accordance therewith for acceptance by the Contractor; and

(2) If the proposal is not acceptable and prompt agreement between the two parties cannot be reached, the Authority may order the Contractor to proceed with the work on a cost-plus-limited basis. A cost-plus-limited basis is defined as the net cost of the labor, materials, and equipment plus fifteen percent (15%) of said net cost to cover all overhead and profit, the total cost not to exceed a specified limit.

i. The net cost of the Contractor's labor is defined as: the basic hourly rate plus fringe benefits payments. The property damage, liability and workmen's compensation insurance premiums, unemployment insurance contributions, and social security taxes on this cost-plus-limited basis work will be included in the payment for overhead.

ii. The net cost of the materials used is defined as the actual cost of such materials delivered to the job site and incorporated in the work.

iii. The net cost of the equipment used is defined as the hourly operating cost of said equipment, times the actual time required to move equipment to and from the site of extra work (if necessary) plus the actual operating time spent on the extra work.

The hourly operating cost shall apply only to equipment that is already on the job. Equipment required to be brought to the job solely for this extra work will be paid for a minimum of one day operating time plus delivery charges.

iv. No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.

e. Each change order shall include in its final form:

(1) A detailed description of the change in work.

(2) The Contractor's proposal (if any) or a conformed copy thereof.

- (3) A definite statement as to the resulting change in the contract price and/or time.
- (4) The statement that all work involved in the change shall be performed in accordance with contract requirements except as modified by the change order.

12. CLAIMS FOR EXTRA COST

- a. If the Contractor claims that any instructions by Drawing or otherwise involve extra cost or extension of time, it shall, within ten calendar days after the receipt of such instructions, and in any event before proceeding to execute the work, submit its protest thereto in writing to the Authority stating clearly and in detail the basis of its objections. No such claim will be considered unless so made.
- b. Any discrepancies which may be discovered between actual conditions and those represented by the Drawings and maps shall at once be reported to the Authority and work shall not proceed except at the Contractor's risk, until written instructions have been received by it from the Authority.
- c. If, on the basis of the available evidence, the Authority determines that an adjustment of the Contract Price and/or Time is justifiable and equitable, the procedure shall then be as provided in Section 11, CHANGES IN THE WORK of the GENERAL CONDITIONS.

13. TERMINATION, LIQUIDATED DAMAGES, DELAYS, AND SUSPENSIONS

a. Termination of Contract.

(i) Cause: If the Contractor refuses or fails to prosecute the work with such diligence as will ensure its completion within the time specified in these Bid Documents, or as modified as provided in these Bid Documents, the Authority by written notice to the Contractor, may terminate the Contractor's right to proceed with the work. Upon such termination, the Authority may take over the work and prosecute the same to completion, by contract or otherwise, and the Contractor and his sureties shall be liable to the Authority for any additional cost incurred by the Authority in its completion of the work, and they shall also be liable to the Authority for liquidated damages for any delay in the completion of the work, as provided below. If the Contractor's right to proceed is so terminated, the Authority may take possession of and utilized in completing the work such materials, tool, equipment, and plant as may be on the site of the work and necessary therefore. Contractor shall not be relieved of liability for damages sustained by the Authority as a result of breach of this Contract by Contractor, and the Authority may withhold payment to the Contractor for the purpose of set-off until such time as the exact amount of damages due the Authority from the Contractor is determined.

(ii) Convenience: The Authority may additionally terminate this Contract at any time for any reason by notice in writing from the Authority to the Contractor. Said termination shall be effective immediately upon Contractor receipt of such notice. In the event of termination of this Contract by the Authority, Contractor shall be entitled to receive compensation for any satisfactory work completed by Contractor through the effective date of termination. In no event shall Contractor

have a claim for loss or profit damages in the event of termination hereunder. Rights to terminate hereunder shall be in addition to and without prejudice to any other right or remedy.

b. **Liquidated Damages for Delays.**

If the work is not completed by **August 31, 2015**, as required by Section 1, TIME FOR COMPLETION under SPECIAL CONDITIONS, including any extensions of time for excusable delays as herein provided, the Contractor shall pay to the Authority as fixed, agreed, and liquidated damages for each calendar day of delay, until the work is completed and accepted, the amount as set forth in Section 2, LIQUIDATED DAMAGES under SPECIAL CONDITIONS, and the Contractor and its sureties shall be liable to the Authority for the amount thereof.

c. **Excusable Delays.**

The Contractor shall not be charged with Liquidated damages for any delays in the completions of the work due:

(1) To any acts of the Government, including controls or restrictions upon, or requisitioning of materials, equipment, tools or labor by reason of war, National Defense, or any other national emergency;

(2) To any acts of the Authority;

(3) To causes not reasonably foreseeable by the parties to this Contract at the time of the execution of the Contract which are beyond the control and without the fault or negligence of the Contractor, including acts of God or of public enemy, acts of another Contractor in the performance of some other contract with the Authority, fires, floods, epidemics, quarantine, restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions; and

(4) To any delay of any subcontractor occasioned by any of the causes specified in subparagraphs (1), (2), (3) and (4) of this paragraph "C" which directly affects the Contractor's ability to maintain his schedule.

Provided, however, that the Contractor promptly notifies the Authority within ten (10) calendar days in writing of the cause of the delay. Upon receipt of such notification, the Authority shall ascertain the facts and the cause and extent of delay. If, upon the basis of the facts and the terms of this Contract, the delay is properly excusable, the Authority shall extend the time for completing the work for a period of time commensurate with the period of excusable delay, only to the extent that said period of excusable delay directly affects the Contractor's ability to perform the work, and delays critical path activities necessary for project completion.

No payment, compensation or adjustment of any kind (other than the extensions of time provided for) shall be made to the Contractor for damages because of hindrances or delays from any cause in the progress of the work, whether such hindrances or delays be avoidable or unavoidable, and the Contractor agrees that it will make no claim for

compensation, damages or mitigation of liquidated damages for any such delays and will accept in full satisfaction for such delays said extension of time.

d. **Suspension of Contract:**

(1) The Authority may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for a period of time that the Authority determines appropriate for the convenience of the Authority.

(2) If the performance of all or any part of the work is, for an unreasonable period of time suspended, delayed or interrupted (i) by an act of the Authority in the administration of this contract or (ii) by the Authority's failure to act within the time specified in this contract (or within a reasonable time if not specified) an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract.

(3) A claim under this clause shall not be allowed unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of the final payment under the contract;

14. ASSIGNMENT OR NOVATION

The Contractor shall not assign or transfer, whether by an assignment or novation, any of its rights, duties, benefits, obligations, liabilities, or responsibilities under this Contract without the written consent of the Authority; provided, however, that assignments to banks, trust companies, or other financial institutions may be made without the consent of the Authority. No assignment or novation of this Contract shall be valid unless the assignment or novation expressly provides that the assignment of any of the Contractor's rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered, and materials, tools, and equipment supplied for the performance of the work under this Contract in favor of all persons, firms, or corporations rendering such labor or services or supplying such materials, tools, or equipment.

15. DISPUTES

a. All disputes arising under this Contract or its interpretation, whether involving law or fact or both, or extra work, and all claims for alleged breach of contract shall within ten (10) calendar days of commencement of the dispute, be presented by the Contractor to the Authority for decision. All papers pertaining to claims shall state the facts surrounding the claim in sufficient detail to identify the claim together with its character and scope.

In the meantime the Contractor shall proceed with the work as directed. Any claim not presented within the time limit specified within this paragraph shall be deemed to have been waived, except that if the claim is of a continuing character and notice of the claim is not given within ten calendar days of its commencement, the claim will be considered

only for a period commencing ten (10) calendar days prior to the receipt by the Authority of notice thereof.

- b. The Contractor shall submit in detail its claim and its proof thereof. Each decision by the Authority will be in writing and will be mailed to the Contractor by registered or certified mail, return receipt requested.
- c. If the Contractor does not agree with any decision of the Authority, it shall in no case allow the dispute to delay the work but shall notify the Authority promptly in writing that it is proceeding with the work under protest, and it may then except the matter in question from the final release.

16. TECHNICAL SPECIFICATIONS AND DRAWINGS

Anything mentioned in the Technical Specifications and not shown on the Drawings or shown on the Drawings and not mentioned in the Technical Specifications shall be of like effect as if shown on or mentioned in both. In case of difference between Drawings and Technical Specifications, the matter shall be immediately submitted to the Engineer and the Authority, without whose decision, said discrepancy shall not be adjusted by the Contractor, save only at its own risk and expense.

17. REQUESTS FOR INFORMATION

It shall be the responsibility of the Contractor to make timely requests of the Authority for any additional information not already in the Contractor's possession which should be furnished by the Authority under the terms of this Contract, and which the Contractor will require in the planning and execution of the work. Such requests must be submitted from time to time immediately as the Contractor becomes aware of the need for supplementary information and each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. Each request shall be in writing, and list the various items and the latest date by which each will be required by the Contractor. The first list shall be submitted within two weeks after Contract award and shall be as complete as possible at that time. The Contractor shall, if requested, furnish promptly any assistance and information the Engineer may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for any delay in its work or to others arising from its failure to comply fully with provisions of this Section.

18. MATERIAL AND WORKMANSHIP

- a. Unless otherwise specifically provided for in the Technical Specifications, all workmanship, equipment, materials and articles incorporated in the work shall be new and the best grade of the respective kinds for that purpose. Where equipment, materials, articles or workmanship are referred to in the Technical Specifications as "equal to" any particular standard, the Engineer shall decide the question of quality and equality.
- b. The Contractor shall furnish at the earliest possible time to the Authority and the Engineer for approval the manufacturer's detailed specifications for all machinery, mechanical and other special equipment, which it contemplates installing together with full information as to type, performance characteristics, and all other pertinent

information concerning all other materials or articles which the Contractor proposes to incorporate in the work. (See Section – SAMPLES, CERTIFICATES AND TESTS, GENERAL CONDITIONS).

- c. Machinery, mechanical and other equipment, materials or articles installed or used without such prior approval shall be at the risk of subsequent rejection.
- d. Materials specified by reference to the number or symbol of a specific standard, such as an ASTM standard, a Federal Specification or other similar standard, shall comply with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of the bid opening, except as limited to type, class or grade, or modified in such reference. The standards referred to, except as modified in the Technical Specification, shall have full force and effect as though printed therein.
- e. The Authority may require the Contractor to dismiss from the work any such company or employee or employees as the Authority or the Engineer may deem incompetent, or careless, or insubordinate, or otherwise detrimental to the satisfactory completion of the project. In no event shall any entity or individual have a claim for loss or profit damages in the event of termination hereunder.

19. SAMPLES, CERTIFICATES AND TESTS

- a. The Contractor shall submit to the Engineer all material or equipment samples, certificates, affidavits, etc., as called for in the Bid Documents or required by the Engineer, promptly after award of the Contract and acceptance of the Contractor's bond. No such material or equipment shall be manufactured or delivered to the site, except at the Contractor's own risk, until the required samples or certificates have been approved in writing by the Engineer. Any delay in the work caused by later or improper submission of samples or certificates for approval shall not be considered just cause for an extension of the contract time.
- b. Each sample submitted by the Contractor shall carry a label giving the name of the Contractor, the project for which it is intended, and the name of the producer. The accompanying certificate or letter from the Contractor shall state that the sample complies with contract requirements, shall give the name and brand of the product, its place of origin, the name and address of the producer, and all specifications or other detailed information which will assist the Engineer in passing upon the acceptability of the sample promptly. It shall also include the statement that all materials or equipment furnished for use in the project will comply with the samples and/or certified statements. Certifications and tests to prove conformance with the Technical Specifications shall be furnished and paid for by the Contractor, as requested by the Authority.
- c. Approval by the Engineer (in conjunction with the Authority and its design team) of any materials shall be general only and shall not constitute a waiver of the Authority's right to demand full compliance with Contract requirements. After actual deliveries, the Engineer will have such check tests made as it deems necessary in each instance and may reject materials, equipment and accessories for cause, even though such materials and articles have been given prior general approval. If materials, equipment or accessories which fail to meet check tests have been incorporated in the work, the Engineer will have the right to cause their removal and replacement with proper materials or to demand and secure such reparation by the Contractor as is equitable.

- d. Except as otherwise specifically stated in the Contract, the costs of sampling and testing will be divided as follows:
- (1) The Contractor shall furnish without extra cost, including packing and delivery charges, all samples required for testing purposes, or as directed by the Engineer to be taken except those samples taken on the project by the Engineer;
 - (2) The Contractor shall assume all cost of re-testing materials which fail to meet contract requirements;
 - (3) The Contractor shall assume all costs of testing materials offered in substitution for those found deficient; and
 - (4) The Authority will pay all other expenses.

20. PERMITS AND CODES

- a. The Contractor shall give all notices required by and comply with all applicable laws, ordinances, and codes of federal, state, and local governments. All environmental abatement, remediation, demolition and construction work and/or utility installations shall comply with all applicable ordinances and codes, including all written waivers. Before installing any work, the Contractor shall examine the Drawings and Technical Specifications for compliance with applicable ordinances and codes and shall immediately report any discrepancy to the Authority. Where the requirements of the Drawings and Technical Specifications fail to comply with such applicable ordinances or codes, the Authority will adjust the Contract by Change Order to conform to such ordinances or codes (unless waivers in writing covering the difference have been granted by the governing body or department) and make appropriate adjustment in the Contract Price or stipulated unit prices.

Should the Contractor fail to observe the foregoing provisions and proceed with the demolition, construction, and/or install any utility at variance with any applicable ordinance or code, including any written waivers (notwithstanding the fact that such installation is in compliance with the Drawings and Technical Specifications), the Contractor shall remove such work without cost to the Authority, but a Change Order will be issued to cover only any excess cost the Contractor would have been entitled to receive if the change had been made before the Contractor commenced work on the items involved.

- b. The Contractor shall at its own expense, secure and pay to the appropriate department of the local government the fees or charges for all permits, including permits for street pavements, sidewalks, sheds, removal of abandoned water taps, sealing of house connections, drains, pavement cuts, building, electrical, plumbing, water, gas, demolition, abatement, and sewer permits, and other permits as required by the local regulatory body or any of its agencies, including street and sidewalk easements and closings.
- c. The Contractor shall comply with applicable federal, state, and local laws and ordinances governing the disposal of surplus excavation, materials, debris, and rubbish

on or off the Project Area and commit no trespass on any public or private property in any operation due to or connected with the work embraced in this Contract.

- d. The Contractor shall pay for securing all permits, inspection deposits, and charges, required by the City of St. Louis and the Metropolitan St. Louis Sewer District, and notify all parties concerned before proceeding with the required work.

21. CARE OF WORK

- a. The Contractor shall be responsible for all damages to persons or property that occur as a result of its fault or negligence in connection with the prosecution of the work, and shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance, whether or not the same has been covered in whole or in part by payments made by the Authority.
- b. In an emergency affecting the safety of life or property, including adjoining property, the Contractor, without special instructions or authorization from the Authority, is authorized to act at the Contractor's discretion to prevent such threatened loss or injury, and the Contractor shall so act. The Contractor shall likewise act if instructed to do so by the Authority. Any compensation claimed by the Contractor on account of such emergency work will be determined by the Authority as provided in the Section – CHANGES IN THE WORK under GENERAL CONDITIONS.
- c. The Contractor shall avoid damage as a result of its operations to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and it shall at its own expense completely repair any damage caused by its operations.
- d. The Contractor shall shore up, brace, underpin, secure, and protect as may be necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with the work embraced in this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of any work. The Contractor shall indemnify and save harmless the Authority from any damages on account of settlements or the loss of lateral support of adjoining property, and from all loss or expense and all damages for which the Authority may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

22. ACCIDENT PREVENTION

- a. The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of its prosecution of the work. The safety provisions of applicable laws and building and construction codes shall be observed, and the Contractor shall take, or cause to be taken, such additional safety and health measures as the Contractor may determine to be reasonably necessary. Machinery, equipment and all hazards shall be guarded in accordance with the safety provisions of the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, Inc., to the extent that such provisions are

not in conflict with applicable laws. The Contractor shall comply with all pertinent provisions of the Contract Work Hours and Safety Standards Act as amended, commonly known as the Construction Safety Act, as pertains to health and safety standards, and all OSHA regulations and requirements.

- b. The Contractor shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor shall promptly furnish the Authority with reports concerning these matters upon written request by the Authority.
- c. The Contractor shall indemnify and save harmless the Authority from any claims for damages resulting from personal injury and/or death suffered or alleged to have been suffered by any person as a result of any work conducted under this Contract.

23. SANITARY FACILITIES

The Contractor shall, as needed, furnish, install, and maintain ample sanitary facilities for all workers. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required by the sanitary codes of the State and local government. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe 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 and governing health regulations.

24. USE OF PREMISIES

- a. The Contractor shall confine its equipment, storage or materials, and construction operations to the areas described in the Technical Specifications and/or as shown on the Drawings and as prescribed by ordinances or permits, or as may be directed by the Authority, and shall not unreasonably encumber the site or public rights-of-way with its materials and construction equipment.
- b. The Contractor shall comply with all reasonable instructions of the Authority and the ordinances and codes of the local government, regarding signs, advertising, traffic, fires, explosives, danger signals, and barricades.

25. REMOVAL OF DEBRIS, CLEANING, ETC.

- a. The Contractor shall, periodically or as directed by the Engineer during the progress of the work, remove and legally dispose of all surplus material and debris, and keep the Project Area and public rights-of-way reasonably clear. Upon completion of the work, he shall remove all temporary construction facilities, debris and unused materials provided for the work, and put the project area and public rights-of way in a neat and clean condition. Trash burning on the site will not be allowed.
- b. Upon completion of the work, or as directed by the Authority during the work, the Contractor shall remove all temporary offices, structures and facilities from the site, except for the fencing, the same to become his property, and leave the site of work clean and in the condition required by the Contract.

26. INSPECTION

- a. All materials and workmanship shall be subject to inspection, examination, or test by the Authority and the Engineer at any and all times during the work and at any and all places where such work is carried on. The Authority shall have the right to reject defective material and workmanship or require its correction. Unacceptable workmanship shall be satisfactorily corrected by the Contractor.

If the Contractor fails to proceed at once with the correction of rejected workmanship or defective material, the Authority may contract or otherwise have the defects remedied or rejected materials removed from the Project Area and charge the costs of the same against any monies which may be due the Contractor, without prejudice to any other rights or remedies of the Authority.

- b. The Contractor shall promptly furnish all materials reasonably necessary for any test which may be required. (See Section – SAMPLES, CERTIFICATES AND TESTS, under the GENERAL CONDITIONS, PART I.) All tests by the Authority will be performed in such manner as not to delay the work unnecessarily and shall be made as described in the Technical Specifications.
- c. Neither inspection, testing, approval nor acceptance of the work in whole or in part, by the Authority or its agents shall relieve the Contractor or his sureties of full responsibility for materials furnished or work performed not in strict accordance with the Contract.

27. REVIEW BY THE AUTHORITY

The Authority, its authorized representatives and agents, and representatives of any appropriately authorized government agencies shall, at all times have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices, and other relevant data and records pertaining to this Contract, provided, however, that all instructions and approval with respect to the work will be given to the Contractor only by the Authority through its authorized representatives or agents.

28. DEDUCTION FOR UNCORRECTED WORK

If the Authority deems it not expedient to require the Contractor to correct work not done in accordance with the Bid Documents, an equitable deduction from the Contract Price will be made by the Authority and subject to settlement, in case of dispute, as herein provided.

29. INSURANCE

- a. The Contractor shall submit to the Authority for review and approval, evidence of its Workers Compensation, Commercial General Liability, Builder's Risk, and Auto Liability policies and shall similarly submit evidence of its Subcontractor's policies before each commences work. The policies shall be scheduled on an approved form and shall be kept in force until the Contractor's work is accepted and taken over by the Authority. Contracts of insurance (covering operations under this Contract) which expire before the Contractor's work is accepted and taken over by the Authority, shall be renewed and submitted to the Authority for its approval. All insurance policies carried during the life of this Contract must be true "occurrence" policies, and shall contain no sunset provision.

b. The Contractor shall purchase and maintain and require his Subcontractors to purchase and maintain, in a Company or companies acceptable to the Authority, and name the Authority and others as additional insured on such, insurance as will protect from claims set forth below which may arise out of or result from the Contractor's operations under the Contract, whether the operations are performed by the Contractor or by any Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

1. Claims under Workers' Compensation and other similar laws which are applicable to the work to be performed.
2. Claims for damages because of bodily injury, occupational disease or sickness, or death of the Contractor's employees.
3. Claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees.
4. Claims for damages which are sustained by any person as a result of the following offenses: false arrest, libel, slander, invasion of privacy, discrimination, and other personal injuries.
5. Claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom;
6. Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle;
7. Claims for damages because of employee dishonesty by any of the Contractor's employees.
8. Claims involving contractual liability insurance.

c. The insurance required shall be written for not less than the following, or greater if required by law:

1. Commercial General Liability – combined single limit for bodily injury and property damage of not less than \$1,000,000 each occurrence, \$2,000,000 annual aggregate. If the annual aggregate is exhausted, the contractor will be required to reinstate the limits.

Such insurance shall include:

- a) Premises/Operations;
- b) Independent Contractor's;
- c) Products/Completed Operations to be maintained for two years after final payment;
- d) Contractual Liability, including both written and oral contracts;
- e) Personal Injury Liability;
- f) Explosion, Collapse, and Underground Hazards;
- g) Sudden and Accidental Pollution;
- h) Delete Care Custody & Control Exclusion.

2. Comprehensive Automobile Liability:

Liability - \$1,000,000
Personal Injury Protection – Statutory
Uninsured Motorists – Statutory

3. Workers' Compensation – Statutory

Employer's Liability - \$1,000,000

4. Builders Risk

A "complete value" Form, issued for the full contract value as executed and amended from time to time, with a "waiver-of-occupancy" endorsement.

d. Certificates of Insurance acceptable to the Authority shall be filed with the Authority within five (5) working days of the date of Notice of Award. These Certificates shall contain a provision that coverage afforded under these policies will not be cancelled, non-renewed, or materially changed until at least thirty (30) days prior written notice has been given to the Authority. The Certificates should include a positive statement evidencing that these coverage amounts are included.

e. The minimum amount of coverage required or actual coverage carried shall not be construed to limit the liability of the contractor or subcontractor.

f. All insurance policies shall be carried with financially responsible insurance companies which are licensed admitted carriers in the state of Missouri, covered under the guarantee fund, and approved by the Authority. All insurance companies must have the following minimum qualifications as rated in the most recent edition of the Best's Key Rating Guide:

1. A rating classification of "A-" or better, and
2. A financial size category of "Class XIII" or larger.

All such companies shall have representatives in the metropolitan St. Louis area.

g. Due to the nature of and location of the work it is required that liability insurance policies name the Land Reutilization Authority of the City of St. Louis, the City of St. Louis, The State of Missouri, and the St. Louis Development Corporation, as Additionally Insured. All policies shall contain a Waiver of Subrogation in favor of these entities.

h. The insurance required to be carried for this project shall be job specific, and the required coverage levels, including any annual aggregate, shall apply separately to this project. Certificates of Insurance shall specifically denote compliance with this requirement.

i. The Contractor shall carry sufficient comprehensive insurance on its equipment at the site of work on route to and from site to fully protect the Contractor; the Contractor shall require the same coverage of its Subcontractors. It is expressly understood and agreed that the Authority and Engineer shall have no liability for damage to equipment.

- j. The Contractor shall remain fully liable and responsible for all obligations under the Bid Documents, whether or not the insurance provided by the Contractor is approved by the Authority, and whether or not it is sufficient in amount, quality, or coverage to protect the Contractor against such liability, and shall pay and make good all such obligations to the full extent such insurance does not cover them.
- k. Any insurance carried by the Authority and the St. Louis Development Corporation, and their officers, agents, employees, successors and assigns which may be applicable, shall be deemed to be excess insurance, and the Contractor's and Subcontractor's insurance shall be deemed primary for all purposes despite any conflicting provision in the Contractor's and Subcontractors' policies to the contrary. The Contractor and Subcontractors must provide an endorsement to their insurance policies stating that their policies are primary.
- l. All insurance policies carried by the Contractor and/or all Subcontractors under this contract shall be presented in entirety to the Authority for review upon written or faxed notice from the Authority within a maximum of five (5) working days from the date of said notice.
- m. The liability policies of the Contractor and Subcontractor shall not contain any provisions which would exclude coverage for damage to that portion of any area where work is not occurring.
- n. The term Subcontractor shall mean any Subcontractor or Sub-subcontractor of any tier. All subcontractors must comply with all the provisions of Section 132. Insurance.
- o. To the fullest extent permitted by law, the Contractor and Subcontractors shall indemnify and hold harmless the entities in Paragraph "g.", and all agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the work including violation of any applicable environmental law, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including loss of use resulting therefrom, but only to the extent caused in whole or in part by negligent acts or omissions of the Contractor, Subcontractors, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this paragraph.

In claims against any person or entity indemnified under this paragraph by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this paragraph shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or Subcontractor under Workers' or Workmens' Compensation Acts, Disability Benefit Acts or other employee benefit acts.
- p. The Contractor shall identify upon written request by the Authority what loss control service its insurance carrier is providing.

- q. The Contractor and all Subcontractors will furnish a list of all claims on a quarterly basis which are related to work performed by them for the Authority and will arrange for meetings with the carriers to discuss specific claims if requested by the Authority. The Contractor and Subcontractors shall advise the Authority if an entity other than the carrier will handle claims.

30. INDEMNIFICATION

To the fullest extent permitted by law, the Contractor and Subcontractors shall indemnify and hold harmless all the entities enumerated under General Conditions in Section 29, Paragraph "g.", and all agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the work including violation of any applicable environmental law, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including loss of use resulting therefrom, but only to the extent caused in whole or in part by negligent acts or omissions of the Contractor, Subcontractors, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligations shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this paragraph.

In claims against any person or entity indemnified under this paragraph by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this paragraph shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or Subcontractor under Worker's or Workmen's Compensation Acts, Disability Benefit Acts or other employee benefit acts.

31. PATENTS

The Contractor shall hold and save the Authority, the St. Louis Development Corporation, and the City of St. Louis, their officers, and employees, harmless from liability of any nature of kind, including costs and expenses, for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured for use in the performance of the Contract, including its use by the Authority, unless otherwise specifically stipulated in the Technical Specifications.

32. WARRANTY OF TITLE

No material, supplies, or equipment for the work shall be purchased subject to any charted mortgage or under a conditional sale or other Contract by which an interest therein or in any part thereof is retained by the seller or supplier. The Contractor shall warrant good title to all materials, supplies, and equipment installed or incorporated in the work, and, upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed thereon by it to the Authority free from any claims, liens, or charges. No Contractor or any person, firm or corporation furnishing any material or labor for any work covered by this Contract shall have any right to impose a lien upon any structure, improvement or appurtenance thereon. Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any bond given by the Contractor for their protection, or any rights under any law permitting such persons to look to

funds due the Contractor in the hands of the Authority. The provisions of this paragraph shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing materials for work when no formal contract is entered into for such materials.

33. GENERAL WARRANTY

Neither the final certificate of payment nor any provisions in the Contract nor partial or entire use of the clearance, improvements or products of the work embraced under this Contract by the Authority or the public or other recipient thereof shall constitute an acceptance of work not done in accordance with the Contract, or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of one (1) year from the date of final acceptance of the work. The Authority will give notice of defective materials and work with reasonable promptness.

34. SIGNS

Subject to prior approval of the Authority as to the size, design, type and location, and to local regulations, the Contractor or subcontractor may erect temporary signs for purposes of identification and controlling traffic. The Contractor shall furnish, erect and maintain the signs and signage as may be required by Safety Regulations and necessary to safeguard life and property. The Contractor shall furnish a bulletin board in prominent location in full view of its employees. The Contractor shall install standard steel "No Trespassing" signs every 100' on the construction fence, facing the exterior. Lettering on signage shall be not less than 9" in height.

35. LABOR / MANAGEMENT RELATIONS

The Contractor shall cooperate in connection with the coordination of working relationships between management and labor in the work included under this Contract, with appropriate labor organizations whose members may be or may become involved in such construction, subject to normal business consideration and all applicable Federal, State, and local laws, relating to labor/management relations, including the right of a majority of employees to designate a bargaining representative.

36. SALVAGE

The Contractor shall have the right to salvage building contents and materials. Salvage of building contents and materials shall in no way impact the schedule. Since the site and buildings cannot be fully secured from vandalism or theft, the Authority does not warrant that any building contents or materials, etc. present during walk through or at time of bid will be present for salvage at the time when demolition activities commence. On site sales of building contents or materials are expressly prohibited, as is access to the Demolition Area by the general public.

37. A.D.A. COMPLIANCE

The Authority does not discriminate against persons with disabilities. The Americans with Disabilities Act (A.D.A) prohibits discrimination based on disability. Contractors with the Authority must comply with the Act. The Authority may verify such compliance as it deems appropriate. Failure to comply with the A.D.A may result in the revocation of the contract.

38. PURCHASES EXEMPT FROM SALES TAX

Purchases of tangible personal property and materials to be incorporated into or consumed in the construction of this project are not subject to Missouri sales tax and may be made on a sales tax-exempt basis. Said purchases may not be made until a Notice to Proceed is forthcoming from the Executive Director of the Authority or his designee will furnish the Contractor awarded this contract an Exemption certificate authorizing such purchases for the project be on a sales tax-exempt basis. The Contractor shall forward a copy of the Exemption Certificate to all subcontractors, and any contractor or subcontractor purchasing materials shall present a copy of such Exemption certificate to all material suppliers as authorization to purchase all tangible personal property and materials to be incorporated into or consumed in the construction of this project and no other on a sales tax-exempt basis. The purchasing contractor shall retain all invoices for property purchased under the Exemption Certificate for a period of five years from completion of the project.

The Exemption Certificate will remain in force until the expiration date indicated thereon. No purchasing contractor shall make any sales tax-exempt purchases for this project after the expiration date or any extension thereof. The Contractor will request in writing to the President of the Board of Public Service at least thirty (30) days prior to the expiration date in effect for the Exemption Certificate any extension to the expiration date that may be required to complete the project. Purchases made pursuant to this section shall be in accordance with all applicable laws and regulations including Section 144.062 of the Missouri Revised Statutes and Missouri Department of Revenue Administrative Regulation 12 CSR 10-3.388.

39. NOTICE TO PROPERTY OWNERS

The Contractor shall give due notice in writing at a reasonable length of time in advance of the work to all owners and occupants, and also to all persons who as agents, or otherwise, may be in charge of any building, or other property, streets, gas, or water pipes, conduits, tracks, or other utilities that may or might be affected by his operations and the Contractor shall allow all such persons or companies, ample time to take all such measurements as may be deemed necessary for the proper protection, or adjustment, of their property and shall not cause any hindrance to, or interference's with, any such persons, companies, or the employees thereof, engaged in carrying out such protection , or adjustment work.

40. SATURDAY / SUNDAY WORK

No work or labor shall be performed under this contract on Saturday or Sunday except in an emergency, or matter of urgent necessity arising in connection therewith, and the Authority, in its sole discretion, shall determine whether such emergency or necessity exists. Contractor shall submit, in writing, any request for work or labor to be performed under this contract on Saturday or Sunday to the Authority. The Contractor shall be responsible for any and all costs associated with the performance of any work or labor on Saturday or Sunday.

APPENDIX E: SPECIAL CONDITIONS

1. TIME FOR COMPLETION

- a. The work which the Contractor shall be required to perform under this Contract shall be completed no later than **August 31, 2015**. Any claims for extra days shall be made in writing to the Authority within ten (10) calendar days of Contractor's knowledge of the need for extra days, but in no case shall claims be made less than 10 calendar days prior to the completion date as established in the Notice to Proceed. It is anticipated that Notice-to-Proceed will be issued within 30 days after written approval from the Authority.
- b. **Commencement, Prosecution and Completion:** Work under this contract shall be started within a period of one week after date of written notice to proceed, and shall be completed within the required working time after such notice as set forth in the "Special Conditions, Time for Completion."

When applicable, contract time based on CALENDAR DAYS shall be the number of consecutive calendar days stated in the contract starting on the date indicated in the official "Notice to Proceed" letter including weekdays, Saturdays, Sundays and Holidays.

No work or labor shall be performed under this contract on Sunday, except in matters of emergency, and the Authority shall determine whether such an emergency or necessity exists. Saturday work will be permitted when reasonable effort has been made to perform work during the regular workweek and when, in the opinion of the Engineer, it is necessary. The Contractor shall notify the Engineer 48 hours in advance of his desire to perform work on Saturday so arrangements may be made for inspection of said work. The decision of the Engineer shall be considered as final.

In the event of failure on the part of the Contractor to complete the work within the time specified above, the Contractor shall pay the Authority, as liquidated damages the amount set forth in the Information for Bidders, for each day (Saturdays, Sundays and Legal Holidays excepted, unless otherwise specified in the contract) of delay until the work is completed and accepted.

In general, the Authority will suspend count of contract time for the following reasons:

1. STRIKES. Whether such strikes are now in existence or occur subsequent to the date of the contract.
2. Delays caused by delivery of equipment. Failure on the part of the Contractor to make timely submittals or to place orders in a timely manner will not be considered.
3. Act of God, fire, or other cause over which the Contractor has no control and could not reasonably anticipate.
4. If the contract work is weather sensitive, lost days due to weather will only be considered if such conditions are encountered that exceed or the 10-year National Weather Service average for said conditions and those conditions affect the current major operation of the project. Weather information will be documented on Bi-Weekly Progress Reports, which are prepared by the Project Engineer.

In case the final value of all work performed exceeds the original contract amount, an extension in the calendar days will be granted to the Contractor. The extension will be made by increasing the contract time in the same ratio as the total final cost of all work performed under the contract bears to the total amount of the original contract. For a combination of projects awarded as a single contract, the extension will be made in a similar manner and on the basis of the total final cost of the combination in relation to the total amount of the original contract. If it can be definitely established that the extra work was of such character that it required more time than is indicated by the money value, the actual number of calendar days required may be allowed.

2. LIQUIDATED DAMAGES

The Contractor and its Sureties shall be liable for and shall pay to the Authority one thousand dollars (\$1,000.00) as fixed, agreed and liquidated damages for each calendar day of delay from the completion date established in the Notice to Proceed, as is determined by the above Time for Completion, or as modified in accordance with Section 11, Changes in the Work under the General Conditions until such work is satisfactorily completed and accepted (final completion). Substantial completion/beneficial occupancy shall not alleviate the Contractor's liability for liquidated damages.

3. EQUAL EMPLOYMENT OPPORTUNITY – GENERAL

- a. In order to carry out the intent of all equal employment opportunity provisions, the Contractor shall, before the award of the Contract for the work herein, meet with the Authority's designee, to arrange for affirmative action by the Contractor and his Subcontractors, in employment, purchasing and the utilization of businesses and enterprises.
- b. Failure to provide for, and to carry out, such affirmative action programs shall be grounds for refusal to award the Contract, and/or for termination of the Contract by the Authority.
- c. Failure to provide to the Authority on forms furnished by the Authority, EEO monthly reports, shall be grounds for termination by the Authority.
- d. The Contractor shall also submit the following to the Authority at such times as requested by the Authority:
 - (1) a copy of the Contractor's Personnel Application Form;
 - (2) a definitive and detailed Job Description for each position utilized under the contract;
 - (3) a copy of the Pay Ranges and Salary Scales which the Contractor follows for each position;
 - (4) a copy of the Contractor's current personnel policies.
- e. The Contractor will make full effort and document said effort to recruit employees from within the boundaries of the City of St. Louis (with a special emphasis on areas within the City which are to be directly served by the project activity to be funded).

- f. The Contractor shall employ in a position a lower income area of resident if otherwise eligible for the position, and if that position is vacant.
- g. The Contractor shall maintain files on applicants for jobs, by job titles, a list of lower income residents who applied for jobs, and lists of City residents who applied for jobs, but were rejected and why they were rejected.

4. MAYOR'S EXECUTIVE ORDER

The Contractor shall comply with the Executive Order of The Mayor of the City of St. Louis, dated April 11, 1997, as reissued and extended, a copy of which is included in this manual and is part of the Bid Documents (see Appendix F-3).

5. WORK SAFE PLAN

The Contractor will be required to prepare and follow a formal written safety program for each major activity of work, which represents the preventative efforts that will be instituted by the Contractor to protect workers and others from accidents. This plan shall parallel the project schedule activity flow, and predetermine the hazards inherent with each activity, along with preventative measures that will be taken by the Contractor. The Contractor shall require all subcontractors to maintain a formal safety program, or follow the Contractor's program.

Contractor agrees to comply with all applicable federal, state and city laws, ordinances, rules and regulations for the safety of persons or property in the performance of the Work including, but not limited to, the requirements of the Occupational Safety and Health Act of 1970, and amendments and regulations promulgated and issued pursuant thereafter.

Contractor shall provide sufficient, safe, and proper facilities, labor and material needed for the access and inspection of Contractor's Work by the Authority and other subcontractors or consultants.

Contractor agrees to comply with the "Hazard Communications Standard" of the Occupational Safety and Health Administration. To the extent required by such standard, Contractor will adopt and implement a written hazard communication program to protect its employees and others from potential exposure of hazardous chemicals in its possession at the job site, warning and handling labels for such chemicals, and material safety data sheets for such chemicals to the Authority for its records upon written request by the Authority. Formal written safety programs shall additionally be provided to the Authority for its records upon written request by the Authority.

Contractor shall furnish a written designation of a representative responsible for implementation and enforcement of Contractor's safety program. This representative shall be at the site whenever contract work is being performed.

6. TEMPORARY FACILITIES

Temporary services and facilities, including utilities, construction and support facilities, security and protection will be the responsibility of the Contractor.

7. REPORTS AND DOCUMENTATION

The Contractor shall be required to deliver reports and documents to the Authority's onsite representative as required. Reports required include, but are not limited to, the following:

Daily Log Report

Weekly Manpower Report

Weekly Schedule Update

Worker Turnover Report/Weekly

Payroll Documentation and Certification /Prevailing Wage/Weekly

8. PROJECT MEETINGS

a. Conduct weekly progress meetings at the Project Site. Notify the Authority and the Engineer of scheduled meeting dates. Coordinate dates of meetings with preparation of the payment request.

b. Attendees: In addition to representatives of the Authority and the Engineer, each subcontractor, supplier, or other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.

c. Agenda: Review and correct or approve minutes of the previous meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the status of the Project.

1. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to insure that current and subsequent activities will be complete within the Contract time.

2. Review the present and future needs of each entity, including the following:

- a. Interface requirements.
- b. Time.
- c. Delays and their causes.
- d. Sequences.
- e. Status of submittals.
- f. Deliveries
- g. Off-site fabrication problems.
- h. Access.
- i. Site utilization.
- j. Temporary facilities and services.
- k. Hours of work.

- l. Hazards and risks.
 - m. Housekeeping
 - n. Quality and work standards.
 - o. Change orders.
 - p. Documentation of information for payment requests.
- d. **Reporting:** No later than 3 days after each meeting, Contractor shall prepare and distribute minutes of the meeting to each party present and to parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.
- e. **Schedule Updating:** Revise the Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting.

9. PROJECT SCHEDULE

- a. Bar-Chart Schedule: Prepare a fully developed, horizontal bar-chart-type, contractor's construction schedule; submit for Authority review prior to issuance of the Notice to Proceed.
1. Provide a separate time bar for each significant construction activity per building. Provide a continuous vertical line to identify the first working day of each week.
 2. Within each time bar, indicate estimated completion percentage in 10 percent increments. As Work progresses, place a contrasting mark in each bar to indicate Actual Completion.
 3. Prepare the schedule on a sheet, or series of sheets, of stable transparency, or other reproducible media, of sufficient width to show data for the entire construction period.
 4. Secure time commitments for performing critical elements of the work from parties involved. Coordinate each element on the schedule with other construction activities; include minor elements involved in the sequence of the Work. Show each activity in proper sequence. Indicate graphically the sequences necessary for completion of related portions of the Work.
 5. Coordinate the Construction Schedule with the order of the project, list of subcontracts, Submittal Schedule, progress reports, payment requests, and other schedules.
 6. Indicate completion in advance of the date established for Substantial Completion. Indicate Substantial Completion on the schedule to allow time for the Engineer's procedures necessary for certification of Substantial Completion.
- b. **Phasing:** On the schedule, show how requirements for phased completion to permit Work by separate Contractors and partial occupancy by the Authority affect the sequence of Work.

- c. **Work Stages:** Indicate important stages of construction for each major portion of the Work, including submittal review, testing, and installation.
- d. **Area Separations:** Provide a separate time bar to identify each major construction area for each major portion of the Work. Indicate where each element in an area must be sequenced or integrated with other activities.
- e. **Cost Correlation:** At the head of the schedule, provide a cost correlation line, indicating planned and actual costs. On the line, show dollar volume of Work performed as of the dates used for preparation of payment requests.
- f. **Distribution:** Following response to the initial submittal, print and distribute copies to the Engineer, Authority, subcontractors, and other parties required to comply with scheduled dates. Post copies in the Project meeting room and temporary field office.
 - 1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.
- g. **Schedule Updating:** Revise the schedule after each meeting, event or activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

Exhibit 1

Technical Specifications/Drawings/Hazardous Material Reports



TECHNICAL SPECIFICATION

ENVIRONMENTAL REMEDIATION AND DEMOLITION

**FORMER PORTER OIL SITE
ST. LOUIS, MISSOURI**

Prepared by:
Environmental Operations, Inc.
1530 South Second Street
St. Louis, Missouri 63104

March 13, 2015

Environmental Engineering, Consulting & Remediation, & Demolition
1530 South 2nd Street St. Louis, Missouri 63104-4500 314.241.0900
www.environmentalops.com

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- B. Asbestos Inspection Report
- C. Heavy Metals Report
- D. Lead Paint Report

1. INTRODUCTION

1.1 Site Conditions

The subject site is the former Porter Oil Company site located at 1429 and 1439 Kentucky Avenue and 1418 and 1434 Wittenberg Avenue in the City of St. Louis, Missouri. The lot is rectangular shaped and approximately one acre in size. A total of three structures exist onsite; an office building, pump house, and the Wittenberg warehouse building. A site location map is shown on Figure 1 in Attachment A. A site plan is shown on Figure 2 in Attachment A. The building at 1433 Kentucky (i.e., Lot 23) is not part of the site.

Asbestos containing materials, household hazardous waste, and lead-based paint (LBP) exists in all three structures. In addition, the basement of the warehouse building on Wittenberg Avenue is flooded with an estimated 100,000 gallons of oil and water. Two separate compartmentalized vaults are also built into the basement of this building. These vaults contain an estimated 15,000 gallons of liquid/sludge/emulsified oily waste.

1.2 Project Overview

The Contractor will be responsible for, but not limited to, the following items:

- Removal and proper disposal of all household hazardous wastes prior to building demolition
- Proper abatement of all asbestos containing materials
- Abatement and/or proper disposal of LBP
- Characterization, profiling and proper disposal of all onsite liquid wastes in the basement of the warehouse building
- Demolition of onsite structures

The Contractor will implement a site-specific Health and Safety Plan (HASP) in order to maintain a safe working environment during performance of the site activities. The HASP will be written and implemented in accordance with Occupational Safety and Health Administration (OSHA) guidelines. A copy of this HASP shall remain onsite during all site activities. A copy of the HASP will be submitted to the Consultant prior to initiation of site activities.

The Contractor will provide all labor, materials, services, and equipment necessary for the aforementioned work. It is the responsibility of the Contractor to obtain all materials, equipment and permits necessary for the work. The Contractor will also be responsible for proper profiling all waste streams to ensure proper disposal. **The Contractor will use “Land Reutilization Authority of the City of St. Louis” as the generator name when completing waste profiles and disposal documentation. Only the Consultant and/or Owner are authorized to sign disposal documentation.**

The City of St. Louis Land Reutilization Authority (LRA) has retained Environmental Operations, Inc. (Consultant) to oversee the waste disposal activities.

1.3 Contractor Qualifications

Contractor shall furnish documentation of successful performance of at least three previous abatement, waste disposal, and demolition projects of similar scope and magnitude. This will include name, address and phone number of purchaser of services and location of work performed.

Prior to commencement of work, the Contractor shall provide the following for each worker: name, length of service with the company and evidence of participation in 40-hour Personnel Protection (HAZWOPER) and Safety course (29 CFR 1910.120). The workers used on the project shall be skilled and experienced as evidenced by participation in at least three AST/UST projects.

1.4 Schedule

Bids must be received by the LRA (Attn: Chadwick Howell) at 1520 Market Street, Suite 2000, St. Louis, Missouri 63103 no later than **3:00 pm CST on May 8, 2015**.

A pre-project meeting will be held at between the Contractor and LRA to coordinate scheduling and provide pertinent details prior to initiating the project.

All work included in the Scope of Work must be completed by **August 31, 2015**, unless extenuating circumstances delay the project.

1.5 Project Contacts

The following individuals are the primary contacts for this project. Questions regarding this technical specification should be directed to the LRA's environmental consultant.

- LRA's Environmental Consultant: Environmental Operations, Inc. (Chuck Munroe) 314-241-0900
- Authority (c/o St. Louis Development Corporation): Chad Howell, 314-657-3738, Peter Phillips, 314-657-3736

2. ASBESTOS AND HAZARDOUS MATERIALS ABATEMENT

2A. GENERAL REQUIREMENTS:

General provisions of Contract, including General and Supplementary Conditions, and other Division-1 Specification Sections, apply to work of this section.

A project site plan drawing is provided in Attachment A showing the construction site boundaries and limits of demolition.

The Asbestos Inspection Report (*Environmental Operations, Inc. dated May 8, 2014*) is provided as Attachment B and provides an inventory of all known types, quantities, and locations of asbestos to be removed.

2A.1 - SUMMARY OF THE WORK

Project name is Environmental Remediation and Demolition of the Former Porter Oil Site.

All work shall be completed according to the requirements of the following specification 4s in the sequence indicated.

General and administration requirements are set forth in the following specification sections:

- 2A.1 Summary of the Work - Asbestos Abatement
- 2A.5 Submittals
- 2A.15 Project Closeout - Asbestos Abatement

Abatement Work: Requirements for asbestos abatement work are set forth in the following specification sections, listed here according to the sequence of the work:

- 2A.6 Air Monitoring - Test Laboratory Services: Describes air monitoring by Owner so that the building beyond the work area will remain uncontaminated.
- 2A.8 Temporary Pressure Differential and Air Circulation System: Sets forth the procedures to set up pressure differential isolation and ventilation of the work area.
- 2A.9 Temporary Enclosures: Details the requirements for the sheet plastic barriers isolating the work area from the balance of the building.
- 2A.10 Worker Protection - Asbestos Abatement: Describes the equipment and procedures for protecting workers against asbestos contamination and other workplace hazards except for respiratory protection.
- 2A.11 - Respiratory Protection: Sets forth the procedures and equipment required for adequate protection against inhalation of airborne asbestos fibers.
- 2A.12 - Decontamination Units: Explains the setup and operation of the personnel and material decontamination units.

Asbestos Removal Work Procedures: These procedures are described in the following specification sections:

- 2B.1 - Removal of Asbestos-Containing Materials
- 2B.2 - Disposal of Asbestos-Containing Waste Material

Decontamination of the Work Area: Area decontamination procedures after completion of the abatement work are described in the following sections:

- 2A.14 - Project Closeout - Asbestos Abatement: Details the closeout procedures to end the project once abatement work is complete including final paperwork requirements.
- 2A.15 - Project Decontamination: Describes the sequence of cleaning and decontamination procedures to be followed during removal of the sheet plastic barriers isolating a work area.
- 2A.16 - Initial Cleaning and Decontamination Procedures: Sets forth procedures to be used on contaminated objects and rooms which are not part of the abatement work area.
- 2A.17 - Work Area Clearance: Describes the analytical methods used to determine if the work area has been successfully cleaned of contamination.

WORK PLAN:

Contractor shall include with pre-job submittals a work plan of the procedures proposed for use in complying with the requirements of the specifications. Include in the plan 1) the location and layout of containment areas, 2) the sequencing of asbestos removal, 3) the location of decontamination units, 4) name and location of the approved disposal site, and 5) specific removal methods. **The plan must be approved by the Owner prior to commencement of work.**

INSPECTION:

Prior to commencement of each phase of work, inspect areas in which work will be performed. Prepare a listing of damage to structure, surfaces, equipment or of surrounding properties which could be misconstrued as damage resulting from the work. Contractor shall photograph or videotape existing conditions as necessary to document conditions. Submit to Owner or Owner's Rep prior to starting work.

STOP WORK:

If the work is not being performed in accordance with the intent of the plans, specifications, and other contract documents, the Owner or Owner's Rep, will present a written stop work order to immediately and automatically stop all work. Do not recommence work until authorized in writing by the Owner or Owner's Rep.

ABATEMENT DAMAGE TO EXISTING STRUCTURES:

Contractor shall take all precautions necessary to protect the existing buildings from damage resulting from the asbestos abatement operations.

As an alternative to the Contractor repairing any damage, the Owner reserves the right to negotiate with the contractor to determine a dollar value settlement for the damage, and perform the repairs himself. The dollar amount of the damages shall either be deducted from the contract amount, or paid to the Owner separately by the contractor.

WORK COVERED BY CONTRACT DOCUMENTS:

The abatement work included in this project is identified by the Asbestos Inspection Report provided as Attachment B to these Technical Specifications.

WORK SEQUENCE:

Description and proposed sequence dates shall be submitted to the Owner or Owner's Rep for approval prior to commencement of abatement work.

END OF SECTION 2A.1

2A.2 - PROJECT COORDINATION - ASBESTOS ABATEMENT

PART 1 - GENERAL

RELATED DOCUMENTS:

General provisions of Contract, including General and Supplemental General Conditions and other Division-1 Specification Sections, apply to this section.

SUMMARY

This Section specifies administrative and supervisory requirements necessary for project coordination including, but not necessarily limited to:

- Administrative and supervisory personnel.
- Pre-Construction Conference.
- Progress Meetings.
- Daily Log.
- Special reports.
- Contingency Plans.
- Notifications to other entities at job site.

Requirements for the Contractor's Construction Schedule are included in Section 2A.5 - Submittals.

ADMINISTRATIVE AND SUPERVISORY PERSONNEL:

All project personnel including managers, supervisors, and workers shall have the required accreditation for the work.

PRE-CONSTRUCTION CONFERENCE

An initial progress meeting, recognized as the "Pre-Construction Conference", will be convened by the Owner prior to start of any work. Contractor's Representative and Contractor's Superintendents shall meet at project site, or as otherwise directed, with the Owner or Owner's Rep, the Abatement Oversight Contractor, and other personnel involved with the asbestos abatement work.

This is an organizational meeting, to review the work plan and each entities responsibilities and personnel assignments. Attendees at the conference should come prepared to discuss and agree upon the following project topics:

- Work Plan
- Construction Schedule
- Critical Work Sequencing
- Designation of Responsible Personnel
- Establish Chain of Authority
- Processing of Field Decisions
- Pay Requests

- Temporary Facilities Installation
- Decontamination - Personnel and Equipment
- Required Submittals
- Materials, Means and Methods to be Used by the Contractor
- Use of Owner's Premises

COORDINATION MEETINGS

The Owner, Owner's Rep, and Contractor will hold weekly coordination meetings at times and locations determined by the Owner's Rep. At a minimum, the Contractor's site manager will be present.

DAILY LOG

Contractor shall maintain a daily log documenting the following items at a minimum:

- Meetings; purpose, attendees, brief discussion.
- Site Visits, authorized and unauthorized.
- Personnel, by name, entering and leaving the work area.
- Summary of work completed that day.
- Special or unusual events, i.e., barrier breaking, equipment failures, accidents.
- OSHA Air Monitoring tests and test results.

Provide a copy of this log to Owner and Owner's Rep on a daily basis.

SPECIAL REPORTS

Except as otherwise indicated, submit special reports directly to Owner or Owner's Rep and others affected by the occurrence within one day of the occurrence which requires special report.

REPORTING UNUSUAL EVENTS

When an event of unusual and significant nature occurs at site (examples: failure of pressure differential system, rupture of temporary enclosures), prepare and submit a special report listing chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. When such events are known or predictable in advance, advise Owner or Owner's Rep in advance at earliest possible date.

REPORTING ACCIDENTS

Prepare and submit reports of significant accidents at site. Record and document data and actions. Comply with OSHA recording and reporting standards, and generally accepted industry standards. For this purpose, a significant accident is defined to include events where personal injury is sustained, property loss of substance is sustained, or where the event posed a significant threat of loss or personal injury.

REPORT DISCOVERED CONDITIONS

When an unusual condition of the building is discovered during the work (e.g., leaks, undisclosed damage) verbally notify Owner or Owner's Rep immediately, and prepare and submit a special report. Contractor should not proceed with any work outside original scope without written consent from Owner.

CONTINGENCY PLAN

Prepare a contingency plan for emergencies including fire, accident, power failure, pressure differential system failure, supplied air system failure, or any other event that may require modification or abridgement of decontamination or work area isolation procedures. Include in plan specific procedures for decontamination or work area isolation. Note that nothing in this specification should impede safe exiting or providing of adequate medical attention in the event of an emergency.

Post telephone numbers and locations of emergency services including but not limited to fire, ambulance, doctor, hospital, police, power company, telephone company, building Owner's Representative Contractor's headquarters and architect or other professional Owner or Owner's Reps, in clean room of the Personnel Decontamination Unit.

NOTIFICATIONS

As required by the Owner, notify other entities at the job site of the nature of the asbestos abatement activities, location of asbestos-containing materials, and requirements relative to asbestos set forth in these specifications and applicable regulations.

Notify emergency service agencies including fire, ambulance, police or other agencies that may service the abatement work site in case of an emergency. Notification is to include methods of entering work area, emergency entry and exit locations, modifications to fire notification or firefighting equipment, and other information needed by agencies providing emergency services.

Any individual at the job site may notify emergency service agencies if necessary without effect on this Contractor or the Contract Sum.

SUBMITTALS

Site Specific Safety and Health Plan

Submit a Site Specific Safety and Health Plan to the Owner or Owner's Rep for review. NO WORK SHALL BEGIN until this submittal is returned with Owner or Owner's Rep action stamp indicating that the submittal is returned for unrestricted use or final-but-restricted use. The Site Specific Health & Safety Plan should include, but is not limited to:

- Site Description and Scope of Work.
- Key Personnel and Roles
- Job Hazard Analyses for Each Significant Job Task
- Personal Protective Equipment

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- Communication Procedures
- Personal Decontamination Procedures
- Daily Site Inspections
- Site Safety Meetings
- Emergency Response and Contingency/ Pre-Emergency Planning

END OF SECTION 2A.2

2A.3 - DEFINITION AND STANDARDS – ASBESTOS ABATEMENT

PART 1 - GENERAL

RELATED DOCUMENTS:

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

SUMMARY:

General Explanation: A substantial amount of specification language constitutes definitions for terms found in other contract documents. Certain terms used in Contract Documents are defined in this article.

General Requirements: The provisions or requirements of Division-1 sections apply to entire work of Contract and, where so indicated, to other elements which are included in project.

DEFINITIONS RELATIVE TO ASBESTOS ABATEMENT

Accredited or Accreditation (When Referring to a Person or Laboratory): A person or laboratory accredited in accordance with Section 206 of Title II of the Toxic Substances Control Act (TSCA) and the State of Missouri Interim Policy regarding House Bill 77.

Aerosol: A system consisting of particles, solid or liquid, suspended in air.

Air Cell: Insulation normally used on pipes and duct work that is comprised of corrugated cardboard which is cellulose or refractory binders.

Air Monitoring: The process of measuring the fiber content of a specific volume of air.

Amended Water: Water to which a surfactant has been added to increase the surface tension to less than or equal to 35 dynes.

Asbestos Containing Material (ACM): Any material containing more than 1% by weight of Asbestos of any type of mixture of types.

Asbestos Debris: Pieces of ACBM that can be identified by color, texture, or composition, or dust, if the dust is determined by an accredited inspector to be ACM.

Asbestos: The asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actinolite-tremolite. For purposes of determining respiratory and worker protection both the asbestiform and non-asbestiform varieties of the above minerals and any of these materials that have been chemically treated and/or altered shall be considered as asbestos.

Asbestos-Containing Building Material (ACBM): Any material which is or is suspected of being, or any material contaminated with, an asbestos-containing material which is to be removed from a work area for disposal.

Asbestos-Containing Waste Material: Any material which is or is suspected of being, or any material contaminated with, an asbestos-containing material which is to be removed from a work area for disposal.

Authorized Visitor: The Owner or Owner's Rep, testing lab personnel, the Architect/Engineer, emergency personnel or a regulatory or other agency having authority over the project.

Barrier: Any surface that seals off the work area to inhibit the movement of fibers.

Breathing Zone: A hemisphere forward of the shoulders with a radius of approximately 6 to 9 inches.

Bridging Encapsulant: An encapsulant that forms a discrete layer on the surface of an asbestos matrix.

Ceiling Concentration: The concentration of an airborne substance that shall not be exceeded.

Certified Industrial Hygienist (C.I.H.): An industrial hygienist certified in Comprehensive Practice by the American Board of Industrial Hygiene.

Demolition: The wrecking or taking out of any building component, system, finish or assembly of a facility together with any related handling operations.

Disposal Bag: A property labeled 6 mil track leak-tight plastic bags used for transporting asbestos waste from work and to disposal site.

Encapsulant: A material that surrounds or embeds asbestos fibers in an adhesive matrix, to prevent release of fibers.

Encapsulation: Treatment of asbestos-containing materials, with an encapsulant.

Enclosure: The construction of an air-tight impermeable, permanent barrier around asbestos-containing material to control the release of asbestos fibers into the air.

Filter: A media component used in respirators to remove solid or liquid particles from the inspired air.

Friable Asbestos Material: Material that contains more than 1% asbestos by weight and that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

General Superintendent: This is the Contractor's Representative at the work site. This person will generally be the Competent Person required by OSHA in 29 CFR 1926.

Glovebag: A sack (typically constructed of 6 -mil transparent polyethylene or polyvinylchloride plastic) with inward projecting long-sleeve gloves, which are designed to enclose an object from which an asbestos-containing material is to be removed.

HEPA Filter Vacuum Collection Equipment (or Vacuum Cleaner): High efficiency particulate air filtered vacuum collection equipment with a filter system capable of collecting and retaining asbestos fibers. Filters should be of 99.97% efficiency for retaining fibers of 0.3 microns or larger.

HEPA Filter: A High Efficiency Particulate Air (HEPA) filter capable of trapping and retaining 99.97% of asbestos fibers greater than 0.3 microns in diameter.

High-Efficiency Particulate Air Filter: (HEPA) refers to a filtering system capable of trapping and retaining 99.97 percent of all mono-dispersed particles 0.3 microns in diameter or larger.

Negative Pressure Respirator: A respirator in which the air pressure inside the respiratory-inlet covering is positive during exhalation in relation to the air pressure of the outside atmosphere and negative during inhalation in relation to the air pressure of the outside atmosphere.

Negative Pressure Ventilation System: A pressure differential and ventilation system.

Penetrating Encapsulant: An encapsulant that is adsorbed by the asbestos matrix without leaving a discrete surface layer.

Personal Monitoring: Sampling of the asbestos fiber concentrations within the breathing zone of an employee.

Pressure Differential and Ventilation System: A local exhaust system, utilizing HEPA filtration capable of maintaining a pressure differential with the inside of the Work Area at a lower pressure than any adjacent area, and which cleans re-circulated air or generates a constant air flow from adjacent areas into the Work Area.-

Protection Factor: The ratio of the ambient concentration of an airborne substance to the concentration of the substance inside the respirator at the breathing zone of the wearer. The protection factor is a measure of the degree of protection provided by a respirator to the wearer.

Removal Encapsulant: A penetrating encapsulant specifically designed to minimize fiber release during removal of asbestos-containing materials rather than for encapsulation.

Respirator: A device designed to protect the wearer from the inhalation of harmful atmospheres.

Surfactant: A chemical wetting agent added to water to improve penetration, thus reducing the quantity of water required for a given operation or area.

Time-Weighted Average (TWA): The average concentration of a contaminant in air during a specific time period.

Trades: Use of titles such as "carpentry" is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespersons of the corresponding generic name.

Visible Emissions: Any emissions containing particulate asbestos material that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

Wet Cleaning: The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning utensils which have been dampened with amended water or diluted removal encapsulant and afterwards thoroughly decontaminated or disposed of as asbestos-contaminated waste.

Work Area: The area where asbestos-related work or removal operations are performed which is defined and/or isolated to prevent the spread of asbestos dust, fibers or debris, and entry by unauthorized personnel. Work area is a Regulated Area as defined by 29 CFR 1926.

END OF SECTION 2A.3

2A.4 - CODES, REGULATIONS AND STANDARDS –ASBESTOS ABATEMENT

PART 1 - GENERAL

RELATED DOCUMENTS:

General provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this section.

SUMMARY:

This section sets forth governments regulations and industry standards which are included and incorporated herein by reference and made a part of the specification. This section also sets forth those notices and permits which are known to the Owner and which either must be applied for and received, or which must be given to governmental agencies before start of work.

Requirements include adherence to work practices and procedures set forth in applicable codes, regulations, and standards.

Requirements include obtaining permits, licenses, inspections, releases and similar documents, as well as payments, statements and similar requirements associated with codes, regulations, and standards.

CODES AND REGULATIONS:

General Applicability of Codes and Regulations, and Standards: Except to the extent that more explicit or more stringent requirements are written directly into the contract documents, all applicable codes, regulations, and standards have the same force and effect (and are made of part of the contract documents by reference) as if copies are included directly in the contract documents, or as if published copies are bound herewith.

Contractor Responsibility: The Contractor shall assume full responsibility and liability for compliance with all applicable federal, state, and local regulations pertaining to work practices, hauling, disposal, and protection of workers, visitors to the site, and persons occupying areas adjacent to the site. The Contractor is responsible for providing medical examinations and maintaining medical records of personnel as required by the applicable Federal, State, and local regulations. The Contractor shall hold the Owner and Owner's Rep harmless for failure to comply with any applicable work, hauling, disposal, safety, health or other regulation on the part of himself, his employees, or his subcontractors.

Federal requirements governing asbestos abatement work or hauling and disposal of asbestos waste materials include but are not limited to the following:

OSHA: U.S. Department of Labor, Occupational Safety and Health Administration, (OSHA), including but not limited to:

- Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite; Final Rules Title 29, Part 1910, Section 1001 and Part 1926, Section 1101 of the Code of Federal Regulations.
- Respiratory Protection Title 29, Part 1910, Section 134 of the Code of Federal Regulations.
- Construction Industry Title 29, Part 1926, of the Code of Federal Regulations.
- Access to Employee Exposure and Medical Records Title 29, Part 1910, Section 2 of the Code of Federal Regulations.
- Hazard Communication Title 29, Part 1910, Section 1200 of the Code of Federal Regulations.
- Specifications for Accident Prevention Signs and Tags Title 29, Part 1910, Section 145 of the Code of Federal Regulations.

DOT: U.S. Department of Transportation, including but not limited to:

- Hazardous Materials Title 29, Part 171 and 172 of the Code of Federal Regulations.

USEPA: U.S. Environmental Protection Agency (USEPA), including but not limited to:

- Asbestos Abatement Projects; Worker Protection Rule Title 40 Part 763, Sub-part G of the Code of Federal Regulations.
- Asbestos Hazard Emergency Response Act (AHERA) Regulation Asbestos Containing Materials in Schools Final Rule & Notice Title 40, Part 763, Sub-part E of the Code of Federal Regulations.
- Training Requirements of (AHERA) Regulation Asbestos Containing Materials in Schools Final Rule & Notice Title 40, Part 763, Sub-part E., Appendix C of the Code of Federal Regulations.
- NESHAPS: National Emission Standard for Asbestos Title 40, Part 61, Sub-part A, and Sub-part M (Revised Sub-part B) of the Code of Federal Regulations. (Revised 11/90).

Local and State Requirements: Abide by all location requirements that govern asbestos abatement work or hauling and disposal of asbestos waste materials, including all requirements of the Missouri Department of Natural Resources.

LICENSES AND PERMITS:

Maintain current licenses and permits as required by applicable state or local jurisdictions for the removal, transportation, disposal or other regulated activity relative to the work of this contract.

POSTING AND FILING OF REGULATIONS:

Post all notices required by applicable federal, state, and local regulations. Maintain two (2) copies of applicable federal, state, and local regulations and standards. Maintain one copy of each at job site. Keep on file in Contractor's office one copy of each.

SUBMITTALS:

The Contractor shall submit the following to the Owner or Owner's Rep for review before start of work. No work shall begin until these submittals are returned with Owner or Owner's Rep action stamp indicating that the submittal is returned for unrestricted use or final-but-restricted use.

For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents,

correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the work include:

State and Local Regulations: Submit copies of codes and regulations applicable to the work.

Notices: Submit notices required by federal, state, and local regulations together with proof of timely transmittal to agency requiring the notice.

Permits: Submit copies of current valid permits required by state and local regulations.

Licenses: Submit copies of all state and local licenses necessary to carry out the work of this contract.

END OF SECTION 2A.4

2A.5 - SUBMITTALS

PART 1 - GENERAL

RELATED DOCUMENTS:

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

SUMMARY:

This Section specifies administrative and procedural requirements for submittals required for performance of the Work, including:

- Contractor's construction schedule.
- Daily construction reports.
- Project drawings.
- Product data.
- Miscellaneous submittals.

The Contractor will be issued a list of submittals from the Owner summarizing documents requiring submittal to the Owner and Owner's Rep within three to five days after receipt of the official Notice of Award.

Administrative Submittals: Refer to other Division-1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to:

- Permits.
- Performance and payment bonds.
- Insurance certificates.
- List of Subcontractors.

SUBMITTAL PROCEDURES:

Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay. One original submittal along with 2 copies shall be submitted.

Coordinate each submittal with purchasing, testing, delivery, other submittals and related activities that require sequential activity.

Coordinate transmittal of different types of submittals for related elements of the work so processing will not be delayed by the need to review submittals concurrently for coordination.

The Owner or Owner's Rep reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

CONTRACTOR'S ABATEMENT SCHEDULE:

Provide planned detailed schedule including work dates, work shift times, approximate number of employees per shift, dates of start and completion, including dates of initial cleaning, preparation work, removal, final cleaning, clearance testing, final inspection dates, and substantial completion.

Submit schedule at least 10 days prior to the date established for "Commencement of the Work."

Secure time commitments for performing critical elements of the work from parties involved. Coordinate each element on the schedule with other construction activities; include minor elements involved in the sequence of the work. Show each activity in proper sequence. Indicate graphically the sequences necessary for completion of related portions of the work.

Coordinate the Contractor's abatement schedule with the schedule of values, submittal schedule, progress reports, payment requests and other schedules.

Indicate completion and Clearance of each Work Area in advance of the date established for Substantial Completion. Allow time for testing and other Owner or Owner's Rep's procedures necessary for certification of Clearance and Substantial Completion.

Distribution: Following response to the initial submittal, print and distribute copies to the Owner or Owner's Rep. When revisions are made, distribute to the same party.

Schedule Updating: Revise the schedule after each activity, where revisions have been recognized or made, and issue the updated schedule.

OWNER OR OWNER'S REP'S ACTION:

Except for submittals for record, information or similar purposes, where action and return is required or requested, the Owner or Owner's Rep will review each submittal, mark to indicate action taken, and return promptly.

Other Action: Where a submittal is primarily for information or record purposes, special processing or other activity, the submittal will be returned, marked "Action Not Required."

END OF SECTION 2A.5

2A.6 - AIR MONITORING - TEST LABORATORY SERVICES

PART 1 - GENERAL

RELATED DOCUMENTS:

General provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to work of this section.

Air monitoring during work area clearance is described in Section 2A.17 - Work Area Clearance.

DESCRIPTION OF THE WORK:

The section describes air monitoring carried out by the Owner or Owner's Rep to verify that the building beyond the work area and the outside environment remains uncontaminated with asbestos fibers. This section also establishes airborne fiber concentrations both inside and outside the work area as action levels, and describes the action required by the Contractor if an action level is met or exceeded.

The Owner or Owner's Rep will be conducting air monitoring throughout the course of the project.

Air monitoring required by OSHA regulation (29 CFR 1926.1101) is work of the Contractor and is not covered in this section.

TEMPORARY FACILITIES:

Electrical service and distribution to be provided by the Contractor for the use of the Owner or Owner's Rep in collecting air samples described herein is outlined in Section 2A.7 - Temporary Facilities.

AIR MONITORING:

The purpose of the Owner's air monitoring is to detect faults in the work area isolation such as:

- Contamination of the building outside of the work area with airborne asbestos fibers,
- Failure of filtration or rupture in the filter in the ventilation system, and
- Airborne asbestos contamination outside the building.

Should any of the above occur, immediately cease asbestos abatement activities until the fault is corrected. Do not recommence work until authorized by the Owner or Owner's Rep.

WORK AREA AIRBORNE FIBER CONCENTRATION

The Owner will monitor airborne fiber concentration in the work area. The purpose of this air monitoring will be to detect airborne asbestos concentrations which may overwhelm the ability of the work area isolation procedures established to protect the balance of the building or outside the building.

STOP ACTION LEVELS:

Inside Work Area: Maintain an average airborne count in the work area of less than the Stop Action Level given below for the type of respiratory protection in use. If the fiber counts rise above this figure for any sample taken, revise work procedures to lower fiber counts. If the Time-Weighted-Average (TWA) fiber count for any work shift or 8-hour period exceeds the Stop Action Level, stop all work except corrective action, leave pressure differential and air circulation system in operation and notify Owner or Owner's Rep.

After correcting cause of high fiber levels, do not recommence work for 24 hours unless otherwise authorized, in writing, by Owner or Owner's Rep.

Stop Action Level (f/cc)	Immediate Stop Level (f/cc)	Minimum Respirator Required	Minimum Protection Factor
0.1	1.0	Half-face	10
0.5	5.0	PAPR	100
1.0	10.0	Type C	1,000

If airborne fiber counts exceed Immediate Stop level given above for type of respiratory protection in use for any period of time, cease all work except corrective action and notify Owner or Owner's Rep. Do not recommence work until fiber counts fall below Stop Action Level given above for the type of respiratory protection in use. After correcting cause of high fiber levels, do not recommence work for 24 hours unless otherwise authorized, in writing, by Owner or Owner's Rep.

Outside Work Area: If any air sample taken outside of the work area exceeds the established base line asbestos fiber concentration, immediately and automatically stop all work except corrective action. The Owner or Owner's Rep will determine the source of the high reading and so notify the Contractor in writing.

If the high reading was the result of a failure of work area isolation measures, initiate the following actions:

- Immediately erect new critical barriers as set forth in Section 2A.9 - Temporary Enclosures, to isolate the affected area from the balance of the building. Erect critical barriers at the next existing structural isolation of the involved space (e.g., wall, ceiling, floor) or as directed by the Owner or Owner's Rep.
- Decontaminate the affected area in accordance with Section 2A.16 - Initial Cleaning and Decontamination Procedures.
- Require that respiratory protection as set forth in Section 2A.11 - Respiratory Protection be worn in affected area until area is cleared for re-occupancy in accordance with Section 2A.17 - Work Area Clearance.
- Leave critical barriers in place until completion of work and insure that the operation of the pressure differential system in the work area results in a flow of air from the balance of the building into the affected area.

- If the exit from the clean room of the personnel decontamination unit enters the affected area, establish a decontamination facility consisting of a shower room and changing room as set forth in Section 2A.12 - Decontamination Units, at entry point to affected area.
- After Certification of Visual Inspection in the work area remove critical barriers separating the work area from the affected area. Final air samples will be taken within the entire area as set forth in Section 2A.17 - Work Area Clearance.
- If the high concentration was the result of other causes initiate corrective action as determined by the Owner or Owner's Rep.

EFFECT ON CONTRACT SUM:

Complete corrective actions with no change in the contract sum if high airborne fiber counts were caused by Contractor's activities. The contract sum and schedule will be adjusted for additional work caused by high airborne fiber counts beyond the Contractor's control.

ANALYTICAL METHODS:

The following method will be used by the Owner or Owner's Rep in analyzing filters used to collect air samples. Sampling rates may be varied from printed standards to allow for high volume sampling.

Phase-Contrast Microscopy (PCM): Phase-Contrast Microscopy will be performed using National Institute for Occupational Safety and Health Method 7400.

SAMPLE VOLUMES:

The number and volume of air samples taken by the Owner or Owner's Rep will be in accordance with the following schedule. Sample volumes given may vary depending upon the analytical method used.

Before Start of Work: The Owner or Owner's Rep will secure Air Samples to establish a base line before start of work. Samples will be collected on 25-mm cassettes with a 50-mm extension cowling with 0.8 micrometer mixed cellulose ester.

Daily: From start of the work, through the work of Project Decontamination, the Owner or Owner's Rep will be taking the following samples on a daily basis, as a minimum. Samples will be collected on 25-mm cassettes with 0.8 micrometer mixed cellulose ester filter media.

Location Sampled	No. of Samples	Analysis Method	Sampling Sensitivity Fibers/cc.	Minimum Volume (Liters)	Rate (LPM)
Each Work Area	1	PCM	0.01 (or as required by conditions)	1,200	1-10
Outside Each Work Area at Critical Barrier	2	PCM	0.01	1,200	1-10

Additional samples may be taken at the Owner's or Owner's Rep's discretion. If airborne fiber counts exceed allowed limits, additional samples will be taken as necessary to monitor fiber levels.

LABORATORY TESTING:

The services of a testing laboratory will be conducted by the Owner or Owner's Rep. Samples will be analyzed daily on-site or at the laboratory, so that verbal reports on air samples can be obtained within 24 hours.

A complete record of all air monitoring and results will be provided by the Owner or Owner's Rep, and furnished to the Owner, and Contractor.

The Contractor may request any additional testing that he deems necessary to correct discrepancies or clarify project requirements during the bidding process. Any requests will be made via the Owner or Owner's Rep and negotiated with the Owner if deemed necessary. No additional testing will be performed unless requested in writing and agreed to by Owner.

Air monitoring results will be posted at the job site on a daily basis by the Owner or Owner's Rep.

ADDITIONAL TESTING:

The Contractor may conduct their own air monitoring and laboratory testing. If they elect to do this, the cost of such air monitoring and laboratory testing shall be at no additional cost to the Owner, and all results of testing will be made available to the Owner at no additional charge.

DAMAGE TO PERSONAL MONITORING EQUIPMENT:

Contractor shall be responsible for damage or theft of Owner or Owner's Rep's sampling equipment worn by Contractor's personnel. Contractor shall repair or replace any sampling equipment damaged by the Contractor's personnel.

Owner will not be performing air monitoring to meet Contractor's OSHA requirements for personnel sampling or any other purpose.

END OF SECTION 2A.6

2A.7 - TEMPORARY FACILITIES - ASBESTOS ABATEMENT

PART 1 - GENERAL

RELATED DOCUMENTS:

General provisions of the Contract, including General and Supplemental General Conditions and other Division-1 Specification Sections, apply to work of this section.

DESCRIPTION OF REQUIREMENTS:

Provide temporary facilities as required herein or as necessary to carry out the work. The Contractor shall provide all equipment, connections and operations of mechanical, electrical and plumbing systems as required.

PART 2 - PRODUCTS

GENERAL: Provide materials and equipment that are undamaged and in serviceable condition. Provide only materials and equipment that are recognized as being suitable for the intended use by compliance with appropriate standards.

SCAFFOLDING: Provide all scaffolding, ladders, staging, etc., as necessary to accomplish the work of this contract. Scaffolding may be of suspension type or standing type such as metal tube and coupler, tubular welded frame, pole or outrigger type, or cantilever type. The type, erection, and use of all scaffolding shall comply with all applicable OSHA provisions.

Equip rungs of all scaffolding and ladders with an abrasive non-slip surface. Provide a nonskid surface on all scaffold surfaces subject to foot traffic.

WATER SERVICE:

Temporary Water Service Connection: Contractor will be required to supply water for the project. All connections to the water system shall include backflow protection. Valves shall be temperature and pressure rated for operation at the temperatures and pressures encountered.

Water Hoses: Employ heavy-duty abrasion-resistant hoses with a pressure rating greater than the maximum pressure of the water distribution system to provide water into each work area and to each Decontamination Unit.

Personnel Decontamination Unit (PDU): Supply hot and cold water to the PDU in accordance with Section 2A.12 - Decontamination Units. Provide UL-rated 40-gallon electric hot water heater to supply hot water for the PDU shower. Hot water for PDU shall be supplied at a minimum temperature of 100°F.

Provide relief valve compatible with water heater operation; pipe relief valve down to drip pan on floor with type L copper.

Wiring of the hot water heater shall be in compliance with NEMA, NECA, and UL standards and the ELECTRICAL SERVICE SECTION below. Activate from 30-amp GFI circuit breaker located within the PDU subpanel.

ACM removal shall not begin until the water heater is installed and operating properly, as approved by the Owner or Owner's Rep.

ELECTRICAL SERVICE:

General: Contractor is required to supply all necessary electrical service for project execution. Provide a weatherproof, grounded temporary electric power service and distribution system of sufficient size, capacity, and power characteristics to accommodate performance of work during the construction period. Comply with applicable NEMA, NECA, and UL standards and governing regulations for materials and layout of temporary electric service.

Temporary Electrical Panel: Provide temporary electrical panel as necessary, sized and equipped to accommodate all electrical equipment and lighting required by the work. Protect with circuit breaker or fused disconnect. Locate temporary panel as directed by Owner or Owner's Rep.

Power Distribution System: Provide circuits of adequate size and proper characteristics for each use. In general run wiring overhead, and rise vertically where wiring will be least exposed to damage from construction operations.

Voltage Differences: Provide identification warning signs at power outlets other than 110-120 volt power. Provide polarized outlets for plug-in type outlets to prevent insertion of 110-120 volt plugs into higher voltage outlets. Dry-type transformers shall be provided where required to provide voltages necessary for work operations.

Ground-Fault Protection: Equip all circuits entering Work Area with ground-fault circuit interrupters (GFCI). Locate GFCI's exterior to Work Area so all circuits are protected prior to entry to Work Area. Provide circuit-breaker-type ground-fault circuit interrupters (GFCI) equipped with test button and reset switch for all circuits to be used for any purpose in work area, decontamination units, exterior, or as otherwise required by national electrical code, OSHA, or other authority. Locate in panel exterior to Work Area.

Electrical Power Cords: Use only grounded extension cords; use "hard-service" cords where exposed to abrasion and traffic. Use single lengths or use waterproof connectors to connect separate lengths of electric cords, if single lengths will not reach areas of work.

Sampling Pumps: Contractor shall supply and install electrical cords solely for the operation of air sampling pumps by the Owner or Owner's Rep. Electrical cords for air sampling pumps shall not be used to supply electricity for other abatement purposes.

Temporary Lighting:

All lighting to the Work Area and Decontamination facilities is to be provided from temporary electrical panel described above.

Where natural lighting does not meet the required light level, Provide lighting in areas where work is being performed as required to supply a 50-foot-candle (minimum) light level. Provide lighting in any area being subjected to a visual inspection as required to supply a 50-foot-candle (minimum) light level. Lights must remain in place and operable until final clearance is achieved. Provide lighting in the Decontamination Unit as required to supply a 25-foot-candle (minimum) light level.

Lamps and Light Fixtures: Provide general service incandescent lamps or fluorescent lamps of wattage indicated or required for adequate illumination as required by the work or this document. Protect lamps with guard cages or tempered glass enclosures, where fixtures are exposed to breakage by construction operation. Provide vapor-tight fixtures in work area and decontamination units. Provide exterior fixtures where fixtures are exposed to the weather or moisture.

MECHANICAL SERVICES:

Contractor shall provide heating sources sufficient to maintain a minimum 60° F within Work Areas at all times.

SAFETY SUPPLIES:

First Aid Supplies: Comply with governing regulations and recognized recommendation within the construction industry.

Fire Extinguishers: Provide type "ABC" dry chemical extinguishers in all work locations. Comply with the applicable recommendations of NFPA Standard 10 "Standard for Portable Fire Extinguishers." Locate fire extinguishers where they are most convenient and effective for their intended purpose, but provide not less than one extinguisher in each Work Area, in Equipment Room, and one outside Work Area in Clean Room.

SANITARY FACILITIES: Contractor shall provide temporary sanitary facility including toilets and wash stations.

PART 3 - EXECUTION:

GENERAL: Use qualified tradesmen for installation of temporary services and facilities. Require that tradesmen accomplishing this work be licensed as required by local authority for the work performed.

Locate temporary services and facilities where they will serve the entire project adequately and result in minimum interference with the performance of the work.

Relocate, modify, and extend services and facilities as required during the course of work so as to accommodate the entire work of the project.

SCAFFOLDING: During the erection and/or moving of scaffolding, care must be exercised so that the polyethylene floor covering is not damaged. Clean debris from non-slip surfaces, as necessary.

WATER SERVICES: Maintain hose connections and outlet valves in leak-proof condition. Where finish work below an outlet might be damaged by spillage or leakage, provide a drip pan of suitable size to minimize the possibility of water damage. Drain water promptly from pans as it accumulates.

ELECTRICAL SERVICES:

General: Install temporary lighting adequate to provide sufficient illumination for safe work and traffic conditions in every area of work.

Circuit Protection: Protect each circuit with a ground-fault circuit interrupter (GFCI) of proper size located in the temporary panel. Do not use outlet type GFCI devices.

Temporary Wiring: Temporary wiring in the Work Area shall be type UF non-metallic sheathed cable located overhead and exposed for surveillance. Do not wire temporary lighting with plain, exposed (insulated) electric conductors. Provide liquid-tight exposures or boxes for wiring devices.

Number of Branch Circuits: Provide sufficient branch circuits as required by the work. All branch circuits are to originate at temporary electrical panel. At minimum provide the following:

- One circuit for each HEPA-filtered fan unit.
- For power tools and task lighting, provide one temporary 4-gang outlet in the following locations. Provide a separate 110-120 Volt, 20-Amp circuit for each 4-gang outlet (4 outlets per circuit).
- One outlet in the work area for each 2,500 square feet of work area.
- One outlet at each decontamination unit, located in equipment room.

Provide 110-120 Volt, 20-Amp branch circuits with 4-gang outlet for Owner's exclusive use while conducting air sampling during the work as follows:

- One in each work area.
- One at clean side of each Decontamination Unit.
- One at each exhaust location for HEPA-filtered fan units.

Provide 110-120 Volt, 20-Amp branch circuits with 4-gang outlet for Owner's exclusive use for conducting final air sampling as set forth in Section 2A.17 - Work Area Clearance, as follows:

- Five inside work area.
- Two outside work area in location designated by Owner or Owner's Rep.

Number of Lighting Circuits: Provide sufficient lighting circuits as required by the work. All lighting circuits are to originate at temporary electrical panel.

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Circuit Protection: Protect each circuit with a ground-fault circuit interrupter (GFCI) of proper size located in the temporary panel.

DECONTAMINATION:

At the completion of abatement work, completely decontaminate all temporary facilities and equipment within the Equipment Decontamination Unit (EDU) before removal from the Work Area.

END OF SECTION 2A.7

2A.8 - TEMPORARY PRESSURE DIFFERENTIAL AND AIR CIRCULATION SYSTEM

PART 1 - GENERAL

RELATED DOCUMENTS:

General provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to work of this section.

PATENT NOTICE:

Contractor is solely responsible to confirm current status of Natale Patent and how it applies to the Work in this contract. The Contractor will defend and hold harmless the Owner and Owner's Rep from any claims relating to patent infringement.

The specified system for asbestos containment and removal using reduced pressurization and filtration may be covered by Natale U.S. Patent No. 4,604,111, issued August 5, 1986.

MONITORING:

Contractor to be responsible for continuously monitoring and recording the pressure differential between the Work Area and the building outside of the Work Area with a monitoring device incorporating a continuous recorder (e.g., strip chart).

SUBMITTALS:

Before Start of Work at Each Contaminant: Submit design of pressure differential system to the Owner or Owner's Rep for review. Do not begin work until submittal is returned with the Owner or Owner's Rep's action stamp indicating that the submittal is returned for unrestricted use. Include in the submittal at a minimum:

- Number of HEPA-filtered fan units required and the calculations necessary to determine the number of machines.
- Description of projected air flow within Work Area and methods required to provide adequate air flow in all portions of the work area.
- Anticipated pressure differential across Work Area enclosures.
- Description of methods of testing for correct air flow and pressure differentials.
- Manufacturer's product data on the HEPA-filtered fan units to be used.
- Location of the machines in the Work Area.
- Method of supplying adequate power to the machines and designation of building electrical panel(s) that will be supplying the power.
- Description of work practices to insure that airborne fibers travel away from workers.
- Manufacturer's product data on equipment used to monitor pressure differential between inside and outside of Work Area.

On a Weekly Basis: Submit printout or copy of printout from pressure differential monitoring equipment. Mark printout with date and start of time for each day. Use printout paper that indicates

elapsed time in intervals no greater than hours. Indicate on each day's record times of starting and stopping abatement work, type of work in progress, breaks for lunch or other purposes, periods of stop work, and filter changes. Label with project name, contractor's name and date, and submit to Owner or Owner's Rep.

QUALITY ASSURANCE:

Monitor pressure differential at Personnel and EDUs with a differential pressure meter equipped with a continuous recorder. Meter shall be equipped with a warning buzzer that will sound if pressure differential drops below 0.01" of water.

PART 2 - PRODUCTS:

HEPA-FILTERED FAN UNITS:

General: Supply the required number of HEPA-filtered fan units to the site in accordance with these specifications. Use units that meet the following requirements.

Cabinet: Constructed of durable materials able to withstand damage from rough handling and transportation. The width of the cabinet should be less than 30 inches to fit through standard-size doorways. Provide units whose cabinets are:

- Factory-sealed to prevent asbestos-containing dust from being released during use, transport, or maintenance.
- Arranged to provide access to and replacement of all air filters from intake end.
- Mounted on casters or wheels.

Fans: Rate capacity of fan according to useable air-moving capacity under actual operating conditions.

HEPA Filters: Provide units whose final filter is the HEPA type with the filter media completely sealed on all edges with a structurally rigid frame.

- Provide units with a continuous rubber gasket located between the filter and the filter housing to form a tight seal.
- Provide HEPA filters that are individually tested and certified by the manufacturer to have an efficiency of not less than 99.97 percent when challenged with 0.3-um dioctylphthalate (DOP) particles when tested in accordance with Military Standard Number 282 and Army Instruction Manual 136-300-175A. Provide filters that bear a UL586 label to indicate ability to perform under specified conditions.
- Provide filters that are marked with the name of the manufacturer, serial number, air flow rating, efficiency and resistance, and the direction of test air flow.

Pre-Filters: Pre-filters, which protect the final filter by removing the larger particles, are required to prolong the operating life of the HEPA filter. Two stages of pre-filtration are required. Provide units with the following pre-filters:

- First-stage pre-filter: low-efficiency type (e.g., for particles 100 um and larger).

- Second-stage (or intermediate) filter: medium efficiency (e.g., effective for particles down to 5 μm).

Provide units with pre-filters and intermediate filters installed either on or in the intake grid of the unit and held in place with special housings or clamps.

Instrumentation: Provide units equipped with the following:

- Magnehelic gauge or manometer to measure the pressure drop across filters and indicate when filters have become loaded and need to be changed.
- A table indicating the usable air-handling capacity for various static pressure readings on the Magnehelic gauges affixed near the gauge for reference, or the Magnehelic reading indicating at what point the filters should be changed, noting cubic feet per minute (CFM) air delivery at that point.
- Elapsed time meter to show the total accumulated hours of operation.

Safety and Warning Devices: Provide units with the following safety and warning devices:

- Electrical (or mechanical) lockout to prevent fan from operating without a HEPA filter.
- Automatic shutdown system to stop fan in the event of a rupture in the HEPA filter or blocked air discharge.
- Warning lights to indicate normal operation (green), too high a pressure drop across the filters (i.e., filter overloading) (yellow), and too low of a pressure drop (i.e., rupture in HEPA filter or obstructed discharge) (red).
- Audible alarm if unit shuts down due to operation of safety systems.

ELECTRICAL COMPONENTS:

Provide units with electrical components approved by the National Electrical Manufacturers Association (NEMA) and Underwriter's Laboratories (UL). Each unit is to be equipped with overload protection sized for the equipment. The motor, fan, fan housing, and cabinet are to be grounded.

PART 3 - EXECUTION

Pressure Differential Isolation: Isolate the Work Area from all adjacent areas or systems of the building with a Pressure Differential that will cause a movement of air from outside to inside at any breach in the physical isolation of the Work Area.

Relative Pressure in Work Area: Continuously maintain the work area at an air pressure that is lower than that in any surrounding space in the building, or at any location in the immediate proximity outside of the building envelope. This pressure differential when measured across any physical or critical barrier must equal or exceed a static pressure of **0.02 inches of water**.

Accomplish the pressure differential by exhausting a sufficient number of HEPA-filtered fan units from the work area. The number of units required will depend on machine characteristics, the seal at barriers, and required air circulation. The number of units will increase with increased make-up air or leaks into the Work Area. Determine the number of units required for pressure isolation by the following procedure:

- Establish required air circulation in the work area, personnel and equipment decontamination units.
- Exhaust a sufficient number of units from the work area to develop the required pressure differential.
- The required number of units is the number determined above **plus one additional unit**.

Vent HEPA filtered fan units to outside of building utilizing the following protocols:

- Mount units to exhaust through disposable ductwork.
- Use ductwork and fittings of same diameter or larger than discharge connection on fan unit.
- Use inflatable, disposal plastic ductwork in lengths not greater than 100 feet.
- Use spiral wire-reinforced flex duct in lengths not greater than 50 feet.
- Arrange exhaust as required to inflate duct to a rigidity sufficient to prevent flapping.
- If direction of discharge from fan unit is not aligned with duct, use sheet metal elbow to change direction. Use six feet of spiral-wire-reinforced flex duct after direction change.

AIR CIRCULATION IN THE WORK AREA:

Air Circulation: For purposes of this document air circulation refers to either the introduction of outside air to the Work Area or the circulation and cleaning of air within the Work Area.

Air circulation in the Work Area is a minimum requirement intended to help maintain airborne fiber counts at a level that does not significantly challenge the work area isolation measures. The Contractor may also use this air circulation as part of the engineering controls in his worker protection program.

Determining the Air Circulation Requirements: Provide a fully operational air circulation system supplying a minimum of the following circulation rate:

- General ACM Removal: Four air changes per hour.
- Mastic Removal: Eight air changes per hour.

EXHAUST SYSTEM:

Pressure differential isolation and air circulation in the Work Area are to be accomplished by an exhaust system as described below.

Exhaust all units from the Work Area to meet air circulation requirements of this document.

Location of HEPA-Filtered Units:

Locate fan unit(s) so that makeup air enters work area primarily through decontamination facilities and traverses Work Area as much as possible. This may be accomplished by positioning the HEPA-filtered fan unit(s) at a maximum distance from the worker access opening or other makeup air sources.

Place end of unit or its exhaust duct through an opening in the plastic barrier or wall covering. Seal plastic around the unit or duct with tape. Vent to outside of building.

Supplemental Makeup Air Inlets:

Provide supplemental makeup air inlets where required for proper air flow through the Work Area, in location approved by the Owner or Owner's Rep, by making openings in the plastic sheeting that allow air from outside the building into the Work Area. Locate auxiliary makeup air inlets as far as possible from the fan unit(s) (e.g., on an opposite wall), off the floor (preferably near the ceiling), and away from barriers that separate the Work Area from occupied clean areas.

Cover inlets with flaps to reseal automatically if the pressure differential system should shut down for any reason.

AIR CIRCULATION IN DECONTAMINATION UNITS

Pressure Differential Isolation:

For decontamination units integral with the containment, arrange Work Area and decontamination units so that the majority of makeup air comes through the Decontamination Units. Use only the PDU or the EDU at any one time and seal the other, so that makeup air passes through the unit in use.

Continuously maintain the pressure differential required for the work area in the:

- PDU: Across the Shower Room with the Equipment Room at a lower pressure than the Clean Room.
- EDU: Across the Holding Room with the Wash Room at a lower pressure than the Clean Room.

Air Circulation:

Continuously maintain air circulation in Decontamination Units at same level as required for Work Area.

Air Movement:

Arrange air circulation through the PDU so that it produces a movement of air from the Clean Room through the Shower Room into the Equipment Room.

USE OF THE PRESSURE DIFFERENTIAL AND AIR CIRCULATION SYSTEM:

General:

Each unit shall be serviced by a dedicated minimum 115V-20A circuit with ground-fault circuit interrupter (GFCI) supplied from temporary power supply installed under requirements of Section 2A.7 - Temporary Facilities - Asbestos Abatement. Do not use existing branch circuits to power fan units.

Testing the System:

Test pressure differential system before any asbestos-containing material is wetted or removed. After the Work Area has been prepared, the decontamination facility set up, and the fan unit(s) installed, start the unit(s) (one at a time). Demonstrate operation and testing of pressure differential system to Owner or Owner's Rep.

Asbestos removal will not begin until the operation of the system has been observed and approved by the Owner or Owner's Rep.

Demonstrate condition of equipment for each HEPA-filtered fan unit and pressure differential monitoring equipment including proper operation of the following:

- Squareness of HEPA filter
- Condition of seals
- Proper operation of all lights
- Proper operation of automatic shut down if exhaust is blocked
- Proper operation of alarms
- Proper operation of magnehelic gauges
- Proper operation and calibration on pressure monitoring equipment.

Demonstrate operation of the pressure differential system to the Owner or Owner's Rep will include, but not be limited to, the following:

- Plastic barriers and sheeting move lightly in toward Work Area.
- Curtain of decontamination units move lightly in toward Work Area.
- There is a noticeable movement of air through the Decontamination Unit.
- Use smoke tube to demonstrate air movement from Clean Room through Shower Room to Equipment Room.
- Use smoke tubes to demonstrate a definite motion of air across all areas in which work is to be performed.
- Use a differential pressure meter or manometer to demonstrate the required pressure differential at every barrier separating the Work Area from the balance of the building, equipment, ductwork or outside.

Modify the Pressure Differential System as necessary to successfully demonstrate the above.

Use of System During Abatement Operations:

Start fan units before beginning work (before any ACM is disturbed). After abatement work has begun, run units continuously (24 hours per day) to maintain a constant pressure differential and air circulation until decontamination of the work area is complete. Do not turn off units at the end of the work shift or when abatement operations temporarily stop.

Do not shut down air pressure differential system during encapsulating procedures, unless authorized by the Owner or Owner's Rep in writing. Supply sufficient pre-filters to allow frequent changes.

Start abatement work at a location farthest from the fan units and proceed toward them. If an electric power failure occurs, immediately stop all abatement work and do not resume until power is restored and fan units are operating again.

At completion of abatement work, allow fan units to run as specified under Section 2A.15 - Project Decontamination, to remove airborne fibers that may have been generated during abatement work and cleanup and to purge the Work Area with clean makeup air. The units may be required to run for a longer time after decontamination, if dry or only partially wetted asbestos material was encountered during any abatement work.

Dismantling the System:

When a final inspection and the results of final air tests indicate that the area has been decontaminated, fan units may be removed from the Work Area. Before removal from the Work Area, remove and properly dispose of contaminants, decontaminate exterior of machine, and seal intake to the machine with 6-mil polyethylene to prevent environmental contamination from the filters.

END OF SECTION 2A.8

2A.9 - TEMPORARY ENCLOSURES

PART 1 - GENERAL

RELATED DOCUMENTS:

General provision of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to work of this section.

PART 2 - PRODUCTS:

SHEET PLASTIC:

Polyethylene Sheet: A single polyethylene film in the largest sheet size possible to minimize seams, 6-mil-thick, clear, frosted, or black, as indicated.

Reinforced Polyethylene Sheet: Where plastic sheet constitutes the only barrier between the work area and the building exterior, provide translucent, nylon-reinforced or woven polyethylene, laminated plastic sheeting. Provide largest size possible to minimize seams, 6-mil-thick, frosted or black.

MISCELLANEOUS MATERIALS:

Duct Tape: Provide duct tape in 2" or 3" widths, with an adhesive that is formulated to stick aggressively to sheet polyethylene.

Spray Cement: Provide spray adhesive in aerosol cans that is specifically formulated to stick tenaciously to sheet polyethylene.

PART 3 - EXECUTION

WORK AREA:

The Work Area is where asbestos abatement work occurs. It is a variable of the extent of work of the Contract. It may be a portion of a room, a single room, or a complex of rooms. A Work Area is considered contaminated during the work, and must be isolated from the balance of the building and decontaminated at the completion of the asbestos-control work.

Completely isolate the Work Area from other parts of the building so as to prevent asbestos-containing dust or debris from passing beyond the isolated area. Should the area beyond the Work Area(s) become contaminated with asbestos-containing dust or debris as a consequence of the work, clean those areas in accordance with the procedures indicated in Section 2A.15 - Project Decontamination. Perform all such required cleaning or decontamination at no additional cost to Owner.

Place all tools, scaffolding, staging, etc., necessary for the work in the area to be isolated prior to completion of Work Area isolation.

Remove all removable furniture that has been designated uncontaminated by the Contract Documents or Owner or Owner's Rep. Also remove uncontaminated equipment, and/or supplies from the Work Area before commencing work, or completely cover with two (2) layers of polyethylene sheeting, 6-mil in thickness, securely taped in place with duct tape. Such furniture and equipment shall be considered outside the work area unless covering plastic or seal is breached.

Emergency Exists: At each existing exit door from the Work Area provide the following means for emergency exiting:

- Arrange exit door so that it is secure from outside the Work Area but permits exiting from the Work Area.
- Mark the outline of door on Primary and Critical Barriers with luminescent tape or paint at least 1" wide. Hang a razor knife on a string beside outline. Arrange Critical and Primary Barriers so that they can be easily cut with one pass of razor knife. Spell the words "EMERGENCY EXIT" inside outline with luminescent paint or tape in letters at least one foot high and 2" thick.

Control Access: Isolate the Work Area to prevent entry by others into Work Area or surrounding controlled areas. Accomplish isolation by the following:

- Submit to Owner or Owner's Rep a list of doors and other openings that must be secured to isolate Work Area. Indicate on list notation if door or opening is in an indicated exit route.
- After receiving authorization from the Owner or Owner's Rep, lock all doors into Work Area, or, if doors cannot be locked, chain shut. Cover any signs that direct emergency exiting to locked doors, either outside or inside of Work Area. Do not obstruct doors required for emergency exits from Work Area or from building.
- After receiving authorization from the Owner or Owner's Rep, construct partitions or closures across any opening into Work Area as indicated on the project drawings.
- Fabricate partitions from 2' x 4' wood studs with 1/2" painted plywood on the face visible to other building occupants. Brace at 4'0" on center.

Provide Warning Signs using one-inch-high letters at each locked door leading to Work Area reading as follows:

KEEP OUT

BEYOND THIS POINT

WORK IN PROGRESS

Immediately inside door and outside critical barriers post an approximately 20-inch by 14-inch manufactured caution sign displaying the following legend with letter sizes and styles of a visibility required by 29 CFR 1926:

DANGER

ASBESTOS

**CANCER AND LUNG DISEASE HAZARD
RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED
IN THIS AREA**

Provide spacing between respective lines at least equal to the height of the respective upper line.

Alternate Methods of Enclosure: Alternate methods of containing the Work Area may be submitted to the Owner or Owner's Rep for approval. Do not proceed with any such method(s) without prior written approval of the Owner's or Owner's Rep's.

CRITICAL BARRIERS:

Completely separate the Work Area from other portions of the building, and the outside by closing all openings to those areas with sheet plastic barriers 6 mil in thickness, or by sealing cracks leading out of Work Area with duct tape.

Provide sheet plastic barriers 6-mil in thickness as required to seal openings completely from the Work Area into adjacent areas. Seal the perimeter of all sheet plastic barriers with duct tape.

Mechanically support sheet plastic independently of duct tape so that seals do not support the weight of the plastic. Following are acceptable methods of supporting sheet plastic barriers. Alternative support methods may be used if approved in writing by the Owner or Owner's Rep.

- Plywood squares 6" x 6" x 3/8" held in place with one 6d smooth masonry nail or electro-galvanized common nail driven through center of the plywood and duct tape on plastic so that plywood clamps plastic to the wall. Locate plywood squares at each end, corner, and at maximum 4 feet on centers.
- Nylon or polypropylene rope or wire with a maximum unsupported span of 10 feet, minimum 1/4" in diameter suspended between supports securely fastened on either side of opening at maximum 1 foot below ceiling. Tighten rope so that it has 2" maximum dip. Drape plastic over rope from outside Work Area so that a two-foot-long flap of plastic extends over rope into Work Area. Staple or wire plastic to itself 1" below rope at maximum 6" on centers to form a sheath over rope. Lift flap and seal to ceiling with duct tape. Seal loop at bottom of flap with duct tape. Erect entire assembly so that it hangs vertically without a "shelf" upon which debris could collect.
- Provide Pressure Differential System per Section 2A.8 - Temporary Pressure Differential and Air Circulation System.
- Spray cement shall only be used to bond and seal lapping sheets of polyethylene.

PREPARE AREA:

If fixed scaffolding is to be used to provide access, HEPA vacuum and wet clean area prior to scaffolding installation.

Removal all electrical and mechanical items, such as lighting fixtures, clocks, diffusers, registers, escutcheon plates, etc. that cover any part of the surface to be worked on.

Removal all general construction items such as cabinets, casework, door and window trim, moldings, ceilings, trim, etc., that cover the surface of the work, as required to prevent interference with the work.

Clean all contaminated furniture, equipment, and or supplies with a HEPA-filtered vacuum cleaners or by wet cleaning, as specified in Section 2A.16 - Initial Cleaning and Decontamination Procedures, prior to being moved or covered. All equipment furniture, etc. is to be deemed contaminated unless specifically declared as uncontaminated on the drawings or in writing by the Owner or Owner's Rep.

Clean all surfaces in work area with a HEPA-filtered vacuum or by wet wiping prior to the installation of primary barrier.

PRIMARY BARRIER:

Protect building and other surfaces in the Work Area from damage from water and high humidity or from contamination from asbestos-containing debris, slurry, or high airborne fiber levels by covering with a primary barrier as described below.

Protect surfaces in the Work Area with two (2) layers of plastic sheeting on floor and walls, or as otherwise directed on the Contract Drawings or in writing by the Owner or Owner's Rep. Perform work in the following sequence.

- Cover all walls and ceilings in Work Area, including "Critical Barrier" sheet plastic barriers, with one layer of supported and sealed with duct tape and spray-glue in the same manner as "Critical Barrier" sheet plastic barriers. Tape all joints including the joining with the floor covering with duct tape or as otherwise indicated by the Owner or Owner's Rep.
- Stairs and Ramps: Do not cover stairs or ramps with unsecured sheet plastic. Where stairs or ramps are covered with plastic, provide 3/4" exterior-grade plywood treads securely held in place, over plastic. Do not cover rungs or rails with any type of protective materials.
- Repaired or Damaged Plastic Sheeting: Remove and replace plastic sheeting that has been damaged by removal operations or where seal has failed allowing water to seep between layers. Remove affected sheeting and wipe down entire area as asbestos-containing material. Install new sheet plastic only when area is completely dry.

SECONDARY BARRIER:

Install Secondary Barrier composed of a layer of sheet plastic, 6-mil thick, on floors, walls, and ceilings over primary layer using the same procedures and sequencing previously outlined for the primary barrier. Locate seams in secondary layer six feet from, or at right angles to, underlying

primary layer of plastic. Install plastic so that secondary layer can be removed independently of primary barrier.

DROP CLOTH:

A third layer of sheet plastic shall be placed over the floors as a drop cloth to protect the secondary layer from debris generated by the asbestos abatement work.

EXTERIOR ENCLOSURES:

Construct exterior enclosures as a Critical Barrier as necessary to completely enclose the work. Fabricate from reinforced polyethylene sheeting and 2" x 4" wood framework. Attach to existing building components or brace as necessary for lateral stability. Construct walls to meet all state and local regulations. Construct to resist a wind of 30 miles per hour; slope ceiling to permit drainage of rain water.

STOP WORK:

If the Critical or Primary Barrier falls or is breached in any manner, stop work immediately and notify Owner or Owner's Rep. Do not start work until authorized in writing by the Owner or Owner's Rep.

EXTENSION OF WORK AREA:

If the Critical Barrier is breached in any manner that could allow the passage of asbestos debris or airborne fibers, then add affected area to the Work Area, enclose it as required by this document of the specification and decontaminate it as described in Section 2A.15 - Project Decontamination.

END OF SECTION 2A.9

2A.10 - WORKER PROTECTION - ASBESTOS ABATEMENT

PART 1 - GENERAL

RELATED DOCUMENTS:

General provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to work of this section.

DESCRIPTION OF WORK:

This section describes the equipment and procedures required for protecting workers against asbestos contamination and other workplace hazards, except for respiratory protection.

RELATED WORK SPECIFIED ELSEWHERE:

Respiratory protection is specified in Section 2A.11.

WORKER TRAINING:

AHERA Accreditation: All workers are to be accredited as Abatement Workers as required by the AHERA regulation 40 CFR 763 Appendix C to Subpart E, April 30, 1987.

State and Local License: All workers are to be trained, certified, and accredited as required by state or local codes or regulations.

OSHA TRAINING: Train, in accordance with 29 CFR 1926, all workers in the dangers inherent in handling asbestos and breathing asbestos dust and in proper work procedures and personal and area protective measures. Include but do not limit the topics covered in the course to the following:

- Methods of recognizing asbestos.
- Health effects associated with asbestos.
- Relationship between smoking and asbestos in producing lung cancer.
- Nature of operations that could result in exposure to asbestos.
- Importance of and instruction in the use of necessary protective controls, practices, and procedures to minimize exposure including:
 - Engineering controls
 - Work practices
 - Respirators
 - Housekeeping procedures
 - Hygiene facilities
 - Protective clothing
 - Decontamination procedures
 - Emergency procedures
 - Waste disposal procedures

- Purpose, proper use, fitting, instructions, and limitations of respirators as required by 29 CFR 1910.134.
- Appropriate work practices for the work.
- Requirements of medical surveillance program.
- Review of 29 CFR 1926.
- Ventilation Systems.
- Work practices, including hands-on or on-job training.
- Personal Decontamination procedures.
- Air monitoring, personal and area.

MEDICAL EXAMINATIONS:

Provide medical examinations for all workers who may encounter an airborne fiber level of 0.1 f/cc or greater for an eight-hour time-weighted average. In the absence of specific airborne fiber data, provide medical examinations for all workers who will enter the Work Area for any reason. Examination shall, at a minimum, meet OSHA requirements as set forth in 29 CFR 1926. In addition, provide an evaluation of the individual's ability to work in environments capable of producing heat stress in the worker.

PART 2 - SUBMITTALS:

Prior to initiation of work Contractor shall submit the following to the Owner or Owner's Rep for review. Do not start work until these submittals are returned with Owner or Owner's Rep's action stamp indicating that the submittal is returned for unrestricted use.

AHERA Accreditation: Submit copies of certificates from an USEPA-approved AHERA Abatement Workers course for each worker as evidence that each asbestos Abatement Worker is accredited as required by the AHERA Regulation 40 CFR 763 Appendix C to Subpart E, April 30, 1987.

State and Local License: Submit evidence that all workers have been trained, certified, and accredited as required by state or local code or regulation.

Certificate Worker Acknowledgement: Submit an original signed copy of the Certificate of Worker's Acknowledgement found at the end of this document, or similar document, for each worker who is to enter the Work Area.

Report from Medical Examination: Conducted within last 12 months as part of compliance with OSHA medical surveillance requirements for each worker who is to enter the Work Area. Submit, at a minimum, for each worker the following:

- Name and Social Security Number.
- Physicians Written opinion from examining physician including at a minimum the following:
 - Whether worker has any detected medical conditions that would place the worker at an increased risk of material health impairment from exposure to asbestos.
 - Any recommended limitations on the worker or on the use of personal protective equipment such as respirators.

- Statement that the worker has been informed by the physician of the results of the medical examination and of any medical conditions that may result from asbestos exposure.
- Copy of information that was provided to physician in compliance with 29 CFR 1926.
- Statement that worker is able to wear and use the type of respiratory protection proposed for the project, and is able to work safely in an environment capable of producing heat stress in the worker.

HEALTH AND SAFETY PLAN:

Provide a health and safety plan that describes the precautions to be taken during abatement in compliance with applicable OSHA regulations for construction activities. Program elements shall include, but are not limited to the following:

	Safety and Health Regulations for Construction Title 29 CFR 1926
Fire Protection	Subpart F
Electrical	Subpart K
Ladders and Scaffolding	Subpart L
Demolition	Subpart T
Heat Stress	ACGIH TLV for Heat Stress
Confined-Space Entry	NIOSH Criteria for Working in Confined Spaces, December 1979

PART 3 - EQUIPMENT

PROTECTIVE CLOTHING:

Personal Clothing: Provide disposal full-body coveralls, disposable head covers, and require that they be worn by all workers in the Work Area.

Provide a sufficient number for all required changes, for all workers in the Work Area.

Boots: Provide work boots with non-skid soles, and where required by OSHA, foot protection, for all workers. Provide boots at no cost to workers.

Goggles: Provide protective goggles as required by OSHA for all workers involved in scraping, spraying, or any other activity which may potentially cause eye injury. Thoroughly clean, decontaminate, and bag goggles before removing them from Work Area at the end of the work.

Gloves: Provide work gloves to all workers as required to do the work, or if requested by the workers. Do not remove gloves from Work Area.

Additional Protective Equipment: Respirators, respirator filters, disposable coveralls, disposable gloves, head covers, and footwear covers shall be provided by the Contractor for the Owner, Owner

or Owner's Rep, and other authorized representatives who may inspect the job site, as this equipment is required by them to carry out the work.

Disposal: All protective clothing worn within the Work Area, shall be considered asbestos-contaminated and shall be managed and disposed of as asbestos-containing material at the end of the Work.

PART 4 - EXECUTION:

GENERAL:

Provide worker protection as required by the most stringent OSHA and/or USEPA standards applicable to the work. The following procedures are minimums to be adhered to regardless of airborne fiber concentration in the Work Area.

Each time Work Area is entered, remove all street clothes in the Changing Room of the PDU and put on new disposable coverall, new head cover, and a clean respirator and filters. Proceed through shower room to equipment room and put on work boots and work clothes.

DECONTAMINATION PROCEDURES

All workers shall adhere to the following personal decontamination procedures whenever they leave the Work Area:

Type C Supplied Air or Powered Air-Purifying Respirators:

- When exiting area, leaving respirator in place, remove work boots and work clothes, disposable coveralls, disposable gloves, disposable head covers, and disposable footwear covers in the Equipment Room.
- While still wearing the respirator, proceed to showers. Showering is mandatory. Care must be taken to follow reasonable procedures in removing the respirator to avoid asbestos fibers while showering. The following procedures is required as a minimum:
 - Thoroughly wet body including hair and face. If using a Powered Air-Purifying Respirator (PAPR) hold blower unit above head to keep canisters dry.
 - With respirator still in place, thoroughly wash body, hair, respirator face piece, and all parts of the respirator except the blower unit and battery pack on a PAPR. Pay particular attention to seal between face and respirator and under straps.
 - Take a deep breath, hold it and/or exhale slowly, completely wet hair, face, and respirator. While still holding breath, remove respirator and hold it away from face before starting to breath.
 - Carefully wash face piece of respirator inside and out.
- Shut down the PAPR in the following sequence:
 - First cap inlets to filter cartridges, then turn off blower unit (this sequence will help keep debris that has collected on the inlet side of filter from dislodging and contaminating the outside of the unit).

- Thoroughly wash blower unit and hoses. Carefully wash battery pack with wet rag. Be extremely cautious of getting water in battery pack as this will short out and destroy battery.
- Shower completely with soap and water.
- Rinse thoroughly.
- Rinse shower room walls and floor prior to exit.
- Proceed from shower to Changing Room and change into street clothes or into new disposable work items.

Air Purifying-Negative Pressure Respirators: All workers shall use the following decontamination procedures as a minimum requirement whenever leaving the Work Area with a half or full face cartridge type respirator:

- When exiting area, leaving the respirator in place, remove work clothes, disposable coveralls, disposable head-covers, and disposable footwear covers or boots in the Equipment Room.
- While still wearing the respirator, proceed to showers. Showering is mandatory. Care must be taken to follow reasonable procedures in removing the respirator and filters to avoid asbestos fibers while showering. The following procedures is required as a minimum:
 - Thoroughly wet body from neck down.
 - Wet hair as thoroughly as possible without wetting the respirator filter if using an air purifying type respirator.
 - Take a deep breath, hold it and/or exhale slowly, complete wetting of hair, thoroughly wetting face, respirator and filter (air purifying respirator). While still holding breath, remove respirator and hold it away from face before starting to breath.
 - Dispose of wet filters from air purifying respirator.
 - Carefully wash face piece of respirator inside and out.
 - Shower completely with soap and water.
 - Rinse thoroughly.
 - Rinse shower room walls and floor prior to exit.
 - Proceed from shower to Changing Room and change into street clothes or into new disposable work items.

BANNED WORK AREA BEHAVIORS: Workers shall NOT eat, drink, smoke, chew tobacco or gum, or apply cosmetics in the Work Area.

END OF SECTION 2A.10

2A.11 - RESPIRATORY PROTECTION

PART 1 - GENERAL

RELATED DOCUMENTS:

General provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to work of this section.

DESCRIPTION OF WORK:

Instruct and train each worker involved in asbestos abatement or maintenance and repair of friable asbestos-containing materials in proper respiratory use and require that each worker always wear a respirator, properly fitted on the face in the Work Area from the start of any operation which may cause airborne asbestos fibers until the Work Area has been released. Use respiratory protection appropriate for the fiber concentration encountered in the work place or as required for other volatile hazardous chemicals or oxygen-deficient situations encountered.

STANDARDS:

Except to the extent that more stringent requirements are written directly into the Contract Documents, the following regulations and standards have the same force and effect (and are made a part of the Contract Documents by reference) as if copied directly into the Contract Documents, or as if published copies were bound herewith. Where there is a conflict in requirements set forth in these regulations and standards, meet the more stringent requirement.

- OSHA - U.S. Department of Labor Occupational Safety and Health Administration, Safety and Health Standards 29 CFR 1910, Section 1001 and Section 1910.134. 29 CFR 1926.1101.
- CGA - Compressed Gas Association, Inc., New York, Pamphlet G-7,
- "Compressed Air for Human Respiration", and Specification G-7.1.
- "Commodity Specification for Air."
- CSA - Canadian Standard Association, Rexdal, Ontario, Standard Z180.1-1978, "Compressed Breathing Air."
- ANSI - American National Standard Practices for Respiratory Protection, ANSI Z88.2-1980.
- NIOSH - National Institute for Occupational Safety and Health

PART 2 - EQUIPMENT

AIR-PURIFYING RESPIRATORS

Respirator Bodies: Provide half-face- or full-face-type respirators. Equip full-face respirators with a nose cup or other anti-fogging device as would be appropriate for use in air temperatures less than 32 degrees Fahrenheit.

Filter Cartridges: Provide, at a minimum, HEPA-type filters labeled with NIOSH and MSHA Certification for "Radionuclides, Radon Daughters, Dust, Fumes, Mists including Asbestos-Containing Dusts and Mists" and color coded in accordance with ANSI Z228.2 (1980). In addition,

a chemical cartridge section may be added, if required, for solvents, etc., in use. In this case, provide cartridges that have each section of the combination canister labeled with the appropriate color code and NIOSH/MSHA Certification.

Non-permitted respirators: Do not use single use, disposable or quarter face respirators.

PART 3 - EXECUTION

GENERAL:

Respiratory Protection Program: Comply with ANSI Z88.2 - 1980 "Practices for Respiratory Protection" and OSHA 29 CFR 1910 and 1926.

Require that respiratory protection be used at all times that there is any possibility of disturbance of asbestos-containing materials whether intentional or accidental.

Require that a respirator be worn by anyone in a Work Area at all times, regardless of activity, during a period that starts with any operation which could cause the release of airborne fibers until the area has been cleared for re-occupancy in accordance with 01714 – Work Area Clearance.

FIT TESTING:

Initial Fitting: Provide initial fitting of respiratory protection during a respiratory protection course of training set up and administered by a qualified industrial hygiene professional. Fit types of respirator to be actually worn by each individual. Allow an individual to use only those respirators for which training and fit testing have been provided. Provide documentation to the Owner or Owner's Rep, of the satisfactory fit test, qualitative for half-face and quantitative for all other respirators.

Upon Each Wearing: Require that an air-purifying respirator be checked for fit with a positive and negative pressure fit check before each use, in accordance with the manufacturer's instructions or ANSI Z88.2 (1980).

TYPE OF RESPIRATORY PROTECTION REQUIRED:

Powered Air-Purifying (PAPR) Respirators: Full face-piece positive pressure respirators are to be used by all workers engaged in the removal, or demolition of pipes, structures, or equipment covered or insulated with asbestos-containing material, or in the removal or demolition of asbestos insulation or coverings, or any other activity which results in or may result in airborne asbestos fibers.

Where PAPR respiratory protection does not apply, determine the proper level of protection by dividing the expected or actual airborne fiber concentration in the Work Area by the "protection factors" given herein. The level of respiratory protection which calculates an airborne fiber concentration inside the respirator, at the breathing zone of the wearer, at or below the permissible exposure limit (PEL) is the minimum level of protection allowed. Contractor must first present an exposure assessment in accordance with OSHA regulations to utilize respirators having less

protection than a PAPR, such as a half-face or full-face type of respirators. Removal of floor tile and mastic by non-friable methods may be performed with a half-face type respirator; this does not apply for floor sheeting.

OSHA PERMISSIBLE EXPOSURE LIMIT (PEL):

Fibers: For purposes of this section, fibers are defined as all fibers regardless of composition as counted in the OSHA Reference Method (ORM), or NIOSH 7400 procedure.

Electron Microscopy: If Electron Microscopy is used to determine airborne fiber levels, only asbestos fibers will be enumerated, but fibers of any size detected by the testing of Section 2A.17 – Work Area Clearance will be counted.

The OSHA Permissible Exposure Limits (PEL) are:

- Time-Weighted Average (TWA) - 0.1 fibers/cc
- 30-minute excursion (ceilings) - 1.0 fibers/cc

RESPIRATORY PROTECTION FACTOR:

RESPIRATOR TYPE	PROTECTION FACTOR
Air purifying: Negative pressure respirator High efficiency filter Half face-piece	10
Air purifying: Negative pressure respirator High efficiency filter Full face-piece	50 (With Quantitative Fit Test)
Powered Air Purifying (PAPR): Positive pressure respirator High efficiency filter Half or full face-piece	100
Type C Supplied Air: Positive pressure respirator Pressure demand or other positive pressure mode Half face-piece	1,000
Type C Supplied Air: Positive pressure respirator Pressure demand or other positive pressure mode Full face-piece	2,000
Type C Supplied Air: Positive pressure respirator Pressure demand or other positive pressure mode Full face-piece Equipped with an auxiliary positive pressure Self-contained breathing apparatus (SCBA)	10,000
Self-contained Breathing Apparatus (SCBA): Positive pressure respirator Pressure demand or other positive pressure mode	10,000

RESPIRATOR TYPE	PROTECTION FACTOR
Full face-piece	

AIR-PURIFYING RESPIRATORS:

Negative Pressure:

Half or Full Face Mask: Supply a sufficient quantity of respirator filters approved for asbestos, so that workers can change filters during the work day. Require that respirator bodies be wet-rinsed, and filters discarded, each time a worker leaves the Work Area. Require that new filters be installed each time a worker re-enters the Work Area. Store respirators and filters at the job site in the changing room and protect totally from exposure to asbestos prior to their use.

PAPRs: Supply a sufficient quantity of high efficiency respirator filters approved for asbestos so that workers can change filters at any time that flow through the face piece decreases below manufacturer's recommendations. Require that regardless of flow, filter cartridges be replaced after 40 hours of use. Require that HEPA elements in filter cartridges be protected from wetting during showering. Require entire exterior housing of respirator, including blower unit, filter cartridges, hoses, batter pack, face mask, belt, and cords, and be washed each time a worker leaves the Work Area. Caution should be used to avoid shorting battery pack during washing. Provide an extra battery pack for each respirator so that one can be charging while one is in use.

END OF SECTION 2A.11

2A.12 - DECONTAMINATION UNITS

PART 1 - GENERAL

RELATED DOCUMENTS:

General provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification sections, apply to work of this section.

DESCRIPTION OF WORK:

Provide separate Personnel and Equipment Decontamination facilities. Require that the Personnel Decontamination Unit be the only means of ingress and egress for the Work Area. Require that all materials exit the Work Area through the Equipment Decontamination Unit.

RELATED WORK SPECIFIED ELSEWHERE:

Refer to Section 2A.7 - Temporary Facilities - Asbestos Abatement for electrical requirements and requirements relative to connection of decontamination facilities to building systems such as water, sewer, and electrical.

SUBMITTALS

Before the Start of Work: Submit the following to the Consultant for review. Do not begin work until these submittals are returned with Consultant's action stamp indicating that the submittal is returned for unrestricted use final-but-unrestricted use.

Personnel Decontamination Unit: Provide project drawing showing location and assembly of personnel decontamination units.

Equipment Decontamination Unit: Provide project drawing showing location and assembly of equipment decontamination units.

Showers: Provide product data.

Filters: Provide product data and drawing of installation on decontamination unit.

Shower Stall: For Wash Down Station provide product data and shop drawing.

PART 2 - PRODUCTS

Polyethylene Sheet: A single polyethylene film in the largest sheet size possible to minimize seams, 6 mil thick, clear, frosted, or black.

Reinforced Polyethylene Sheet: Where plastic sheet is the only separation between the Work Area and building exterior, provide translucent, nylon reinforced, laminated, flame resistant, polyethylene

film that conforms to requirements set forth by the National Fire Protection Association Standard 701, Small Scale Fire Test for Flame-resistant Textiles and Films. Provide largest size possible to minimize seams, 6 mil thick, frosted or black.

Duct Tape: Provide duct tape in two-inch or three-inch widths as indicated, with an adhesive which is formulated to stick aggressively to sheet polyethylene.

Spray Adhesive: Provide spray adhesive in aerosol cans which is specifically formulated to stick tenaciously to sheet polyethylene.

Shower Walls: Provide walls fabricated from, impervious, waterproof material. Structurally support as necessary for stability.

Shower Head and Controls: Provide a factory-made shower head producing a spray of water which can be adjusted for spray size and intensity. Feed shower with water mixed from hot and cold supply lines. Arrange so that control of water temperature, flow rate, and shut off is from inside shower without outside aid.

Filters: Provide cascaded filter units on drain lines from showers or any other water source carrying asbestos-contaminated water from the Work Area. Provide units with disposable filter elements as indicated below. Connect so that discharged water passes primary filter and output of primary filter passes through secondary filter.

- Primary Filter - Passes particles 20 microns and smaller.
- Secondary Filter - Passes particles 5 microns and smaller.

Hose Bib: Provide heavy bronze angle type with wheel handle, vacuum breaker, and 3/4-inch National Standard male hose outlet. Shower Stall: For Wash Down Station provide leak tight shower enclosure with integrated drain. Structurally support as necessary for stability. Equip with hose bib, as specified in this section, mounted at approximately four feet-zero inches above drain pan. Connect drain to a reservoir, pump water from reservoir through filters to a drain or store and use for amended water. Mount filters inside shower stall on back wall beneath hose bib.

Lumber: Provide kiln dried lumber of any grade or species.

Sump Pump: Provide totally submersible waterproof sump pump with integral float switch. Provide unit sized to pump 2 times the flow capacity of all showers or hoses supplying water to the sump, through the filters specified herein when they are loaded to the extent that replacement is required. Provide unit capable of pumping debris, sand, plaster or other materials washed off during decontamination procedures without damage to mechanism of pump. Adjust float switch so that a minimum of three inches remains between top of liquid and top of sump pan.

PART 3 - EXECUTION

PERSONNEL DECONTAMINATION UNIT:

Provide a Personnel Decontamination Unit consisting of a serial arrangement of connected rooms or spaces, Changing Room, Drying Room, Shower Room, Equipment Room. Require all persons without exception to pass through this Decontamination Unit for entry into and exiting from the Work Area for any purpose. Do not allow parallel routes for entry or exit. Do not remove equipment or materials through Personnel Decontamination Unit. Provide temporary lighting within Decontamination Units as necessary to reach a lighting level of 50 foot candles.

Changing Room (clean room): Provide a room that is physically and visually separated from the rest of the building for the purpose of changing into protective clothing. Change room shall have minimum dimensions of 10' x 10' x 8' and shall comply with all OSHA standards.

- Construct using polyethylene sheeting, at least 6 mil in thickness, to provide an airtight seal between the Changing Room and the rest of the building.
- Locate so that access to Work Area from Changing Room is through Shower Room.
- Separate Changing Room from the building by a sheet plastic flapped doorway.
- Require workers to remove all street clothes in this room, dress in clean, disposable coveralls, and don respiratory protection equipment. Do not allow asbestos-contaminated items to enter this room. Require workers to enter this room either from outside the structure dressed in street clothes, or naked from the showers.
- An existing room may be utilized as the Changing Room if it is suitably located and of a configuration whereby workers may enter the Changing Room directly from the Shower Room. Protect all surfaces or rooms with sheet plastic as set forth in Section 2A.9 – Temporary Enclosures. Authorization for this must be obtained from the Consultant in writing prior to start of construction. Submit written request detailing layout and protective measures proposed.
- Maintain floor of changing room dry and clean at all times. Do not allow overflow water from shower to wet floor in changing room.
- Damp wipe or mist all surfaces twice after each shift change with a disinfectant solution.
- Provide posted information for all emergency phone numbers and procedures.
- Provide all other components indicated on the contract drawings.

Drying Room: Provide a drying room as an airlock and a place for workers to dry after showering.

- Construct room by providing a pan continuous with or draining to Shower Room pan. Install a freely draining wooden or non-skid metal floor in pan at elevation of top of pan.
- Separate this room from the rest of the building with airtight walls fabricated of 6-mil polyethylene.
- Separate this room from the Changing Room and Shower Room with airtight walls fabricated of 6-mil polyethylene.
- Separate from Changing Room by a sheet plastic flapped doorway.
- Provide a continuously adequate supply of disposable bath towels.
- Arrange so that there is a sensible movement of air from clean room through breathing zone of worker in Shower and Drying Room toward Equipment Room.

Shower Room: Provide a completely watertight operational shower to be used for transit by cleanly dressed workers heading for the Work Area from the Changing Room, or for showering by workers headed out of the Work Area after undressing in the Equipment Room.

- Construct room by providing a shower pan and 2 shower walls in a configuration that will cause water running down walls to drip into pan. Install a freely draining wooden floor in shower pan at elevation of top of pan.
- Separate this room from the rest of the building with airtight walls fabricated of 6-mil polyethylene.
- Separate this room from the Drying Room and Airlock with airtight walls fabricated of 6-mil polyethylene.
- Provide splash proof entrances to Drying Room and Airlock with doors arranged in the following configuration:
 - At each entrance to the Shower Room construct a door frame out of nominal two inch by four-inch lumber with 1-1/2 inch jambs (sides) and 1-1/2 inch head (top) and sill (bottom). Attach to this door frame two overlapping flaps of sheet plastic, fastened at the head (top) and jambs (sides) (by clamping between a 1-1/2 inch x 3/4 inch batten and frame). Overlap the flaps a minimum of six inches in a direction that presents a shingle-like configuration to the water stream from the shower. Overlap sill (bottom) by 1-1/2 inch minimum. Arrange so that any air movement out of the Work Area will cause the flaps to seal against the door frame.
- Provide shower head and controls.
- Provide temporary extensions of existing hot and cold water and drainage, as necessary for a complete and operable shower.
- Provide a soap dispenser and a continuously adequate supply of soap and maintain in sanitary condition.
- Arrange so that water from showering does not splash into the Changing or Equipment Rooms.
- Arrange water shut off and drain pump operation controls so that a single individual can shower without assistance from either inside or outside of the Work Area.
- Provide flexible hose shower head.
- Pump wastewater to drain or to storage for use in amended water. If pumped to drain, provide 20 micron and 5 micron wastewater filters in line to drain or wastewater storage. Change filters daily or more often if necessary. Locate filters inside shower unit so that water lost during filter changes is caught by shower pan.
- Provide hose bib.
- Provide all other items indicated on contract drawings.

Airlock: Provide an airlock between Shower Room and Equipment Room. This is a transit area for workers. Separate this room from Equipment Room by a sheet plastic flap doorway.

- Separate this room from the rest of the building with airtight walls fabricated of 6-mil polyethylene.
- Separate this room from the Equipment Room and Shower Room with airtight walls fabricated of 6-mil polyethylene.
- Separate from Equipment Room by a sheet plastic flapped doorway.

Equipment Room (Contaminated Area): Require work equipment, footwear and additional contaminated work clothing to be left here. This is a change and transit area for workers.

- Separate this room from the Work Area by a 6-mil polyethylene flapped doorway.
- Separate this room from the rest of the building with airtight walls fabricated of 6-mil polyethylene.
- Separate this room from the Shower Room and Work Area with airtight walls fabricated of 6-mil polyethylene.
- Provide a drop cloth layer of sheet plastic on floor in the Equipment Room for every shift change expected. Roll drop cloth layer of plastic from Equipment Room into Work Area after each shift change. Replace before next shift change. Provide a minimum of two (2) layers of plastic at all times. Use only clear plastic to cover floors.

Work Area: Separate Work Area from the Equipment Room by polyethylene barriers. If the airborne asbestos level in the Work Area is expected to be high, add an intermediate cleaning space between the Equipment Room and the Work Area. Damp wipe clean all surfaces after each shift change. Provide one additional floor layer of 6-mil polyethylene per shift change and remove contaminated layer after each shift.

Decontamination Sequence: Require that all workers adhere to the following sequence when entering or leaving the Work Area.

- Entering Work Area:
 - Worker enters Changing Room and removes street clothing, puts on clean disposable overalls and respirator, and passes through the Shower Room into the Equipment Room.
 - Any additional clothing and equipment left in Equipment Room needed by the worker are put on in the Equipment Room.
 - Worker proceeds to Work Area.
- Exiting Work Area:
 - Before leaving the Work Area, require the worker to remove all gross contamination and debris from overalls and feet.
 - The worker then proceeds to the Equipment Room and removes all clothing except respiratory protection equipment.
 - Extra work clothing such as boots, hard hats, goggles, gloves, are to be stored in contaminated end of the Equipment Room.
 - Disposable coveralls are placed in a bag for disposal with other material.
 - Require the Decontamination procedures found in Section 2A.10 be followed by all individuals leaving the Work Area.
 - After showering, the worker moves to the Changing Room and dresses in either new coveralls for another entry or street clothes if leaving.

EQUIPMENT DECONTAMINATION UNIT:

Provide an Equipment Decontamination Unit consisting of serial arrangement of rooms, Clean Room, Holding Room, Wash Room for removal of equipment and material from Work Area. Do not allow personnel to enter or exit Work Area through Equipment Decontamination Unit.

Arrange with airlocks between rooms as required below.

Wash Down Station: Provide an enclosed Shower Unit located in Work Area just outside Wash Room as an equipment, bag and container cleaning station.

Fabricate waterproof floor extending six feet - zero inches beyond Wash Down station in all directions. Install seamless waterproof membrane over area and extend over curbs on all four sides. Form curbs from two-inch by four-inch lumber laid on the flat.

Waterproof membrane is to be fabricated from minimum 10-mil polyethylene.

Do not allow water to collect on waterproof membrane. Remove continuously with a wet vacuum or mops.

Wash Room: Provide wash room for cleaning of bagged or containerized asbestos-containing waste materials passed from the Work Area.

Construct wash room of nominal two-inch by four-inch wood framing and 6-mil polyethylene sheeting, and located so that packaged materials, after being wiped clean, can be passed to the Holding Room.

Separate this room from the Work Area by a single flapped door of 6-mil polyethylene sheeting.

Provide a drop cloth layer of plastic on floor in the Wash Room for every load-out operation. Roll this drop cloth layer of plastic from Wash Room into Work Area after each load-out. Provide a minimum of two (2) layers of plastic at all times. Use only clear plastic to cover floors.

Airlock: Provide an airlock between Wash Room and Holding Room. This is a transit area.

Separate this room from adjacent spaces by a sheet plastic flapped doorway.

Separate this room from the rest of the building and adjacent spaces with airtight walls fabricated of 6-mil polyethylene.

Holding Room: Provide Holding Room as a drop location for bagged asbestos-containing materials passed from the Wash Room. Construct Holding Room of nominal two-inch by four-inch wood framing and 6 mil polyethylene sheeting, located so that bagged materials cannot be passed from the Wash Room through the Holding Room to the Clean Room.

Separate this room from the adjacent rooms by flap doors fabricated from 6-mil sheet plastic.

Airlock: Provide an airlock between Holding Room and Clean Room. This is a transit area.

Separate this room from adjacent spaces by a sheet plastic flap doorway.

Separate this room from the rest of the building and adjacent spaces with airtight walls fabricated of 6-mil polyethylene.

Clean Room: Provide Clean Room to isolate the Holding Room from the building exterior. If possible locate to provide direct access to the Holding Room from the building exterior.

Erect Critical and Primary Barriers as described in Section 2A.9 – Temporary Enclosures in an existing space. If no space exists, construct Clean Room of two-inch by four-inch wood framing and 6-mil polyethylene sheeting.

Separate this room from the exterior by a single flap door of 6-mil polyethylene sheeting.

Load-Out Area: The load-out area is the transfer area from the building to a truck or dumpster. It may be the Clean Room of the Equipment Decontamination unit or a separate room or loading dock area. Erect Critical and Primary barriers as described in Section 2A.9 – Temporary Enclosures in load-out area.

During transfer of material from load-out area erect primary barriers as described in Section 2A.9 – Temporary Enclosures as necessary to seal path from load-out area to truck or dumpster.

Decontamination Sequence: Take all equipment or material from the Work Area through the Equipment Decontamination Unit according to the following procedure:

- At washdown station, thoroughly wet and clean contaminated equipment or sealed polyethylene bags and pass into Wash Room.
- When passing equipment or containers into the Wash Room, close all doorways of the Equipment Decontamination Unit, other than the doorway between the Washdown Station and the Wash Room. Keep all outside personnel clear of the Equipment Decontamination Unit.
- Once inside the washroom, wet clean the bags and/or equipment.
- When cleaning is complete pass items into Holding Room. Close all doorways except the doorway between the Holding room and the Clean Room.
- Workers from the building exterior enter Holding Area and remove decontaminated equipment and/or containers for disposal.
- Require these workers to wear full protective clothing and appropriate respiratory protection.
- At no time is a worker from an uncontaminated area to enter the enclosure when a removal worker is inside.

CONSTRUCTION OF THE DECONTAMINATION UNITS:

Walls and Ceiling: Construct airtight walls and ceiling using 6-mil polyethylene sheeting, in thickness. Attach to existing building components or a temporary framework.

Floors: Use 2 layers (minimum) of 6-mil polyethylene sheeting to cover floors in all areas of the Decontamination Units. Use only clear plastic to cover floors.

Flap Doors: Fabricated from three (3) overlapping sheets with openings a minimum of three feet (3') wide. Configure so that sheeting overlaps adjacent surfaces. Weigh sheets at bottoms as required so

that they quickly close after being released. Put arrows on sheets to indicate direction of overlap and/or travel. Provide a minimum of six feet (6') between entrance and exit of any room. Provide a minimum of three feet (3') between doors to airlocks.

If the Decontamination area is located within an area containing friable asbestos on overhead ceilings, ducts, piping, etc., provide the area with a minimum 1/4 inch hardboard or 1/2 inch plywood "ceiling" with polyethylene sheeting, 6 mil in thickness covering the top of the "ceiling."

Alternate methods of providing Decontamination facilities may be submitted to the Consultant for approval. Do not proceed with any such method(s) without written authorization of the Consultant.

Electrical: Provide subpanel at Changing Room to accommodate all removal equipment. Supply power to subpanel directly from the Contractor's temporary electrical power. Connect all electrical branch circuits in Decontamination unit and particularly any pumps in shower room to a ground-fault circuit protection device.

CLEANING OF DECONTAMINATION UNITS:

Clean debris and residue from inside the Decontamination Units on a daily basis or as otherwise indicated by consultant. Damp wipe or hose down all surfaces after each shift change. Clean debris from shower pans on a daily basis.

If the Changing Room of the Personnel Decontamination Unit becomes contaminated with asbestos-containing debris, abandon the entire Decontamination Unit and erect a new Decontamination Unit. Use the former Changing Room as an inner section of the new Equipment Room.

SIGNS:

Post an approximately 20 inch by 14 inch manufactured caution sign at each entrance to the Work Area displaying the following legend with letter sizes and styles of a visibility required by 29 CFR 1926:

DANGER

ASBESTOS

CANCER AND LUNG DISEASE HAZARD
RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED
IN THIS AREA

Provide spacing between respective lines at least equal to the height of the respective upper line. Post an approximately 10 -inch by 14-inch manufactured sign at each entrance to each Work Area displaying the following legend with 3/4" size block style lettering as follows:

NO FOOD, BEVERAGES OR TOBACCO PERMITTED

ALL PERSONS SHALL DON PROTECTIVE CLOTHING
(COVERINGS) BEFORE ENTERING THE WORK AREA

ALL PERSONS SHALL SHOWER IMMEDIATELY
AFTER LEAVING WORK AREA AND BEFORE
ENTERING THE CHANGING AREA

END OF SECTION 2A.12

2A.13 - MATERIALS AND EQUIPMENT - ASBESTOS ABATEMENT

PART 1 - GENERAL

RELATE DOCUMENTS

General provisions of Contract, including General and Supplementary Conditions and other Division-1 Specifications Sections, apply to this Section.

SUMMARY

This Section specifies administrative and procedural requirements governing the Contractor's selection of products for use in the project.

The Contractor's Abatement Schedule is included under Section 2A.5 – Submittals.

Standards: Refer to Section 2A.3 – Definitions and Standards for applicability of industry standards to products specified.

DEFINITIONS

Definitions used in this Section are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well recognized meanings in the construction industry.

"Products" are items purchased for use in performing the work or for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material", "equipment," "system," and terms of similar intent.

"Named Products" are items identified by manufacturer's product name, including make or model designation, indicated in the manufacturers published product literature, that is current as of the date of the Contract Documents.

"Materials" are products that are substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.

"Equipment" are products that may be either operational or fixed.

“Operations Equipment” are products with operating parts, whether motorized or manually operated, that require temporary or permanent service connections, such a wiring or piping.

“Fixed Equipment” are products necessary for accomplishing the work that are used as a temporary facility during the work and removed afterward.

SUBMITTALS

Required submittals: A general listing of Products requiring submittals is included at the end of Section 2A.5 – Submittals. This listing may not be complete. Submittal requirements are found in each specification section. Prepare a schedule in tabular form showing each Product listed. Include the manufacturer's name and proprietary product names for each item listed.

Owner or Owner's Rep's Action: The Owner or Owner's Rep will respond in writing to the Contractor within five days of receipt of the completed Product list schedule. The Owner or Owner's Rep's response will include a list of unacceptable Product selections, containing a brief explanation for this action

QUALITY ASSURANCE

Compatibility of Options: When the Contractor is given the option of selection between two or more Products for use on the project, the Product selected shall be compatible with Products previously selected, even if previously selected Products were also options.

PRODUCT DELIVERY, STORAGE, AND HANDLING

Deliver, store and handle Products in accordance with the manufacturer's recommendations, using means and methods that will prevent damage, deterioration and loss, including theft.

Schedule deliveries to minimize long-term storage at the site and overcrowding of construction spaces.

Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.

Deliver Products to the site in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protection and installing.

Inspect Products upon delivery to ensure compliance with the Contractor Documents, and to ensure that Products are undamaged and properly protected.

Store Products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.

Store heavy materials away from the project structure in a manner that will not endanger the supporting construction.

Store Products subject to damage by the elements above ground, under cover in a weather-tight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

PART 2 - PRODUCTS

PRODUCT SELECTION

General Product Requirements:

Provide Products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, unused at the time of installation.

Provide Products complete with all accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for the intended use and effect.

Where available, provide standard Products of types that have been produced and used successfully in similar situations on other projects.

Product Selection Procedures: Product selection is governed by the Contract Documents and governing regulations, not by previous project experience. Procedures governing Product selection include the following:

- Proprietary Specification Requirements: Where only a single Product or manufacturer is named, provide the Product indicated. No substitutions will be permitted.
- Semi-proprietary Specification Requirements: Where two or more Products or manufacturers are named, provide one of the Products indicated. No substitutions will be permitted.
- Non-Proprietary Specifications: When the Specifications list Products or manufacturers that are available and may be incorporated in the Work, but do not restrict the Contractor to use of these Products only, the Contractor may propose any available Product that complies with Contract requirements. Comply with Contract Document provisions concerning "substitutions: to obtain approval for use of an unnamed Product.
- Descriptive Specification Requirements: Where Specifications describe a Product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a Product or assembly that provides the characteristics and otherwise complies with Contract requirement.

Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide Products that comply with these requirements, and are recommended by the manufacturer for the application indicated. General overall performance of a Product is implied where the Product is specified for a specific application.

Manufacturer's recommendations may be contained in published Product literature, or by the manufacturer's certification of performance.

Compliance with Standards, Codes and Regulations: Where the Specifications only require compliance with an imposed code, standard or regulation, select a Product that complies with the stands, codes or regulations specified.

Allowances: Refer to individual Specification Sections and "Allowance" provisions in Division-1 for allowances that control Product selection, and for procedures required for processing such selections.

PART 3 - EXECUTION

INSTALLATION OF PRODUCTS

Comply with manufacturer's instructions and recommendation for installation of Products in the applications indicated.

END OF SECTION 2A.13

2A.14 - PROJECT CLOSEOUT

PART 1 - GENERAL

RELATED DOCUMENTS:

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

SUMMARY

This Section specifies administrative and procedural requirements for project closeout, including but not limited to:

- Inspection procedures.
- Project record document submittal.
- Submittal of warranties.
- Final cleaning.

The requirements of this section apply to closeout of each phase.

SUBMITTAL COMPLETION:

Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.

In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the work claimed as substantially complete. Include supporting documents for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.

- If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the work is not complete.
- Advise Owner of pending insurance change over requirements.
- Submit specific warranties, workmanship, bonds, final certifications and similar documents.
- Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities; include occupancy permits, operating certificates and similar releases, if applicable.
- Submit record drawings, damage survey, and similar final record information.
- Complete start up testing of systems. Discontinue or change over and remove temporary facilities from the site, along with construction tools, and similar elements.

Inspection Procedures: On receipt of a request for inspection, the Owner or Owner's Rep will either proceed with inspection or advise the Contractor of unfilled requirements. The Owner or Owner's Rep will prepare the Certificate of Substantial Completion following inspection, or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.

The Owner or Owner's Rep will repeat inspection when requested and assured that the work has been substantially completed.

Results of the completed inspection will form the basis of requirements for final acceptance.

FINAL ACCEPTANCE:

Preliminary Procedures: Before requesting final inspection for Certification of Final Acceptance and Final Payment, complete the following. List exceptions in the request.

- Submit the Final Payment Request with releases and supporting documentation not previously submitted and accepted. Include Certificates of Insurance for Products and completed operations where required.
- Submit an updated final statement, accounting for final additional changes to the Contract Sum.
- Submit a certified copy of the Owner or Owner's Rep's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance and the list has been endorsed and dated by the Owner or Owner's Rep.
- Submit final electrical meter readings in each townhouse building.
- Submit consent of surety to Final Payment.
- Submit evidence of final, continuing insurance coverage complying with insurance requirements.

Re-inspection Procedure: The Owner or Owner's Rep will re-inspect the work upon receipt of notice that the work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Owner or Owner's Rep.

Upon completion of re-inspection, the Owner or Owner's Rep will prepare a Certificate of Final Acceptance or advise the Contractor of work that is incomplete or, of obligations that have not been fulfilled but are required for Final Acceptance.

If necessary, re-inspection will be repeated.

RECORD DOCUMENT SUBMITTALS:

General: Do not use record documents for abatement purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Owner or Owner's Rep's reference during normal working hours.

Record Specifications: Maintain one complete copy of the Project Manual, including addenda, and one copy of other written abatement documents such as Change Orders and modifications issued in printed form during abatement. Mark these documents to show substantial variations in actual work performed in comparison with the text of the Specifications and modifications. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation. Note related record drawing information and Product Data.

Upon completion of the work, submit Record Specifications to the Owner or Owner's Rep for the Owner's records.

Record Product Data: Maintain one copy of each Product Data submittal. Mark these documents to show significant variations in the actual work performed in comparison with information submitted. Include variations in Products delivered to the site, and from the manufacturer's installation instructions and recommendations. Give particular attention to concealed Products and portions of the work which cannot otherwise be readily discerned later by direct observation. Note related Change Orders and mark up of record Drawings and Specifications.

Upon completion of mark up, submit complete set of record Product Data to the Owner or Owner's Rep for the Owner's records.

Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record keeping and submittal requirements in connection with actual performance of the work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Owner or Owner's Rep for the Owner's records.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION:

FINAL CLEANING:

General: General cleaning during abatement is required by the General Conditions and included in Section 2A.7 – Temporary Facilities.

Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.

Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.

- Remove labels that are not permanent labels.
- Clean transparent materials, including mirrors and glass in doors and windows. Replace chipped or broken glass and other damaged transparent materials.
- Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Restore reflective surfaces to their original reflective condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.
- Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
- Clean the site, including landscape areas, of rubbish, litter and foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.

Removal of Protection: Remove temporary protection and facilities installed for protection of the work during abatement.

Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.

Where extra materials of value remaining after completion of associated Work have become the Owner's property, arrange for disposition of these materials as directed.

END OF SECTION 2A.14

2A.15 - PROJECT DECONTAMINATION

PART 1 - GENERAL

RELATED DOCUMENTS:

General provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to work of this section.

DESCRIPTION OF REQUIREMENTS:

General: Decontamination of the Work Area following asbestos abatement.

- If the asbestos abatement work is on damaged or friable materials the work is a three step procedure with cleaning of the Secondary, Primary, and Critical Barrier plastic prior to their removal. Unless specifically indicated otherwise, all materials are considered damaged or friable for purposes of this section.
- In all cases, operation of the pressure differential system is used to remove airborne fibers generated by the abatement work.

Related Work Specified Elsewhere: Removal of Gross Debris is integral with the performance of abatement work and as such is specified in Section 2B.1 - Removal of Asbestos-Containing Materials of these specifications.

Work Area Clearance: Air testing and other requirements which must be met before release of Contractor and re-occupancy of the work area are specified in Section 2A.17 - Work Area Clearance of these specifications.

PART 2 - PRODUCTS (Not Applicable)

PART 3 – EXECUTION

GENERAL:

Work of this Section includes the decontamination of air in the Work Area which has been, or may have been, contaminated by the elevated airborne asbestos fiber levels generated during abatement activities, or which may previously have had elevated fiber levels due to friable asbestos-containing materials in the space.

Work of this Section includes the cleaning, decontamination, and removal of temporary facilities installed prior to abatement work, including:

- Secondary, Primary and Critical Barriers erected by work of Section 2A.9 – Temporary Enclosures.
- Decontamination Unit erected by work of Section 2A.12.
- Pressure Differential System installed by work of Section 2A.8.

Work of this Section includes the cleaning, and decontamination of all surfaces (ceiling, walls, floor) of the Work Area, and all furniture or equipment in the Work Area.

START OF WORK:

Previous Work: During completion of the asbestos abatement work specified in other sections, any gross debris generated by the asbestos abatement work will have been removed and disposed of.

Start of Work: Work of this section begins with the cleaning of the Secondary Barrier. At start of work the following will be in place:

- Secondary Barrier and Primary Barrier: Two layers of polyethylene sheeting on floors and walls.
- Critical Barrier: An airtight barrier between the Work Area and other portions of the building or the outside.
- Critical Barrier Sheeting: Over lighting fixtures and clocks, ventilation openings, doorways, connectors, speakers and other openings. Decontamination Units: For personnel and equipment in operating condition.
- Pressure Differential System: In operation.

FIRST CLEANING:

Carry out a first cleaning of all surfaces of the Work Area including items of remaining sheeting, tools, scaffolding and/or staging by use of damp-cleaning and mopping, and/or a High-Efficiency Particulate Air (HEPA) filtered vacuum. (Note: A HEPA vacuum may fail if used with wet material.) Do not perform dry dusting or dry sweeping. Use each surface of a cleaning cloth one time only and then dispose of as contaminated waste. Continue this cleaning until there is no visible debris from removed materials or residue on plastic sheeting or other surfaces. Remove Secondary Barrier of polyethylene sheeting and properly dispose. Remove all filters in Air Handling System(s) and dispose of as asbestos containing waste in accordance with requirements of Section 2B.2 Disposal of Asbestos-Containing Waste Material.

Wait 96 Air Changes or 24 hours to allow HEPA-filtered fan units to clean air of airborne asbestos fibers. Use oscillating fans as necessary to assure circulation of air in all parts of Work Areas during this period. Maintain Pressure Differential System in operation for the entire 96 air change or 24-hour period.

SECOND CLEANING:

Carry out a cleaning of the primary barrier and all surfaces in the Work Area in the same manner as the first cleaning.

Encapsulation of Substrate: Perform encapsulation of substrate and lockdown of primary barrier at this time. Maintain Pressure Differential System in operation during encapsulation work. Perform work only after meeting the following requirements:

- Surfaces to be covered have met the requirements for a visual inspection in this section.

- Airborne fiber counts in the Work Area are at or below 0.01 fibers per cubic centimeter as measured by phase contrast microscopy.

Removal of Primary Barriers:

Immediately following the cleaning of the Primary plastic, remove all Primary Barrier sheeting and Material Decontamination Unit, if there is one, leaving only:

- Critical Barrier: Which forms the sole barrier between the Work Area and other portions of the building or the outside.
- Critical Barrier Sheeting: Covers over lighting fixtures and clocks, ventilation openings, doorways, convectors, speakers, and other openings.

Decontamination Unit: For personnel, in operating condition.

Pressure Differential System: Maintain in continuous operation.

Wait 96 Air Changes or 24 hours to allow HEPA-filtered fan units to clean air of airborne asbestos fibers. Use oscillating fans as necessary to assure circulation of air in all parts of work areas during this period. Maintain Pressure Differential System in operation for the entire 96 Air Change or 24-hour period.

THIRD CLEANING:

Carry out a third cleaning of all surfaces in the work area in the same manner as the first cleaning. The Third Cleaning shall include existing room surfaces. Take care to avoid leaving water marks or other damage to surfaces.

Contractor's Testing: At the completion of the Third Cleaning, visually inspect all surfaces. Re-clean if any dust, debris, etc. is found. At completion of this inspection, sweep entire Work Area including walls, ceilings, ledges, floors and other surfaces in the Work Area with exhaust from forced-air equipment (leaf blower with approximately 1 horsepower electric motor or equivalent). Do not direct forced-air equipment at any seal in any Critical Barrier. If any debris or dust is found repeat the cleaning. Continue this process until no debris dust or other material is found while sweeping of all surfaces with forced-air equipment.

Wait 96 Air Changes or 24 hours to allow HEPA-filtered fan units to clean air of airborne asbestos fibers. Use oscillating fans as necessary to assure circulation of air in all parts of work areas during this period. Maintain pressure differential system in operation for the entire 96 Air Changes or 24-hour period.

VISUAL INSPECTION:

96 Air Changes or 24 Hours after Third Cleaning, perform a complete Visual Inspection of the entire Work Area including all surfaces, ceiling, walls, floor, decontamination unit, all plastic sheeting, seals over ventilation openings, doorways, windows, and other openings; look for debris from any sources, residue on surfaces, dust or other matter. During visual inspection sweep entire work area including

walls, ceilings, ledges, floors, and other surfaces in the room with exhaust from forced air equipment (leaf blower with approximately 1 horsepower electric motor or equivalent). If any debris, residue, dust or other matter is found repeat Third Cleaning and continue decontamination procedure from that point. When the area is visually clean, and if after sweeping of all surfaces with leaf blower, no debris, residue, dust or other material is found, complete the certification at the end of this section. Visual inspection is not complete until confirmed in writing, on the certification, by Owner or Owner's Rep.

Temporary Lighting: Provide a minimum of 50 foot candles of lighting on all surfaces in the areas to be subjected to visual inspection. Provide hand held lights providing 150 foot candles at 4 feet capable of reaching all locations in work area.

Lifts: Provide ladders, scaffolding, and lifts as required to provide access to all surfaces in the area to be subjected to visual inspection. Access is to allow touching of all surfaces.

FINAL AIR SAMPLING:

After the work area is found to be visually clean, air samples will be collect by the Owner or Owner's Rep and analyzed in accordance with the procedure for Phase Contrast Microscopy (PCM) set forth in Section 2A.17 – Work Area Clearance:

- If Release Criteria are not met, repeat cleaning and continue Decontamination Procedure from that point.
- If Release Criteria are met, proceed to work of this Section on Removal of Work Area Isolation.

REMOVAL OF WORK AREA ISOLATION:

After all requirements of this section and Section 2A.17 – Work Area Clearance have been met:

- Shut down and remove the Pressure Differential System. Seal HEPA-filtered fan units, HEPA vacuums and similar equipment with 6-mil polyethylene sheet and duct tape to form a tight seal at intake end before being moved from Work Area.
- Remove Personnel Decontamination Unit.
- Remove the Critical Barriers separating the Work Area from the rest of the building. Remove any small quantities of residual material found upon removal of the plastic sheeting with wet wiping, HEPA-filtered vacuum cleaners and local area protection. If significant quantities, as determined by the Owner or Owner's Rep, are found then the entire area affected shall be decontaminated as specified in Section 2A.16 - Initial Cleaning and Decontamination Procedures.
- Remove all equipment, materials, debris from the work site.
- Dispose of all asbestos-containing waste material as specified in Section 2B.2 – Disposal of Asbestos Containing Waste Material.

CERTIFICATE OF VISUAL INSPECTION:

Following this section is a "Certificate of Visual Inspection." This certification is to be completed by the Contractor and signed by the Contractor Supervisor directly responsible for the work. Submit completed Certificate with Application for Final Payment. Final payment will not be made until this Certification is executed.

SUBSTANTIAL COMPLETION OF ABATEMENT WORK:

Asbestos Abatement Work is Substantially Complete upon meeting the requirements of this section and Section 2A.17 - Work Area Clearance, including submission of:

- Certificate of Visual Inspection.
- Receipts documenting proper disposal as required by 2B.2 – Disposal of Asbestos-Containing Waste Material.
- Punch list detailing repairs to be made and incomplete items.

CERTIFICATION OF VISUAL INSPECTION

In accordance with Section 2A.15 – Project Decontamination of the Technical Specifications, the Contractor hereby certifies that he has visually inspected the Work Area (all surfaces including pipes, beams, ledges, walls, ceiling and floor, Decontamination Unit, sheet plastic, etc.) and has found no dust, debris, or residue.

By: _____
(Signature)

(Date)

(Print Name)

(Print Title)

END OF SECTION 2A.15

2A.16 - INITIAL CLEANING AND DECONTAMINATION PROCEDURES

PART 1 - GENERAL:

RELATED DOCUMENTS:

General provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to work of this section.

DESCRIPTION OF THE WORK:

Initial cleaning and decontamination are required for the building spaces and furnishings, including tables, desks, chairs, and fixtures, at the locations of removal.

RELATED WORK SPECIFIED ELSEWHERE:

Work Area Clearance: Specified in Section 2A.17 – Work Area Clearance.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION:

GENERAL:

Complete the following before start of work of this section:

- 01526 - Temporary Enclosures - establish critical barriers
- 01562 - Respiratory Protection
- 01563 - Decontamination Units

PRE-CLEANING OF SURFACES:

Except for dirt floors, pre-cleaning shall be conducted prior to the commencement of any abatement. After establishing critical barriers and the decontamination facility, HEPA-vacuum or wet clan all floors and other surfaces.

WET CLEANING:

Accomplish wet cleaning during decontamination with paper towels or disposable rags:

- Immerse paper towel or rag in container of water with surfactant, or diluted removal encapsulant, wring out, and fold into quarters,
- Wipe surface once and refold to a fresh face of cloth. Proceed in this manner until all available faces of paper towel or rag have been used.
- Dispose of paper towel or rag.
- Do not place rag back in container to rinse out or for any other purpose. If a used towel or rag comes in contact with water, empty container and refill.

REMOVAL OF ASBESTOS-CONTAINING DEBRIS:

Work of this document is limited to the cleanup of a small quantity of amassed debris that has fallen from an architectural finish, fire proofing, or thermal insulation on pipes, boilers, and other thermal equipment.

Remove asbestos-containing debris and decontaminate the area involved using the following sequence:

- Shut down all ventilation into room.
- Seal entry to work area with 6-mil polyethylene. Slit polyethylene for entry. Install a flap to cover the slit automatically; tape slit closed after entry.
- Start HEPA vacuum before entering the area.
- Use the HEPA vacuum to clean a path at least 6 feet wide from the entry point of the work area to the site of the fallen material.
- Remove all small debris with the HEPA vacuum.
- HEPA vacuum surfaces of all pieces too large to be removed by the suction of the HEPA vacuum.
- Pick up such pieces and place in the bottom of a 6-mil polyethylene disposal bag conforming to the requirements of Section 2B.2 - Disposal of Asbestos-Containing Waste Material. Place pieces in the bag without dropping, and avoiding unnecessary disturbance and release of material.
- Remove all remaining visible debris with HEPA vacuum.
- HEPA vacuum an area three feet beyond the location in which any visible debris was found in two directions each at right angles to the other.
- Place a 6-mil polyethylene drop cloth immediately on top of the HEPA vacuumed area before performing any repair work on site from which fall-out occurred.
- HEPA vacuum the site from which material fell removing all loose material that can be removed by the vacuum.
- Repair or remove remaining material.
- HEPA vacuum ladder and/or any tools used and pass out of the work area.

- HEPA vacuum all surfaces in the room starting at the top of wall and working downward to the floor. Then start at corner of floor farthest from Work Area entrance and work toward entrance.
- HEPA vacuum the floor using a floor attachment with rubber floor seals and adjustable floor to attachment height. Adjust the height so that the rubber seals just touch the floor if carpeted and are within 1/16" of hard surface floors. Vacuum the floor in parallel passes with each pass overlapping the previous by one-half the width of the floor attachment. At the completion of one cleaning vacuum the floor a second time at right angles to the first.
- Secure area from occupancy until air monitoring results per Section 2A.15 - Project Decontamination indicate that area is safe for re-occupancy.

CLEANING AND DECONTAMINATING OBJECTS:

Perform all work of decontaminating objects wherever possible on a plastic drop sheet.

- HEPA vacuum all surfaces of object and immediate area before moving the object.
- Pick-up object, if possible, and HEPA vacuum all surfaces.
- Hand to off-sheet worker who will wet-clean object, if possible, and place outside of the decontamination enclosure, for removal by Owner to storage location.
- Decontaminate area where object was located by HEPA vacuuming twice, in two perpendicular directions. Wet clean if necessary to remove any debris.
- Place object in designated storage area.

DECONTAMINATION OF ROOMS:

- Shut down all ventilation into space.
- Seal entry to Work Area with 6-mil polyethylene. Slit polyethylene for entry. Install a flap to cover the slit automatically; tape slit closed after entry.
- Install Differential Pressure System in accordance with Section 2A.8 - Temporary Pressure Differential and Air Circulation System.
- Recirculate HEPA-filtered fan units in space by operating them so that discharge from machine is back into room. Use one HEPA-filtered fan unit for each 2,500 cubic feet of room volume.
- HEPA vacuum all surfaces in the room starting at the ceiling, then top of wall and working downward to the floor.
- HEPA vacuum the floor using a floor attachment with rubber floor seals and adjustable floor to attachment height. Adjust the height so that the rubber seals just touch the floor if carpeted and are within 1/16" of hard surface floors. Vacuum the floor in parallel passes with each pass overlapping the previous by one half the width of the floor attachment. At the completion of one cleaning, vacuum the floor a second time at right angles to the first.
- Operate HEPA-filtered fan unit in space for 24 hours minimum.
- At completion of Decontamination Work, workers decontaminate in accordance with Section 2A.10 - Worker Protection - Asbestos Abatement.
- Secure area from occupancy until air monitoring results per Section 2A.17 - Work Area Clearance indicate area is safe for re-occupancy.

END OF SECTION 2A.16

2A.17 - WORK AREA CLEARANCE

PART 1 - GENERAL

RELATED DOCUMENTS:

General provision of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to work of this section.

- Visual Inspection: Required as a prerequisite of air testing, is set forth in Section 2A.15 Project Decontamination.
- Air Monitoring: Performed by the Owner during abatement work, is described in Section 2A.6 – Air Monitoring Test Laboratory Services.

SUMMARY:

This Section sets forth required post-abatement airborne asbestos concentrations in the Work Area and describes testing procedures used to measure these levels performed by the Owner or Owner's Rep.

The Owner will only pay for the analysis of one set of Work Area clearance samples per clearance area. Additional air samples that are required due to failure of the initial samples to meet clearance criteria will be paid for by the Contractor. The Contractor shall use an Owner approved testing lab to test air samples.

CONTRACTOR RELEASE CRITERIA:

The Asbestos Abatement Work Area is Cleared when the Work Area is visually clean and airborne asbestos structure concentrations have been reduced to the level specified herein.

VISUAL INSPECTION:

Work of this section will not begin until the visual inspection described in Section 2A.15 - Project Decontamination is complete and has been signed by the Owner or Owner's Rep.

AIR MONITORING:

To determine if the elevated airborne asbestos structure concentration encountered during abatement operations has been reduced to the specified level, the Owner will secure samples and analyze them by Phased-Contrast Microscopy (PCM) according to the following procedures.

- Aggressive sampling procedures as described herein will be followed.
- Work Area Clearance: upon meeting the Clearance requirements, the work of Section 2A.15 - Project Decontamination, can continue.

Aggressive Sampling Procedure (Full Containment):

All Air Samples will be taken using aggressive sampling techniques as follows:

- Before sampling pumps are started, the exhaust from forced-air equipment (leaf blower with an approximately 1-horsepower electric motor) will be swept against all walls, ceilings, floors, ledges, and other surfaces in the room. This procedure will be continued for 5 minutes per 10,000 cubic feet of room volume.
- One 20-inch diameter fan per 10,000 cubic feet of room volume will be mounted in a central location at approximately 2 meters above floor, directed toward ceiling and operated at low speed for the entire period of sample collection.
- Air samples will be collected in areas subject to normal air circulation away from room corners, obstructed locations, and sites near windows, doors or vents.
- After air sampling pumps have been shut off, fans will be shut off.

In-Progress Clearance Testing

In-Progress Clearance Testing will be conducted for glovebag removal areas, and removal of caulking, floor tile and mastic and Transite.

SCHEDULE OF AIR SAMPLES:

The number and volume of air samples taken and analytical methods used by the Owner will be in accordance with the following schedule. Sample volumes given may vary depending upon the analytical instruments used.

In each homogeneous Work Area, after completion of all cleaning work, a minimum of 7 samples will be collected and analyzed as follows:

- Samples will be collected on 25-mm, 50-mm-extension cowling cassettes with the following filter media:

PCM: 0.8 um mixed cellulose ester in a cassette with a 50-mm conductive extension cowl.					
Location Sampled	Number of Samples	Analysis Method	Detection Limit (Fibers/cc)	Minimum Volume (Liters)	Rate (Liters/min.)
Each Work Area (>1,000 ft ³)	5	PCM	0.01	1,200	1-10
Each Work Area (<1,000 ft ³)	2	PCM	0.01	1,200	1-10
In-Progress	2	PCM	0.01	1,200	1-10

Release Criteria: Decontamination of the work site is complete when every Work Area sample is at or below the Detection Limit above. If any sample is above the Detection Limit then the decontamination is incomplete and re-cleaning per Section 2A.15 - Project Decontamination, is required.

LABORATORY TESTING:

Phase-Contrast Microscopy (PCM): The services of a testing laboratory will be employed by the Owner to perform laboratory analysis of the air samples. A technician will be at the job site, and samples will be sent daily by overnight delivery, so that verbal reports on air samples can be obtained within 24 hours. A complete record, certified by the testing laboratory, of all air monitoring tests and results will be furnished to the Owner or Owner's Rep and the Contractor.

The Owner shall employ the Owner or Owner's Rep to perform one set of clearance sample collection and analysis per enclosure based on the Contractors visual certification and Certification that the work is complete. Should additional clearance testing be required due to failure to meet the clearance criteria established, the Contractor will be responsible for all direct and incidental costs of labor, material, and analysis associated with additional testing.

END OF SECTION 2A.17

B. SITE WORK

2B.1 - REMOVAL OF ASBESTOS - CONTAINING MATERIALS

PART 1 - GENERAL

RELATED DOCUMENTS:

General provisions of Contract, including General and Supplementary Conditions and Division - 1 Specification Sections, apply to work of this section.

RELATED WORK SPECIFIED ELSEWHERE:

Installation of Critical and Primary Barriers, and Work Area Isolation Procedures are set forth in Section 2A.9 – Temporary Enclosures.

Project Decontamination procedures are specified in Section 2A.15 – Project Decontamination.

Disposal of asbestos-containing waste is specified in Section 2B.2 – Disposal of Asbestos-Containing Waste Material.

SUBMITTALS

Before Start of Work: Submit the following to the Owner or Owner's Rep for review. Do not start work until these submittals are returned with Owner or Owner's Rep's action stamp indicating that the submittal is returned for unrestricted use.

Surfactant: Submit Product data to Owner or Owner's Rep prior to use. Follow manufacturer's instructions and recommendations for use. Include data substantiating that Product complies with requirements.

Removal Encapsulant: Submit Product data to Owner or Owner's Rep prior to use. Follow manufacturer's instructions and recommendations for use. Include data substantiating that Product complies with requirements..

NESHAP Certification: Submit certification from manufacturer of surfactant or removal encapsulant that, to the extent required by this specification, the material, if used in accordance with manufacturer's instructions, will wet ACM to which it is applied as required by the NESHAP Asbestos Regulations (40 CFR 61, Subpart M).

Material Safety Data Sheet: Submit the Material Safety Data Sheet, or equivalent, in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) for each surfactant, encapsulating material, and solvent proposed for use on the work. Include a separate attachment for each sheet indicating the specific worker protective equipment proposed for use with the material indicated.

PART 2 - PRODUCTS:

Wetting Materials: For a wetting prior to disturbance of ACM, use either amended water or a removal encapsulant:

Amended Water: Provide water to which a surfactant has been added. Use a mixture of surfactant and water that results in wetting of the ACM and retardation of fiber release during disturbance of the material equal to or greater than that provided by the use of one ounce of a surfactant consisting of 50% polyoxyethylene ester and 50% polyoxyethylene ether mixed with five gallons of water.

Removal Encapsulant: Provide a penetrating-type encapsulant designed specifically for removal of asbestos-containing material. Use a material which results in wetting of the asbestos-containing material and retardation of fiber release during disturbance of the material equal to or greater than that provided by water amended with a surfactant consisting of one ounce of a mixture of 50% polyoxyethylene ester and 50% polyoxyethylene ether in five gallons of water.

Polyethylene Sheet: Provide a single polyethylene film in the largest sheet size possible to minimize seams, 6 mil thick, clear, frosted, or black.

Duct Tape: Provide duct tape in 2" or 3" widths with an adhesive that is formulated to stick aggressively to sheet polyethylene.

Spray Cement: Provide spray adhesive in aerosol cans that is specifically formulated to stick tenaciously to sheet polyethylene.

Disposal Bags: Provide 6-mil-thick, leak-tight, polyethylene bags labeled as required by Section 2B.2 – Disposal of Asbestos-Containing Waste Material.

Fiberboard Drums: Provide heavy-duty, leak-tight, fiberboard drums with tight-sealing, locking, metal tops.

Felt: Standard felt approximately 1/16" thick and 36" to 72" wide.

PART 3 - EXECUTION

Worker Protection: Before beginning work with any material for which a Safety Data Sheet has been submitted, provide workers with the required protective equipment. Require that appropriate protective equipment be used at all times.

Full Containment/Gross Removal Methods:

Full containment procedures shall be followed for removal of any friable ACM materials in accordance with the following Work-Area Preparation and Wet Removal Method Procedures. For removal of ACM TSI piping using a glovebag, the Contractor will follow the Glovebag Removal Method in this Section.

Work-Area Preparation:

- Post caution signs meeting the specifications of OSHA 29 CFR 1910.1001 (g) (1) (ii) at any location and approaches to a location where airborne concentrations of asbestos may exceed ambient background levels. Signs shall be posted to permit a person to read the sign and take the necessary protective measures to avoid exposure before entering the work area. Additional signs may need to be posted following construction of work-place enclosure barriers.
- Shut down and lock out electric power to all work areas. Provide temporary power and lighting and ensure safe installation of temporary power sources and equipment in accordance with the National Electrical Code (see Section 855.10 (c) (6)). All power to work areas shall be brought in from outside the area through ground-fault circuit interrupters at the source.
- Shut down and isolate heating, cooling and ventilating air systems to prevent contamination and fiber dispersal to other areas of the structure.
- Pre-clean movable objects within the proposed work areas using HEPA filtered vacuum equipment and/or wet cleaning methods as appropriate and remove such objects from work areas to a temporary location.
- Pre-clean fixed objects and specific equipment items which will remain within the proposed work area, using HEPA filtered vacuum equipment or wet cleaning methods as appropriate and enclose with plastic sheeting sealed with tape.
- Clean the proposed work areas using HEPA filtered vacuum equipment and/or wet cleaning methods as appropriate. Methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters, shall be prohibited. Asbestos-containing materials shall not be disturbed during the pre-cleaning phase.
- Seal off all openings, including but not limited to windows, corridors, doorways, skylights, ducts, grills, diffuses and any other penetrations of the work areas with plastic sheeting sealed with tape. Also, seal all seams in system components that pass through the work area. Doorways and corridors which will not be used during work must be sealed with barriers.
- Cover floor and wall surfaces with plastic sheeting sealed with tape. Use a minimum of two layers of 6-mil plastic on floors and 4-mil on walls. Cover walls with plastic sheeting to the floor level, thus overlapping the floor material by a minimum of twelve inches. The plastic shall be sized to minimize seams. Seams shall be staggered and separated by a distance of at least six feet.
- Remove and clean ceiling-mounted objects as necessary.
- Maintain emergency and fire exits from the work areas or establish alternative exits.

Wet Removal Methods:

- Thoroughly wet, to satisfaction of Owner or Owner's Rep, ACM to be removed prior to stripping and/or tooling to reduce fiber dispersal into the air. Accomplish wetting by a fine spray (mist) of amended water or removal encapsulant. Saturate material sufficiently to wet to the substrate without damaging the substrate or causing excess dripping. Allow time for amended water or removal encapsulant to penetrate material thoroughly. If amended water is used, spray material repeatedly during the work process to maintain a continuously wet condition. If a removal encapsulant is used, apply in strict accordance with manufacturer's written instructions.

- Perforate outer covering of any installation that has been painted and/or jacketed in order to allow penetration of amended water or removal encapsulant or use injection equipment to wet material under the covering. Where necessary, carefully strip away while simultaneously spraying amended water or removal encapsulant on the installation to minimize dispersal of asbestos fibers into the air.
- Amended water must be applied as a mist to the ACM. Copious water application by a hose, bucket, or other means resulting in water run-off or excessive dripping is not permitted. Removal of ACM by high-pressure water hose, jetting, or flooding is not permitted for this work.
- Mist work area continuously with amended water whenever necessary to reduce airborne fiber levels.
- Remove saturated ACM in small sections from all areas. Do not allow material to dry out. As it is removed, simultaneously pack material while still wet into disposal bags. Evacuate air from disposal bags with a HEPA-filtered vacuum cleaner before sealing. Twist, bend over, and seal neck of bags with a minimum of three wraps of duct tape. Clean the outside of the bags and move the bags to Wash Down Station adjacent to Material Decontamination Unit.

Pipe and Pipe Fitting Insulation:

- Spray with a mist of amended water or removal encapsulant. Allow amended water or removal encapsulant to saturate material to substrate. If a removal encapsulant is used, use in strict accordance with manufacturer's instructions. Cut bands holding preformed insulation, slit jackets or covers at seams, remove and hand-place in a disposal bag.
- Remove job-molded fitting insulation in chunks and hand-place in a disposal bag. Do not drop to floor. Remove any residue on pipe or fittings with stiff bristle nylon hand brush. Vacuum surface area four inches deep or to hard pan stiff undisturbed soil.

Local Ventilation and Collection System:

Provide local ventilation and collection systems as described below for each area where asbestos is being removed or otherwise disturbed:

- Provide HEPA-filtered fan units, Temporary Pressure Differential and Air Circulation System, in the vicinity of the work. Arrange so that the units exhaust into the Work Area oriented in a direction away from the work. Extend a 12-inch-diameter flexible non-collapsing duct from the intake end to a point no more than 4' 0" from any scraping or wire brushing activity.
- Locate intake of duct so that air flow is horizontal and slightly downward into intake. Replace primary filters on HEPA-filtered fan units at an interval of no greater than 30 minutes. Allow no more than one scraping or wire brushing activity per fan unit.
- Attach a job-built 4' x 4' flared end piece on intake end of duct. Support end piece horizontally at a point 4' 0" below the work, so that airflow is downward into intake.

Floor Tile and Mastic:

Floor tile and mastic removal procedures shall be as follows:

- After pre-cleaning operations, critical barriers will be installed over necessary openings following procedure outlined in Section 2A.9 – Temporary Enclosures of this Specification.
- Floor tile shall be thoroughly wetted prior to removal and maintained in a wet condition by misting with amended water. Tile surfaces shall be kept wet until all tiles are removed.
- Remove floor tile in intact sections as much as possible. Floor tile shall be removed in a manner to prevent the material from becoming friable.

It is at the sole discretion of the Owner or Owner’s Rep to determine if the floor tile has been rendered friable during removal activities. If the determination that the floor tile has become friable is made, all abatement work will cease immediately, and the “Full Containment/ Gross Removal Methods” described in this section will be followed.

- Install splash guards against all interior walls where mastic will be removed.
- Remove adhesive mastic with appropriate solvents, or other means approved by the Owner's Representative. All visible residue of mastic shall be removed.

Floor tile mastic will be determined to be clean when a razor knife can be scraped across the substrate without any visible evidence of mastic on the blade. Petroleum staining and traces of mastic embedded in concrete pores will be allowed. Do not encapsulate floor substrate after removal of floor tile mastic or during cleaning of containment prior to clearance. Use a HEPA vacuum and wet wiping as required to clean the floor substrate. Solvents will be neutralized at the completion of abatement according to manufacturer's instructions. Any waste sludges or powders generated by the removal of mastics will be characterized as hazardous or nonhazardous - special waste according to guidelines established by the EPA. If the Contractor wishes to use chemical solvents, chemical removers, or any combination of chemical Products in the work area, the Contractor shall conduct and document all required OSHA compliance monitoring for not only asbestos, but for any chemical used or any other type of "air contaminant" as defined in 29 CFR 1910, generated during the abatement project. The Contractor shall also increase the number of air changes to six air changes/hour instead of the current four air changes/hour.

Glove Bag Removal Methods:

Glove bag removal procedures for asbestos pipe insulation material shall be as follows:

- After pre-cleaning operations, place a layer of 6-mil clean plastic on the floor directly under the material to be removed.
- Place negative air machine(s) inside the general work area where glove bag removal will be performed. The negative air machine does not need to be vented to the outside.
- Carefully install glove bag to completely cover the pipe. The glove bag is attached to the pipe by folding the open edges together and securely sealing them with tape. All openings of the glove bag must be sealed with duct tape or equivalent material. The bottom seam of the glove bag must also be sealed with duct tape to prevent any leakage from the bag that may result from a defect in the bottom seal. The pipe insulation diameter worked shall not exceed one half the bag working length above the attached gloves.
- The integrity of the glove bag seal shall be checked by performing a smoke test. Any signs of leakage will be taped airtight.
- Thoroughly wet the pipe with a wetting agent that is applied through the pre-cut port provided in the glove bag or apply through a small hole in the bag.

- Once the material is thoroughly wetted, remove the pipe insulation material. Avoid creating dust.
- After removal of the layer of pipe insulation, the pipe surface from which asbestos has been removed must be thoroughly cleaned with a wire brush and wet wiped using wetting agents until all visible material has been removed.
- Any asbestos containing insulation edges that have been exposed as a result of the removal or maintenance activity must be encapsulated with bridging encapsulant to ensure the edges do not release asbestos fibers. **Under no circumstances will the same glove be used for removal of subsequent sections of pipe insulation.**
- When the asbestos removal and encapsulation have been completed, a vacuum hose from a HEPA filtered vacuum shall be inserted into the glove bag through the part to remove any air in the bag that may contain asbestos fibers. When the air has been removed from the bag, the bag should be squeezed tightly (as close to the top as possible), twisted and sealed with tape, to keep the asbestos materials safely in the bottom of the bag. The HEPA vacuum can then be removed from the bag and the glove bag itself can be removed from the whole area and placed into a second labeled 6-mil polyethylene bag.
- The contractor shall provide a minimum of air purifying respirators with dual (HEPA) filters and in compliance with OSHA (29 CFR 1910.1101) and EPA (40 CFR 763, Subpart IV).
- Full personal protective equipment which includes approved disposable clothing, which covers the head, torso, arms, legs, and feet shall also be provided.

At locations where pipe fitting insulation is removed from pipe with straight runs insulated with fibrous glass or other non-asbestos containing fibrous material, remove fibrous materials.

The Owner or Owner's Rep shall collect two air samples in the work area and one air sample at the exhaust of the negative pressure ventilation equipment during the glove bag removal phase of the project. The contractor is responsible for all OSHA Compliance Sampling.

Window/ Door Caulking and Glazing Removal Methods:

Caulking and glazing shall be removed as a non-friable material in an intact state. Drop cloths and barrier tape will be used during intact removal activities. If caulking or glazing remains applied to the window once disassembled, the window will be wrapped with two layers of 6-mil polyethylene and labeled for disposal.

Transite Removal Methods:

Transite shall be removed with minimal breakage, wrapped with two layers of 6-mil polyethylene and labeled for disposal.

Fire Door Removal Methods:

Fire Doors shall be removed intact using component removal, wrapped with two layers of 6-mil polyethylene and labeled for disposal.

Special Conditions:

If circumstances occur that prohibit the use of wet removal methods to reduce fiber concentration, and, therefore, that require dry removal of ACM, the contractor must acquire special approval and variance from the appropriate regulatory agencies.

END OF SECTION 2B.1

2B.2 - DISPOSAL OF ASBESTOS - CONTAINING MATERIALS

PART 1 - GENERAL

RELATE DOCUMENTS:

General provisions of Contract, including General and Supplementary Conditions and Division-1 Specification Sections, apply to work of this section.

Section 2A.4 – Codes and Regulations - Asbestos Abatement describes applicable federal, state and local regulations.

DESCRIPTION OF THE WORK

This section describes the disposal of ACM. Disposal includes packaging of asbestos-containing waste materials. Disposal shall be accomplished by landfilling.

SUBMITTALS:

Before Start of Work: Submit the following to the Owner or Owner's Rep for review. Do not start work until these submittals are returned with Owner or Owner's Rep's action stamp indicating that the submittal is returned for unrestricted use.

- Copy of state or local license for waste hauler.
- Name and address of landfill where asbestos-containing waste materials are to be buried. Include contact person and telephone number.
- Chain-of-Custody form and form of waste manifest proposed.
- Sample of disposal bag and any added labels to be used.

On a weekly basis submit copies of all manifests and disposal site receipts to Owner or Owner's Rep.

PART 2 - PRODUCTS

Disposal Bags: Provide 6-mil-thick, leak-tight polyethylene bags labeled with three labels with text as follows:

First Label

**CAUTION
CONTAINS ASBESTOS FIBERS
AVOID OPENING OR BREAKING CONTAINER
BREATHING ASBESTOS IS HAZARDOUS TO YOUR HEALTH**

Second Label

Provide in accordance with 29 CFR 1910.1200(f) of OSHA's Hazard Communication standard:

**DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
BREATHING AIRBORNE ASBESTOS, TREMOLITE, ANTHOPHYLLITE, OR
ACTINOLITE FIBERS IS HAZARDOUS TO YOUR HEALTH**

Third Label

Provide in accordance with U.S. Department of Transportation regulation on hazardous waste marking. 49 CFR 171 and 172. Hazardous Substances: Final Rule, published November 21, 1986, and revised February 17, 1987:

**RQ (Asbestos)
CLASS 9
NA 2212
P.G. 111
CONSIGNEE OR CONSIGNOR
NAME AND ADDRESS**

Fourth Label

Provide Contractor and General information required by NESHAP.

PART 3 - EXECUTION

Comply with the following documents during all phases of this work:

- Section 2A.10 – Worker Protection - Asbestos Abatement
- Section 2A.11 – Respiratory Protection

GENERAL:

All waste is to be hauled by a waste hauler with all required licenses from all state and local authorities with jurisdiction.

Load all asbestos-containing waste material in disposal bags or leak-tight drums. All materials are to be contained in one of the following:

- Two 6-mil disposal bags, or
- Two 6-mil disposal bags and a fiberboard drum.

Protect interior of truck or dumpster with Critical and Primary Barriers as described in Section 2A.9 – Temporary Enclosures.

Carefully load containerized waste in fully enclosed dumpsters for transport. Exercise care before and during transport to insure that no unauthorized persons have access to the material.

Do not store containerized materials outside of the Work Area. Take containers from the Work Area directly to a sealed truck or dumpster.

Do not transport disposal bagged materials on open trucks.

Label drums with same warning labels as bags. Uncontaminated drums may be reused.

Treat drums that have been contaminated as asbestos-containing waste and dispose of in accordance with this specification.

Advise the landfill operator or processor, at least one day in advance of transport, of the quantity of material to be delivered.

At disposal site, carefully unload containerized waste from the truck.

Retain receipts from landfill or processor for materials disposed of.

Within 48 hours of hauling and documented disposal of each load, submit copy of waste manifest, chain-of-custody form, and landfill receipt to Owner or Owner's Rep.

Provide Owner with copies of landfill records as required by the USEPA documents EPA 34011-90-016, November 1990, "Reporting and Recordkeeping Requirements for Waste Disposal: A Field Guide."

END OF SECTION 2B.2

2C. HAZARDOUS MATERIALS

2C.1 - SUMMARY OF THE WORK – HAZARDOUS MATERIALS

PART 1 - GENERAL

RELATED DOCUMENTS:

General provisions of Contract, including General and Supplementary Conditions, and other Division-1 Specification Sections, apply to work of this section.

The Asbestos Inspection Report (Attachment B) provides a preliminary inventory of types and quantities of hazardous materials to be removed.

PROJECT/WORK IDENTIFICATION:

General:

All work shall be completed according to applicable local, state, and federal regulations.

WORK PLAN:

Contractor shall include plans for the removal, packaging, transportation, and disposal of hazardous materials as part of the work required in Section 2A.1. **The plan must be approved by the Owner or Owner's Rep prior to commencement of work.**

END OF SECTION 2C.1

2C.2 - PCB BALLAST AND FLUORESCENT LIGHT TUBE DISPOSAL

PART 1 – GENERAL

1.1 PCB LIGHT BALLAST IDENTIFICATION

- A. The contractor shall assume that light ballast manufactured prior to 1979 contains PCBs. The release of one pound of PCBs may be subject to liability under CERCLA.
- B. The contractor shall inspect each light fixture in the facility for labels identifying date of manufacture. If no date is available or “PCB Free” label is not found, ballasts shall be assumed to be PCB contaminated.
- C. Contractor is responsible for identifying the disposal facility to be approved by the Owner. A written disposal procedure will be submitted by the contractor describing the removal and disposal procedure. Packaging shall meet the requirement of the transporter, the receiving disposal facility and applicable regulations:

1.2 PCB CONTAINING FLUID IDENTIFICATION

- A. The contractor shall assume that electrical transformers contain PCBs until representative sampling can confirm otherwise. It is the responsibility of the contractor to perform analytical testing to quantify the PCB fluids. The release of one pound of PCBs may be subject to liability under CERCLA.
- B. It is the responsibility of the contractor to perform analytical testing to quantify the PCB fluids and any PCB-contaminated materials.
- C. Contractor is responsible for identifying the disposal facility to be approved by the Owner. A written disposal procedure will be submitted by the contractor describing the removal and disposal procedure. Packaging and labeling shall meet the requirement of the transporter, the receiving disposal facility and applicable regulations.

1.3 DRUM LABELING

- A. Hazardous Waste Labels shall be completed as follows:
 - 1. Fill in date packed under Accumulation Start Date.
 - 2. DOT Proper Shipping Polychlorinated biphenyls U.N or N.A. No.: UN2315.
 - 3. Generator Name and Address
- B. Affix the above label to the side of the drum.
- C. Also, affix a PCB label to the side of each drum.

1.4 FLUORESCENT LIGHT TUBE REMOVAL

- A. Fluorescent light tubes shall be removed without damage by the contractor and disposed of through a recycling facility identified by the contractor and approved by the Owner or Owner’s Rep. The contractor shall provide personnel with Personal Protective Equipment sufficient to prevent hazardous material exposure and injury.

- B. Fluorescent light tubes shall be assumed to contain mercury in excess of the TCLP limit of 0.2 mg/L. The hazardous waste code shall be designated as D009, pursuant to 40 CFR 261.24. The tubes shall be packaged and shipped according to the procedures identified by the transporter and receiving facility.

END OF SECTION 2C.2

2C.3 - RECLAMATION OF CFCS

PART 1 – GENERAL

1.1 RECLAMATION OF CFCS

- A. Removal of equipment and components containing chlorofluorocarbons (CFCs) shall be performed by contractors meeting the requirements of Title 6 Section 608 National Recycling and Emission Reduction Program if the 1990 Clean Air Act Amendments as indicated in 40 CFR Part 82 Subpart F.
- B. Technicians removing CFCs shall meet the certification requirements specified in 40 CFR 82.161.
- C. All equipment used in the reclamation of CFCs shall meet the required performance standards and schedule for equipment testing.
- D. The Contractor shall assure the Owner that all CFCs recovered will be properly processed and recycled. The Contractor will provide the Owner or Owner's Rep with certified documentation of amounts of CFCs accepted by the recycler.

END OF SECTION 2C.3

2C.4 - MERCURY-CONTAINING EQUIPMENT

PART 1 – GENERAL

1.1 MERCURY-CONTAINING EQUIPMENT

- A. Any mercury-containing equipment shall be removed without damage by the Contractor and disposed of through a recycling facility identified by the Contractor and approved by the Owner or Owner's Rep. The contractor shall provide personnel with Personal Protective Equipment (PPE) sufficient to prevent hazardous material exposure and injury.
- B. Mercury-containing equipment shall be assumed to contain mercury in excess of the TCLP limit of 0.02 mg/L. The hazardous waste code shall be designated as D009, pursuant to 40 CFR 2261.24.
- C. Mercury-containing equipment shall be packaged and shipped according to the procedures identified by the transporter and receiving facility.

END OF SECTION 2C.4

2C.5 - HAZARDOUS WASTE DISPOSAL

PART 1 – GENERAL

1.1 DETERMINING GENERATOR STATUS

- A. The amount of waste generated is used to determine whether the Owner and the Contractor are a conditionally exempt hazardous waste generator (no more than 100 kilograms per month), small waste generator (100 to 1,000 kilograms per month) or large quantity generator (1,000 kilograms or more per month). It is the Contractor's responsibility to obtain a generator identification number from appropriate regulatory agencies if required.
- B. It is the Contractor's responsibility to obtain the necessary permits and applications to dispose of, recycle or reclaim any hazardous or special waste generated during the implementation of this project. The Contractor must assure the materials are packaged, transported and disposed of/recycled in accordance with all applicable local, state and Federal regulations.

1.2 OBTAINING AN EPA IDENTIFICATION NUMBER

- A. Unless the Contractor and Owner are conditionally exempt, an EPA identification number must be obtained for the site. Contractor is required to submit application to the appropriate state or federal agency to obtain an EPA identification number.

1.3 DISPOSAL OF HAZARDOUS WASTES

- A. Wastes must be segregated and packaged in accordance with applicable regulations. Wastes should neither be left on the property in an unsecured area, nor dumped in an unauthorized dumpster.
- B. Any hazardous wastes must be disposed of at a licensed hazardous waste disposal facility, reclamation or recycling facility. Within 72 hours of waste leaving the site, document completion of hauling and disposal of each load by submitting a copy of the waste manifest, Chain-of-Custody form and landfill receipt to Owner or Owner's Rep.

END OF SECTION 2C.5

3A. DEMOLITION

3A.1 - SUMMARY OF WORK - DEMOLITION

PART 1-GENERAL

1.1 PROJECT DESCRIPTION

This project includes the demolition of the former Porter Oil buildings in St. Louis, Missouri.

1.2 SCOPE OF THIS SECTION

This Section summarizes the demolition work covered by this project, identifies the duties of the Contractor, and defines specific requirements of the Contractor regarding the scheduling of the demolition work and use of the work site.

1.3 WORK COVERED BY DEMOLITION PHASE

The demolition work to be performed under this Contractor is described in this Technical Specification.

1.4 PERFORMANCE SCHEDULE, WORK SEQUENCE AND USE OF THE PREMISES

- A. The Contractor shall be required to coordinate the demolition work with the Owners' Representative.
- B. The Contractor shall coordinate and schedule the demolition work initiate as the soonest possible time following the environmental abatement work.
- C. The Contractor shall prepare and maintain, in an up-to-date status, a Construction Schedule for the work to be performed under this Contract.
- D. In preparing the schedule, the Contractor must take into account existing conditions at the site and phases of work and work areas described in Contract Documents.
- E. Construction operations shall be planned to avoid disturbing adjacent structures, specifically particulate dust emissions must be kept to a minimum.
- F. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated. The site shall be made accessible to the contractor from Monday to Friday between the hours of 7:00 a.m. and 5:00 p.m.
- G. Driveways and Entrances: Keep driveways and entrances serving the premises clear and available to the Owner, the Owner's employees and/or authorized visitors, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.

END OF SECTION 3A.1

3A.2 - SUBMITTALS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

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

1.2 SUMMARY:

- A. This Section specifies administrative and procedural requirements for submittals required for performance of the Work, including:
 - 1. Contractor's construction schedule/work plan.
 - 2. Daily construction reports.
 - 3. Project drawings.
 - 4. Product data.
 - 5. Miscellaneous submittals.
- B. Administrative Submittals: Refer to other Division-1 Sections for requirements for administrative submittals. Such submittals include, but are not limited to:
 - 1. Permits.
 - 2. Insurance certificates.
 - 3. List of Subcontractors.

1.3 SUBMITTAL PROCEDURES:

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 - 1. Coordinate each submittal with purchasing, testing, delivery, other submittals and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related elements of the work so processing will not be delayed by the need to review submittals concurrently for coordination.
- B. The Owner's Representative reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received

1.4 CONTRACTOR'S DEMOLITION SCHEDULE/WORK PLAN:

- A. Prepare a detailed demolition schedule to include the utility disconnects, permitting, installation of the fence, protection in alley, asbestos removal and detailed demolition tasks.
 - 1. Secure time commitments for performing critical elements of the work from parties involved. Coordinate each element on the schedule with other construction activities; include minor elements involved in the sequence of the work. Show each activity in proper sequence.
 - 2. Indicate completion in advance of the date established for Substantial Completion. Allow time for the Owner's Representative's procedures necessary for certification of Substantial Completion.

- B. Schedule Updating: Revise the schedule after each activity, where revisions have been recognized or made, and issue the updated schedule.
- C. Contractor shall prepare a plan of the procedures proposed for use in complying with the requirements of the specifications. Detailed procedures should be included to summarize the site protection activities and the site demolition activities.
- D. Distribution: Following response to the initial submittal, print and distribute copies to the Owner's Representative.

1.5 MISCELLANEOUS SUBMITTALS:

- A. Safety Data Sheets: Process material safety and data sheets as "product data."
- B. Standards: Where submittal of a copy of standards is indicated, and except where copies of standards are specified as an integral part of a "Product Data" submittal, submit a single copy of standards for the Owner's Representative's use.
- C. Closeout Submittals: Refer to Section 2A.14 – Project Closeout and to individual sections of these specifications for specific submittal requirements of project closeout information.
- D. Record Documents: Furnish set of original documents as maintained on the project site.

1.6 OWNER'S REPRESENTATIVE'S ACTION:

- A. Except for submittals for record, information or similar purposes, where action and return is required or requested, the Owner's Representative will review each submittal, mark to indicate action taken, and return promptly.
 - 1. Final Unrestricted Release: Where submittals are marked "Approved," that part of the work covered by the submittal may proceed provided it complies with requirements of the Contract Documents; final acceptance will depend upon that compliance.
 - 2. Final-But-Restricted Release: When submittals are marked "Approved as Noted," that part of the work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance.
 - 3. Returned for Resubmittal: When submittal is marked "Not Approved, Revise and Resubmit," do not proceed with that part of the work covered by the submittal, including purchasing, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary to obtain a different action mark.

Do not permit submittals marked "Not Approved, Revise and Resubmit" to be used at the Project site, or elsewhere where work is to progress.

- 4. Other Action: Where a submittal is primarily for information or record purposes, special processing or other activity, the submittal will be returned, marked "Action Not Required."
- B. Compliance with specified characteristics is the Contractor's responsibility.

END OF SECTION 3A.2

3A.3 - TEMPORARY FACILITIES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and General provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specifications sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes Requirements for temporary facilities, including temporary utilities, support utilities, and security and protection facilities.
- B. Temporary utilities include, but are not limited to, the following:
 - 1. Sewers and drainage.
 - 2. Water service and distribution.
 - 3. Sanitary facilities, including toilets, wash facilities, and drinking-water facilities.
 - 4. Temporary heat.
 - 5. Ventilation.
 - 6. Electric power service.
 - 7. Lighting.
 - 8. Telephone service.
- C. Security and protection facilities include, but are not limited to, the following:
 - 1. Environmental protection.
 - 2. Stormwater control.
 - 3. Site Fencing/Security
 - 4. Alley Protection/Barrier
- D. Heating Equipment: Contractor shall provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
- E. Electrical Outlets: Properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-V plugs into higher-voltage outlets; equipped with ground-fault circuit interrupters, reset button, and pilot light.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Engage appropriate local utility company to install temporary service or connect to existing service. Where utility company provides only part of the service, provide the remainder with the matching, compatible materials and equipment. Comply with the utility company recommendations.
 - 1. Arrange with utility company, Owner, and existing users for a time when service can be interrupted, if necessary, to make connections for temporary services.
 - 2. Provide adequate capacity at each stage of construction. Before temporary utility is available, provide trucked-in services.
 - 3. Obtain easements to bring temporary utilities to Project site where Owner's easements cannot be used for that purpose.
- B. Sewers and Drainage: If sewers are available, provide temporary connections to remove effluent that can be discharged lawfully. If sewers are not available or cannot be used, provide drainage ditches, dry wells, stabilization ponds, and similar facilities. If neither sewers nor drainage facilities can be lawfully used for discharge of effluent, provide containers to remove and dispose of effluent off-site in a lawful manner.
 - 1. Filter out siltation and soil, construction debris, chemicals, oils, and similar contaminants that might clog sewers or pollute waterways before discharge.
 - 2. Connect temporary sewers to municipal system as directed by sewer department officials.
 - 3. Maintain temporary sewers and drainage facilities in a clean, sanitary condition. After heavy use, restore normal conditions promptly.
 - 4. Provide temporary filter beds, settlement tanks, separators, and similar devices to purify effluent to levels acceptable to authorities having jurisdiction.
- C. Water Service: This contractor shall obtain the necessary permits, backflow preventers, hoses, and accessories to utilize water from nearby fire hydrants for any water needs.
- D. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities.
 - 1. Disposable Supplies: Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Maintain adequate supply. Provide covered waste containers for disposal of used material.
 - 2. Toilets: Contractor to provide necessary toilet facilities on-site.
- E. Electric Power Service: Contractor to utilize generators or contract with an electrical contractor to provide hardwired temporary power.
- F. Lighting: Provide temporary lighting as needed, with local switching that provides adequate illumination for construction operations and traffic conditions.

3.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

- B. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erecting structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and public of possible hazard. Where appropriate and needed, provide lighting, including flashing red or amber lights.

END OF SECTION 3A.3

3B. SITE WORK

3B.1 - BUILDING DEMOLITION

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Demolition, removal and off-site disposal of the buildings and their contents.
 - 2. Disconnecting, capping, and abandoning site utilities, including sewers, in place.
- B. Related Sections: The following sections contain requirements that relate to this Section:
 - 1. Section 2A.5 – Submittals.
 - 2. Section 2A.7 – Temporary Facilities for temporary utilities, temporary security and protection facilities, and environmental protection measures for demolition operations.

1.3 DEFINITIONS

- A. Remove: Remove and legally dispose of items off-site to an authorized receiving facility except those indicated to be reinstalled, salvaged, or to remain the Owner's property.

1.4 MATERIALS OWNERSHIP

- A. Except for items or materials indicated to be reused, salvaged, 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 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections, for information only, unless otherwise indicated.
- B. Proposed dust-control measures.
- C. Photographs or videotape, sufficiently detailed, of existing conditions of adjoining construction and site improvements that might be misconstrued as damage caused by demolition operations.
- D. Record drawings at Project closeout – Identify and accurately locate capped utilities and other subsurface structural, electrical, or mechanical conditions that remain after demolition and remediation.
- E. Landfill records indicating receipt and acceptance of demolition, special and hazardous wastes by a landfill facility licensed to accept those wastes.
- F. Detailed weight tickets for all materials removed from the site to provide recycling information for project.

- G. Schedule of demolition activities indicating the detailed sequence of demolition and removal work, with starting and ending date for each activity.

1.6 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: Engage an experienced firm that has successfully completed demolition Work similar to that indicated for this Project. Demolition Contractor shall be Class 1 board-certified in accordance with the provisions of Section 130.1 of Ordinance 58032 (Part II, entitled “The Building Code of the City of St. Louis”).
- B. Regulatory Requirements: Comply with governing EPA notification regulations before demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Pre-demolition conference: conduct conference at project site.

1.7 PROJECT CONDITIONS

- A. Buildings to be demolished will be vacated and their use discontinued before start of Work.
- B. Owner assumes no responsibility for actual condition of the buildings to be demolished. Conditions existing at the time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Hazardous Materials: Hazardous materials are present in the buildings to be demolished. These materials include, but are not limited to, asbestos containing materials, petroleum products, miscellaneous chemicals, mercury thermostats, and A/C or mechanical units containing refrigerants. Prior to bidding, inspect the buildings to determine the quantities and types of hazardous materials to be removed. All hazardous materials shall be removed and disposed of by the Abatement Contractor prior to the start of building demolition, in accordance with Part I, Environmental Specification, and Part III, Environmental Remediation Specification, of this Specification. If additional hazardous materials are located in concealed areas during demolition, immediately cease demolition and notify the Owner’s Representative.
- D. Storage or sale of removed items or materials on-site will not be permitted.

PART 2 – EXECUTION

2.1 EXAMINATION

- A. Survey existing conditions and correlate with requirements indicated to determine extent of demolition required.
- B. Survey the condition of the building to determine whether removing any element might result in a structural deficiency or unplanned collapse of any portion of the structure or adjacent structures during demolition.
- C. Perform surveys as the Work progresses to detect hazards resulting from demolition activities.

2.2 UTILITY SERVICES

- A. Maintain existing utilities indicated to remain in service and protect them against damage during demolition operations. Any utility to remain in service that is

damaged shall be repaired to the satisfaction of the affected utility at the contractor's expense.

- B. Do not interrupt existing utilities serving occupied or operating facilities, except when authorized in writing by Owner and authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and to governing authorities.
- C. Utility Demolition Requirements: Locate, identify, disconnect, and cap off all utility services to be removed or abandoned and any building services. Fill all sewers to be abandoned in accordance with MSD Standard Specifications.
 - 1. Contractor shall be responsible for contacting and coordinating with all utility companies to have utilities disconnected, capped, removed, or abandoned.
 - 2. Do not begin demolition until all utility services have been disconnected.

2.3 PREPARATION

- A. Drain, purge, or otherwise remove, collect, and dispose of chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with demolition operations.
- B. Conduct demolition operations and remove debris to ensure minimum interference with roads, streets, walks and other adjacent occupied and used facilities. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Obtain all permits required to closed public street and walks, and provide barriers, warning lights, and other safety devices required by the Street Department. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- C. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around demolition area.
 - 1. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction.
 - 2. Protect existing site improvements, appurtenances, and landscaping to remain.
 - 3. Erect a plainly visible fence around drip line of individual trees or around perimeter drip line of groups of trees to remain.
 - 4. Clean all dirt, mud, debris, etc., that is tracked onto street as directed by the City of St. Louis Street Department.
- D. Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent movement, settlement, or collapse of building to be demolished and adjacent buildings to remain. Strengthen or add new supports when required during progress of demolition.

2.4 EXPLOSIVES

Use of explosives is explicitly prohibited.

2.5 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.

Do not create hazardous or objectionable conditions, such as ice, flooding, and pollution, when using water.

- B. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- C. Clean adjacent buildings and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing before start of demolition.

2.6 DEMOLITION

- A. **Building Demolition:** Building demolition shall not begin until written notifications are received from the Abatement Contractor that hazardous material/asbestos abatement has been complete. Copy of the Abatement Contractor's notice of hazardous material removal completion shall be sent to Owner's representative. Building demolition also includes demolition and off-site removal of building attachments such as porches, stairs, retaining walls, window wells, etc. Use methods required to complete work within limitations of governing regulations and as follows:
 - 1. Locate demolition equipment throughout the building and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - 2. Dispose of demolished items and materials promptly and in a safe manner. On-site storage or sale of removed items is prohibited.
 - 3. Demolish concrete and masonry in small sections.
 - 4. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 - 5. Break up and remove concrete slabs on grade.
 - 6. Remove air-conditioning equipment without releasing refrigerants. Recover refrigerant and properly dispose or recycle.
 - 7. Remove all appliances, furniture, and similar items encountered on site.
- B. **Site Improvement Demolition:** Remove and legally dispose of off-site all site improvements.
 - 1. All buildings, slabs, foundations, footings, and paved surfaces shall be removed to a depth of three feet below bottom of slab.
 - 2. Contractor shall ensure that a land disturbance permit has been obtained prior to any activity on the site involving soil excavation, movement and/or shoring, if one acre or more of land will be disturbed by demolition activities.
 - 3. If the Department of Natural Resources require a SWWPP permit, this contractor shall include establishing and maintaining the required SWPPP protocols.
- C. **Damages:** Promptly repair damages to adjacent facilities caused by demolition operations. All repairs shall be satisfactory to property Owner and shall be at the contractor's expense.

2.7 BACKFILL

- A. The site shall be brought back up to grade with a backfill material and methods approved by the Owner's Representative. The bidder shall include in their proposal the backfill material and source proposed to be used.

- B. Contractor shall submit a backfill plan to the Owner's Representative describing the materials, means and methods to be used to meet the backfill specifications. The Owner's Representative shall review and approve this plan prior to the Contractor placing backfill.
- C. Painted masonry, concrete with protruding rebar, wood, metals, and putrescible materials shall not be used as backfill material.

2.8 DISPOSAL OF DEMOLISHED MATERIALS

- A. All demolition debris shall be transported, disposed of, or recycled in accordance with all applicable and appropriate state and federal laws, rules and regulations.
- B. Contractor will provide a list of all disposal facilities, recycling facilities, and waste transportation providers to be utilized for this Project, along with contact information and appropriate licenses or EPA ID numbers of each provider. Owner reserves the right to reject the use of any disposal/recycling facility or transportation company.
- C. Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site. Any items being salvaged by the contractor shall not be stored on site but must be promptly removed with the demolition process.
- D. Burning of demolition debris is not allowed.

END OF SECTION 3B.1

4. ENVIRONMENTAL REMEDIATION

4.1 SCOPE OF WORK

4.1.1 Mobilization/Demobilization

- Mobilize required personnel and equipment to the site and set up necessary features such as storage areas and sanitary facilities. Water, electricity and sewer service will not be provided at the site.
- Acquire necessary local, state and/or federal permits to perform the work
- Prepare site-specific Health and Safety Plan.
- Provide for operation and maintenance of all supplied equipment
- Provide for site maintenance and clean-up

4.1.2 Waste Disposal

The following sections outline the general procedures for disposal of miscellaneous onsite waste products.

- All liquid wastes in the basement of the building, including wastes in the compartmentalized vaults, shall be removed sufficient to permit building demolition.
- Waste materials shall be disposed of in a manner consistent with all applicable Local, State, and Federal waste disposal regulations. It shall be the responsibility of the Contractor to perform any sampling and analyses required to characterize the water and oil for proper disposal. For bidding purposes, assume that one water sample will be required for disposal to MSD sewer (MSD Group I Analysis) and three oil/water samples from basement liquids and compartmentalized vaults will be required for solidification/landfill disposal (non-hazardous).
- Water in the basement shall be pumped for direct discharge to an onsite MSD sanitary or combined sewer inlet. The volume of water direct discharged to the MSD sewer shall be metered in a manner acceptable to LRA and a volume report submitted to the Consultant. Filtration must be performed to ensure that no free product oil is direct discharged to the MSD sewer. For bidding purposes, assume that 80,000 gallons of water will be disposed via direct discharge.
- Once water can no longer be effectively separated from the oil, remaining oil/water in the basement shall be characterized, profiled and properly disposed/recycled. Obtain any necessary permits (local, state and/or federal) to transport and properly dispose basement oil/water. For bidding purposes, assume that 20,000 gallons of oil/water will be hauled offsite for proper solidification/landfill disposal (non-hazardous).
- Access onsite vaults and clean sufficient for dismantling and recycling. Remove and properly dispose wastes in the vault. Obtain any necessary permits (local, state and/or federal) to transport and properly dispose wastes in the vaults. For bidding purposes, assume that 15,000 gallons of oil/water will be hauled offsite for proper solidification/landfill disposal (non-hazardous).
- Residues and liquids may not be stored on site for more than 30 days and must be properly contained. Disposal shall be properly manifested and performed by a license waste hauler.
- Re-cover and secure elevator shaft at the loading dock on the south side of the building sufficient to prevent further flooding of the basement during rain events.

- Obtain and complete required disposal manifests for basement oil/water. Disposal records shall be provided to the Consultant within ten (10) days of the disposal date.

4.2 SITE ACCESS AND SECURITY

- The site can be accessed from Kentucky Avenue or unimproved Wittenberg Avenue as shown on the attached Figure 2.
- The Contractor shall be responsible for securing the site at the end of each working day.
- Security of equipment after hours is at the Contractor's expense.

4.3 SAFETY

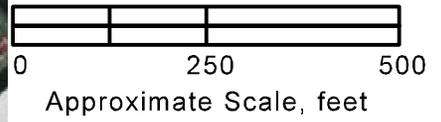
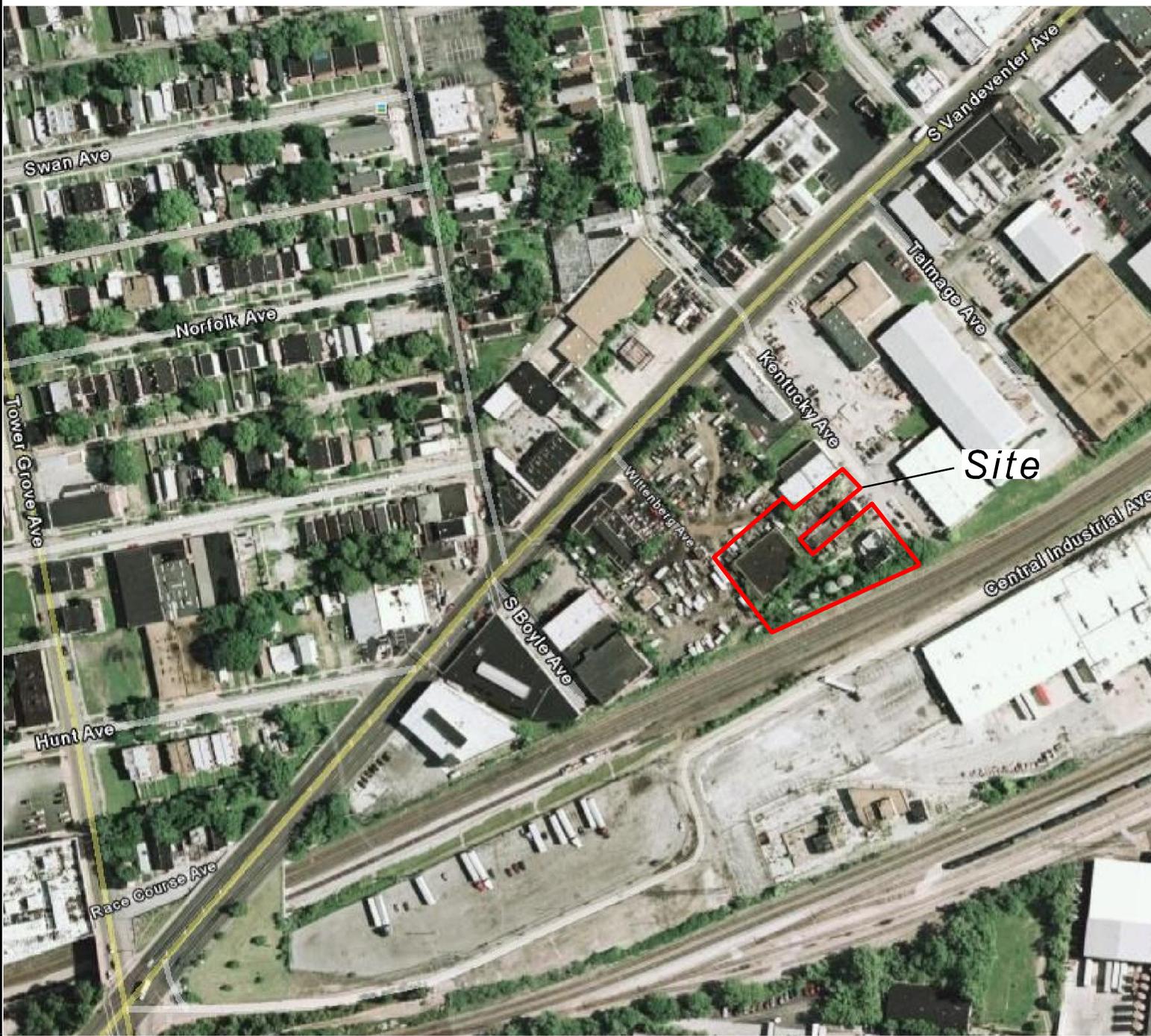
- A Site Safety and Health Plan shall be developed by the Contractor based on all applicable Occupational Safety and Health Administration (OSHA) standards and regulations. The Contractor's plan shall provide for personnel training, respiratory protection, medical surveillance, communications, emergency plan, waste disposal procedures and procedures for the safe demolition and disposal of the USTs and accessories. A copy of the Site Safety and Health Plan shall be submitted to the Consultant at least five days prior to the start of work and must be readily available on the job site.
- Contractor shall be responsible for initiating, maintaining and supervising all safety precautions programs in connection with performance of Contract.
- All workers shall have safety training as required by the Code of Federal Regulations (CFR) Section 1910.120.
- All provisions of the Site Safety Plan shall be in force during site activities, unless modified in writing by the Contractor. It is the Contractor's responsibility to enforce the Site Safety Plan.
- Prior to ending operations on any working day or at any time the Contractor is not on site, the Contractor shall secure all areas of work in a safe manner to the satisfaction of the Owner.
- In event Contractor encounters on site conditions beyond those identified in the contract documents, the Consultant should be notified immediately.

4.4 APPLICABLE CODES, STANDARDS AND SPECIFICATIONS

- American National Standards Institute, ANSI-Z88.2, "Standard Practices for Respiratory Protection"
- National Fire Prevention Association, Volume 30, "Flammable and Combustible Liquids Code"
- National Institute for Occupational Safety and Health, NIOSH, "Working in Confined Space"
- State, County and Local Codes, Ordinances, and Regulations

Attachment A

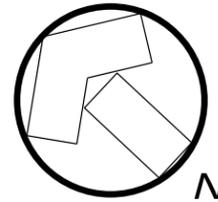
Project Site Plan



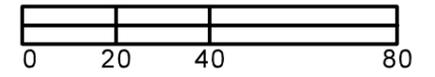
Site Location Map
Porter Oil
1439 Kentucky Avenue
Saint Louis, Missouri

Figure 1

5/17/2010 1:30:54 PM M:\2_Rem\3156 Porter Oil\3156 Figure 01 Revised Site Location Map.dgn
marcus



North



Approximate Scale, feet



Legend

Property Boundary

Site Plan
 Porter Oil Site
 1439 Kentucky Avenue
 Saint Louis, Missouri

Figure 2

Attachment B

Asbestos Inspection Report



**Environmental
Operations, Inc.**
CLEARING THE WAY

**PRE- DEMOLITION ASBESTOS AND ENVIRONMENTAL
INSPECTION OF:**

**1439 KENTUCKY AVE
ST LOUIS, MO 63110**



PREPARED FOR:

**CHADWICK E. HOWELL
ENVIRONMENTAL ENGINEERING MANAGER
ST. LOUIS DEVELOPMENT CORPORATION
1520 MARKET STREET, SUITE 2000
ST. LOUIS, MO 63103**

PREPARED BY:

**ENVIRONMENTAL OPERATIONS, INC.
1530 SOUTH SECOND STREET
ST. LOUIS, MISSOURI 63104-4500
(314) 241-0900**

EOI PROJECT #4927



**Environmental
Operations, Inc.**
CLEARING THE WAY

May 8, 2014
Environmental Operations, Inc.
Former Porter Oil Site
Project #4927

Addendum to Pre-Demolition report for the Former Porter Oil Site

On March 20, 2014 Mr. Kevin Schoenborn, Environmental Operations, Inc. (EOI) Missouri Department of Natural Resources Licensed Asbestos Inspector entered the basement of the old concrete building on the property of the former Porter Oil to inspect the basement area after Environmental Management Alternatives (EMA) had pumped the water and oil out of the basement area. Mr. Schoenborn performed a visual inspection of the basement area and did not see any suspect asbestos containing material.

Mr. Schoenborn a Missouri Department of Health and Senior Services licensed Lead Inspector used the RMD X-Ray lead detector to inspect the various colors of paint on the walls and tanks in the basement. All lead shots taken with the RMD X-Ray tested negative for the presence of lead.

Since the time of the visual inspection and lead testing on March 20, 2014 water and oil are leaking back into the basement area from either above the ground or from under the basement slab.

Kevin Schoenborn

Kevin Schoenborn

Missouri Asbestos Inspector #7118020813MOIR5056

Missouri Lead Inspector #131223-300004327

EOI Project #4927
ST. LOUIS DEVELOPMENT CORPORATION
1520 MARKET STREET, SUITE 2000
ST. LOUIS, MO 63103

May 20, 2013

ENVIRONMENTAL OPERATIONS, INC.
1530 SOUTH SECOND STREET
ST. LOUIS, MISSOURI 63104 – 4500

I hereby certify that the inspection referenced by this report was conducted in accordance with the intent of the National Emissions Standard for Hazardous Air Pollutants (NESHAP'S) regulations, to the best of my ability and knowledge.



ANDREW ADKINS, INSPECTOR
ENVIRONMENTAL TECHNICIAN
MISSOURI ASBESTOS INSPECTOR # 7118032112Moll15594

I have reviewed this report and hereby certify that the information contained within satisfies the intent of the Environmental Protection Agency (EPA) regulations, to the best of my ability and knowledge.



BILL WITTS, CHMM
VICE PRESIDENT
COMPLIANCE SERVICES

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EXECUTIVE SUMMARY

Environmental Operations, Inc. (EOI) was retained by St. Louis Development Corporation (Client) to conduct a pre-demolition asbestos and hazardous materials inspection of the buildings located at 1439 Kentucky St., St. Louis, MO. Andrew Adkins and Dale Edgerley, EOI Asbestos Inspectors, conducted the inspections on April 9 and 11, 2013. Mr. Adkins and Mr. Edgerley are Missouri licensed and Environmental Protection Agency accredited Asbestos Building Inspectors.

The buildings consisted of a two-story building on a brick foundation with a basement (Office Building), a concrete structure (Maintenance Building) with a basement, and a pump shed located on the east side of property. The inspection included an investigation of the building for environmental hazards that must be removed or properly managed prior to demolition. The hazards observed included suspect asbestos-containing materials (ACM) and miscellaneous hazardous materials.

Asbestos-Containing Material Summary

EOI collected bulk samples of the suspect ACM to identify which materials contain asbestos. A total of one hundred and two (102) bulk samples were collected from the various areas. The suspect materials sampled consisted of floor tile and mastic, drywall joint compound, hockey pucks, insulation, window caulking, various ceiling tiles, pipe insulation and roof material. Multiple samples of each suspect material were collected for proper material identification. The samples were submitted to EMC Laboratories in Phoenix, Arizona for analysis.

The results of the analysis indicate the following materials were found to contain asbestos:

Maintenance Shop/ Pump Shed

- Window Glazing
- Electrical Panel
- Brake Pads
- Roofing and Flashing
- TSI Air-cell.

Office Building

- 9" Floor Tile, Light Brown
- Mastic Adhesive Hockey Pucks
- 9" Floor Tile, Green
- Window Glazing
- Roll of Seam Tape
- TSI Air Cell Pipe Insulation
- TSI Block Insulation
- Roofing Tar

Miscellaneous Hazardous Materials Summary

EOI identified the following miscellaneous hazardous materials during the investigation of the building:

- 68 4-Foot Florescent Bulbs
- 4 8-Foot Florescent Bulbs
- 37 Ballasts
- 1 Mercury Thermostat
- 100 Misc. containers

Additionally, the Maintenance Building had several hundred gallons of oily water in the basement. About 100 smaller containers containing various quantities and types of chemicals and materials were identified. The chemicals discovered on site appear to be consistent with those which would be utilized in the production of typical maintenance/housekeeping supplies.

Recommendations

The identified ACM will need to be removed by a licensed abatement contractor prior to demolition of the building. Miscellaneous hazardous materials should also be removed prior to demolition. The building components and materials that are painted cannot be used as clean fill or recycled and must be disposed of in a construction and demolition debris (C&D) landfill unless the demolition contractor tests the materials for the all eight (8) RCRA metals and passes the State's requirements for clean fill prior to being used as clean fill.

1. METHODOLOGY

1.1 Designation of Building Materials

During this inspection, homogeneous materials were identified and sampled. Homogeneous building materials for inspection purposes are defined as an area of surfacing material, thermal system insulation material, or miscellaneous material uniform in color or texture.

1.2 Sampling and Analysis for Asbestos

A representative number of bulk samples of suspect ACMs were collected for each homogeneous material throughout the building. Samples were collected using carpenter knives and/or other sampling tools. The tools were thoroughly decontaminated after the collection of each sample to minimize the potential for cross contamination. All bulk samples were carefully collected and inspected after collection to verify whether all layers or substrates of suspect materials were obtained. The bulk samples were individually placed in labeled Zip-Lock plastic packages and delivered to EMC Labs, Inc. of Phoenix, Arizona for analysis. EMC Labs, Inc. is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos fiber analysis (NVLAP #101926-0). Samples were analyzed using Polarized Light Microscopy (PLM) Test Method 40 CFR, Chapter One, Subpart F, Appendix A.

Inspectors were unable to access the basement of the Maintenance Building due to the presence of standing water. Therefore, this area was not inspected.

Chain-of-Custody Procedure: During the assessment, all bulk samples were recorded on chain-of-custody forms. Each sample was placed in a sealed plastic bag and labeled (sample number and location) with a permanent marker. The inspector then inserted the samples collected in a box with the chain-of-custody form accompanying the shipment to the laboratory. Prior to the delivery, a copy of the chain-of-custody form was made and kept in the project file. Only the inspectors performing the survey had access to the bulk samples prior to shipment to minimize the potential of bulk samples being lost.

1.3 Asbestos Inspection Assessment Logic

All readily accessible suspect building materials were evaluated and sampled. EOI performed limited destructive investigation methods, which includes creating minimal openings in walls, ceilings, chases or other hidden areas of the building to investigate for hidden suspect ACM. EOI used knowledge and experience from performing similar inspections on where to access hidden areas.

1.4 Miscellaneous Hazardous Materials Assessment Protocol

The miscellaneous hazardous materials assessment consisted of a visual walk-through inspection and inventory of hazardous materials or concerns throughout the building(s), which would require proper handling and disposal prior to demolition activities.

2.0 FINDINGS

2.1 Asbestos-Containing Materials

A summary of the asbestos findings are included in Table 1 below:

Table 1
 Summary of Confirmed Asbestos Containing Materials

Material Description	Location	Quantity
Window Glazing	Windows Throughout Bldg.	15 – 5' x 5 ½' 11 – 7' x 5 ½' 15 – 4' x 5 ½'
Electrical Panel	1 st Floor NE Corner	4 Sq. Ft.
Brake Pads	Spotty Throughout 1 st Floor	6 Sq. Ft.
TSI Air-cell	Inside Pump Shed North End	5 Ln. Ft.
Roofing & Flashing	Main Building	7,400 Sq. Ft. 375 Ln. Ft.
Flashing	Pump Shed	20 Ln. Ft.
9" Floor Tile Light Brown	Top of Basement Steps	3' x 15' Hallway 8' x 13' Top of Steps
Mastic Adhesive Hockey Pucks	1 st Floor South Side	14' x 12' S. Center 14' x 15' S. Front

Material Description	Location	Quantity
9" Floor Tile Green w/Black Mastic	SE Room, Center Room, SW Room, Hallway	4' x 16' Hallway 14' x 15' SE Front 14' x 12' S. Center under Carpet 16' x 14' SW Corner under Carpet, Plywood, & 12" FT Brown Wood Grain
Window Glazing	Wood Windows	12 Windows
Roll of Seam Tape	2 nd Floor Shelf	1 Roll
TSI Air Cell Pipe Insulation	2 nd Floor Shelf, Basement Rafters	12' Basement 15' 2 nd Floor Shelf
Window Glazing	Metal Casement Windows	4 Windows
TSI Block Insulation	South End Basement	3 Ln. Ft
Roofing Tar	Roof	Throughout

2.2 Non-Asbestos-Containing Materials

The list of building materials identified as non-asbestos-containing is provided in Table 2:

Table 2
 Non-Asbestos Building Materials

Material Description	Location
Roofing	Pump Shed Roof
12" Ceiling Tile Pin Dot	1 st Floor Main Room (Spline)
Linoleum Beige Small Pebble Pattern w/Yellow Mastic	Throughout 1 st Floor
Plaster Walls	Throughout
Sheet Flooring Brown w/Burlap	1 st Floor Bottom layer Under Linoleum
12" Ceiling Tile Squiggly Lines	Front Entry
Drywall & Joint Compound	Throughout
12" Floor Tile Brown Wood Grain w/Clear Mastic	Hallway Top Layer
2' x 4' Ceiling Tile Smooth	South Center Room
Ceiling Plaster	Throughout
12" Ceiling Tile Large Holes	1 st Floor South Side
2' x 4' Ceiling Tile Textured	SW Corner Room
Tar Paper	On Steps to 2 nd Floor
Attic Insulation Brown	Attic Area
Boiler Packing	Boiler
Lt. Blue Linoleum	N. Basement by Back Door
Lt Brown Sheet Flooring w/Burlap	N. Basement Stairs
Window Caulking	Windows
Flashing	Roof

2.3 Miscellaneous Hazardous Materials

The survey of the property consisted of visual observation of labels and estimated quantities. The following items were identified in the building:

- 68 4-Foot Florescent Bulbs
- 4 8-Foot Florescent Bulbs
- 37 Ballasts
- 1 Mercury Thermostat
- 100 Misc. containers

Additionally, the Maintenance Building had several hundred gallons of oily water in the basement. The 100 miscellaneous containers were small containers, containing various quantities and types of chemicals and materials. These materials appear to be consistent with those which would be utilized in the production of typical maintenance/housekeeping supplies.

3.0 RECOMMENDATIONS AND CONCLUSIONS

Asbestos-Containing Material

The ACM identified in this survey will need to be properly removed and disposed of prior to demolition or renovation activities that will impact the ACM. The asbestos abatement activities must be performed by a licensed asbestos abatement contractor using licensed asbestos abatement workers in compliance with all applicable local, state, and federal regulations.

Miscellaneous Hazardous Materials

All hazardous materials identified within the building must be removed and properly disposed of prior to demolition of the building.

4.0 LIMITATIONS

Inspectors were unable to access the basement of the Maintenance Building due to the presence of standing water. Therefore, this area was not inspected and the presence or absence of ACM or miscellaneous hazardous materials could not be determined.

This pre-demolition inspection was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale.

The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during the on-site services conducted at the buildings. The information contained in this report is relevant to the date on which inspection and sampling activities were conducted and should not be relied upon to represent conditions at a later date.

Additional ACM may be present in areas that were not accessible to the inspectors. If any additional suspect ACM is discovered during renovation or demolition activities, the work should be stop and the material assessed and sampled as necessary by a licensed inspector.

This report has been prepared on behalf of and exclusively for use by the Client for specific application to their project as discussed.

No warranty, expressed or implied, is made.

EOI Project #4927
St. Louis Development Corporation
May 21, 2013

ATTACHMENT 1

Asbestos Bulk Sampling Log

ACM SAMPLE LOG

Date: 4-29-13 Project: Former Porter Oil Office Building Job Number: #4927

Location: 1439 Kentucky Avenue St. Louis, Missouri Sampler: DLE/AA

SAMPLE NUMBER	ACM TYPE	CONDITION	SAMPLE LOCATION	FRIABLE Y OR N	AMOUNT	CONTAINS ASBESTOS YES OR NO	PICTURE #
1,2,3	12" Ceiling Tile Pin Dot	Poor	1 st Floor Main Room (Spline)	Y		NO	1
4,5,6	Linoleum Beige Small Pebble Pattern w/Yellow Mastic	Fair	Throughout 1 st Floor	Y		NO, NO	2
7,8,9	Plaster Walls	Poor	Throughout	Y		NO, NO	3
10,11,12	Sheet Flooring Brown w/Burlap	Poor	1 st Floor Bottom layer Under Linoleum	N		NO	4
13,14,15	12" Ceiling Tile Squiggly Lines	Poor	Front Entry	Y		NO	5
16,17,18	9" Floor Tile Light Brown	Poor	Top of Basement Steps	N	3' x 15' Hallway 8' x 13' Top of Steps	YES	6
19,20,21	Drywall & Joint Compound	Poor	Throughout	Y		NO	7
22,23,24	12" Floor Tile Brown Wood Grain w/Clear Mastic	Good	Hallway Top Layer	N		NO, NO	8
25,26,27	2' x 4' Ceiling Tile Smooth	Good	South Center Room	Y		NO	9
28,29,30	Ceiling Plaster	Fair	Throughout	Y		NO, NO	10
31,32,33	12" Ceiling Tile Large Holes	Fair	1 st Floor South Side	Y		NO	11
34,35,36	Mastic Adhesive Hockey Pucks	Fair	1 st Floor South Side	N	14' x 12' S. Center 14' x 15' S. Front	YES	12
37,38,39	2' x 4' Ceiling Tile Textured	Good	SW Corner Room	Y		NO	13

ACM SAMPLE LOG

Date: 4-29-13 Project: Former Porter Oil Office Building Job Number: #4927

Location: 1439 Kentucky Avenue St. Louis, Missouri Sampler: DLE/AA

SAMPLE NUMBER	ACM TYPE	CONDITION	SAMPLE LOCATION	FRIABLE Y OR N	AMOUNT	CONTAINS ASBESTOS YES OR NO	PICTURE #
40,41,42	9" Floor Tile Green w/Black Mastic	Good	SE Room, Center Room, SW Room, Hallway	N	4' x 16' Hallway 14' x 15' SE Front 14' x 12' S. Center under Carpet 16' x 14' SW Corner under Carpet, Plywood, & 12" FT Brown Wood Grain	YES, NO	14
43,44,45	Window Glazing	Poor	Wood Windows	N	12 Windows	YES	15
46,47,48	Roll of Seam Tape	Good	2 nd Floor Shelf	Y	1 Roll	YES	16
49,50,51	TSI Air Cell Pipe Insulation	Good	2 nd Floor Shelf, Basement Rafters	Y	12' Basement 15' 2 nd Floor Shelf	YES	17
52,53,54	Tar Paper	Fair	On Steps to 2 nd Floor	N		NO	18
55,56,57	Window Glazing	Fair	Metal Casement Windows	N	4 Windows	YES	19
58,59,60	Attic Insulation Brown	Poor	Attic Area	Y		NO	20
61,62,63	TSI Block Insulation	Good	South End Basement	Y	3 Ln. Ft.	YES	21
64,65,66	Boiler Packing	Fair	Boiler	Y	1 Sq. Ft.	NO	22
67,68,69	Lt. Blue Linoleum	Poor	N. Basement by Back Door	Y	8' x 16'	NO	23
70,71,72	Lt Brown Sheet Flooring w/Burlap	Fair	N. Basement Stairs	N	42 Sq. Ft.	NO, NO	24
73,74,75	Window Caulking	Fair	Windows	N	25 Windows	NO	25
76,77,78	Roofing Tar	Fair	Roof	N		YES	26
79,80,81	Flashing	Fair		N		NO, NO	27

ENVIRONMENTAL OPERATIONS, INC. 314-241-0900 FAX: 314-436-2900
1530 SOUTH SECOND STREET ST. LOUIS, MISSOURI 63104

EOI Project #4927
St. Louis Development Corporation
May 21, 2013

ATTACHMENT 2

Asbestos Laboratory Analysis Data Sheets

EMC LABS, INC.

9830 S. 51st Street, Suite B109, Phoenix, AZ 85044
Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Laboratory Report
0125273

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client: ENVIRONMENTAL OPERATIONS Job# / P.O. #: 4927
Address: 1530 S. 2ND ST, STE 200 Date Received: 04/15/2013
ST. LOUIS MO 63104 Date Analyzed: 04/17/2013
Collected: 04/12/2013 Date Reported: 04/18/2013
Project Name: FORMER PORTER OIL OFFICE BUILDING EPA Method: EPA 600/R-93/116
Address: Submitted By: DALE L. EDGERLEY
Collected By:

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0125273-001 1		12" Ceiling Tile, White/ Brown Pin Dot	No	None Detected	Cellulose Fiber 90% Gypsum Carbonates Binder/Filler 10%
0125273-002 2		12" Ceiling Tile, White/ Brown Pin Dot	No	None Detected	Cellulose Fiber 90% Gypsum Carbonates Binder/Filler 10%
0125273-003 3		12" Ceiling Tile, White/ Brown Pin Dot	No	None Detected	Cellulose Fiber 90% Gypsum Carbonates Binder/Filler 10%
0125273-004 4		LAYER 1 Linoleum, Beige Small Pebble Pattern	No	None Detected	Cellulose Fiber 15% Fibrous Glass 2% Synthetic Fiber 2% Carbonates Gypsum Perlite Quartz Binder/Filler 81%
		LAYER 2 Mastic, Yellow	No	None Detected	Gypsum Carbonates Binder/Filler 100%

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Project Name:	FORMER PORTER OIL OFFICE BUILDING	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	DALE L. EDGERLEY
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0125273-005 5		LAYER 1 Linoleum, Beige Small Pebble Pattern	No	None Detected	Cellulose Fiber 15% Fibrous Glass 2% Synthetic Fiber 2% Carbonates Gypsum Perlite Quartz Binder/Filler 81%
		LAYER 2 Mastic, Yellow Note: Difficult to separate adjacent layers	No	None Detected	Cellulose Fiber <1% Gypsum Carbonates Binder/Filler 99%
0125273-006 6		LAYER 1 Linoleum, Beige Small Pebble Pattern	No	None Detected	Cellulose Fiber 15% Fibrous Glass 2% Synthetic Fiber 2% Carbonates Gypsum Perlite Quartz Binder/Filler 81%
		LAYER 2 Mastic, Yellow Note: Difficult to separate adjacent layers	No	None Detected	Cellulose Fiber <1% Gypsum Carbonates Binder/Filler 99%
0125273-007 7		LAYER 1 Wall Plaster-Scratch Coat, Beige	No	None Detected	Carbonates Gypsum Mica Quartz Binder/Filler 100%
		LAYER 2 Wall Plaster-Finish Coat, White	No	None Detected	Carbonates Gypsum Quartz Binder/Filler 100%

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Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0125273-008 8		LAYER 1 Wall Plaster-Scratch Coat, Beige	No	None Detected	Cellulose Fiber	2%
					Carbonates Gypsum Mica Quartz Binder/Filler	98%
		LAYER 2 Wall Plaster-Finish Coat, White	No	None Detected	Carbonates Gypsum Quartz Binder/Filler	100%
0125273-009 9		LAYER 1 Wall Plaster-Scratch Coat, Beige	No	None Detected	Hair	<1%
					Carbonates Gypsum Mica Quartz Binder/Filler	99%
		LAYER 2 Wall Plaster-Finish Coat, White	No	None Detected	Carbonates Gypsum Quartz Binder/Filler	100%
0125273-010 10		Sheet Flooring W/ Burlap Backing, Brown	No	None Detected	Cellulose Fiber	20%
					Carbonates Gypsum Quartz Binder/Filler	80%
0125273-011 11		Sheet Flooring W/ Burlap Backing, Brown	No	None Detected	Cellulose Fiber	20%
					Carbonates Gypsum Quartz Binder/Filler	80%

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Address:		Submitted By:	DALE L. EDGERLEY
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0125273-012 12		Sheet Flooring W/ Burlap Backing, Brown	No	None Detected	Cellulose Fiber 20% Carbonates Gypsum Quartz Binder/Filler 80%
0125273-013 13		12" Ceiling Tile, White/ Brown Squiggly Lines	No	None Detected	Cellulose Fiber 90% Carbonates Gypsum Binder/Filler 10%
0125273-014 14		12" Ceiling Tile, White/ Brown Squiggly Lines	No	None Detected	Cellulose Fiber 90% Carbonates Gypsum Binder/Filler 10%
0125273-015 15		12" Ceiling Tile, White/ Brown Squiggly Lines	No	None Detected	Cellulose Fiber 90% Carbonates Gypsum Binder/Filler 10%
0125273-016 16		9" Floor Tile, Lt. Brown/ Black	Yes	Chrysotile 5%	Cellulose Fiber 15% Synthetic Fiber 5% Carbonates Gypsum Quartz Binder/Filler 75%
0125273-017 17		9" Floor Tile, Lt. Brown/ Black	Yes	Chrysotile 5%	Cellulose Fiber 15% Synthetic Fiber 5% Carbonates Gypsum Quartz Binder/Filler 75%

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Project Name:	FORMER PORTER OIL OFFICE BUILDING	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	DALE L. EDGERLEY
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0125273-018 18		9" Floor Tile, Lt. Brown/ Black	Yes	Chrysotile 5%	Cellulose Fiber 15% Synthetic Fiber 5% Carbonates Gypsum Quartz Binder/Filler 75%
0125273-019 19		Drywall/Joint Compound Composite, White/ Brown/ Off White Note: COMPOSITE ANALYSIS REQUESTED	No	None Detected	Cellulose Fiber 11% Gypsum Carbonates Mica Quartz Binder/Filler 89%
0125273-020 20		Drywall/Joint Compound Composite, White/ Brown/ Off White Note: COMPOSITE ANALYSIS REQUESTED	No	None Detected	Cellulose Fiber 11% Gypsum Carbonates Mica Quartz Binder/Filler 89%
0125273-021 21		Drywall/Joint Compound Composite, White/ Brown/ Off White Note: COMPOSITE ANALYSIS REQUESTED	No	None Detected	Cellulose Fiber 11% Gypsum Carbonates Mica Quartz Binder/Filler 89%
0125273-022 22		LAYER 1 12" Floor Tile, Brown Wood Grain	No	None Detected	Carbonates Gypsum Quartz Binder/Filler 100%
		LAYER 2 Mastic, Clear	No	None Detected	Carbonates Gypsum Binder/Filler 100%

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0125273-023 23		LAYER 1 12" Floor Tile, Brown Wood Grain	No	None Detected	Carbonates Gypsum Quartz Binder/Filler 100%
		LAYER 2 Mastic, Clear	No	None Detected	Cellulose Fiber <1% Carbonates Gypsum Binder/Filler 99%
0125273-024 24		LAYER 1 12" Floor Tile, Brown Wood Grain	No	None Detected	Carbonates Gypsum Quartz Binder/Filler 100%
		LAYER 2 Mastic, Clear	No	None Detected	Cellulose Fiber <1% Carbonates Gypsum Binder/Filler 99%
0125273-025 25		2x4 Ceiling Tile, White/ Brown Smooth	No	None Detected	Cellulose Fiber 85% Carbonates Gypsum Binder/Filler 15%
0125273-026 26		2x4 Ceiling Tile, White/ Brown Smooth	No	None Detected	Cellulose Fiber 85% Carbonates Gypsum Binder/Filler 15%
0125273-027 27		2x4 Ceiling Tile, White/ Brown Smooth	No	None Detected	Cellulose Fiber 85% Carbonates Gypsum Binder/Filler 15%

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Collected By:

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0125273-028 28		LAYER 1 Ceiling Plaster-Scratch Coat, Beige	No	None Detected	Hair Carbonates Gypsum Quartz Binder/Filler 1%
		LAYER 2 Ceiling Plaster-Finish Coat, White	No	None Detected	Carbonates Gypsum Quartz Binder/Filler 99%
0125273-029 29		LAYER 1 Ceiling Plaster-Scratch Coat, Beige	No	None Detected	Hair Carbonates Gypsum Quartz Binder/Filler 1%
		LAYER 2 Ceiling Plaster-Finish Coat, White	No	None Detected	Carbonates Gypsum Quartz Binder/Filler 99%
0125273-030 30		LAYER 1 Ceiling Plaster-Scratch Coat, Beige	No	None Detected	Hair Carbonates Gypsum Quartz Binder/Filler 1%
		LAYER 2 Ceiling Plaster-Finish Coat, White	No	None Detected	Carbonates Gypsum Quartz Binder/Filler 99%
0125273-031 31		12" Ceiling Tile, White/ Brown Large Holes	No	None Detected	Cellulose Fiber Gypsum Carbonates Binder/Filler 90%

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Collected By:

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0125273-032 32		12" Ceiling Tile, White/ Brown Large Holes	No	None Detected	Cellulose Fiber 90% Gypsum Carbonates Binder/Filler 10%
0125273-033 33		12" Ceiling Tile, White/ Brown Large Holes	No	None Detected	Cellulose Fiber 90% Gypsum Carbonates Binder/Filler 10%
0125273-034 34		Adhesive Mastic Hockey Pucks, Brown	Yes	Chrysotile 7%	Carbonates Gypsum Binder/Filler 93%
0125273-035 35		Adhesive Mastic Hockey Pucks, Brown	Yes	Chrysotile 7%	Carbonates Gypsum Binder/Filler 93%
0125273-036 36		Adhesive Mastic Hockey Pucks, Brown	Yes	Chrysotile 5%	Cellulose Fiber 2% Carbonates Gypsum Binder/Filler 93%
0125273-037 37		2x4 Ceiling Tile, White/ Beige Textured	No	None Detected	Cellulose Fiber 70% Mineral Wool 10% Gypsum Perlite Carbonates Binder/Filler 20%
0125273-038 38		2x4 Ceiling Tile, White/ Beige Textured	No	None Detected	Cellulose Fiber 70% Mineral Wool 10% Gypsum Perlite Carbonates Binder/Filler 20%

EMC LABS, INC.

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Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Laboratory Report
0125273

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client: ENVIRONMENTAL OPERATIONS Job# / P.O. #: 4927
Address: 1530 S. 2ND ST, STE 200 Date Received: 04/15/2013
ST. LOUIS MO 63104 Date Analyzed: 04/17/2013
Collected: 04/12/2013 Date Reported: 04/18/2013
Project Name: FORMER PORTER OIL OFFICE BUILDING EPA Method: EPA 600/R-93/116
Address: Submitted By: DALE L. EDGERLEY
Collected By:

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0125273-039		2x4 Ceiling Tile, White/ Beige Textured	No	None Detected	Cellulose Fiber Mineral Wool Gypsum Perlite Carbonates Binder/Filler 70% 10% 20%
0125273-040		LAYER 1 9" Floor Tile, Green	Yes	Chrysotile 7%	Carbonates Quartz Binder/Filler 93%
		LAYER 2 Mastic, Black	Yes	Chrysotile <1%	Cellulose Fiber Gypsum Carbonates Binder/Filler 10% 89%
0125273-041		LAYER 1 9" Floor Tile, Green	Yes	Chrysotile 10%	Carbonates Quartz Binder/Filler 90%
		LAYER 2 Mastic, Black Note: Difficult to separate adjacent layers	Yes	Chrysotile <1%	Cellulose Fiber Carbonates Quartz Binder/Filler 1% 98%
0125273-042		LAYER 1 9" Floor Tile, Green	Yes	Chrysotile 12%	Carbonates Quartz Binder/Filler 88%
		LAYER 2 Mastic, Black Note: Difficult to separate adjacent layers	No	None Detected	Cellulose Fiber Carbonates Binder/Filler 2% 98%
0125273-043		Window Glazing, White/ Beige	Yes	Chrysotile 2%	Carbonates Quartz Binder/Filler 98%

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Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	ENVIRONMENTAL OPERATIONS	Job# / P.O. #:	4927
Address:	1530 S. 2ND ST, STE 200	Date Received:	04/15/2013
	ST. LOUIS MO 63104	Date Analyzed:	04/17/2013
Collected:	04/12/2013	Date Reported:	04/18/2013
Project Name:	FORMER PORTER OIL OFFICE BUILDING	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	DALE L. EDGERLEY
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0125273-044 44		Window Glazing, White/ Beige	Yes	Chrysotile 2%	Carbonates Quartz Binder/Filler 98%
0125273-045 45		Window Glazing, White/ Beige	Yes	Chrysotile 3%	Carbonates Quartz Binder/Filler 97%
0125273-046 46		Seam Tape, White	Yes	Chrysotile 40%	Cellulose Fiber 45% Carbonates Gypsum Binder/Filler 15%
0125273-047 47		Seam Tape, White	Yes	Chrysotile 40%	Cellulose Fiber 45% Carbonates Gypsum Binder/Filler 15%
0125273-048 48		Seam Tape, White	Yes	Chrysotile 40%	Cellulose Fiber 45% Carbonates Gypsum Binder/Filler 15%
0125273-049 49		TSI Air-Cell Insulation, White/ Gray	Yes	Chrysotile 40%	Cellulose Fiber 45% Carbonates Gypsum Binder/Filler 15%
0125273-050 50		TSI Air-Cell Insulation, White/ Gray	Yes	Chrysotile 40%	Cellulose Fiber 45% Carbonates Gypsum Binder/Filler 15%

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Project Name: FORMER PORTER OIL OFFICE BUILDING EPA Method: EPA 600/R-93/116
Address: Submitted By: DALE L. EDGERLEY
Collected By:

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0125273-051 51		TSI Air-Cell Insulation, White/ Gray	Yes	Chrysotile 40%	Cellulose Fiber 45% Carbonates Gypsum Binder/Filler 15%
0125273-052 52		Tar Paper, Black	No	None Detected	Cellulose Fiber 60% Synthetic Fiber 5% Carbonates Binder/Filler 35%
0125273-053 53		Tar Paper, Black	No	None Detected	Cellulose Fiber 60% Synthetic Fiber 5% Carbonates Binder/Filler 35%
0125273-054 54		Tar Paper, Black	No	None Detected	Cellulose Fiber 60% Synthetic Fiber 5% Carbonates Binder/Filler 35%
0125273-055 55		Window Glazing, White	Yes	Chrysotile 3%	Carbonates Quartz Binder/Filler 97%
0125273-056 56		Window Glazing, White	Yes	Chrysotile 3%	Carbonates Quartz Binder/Filler 97%
0125273-057 57		Window Glazing, White	Yes	Chrysotile 3%	Carbonates Quartz Binder/Filler 97%
0125273-058 58		Attic Insulation, Brown	No	None Detected	Cellulose Fiber 95% Gypsum 5%

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Project Name: FORMER PORTER OIL OFFICE BUILDING EPA Method: EPA 600/R-93/116
Address: Submitted By: DALE L. EDGERLEY
Collected By:

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0125273-059 59		Attic Insulation, Brown	No	None Detected	Cellulose Fiber 97% Gypsum 3%
0125273-060 60		Attic Insulation, Brown	No	None Detected	Cellulose Fiber 97% Gypsum 3%
0125273-061 61		TSI Block Insulation, Beige	Yes	Chrysotile 10% Amosite 10%	Carbonates Gypsum Mica Binder/Filler 80%
0125273-062 62		TSI Block Insulation, Beige	Yes	Chrysotile 10% Amosite 10%	Carbonates Gypsum Mica Binder/Filler 80%
0125273-063 63		TSI Block Insulation, Beige	Yes	Chrysotile 10% Amosite 10%	Carbonates Gypsum Mica Binder/Filler 80%
0125273-064 64		Boiler Packing, Gray/ Black	No	None Detected	Wollastonite 15% Carbonates Gypsum Quartz Binder/Filler 85%
0125273-065 65		Boiler Packing, Gray/ Black	No	None Detected	Wollastonite 15% Carbonates Gypsum Quartz Binder/Filler 85%

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Project Name: FORMER PORTER OIL OFFICE BUILDING EPA Method: EPA 600/R-93/116
Address: Submitted By: DALE L. EDGERLEY
Collected By:

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0125273-066 66		Boiler Packing, Gray/ Black	No	None Detected	Wollastonite 15% Carbonates Gypsum Quartz Binder/Filler 85%
0125273-067 67		Linoleum, Lt. Blue/ Beige	No	None Detected	Fibrous Glass 10% Carbonates Quartz Binder/Filler 90%
0125273-068 68		Linoleum, Lt. Blue/ Beige	No	None Detected	Fibrous Glass 10% Carbonates Quartz Binder/Filler 90%
0125273-069 69		Linoleum, Lt. Blue/ Beige	No	None Detected	Fibrous Glass 10% Carbonates Quartz Binder/Filler 90%
0125273-070 70		LAYER 1 Sheet Flooring, Tan	No	None Detected	Cellulose Fiber 12% Carbonates Quartz Binder/Filler 88%
		LAYER 2 Burlap, Brown	No	None Detected	Cellulose Fiber 90% Carbonates Binder/Filler 10%
0125273-071 71		LAYER 1 Sheet Flooring, Tan	No	None Detected	Cellulose Fiber 12% Carbonates Quartz Binder/Filler 88%
		LAYER 2 Burlap, Brown	No	None Detected	Cellulose Fiber 90% Carbonates Binder/Filler 10%

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Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	ENVIRONMENTAL OPERATIONS	Job# / P.O. #:	4927
Address:	1530 S. 2ND ST, STE 200	Date Received:	04/15/2013
	ST. LOUIS MO 63104	Date Analyzed:	04/17/2013
Collected:	04/12/2013	Date Reported:	04/18/2013
Project Name:	FORMER PORTER OIL OFFICE BUILDING	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	DALE L. EDGERLEY
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0125273-072 72		LAYER 1 Sheet Flooring, Tan	No	None Detected	Cellulose Fiber 12% Carbonates Quartz Binder/Filler 88%
		LAYER 2 Burlap, Brown	No	None Detected	Cellulose Fiber 90% Carbonates Binder/Filler 10%
0125273-073 73		Window Caulking, White	No	None Detected	Carbonates Quartz Binder/Filler 100%
0125273-074 74		Window Caulking, White	No	None Detected	Carbonates Quartz Binder/Filler 100%
0125273-075 75		Window Caulking, White	No	None Detected	Carbonates Quartz Binder/Filler 100%
0125273-076 76		Roofing Material, Black	Yes	Chrysotile 10%	Carbonates Quartz Binder/Filler 90%
0125273-077 77		Roofing Material, Black	No	None Detected	Cellulose Fiber 60% Gypsum Binder/Filler 40%
0125273-078 78		Roofing Material, Black	Yes	Chrysotile 5%	Cellulose Fiber 15% Carbonates Quartz Binder/Filler 80%

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Project Name: FORMER PORTER OIL OFFICE BUILDING EPA Method: EPA 600/R-93/116
Address: Submitted By: DALE L. EDGERLEY
Collected By:

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0125273-079 79		LAYER 1 Roof Material/Flashing, White/ Black Note: Difficult to separate adjacent layers	No	None Detected	Cellulose Fiber 20% Carbonates Quartz Binder/Filler 80%
		LAYER 2 Roofing, Green/ Black	No	None Detected	Cellulose Fiber 15% Carbonates Quartz Binder/Filler 85%
0125273-080 80		LAYER 1 Roof Material/Flashing, White/ Black Note: Difficult to separate adjacent layers	No	None Detected	Cellulose Fiber 20% Carbonates Quartz Binder/Filler 80%
		LAYER 2 Roofing, Green/ Black	No	None Detected	Cellulose Fiber 15% Carbonates Quartz Binder/Filler 85%
0125273-081 81		LAYER 1 Roof Material/Flashing, White/ Black Note: Difficult to separate adjacent layers	No	None Detected	Cellulose Fiber 20% Carbonates Quartz Binder/Filler 80%
		LAYER 2 Roofing, Green/ Black	No	None Detected	Cellulose Fiber 15% Carbonates Quartz Binder/Filler 85%

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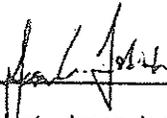
Laboratory Report
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Bulk Asbestos Analysis by Polarized Light Microscopy

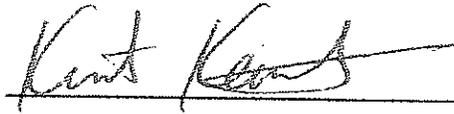
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Collected: 04/12/2013 Date Reported: 04/18/2013
Project Name: FORMER PORTER OIL OFFICE BUILDING EPA Method: EPA 600/R-93/116
Address: Submitted By: DALE L. EDGERLEY
Collected By:

Lab ID	Sample	Layer Name /	Asbestos	Asbestos Type	Non-Asbestos
Client ID	Location	Sample Description	Detected	(%)	Constituents



Analyst - Jason Jedinak



Signatory - Lab Director - Kurt Kettler

Distinctly stratified, easily separable layers of samples are analyzed as subsamples of the whole and are reported separately for each discernible layer. All analyses are derived from calibrated visual estimate and measured in area percent unless otherwise noted. The report applies to the standards or procedures identified and to the sample(s) tested. The test results are not necessarily indicative of representative of the qualities of the lot from which the sample was taken or of apparently identical or similar products, nor do they represent an ongoing quality assurance program unless so noted. These reports are for the exclusive use of the addressed client and that they will not be reproduced wholly or in part for advertising or other purposes over our signature or in connection with our name without special written permission. The report shall not be reproduced except in full, without written approval by our laboratory. The samples not destroyed in testing are retained a maximum of thirty days. The laboratory measurement of uncertainty for the test method is approximately less than 1 by area percent. Accredited by the National Institute of Standards and Technology, Voluntary Laboratory Accreditation Program for selected test method for asbestos. The accreditation of any reports generated by this laboratory in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. Polarized Light Microscopy may not be consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.

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Laboratory Report
0125274

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client: ENVIRONMENTAL OPERATIONS Job# / P.O. #: 4927 4927
Address: 1530 S. 2ND ST, STE 200 Date Received: 04/15/2013
ST. LOUIS MO 63104 Date Analyzed: 04/17/2013
Collected: 04/09/2013 Date Reported: 04/17/2013
Project Name: FORMER PORTER OIL CONCRETE MAINTENANCE BYUKDUNG AN EPA Method: EPA 600/R-93/116
Address: Submitted By: DALE L. EDGERLEY
Collected By:

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0125274-001 1	MAIN BLDG.	Window Glaze, White/ Off White	Yes	Chrysotile 5%	Carbonates Quartz Binder/Filler 95%
0125274-002 2	MAIN BLDG.	Window Glaze, White/ Off White	Yes	Chrysotile 5%	Carbonates Quartz Binder/Filler 95%
0125274-003 3	MAIN BLDG.	Window Glaze, White/ Off White	Yes	Chrysotile 5%	Carbonates Quartz Binder/Filler 95%
0125274-004 4	MAIN BLDG.	Electrical Panel, Black	Yes	Chrysotile 30%	Carbonates Gypsum Quartz Binder/Filler 70%
0125274-005 5	MAIN BLDG.	Electrical Panel, Black	Yes	Chrysotile 50%	Gypsum Quartz Binder/Filler 50%
0125274-006 6	MAIN BLDG.	Electrical Panel, Black	Yes	Chrysotile 50%	Gypsum Quartz Binder/Filler 50%
0125274-007 7	MAIN BLDG.	Brake Pads, Black	Yes	Chrysotile 35%	Gypsum Quartz Binder/Filler 65%

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Bulk Asbestos Analysis by Polarized Light Microscopy

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ST. LOUIS MO 63104 Date Analyzed: 04/17/2013
Collected: 04/09/2013 Date Reported: 04/17/2013
Project Name: FORMER PORTER OIL CONCRETE EPA Method: EPA 600/R-93/116
MAINTENANCE BYUKDUNG AN Submitted By: DALE L. EDGERLEY
Address: Collected By:

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0125274-008 8	MAIN BLDG.	Brake Pads, Black	Yes	Chrysotile 35%	Gypsum Quartz Binder/Filler 65%
0125274-009 9	MAIN BLDG.	Brake Pads, Black	Yes	Chrysotile 35%	Gypsum Quartz Binder/Filler 65%
0125274-010 10	PUMP SHED	Pump Shed Roofing, Gray/ Black	No	None Detected	Cellulose Fiber 30% Gypsum Quartz Binder/Filler 70%
0125274-011 11	PUMP SHED	Pump Shed Roofing, Gray/ Black	No	None Detected	Cellulose Fiber 30% Gypsum Quartz Binder/Filler 70%
0125274-012 12	PUMP SHED	Pump Shed Roofing, Gray/ Black	No	None Detected	Cellulose Fiber 30% Gypsum Quartz Binder/Filler 70%
0125274-013 13	PUMP SHED	Pump Shed Flashing, Black	Yes	Chrysotile 25%	Cellulose Fiber 25% Gypsum Quartz Binder/Filler 50%
0125274-014 14	PUMP SHED	Pump Shed Flashing, Black	Yes	Chrysotile 25%	Cellulose Fiber 25% Gypsum Quartz Binder/Filler 50%

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Laboratory Report
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MAINTENANCE BYUKDUNG AN Submitted By: DALE L. EDGERLEY
Address:

Collected By:

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0125274-015 15	PUMP SHED	Pump Shed Flashing, Black	Yes	Chrysotile 25%	Cellulose Fiber 25% Gypsum Quartz Binder/Filler 50%
0125274-016 16	PUMP SHED	LAYER 1 Pump Shed Pipe Insulation, White	Yes	Chrysotile 80%	Cellulose Fiber 10% Gypsum Carbonates Binder/Filler 10%
		LAYER 2 Pump Shed Pipe Insulation, White	Yes	Chrysotile 80%	Cellulose Fiber 10% Gypsum Carbonates Binder/Filler 10%
0125274-017 17	PUMP SHED	Pump Shed Pipe Insulation, White	Yes	Chrysotile 80%	Cellulose Fiber 10% Gypsum Carbonates Binder/Filler 10%
0125274-018 18	PUMP SHED	LAYER 1 Pump Shed Pipe Insulation, White	Yes	Chrysotile 80%	Cellulose Fiber 10% Gypsum Carbonates Binder/Filler 10%
		LAYER 2 Pump Shed Pipe Insulation, White	Yes	Chrysotile 80%	Cellulose Fiber 10% Gypsum Carbonates Binder/Filler 10%
0125274-019 19	MAIN BLDG.	Roofing/ Flashing, Black	Yes	Chrysotile 20%	Cellulose Fiber 20% Gypsum Carbonates Quartz Binder/Filler 60%

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Project Name: FORMER PORTER OIL CONCRETE EPA Method: EPA 600/R-93/116
MAINTENANCE BYUKDUNG AN Submitted By: DALE L. EDGERLEY
Address: Collected By:

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0125274-020 20	MAIN BLDG.	LAYER 1 Roofing, Black	Yes	Chrysotile 20%	Cellulose Fiber 20% Gypsum Carbonates Quartz Binder/Filler 60%
		LAYER 2 Flashing, Black	Yes	Chrysotile 20%	Cellulose Fiber 20% Gypsum Carbonates Quartz Binder/Filler 60%
0125274-021 21	MAIN BLDG.	LAYER 1 Roofing, Black	Yes	Chrysotile 20%	Cellulose Fiber 20% Gypsum Carbonates Quartz Binder/Filler 60%
		LAYER 2 Flashing, Black	Yes	Chrysotile 20%	Cellulose Fiber 20% Gypsum Carbonates Quartz Binder/Filler 60%



Analyst - Kurt Kettler



Signatory - Lab Manager - Ken Scheske

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EOI Project #4927
St. Louis Development Corporation
May 21, 2013

ATTACHMENT 3

Laboratory Chain-of-Custody

CHAIN OF CUSTODY

EMC Laboratories
 9830 S. 51ST St., Ste B-109
 Phoenix, AZ 85044
 (800) 362-3373 Fax (480) 893-1726

1000K
 TAT: 1-2³ days
 Rec'd APR 15 PM

COMPANY NAME: ENVIRONMENTAL OPERATIONS, INC.
1530 S. 2ND Street
St. Louis, MO 63104
 CONTACT: Dale Edgerley - Cell (314) 258-2053
 Phone/Fax: (314) 241-0900 / (314) 436-2900
 Email: Dale@environmentalops.com

BILL TO: (If Different Location)
SAME
E-MAILED APR 18 2013

Now Accepting: VISA - MASTERCARD Price Quoted: \$ _____ / Sample \$ _____ / Layers

COMPLETE ITEMS 1-4: (Failure to complete any items may cause a delay in processing or analyzing your samples)

1. **TURNAROUND TIME:** [4hr rush] [8hr rush] [1-Day] / [2-Day] [3-Day] [5-Day] [6-10 Day]

Prior confirmation of turnaround time is required
Additional charges for rush analysis (please call marketing department for pricing details)
Laboratory analysis may be subject to delay if credit terms are not met

2. **TYPE OF ANALYSIS:** [Bulk-PLM] [Air-PCM] [Lead] [Point Count] [Fungi: AOC, W-C, Bulk, Swab, Tape]

3. **DISPOSAL INSTRUCTIONS:** [Dispose of samples at EMC] / [Return samples to me at my expense]
 (If you do not indicate preference, EMC will dispose of samples 60 days from analysis.)

4. Project Name: Former Porter Oil Office Building
 P.O. Number: 4927 Project Number: 4927

EMC SAMPLE #	CLIENT SAMPLE #	DATE & TIME SAMPLED	LOCATION/MATERIAL TYPE	Samples Accepted Yes / No	AIR SAMPLE INFO / COMMENTS		
					ON	OFF	FLOW RATE
1,2,3	1,2,3	4-12-13	12" Ceiling Tile Pin Dot	<input checked="" type="checkbox"/> N			
4,5,6	4,5,6	4-12-13	Linoleum Beige Small Pebble Pattern	<input checked="" type="checkbox"/> N			
7,8,9	7,8,9	4-12-13	Plaster Walls	<input checked="" type="checkbox"/> N			
10,11,12	10,11,12	4-12-13	Sheet Flooring Brown w/Burlap Backing	<input checked="" type="checkbox"/> N			
13,14,15	13,14,15	4-12-13	12" Ceiling Tile Squiggly Lines	<input checked="" type="checkbox"/> N			
16,17,18	16,17,18	4-12-13	9" Floor Tile Light Brown	<input checked="" type="checkbox"/> N			
19,20,21	19,20,21	4-12-13	Drywall & Joint Compound	<input checked="" type="checkbox"/> N			
22,23,24	22,23,24	4-12-13	12" Floor Tile Brown Wood Grain	<input checked="" type="checkbox"/> N			
25,26,27	25,26,27	4-12-13	2' x 4' Ceiling Tile Smooth	<input checked="" type="checkbox"/> N			
28,29,30	28,29,30	4-12-13	Ceiling Plaster	<input checked="" type="checkbox"/> N			
31,32,33	31,32,33	4-12-13	12" Ceiling Tile Large Holes	<input checked="" type="checkbox"/> N			
34,35,36	34,35,36	4-12-13	Adhesive Mastic Hockey Pucks	<input checked="" type="checkbox"/> N			
37,38,39	37,38,39	4-12-13	2' x 4' Ceiling Tile Textured	<input checked="" type="checkbox"/> N			
40,41,42	40,41,42	4-12-13	9" Floor Tile Green w/Black Mastic	<input checked="" type="checkbox"/> N			
43,44,45	43,44,45	4-12-13	Window Glazing Wood Windows	<input checked="" type="checkbox"/> N			
46,47,48	46,47,48	4-12-13	Roll of Seam Tape	<input checked="" type="checkbox"/> N			
49,50,51	49,50,51	4-12-13	TSI Air-cell Pipe Insulation	<input checked="" type="checkbox"/> N			
52,53,54	52,53,54	4-12-13	Tar Paper on Stairs	<input checked="" type="checkbox"/> N			
55,56,57	55,56,57	4-12-13	Window Glazing on Metal Windows	<input checked="" type="checkbox"/> N			
58,59,60	58,59,60	4-12-13	Attic Insulation Brown	<input checked="" type="checkbox"/> N			
61,62,63	61,62,63	4-12-13	TSI Block Insulation	<input checked="" type="checkbox"/> N			
				<input checked="" type="checkbox"/> N			

64,65,66	64,65,66	4-12-13	Boiler Packing	(Y) N		
67,68,69	67,68,69	4-12-13	Light Blue Linoleum	Y N		
70,71,72	70,71,72	4-12-13	Light Brown Sheet Flooring w/Burlap	Y N		
73,74,75	73,74,75	4-12-13	Window Caulking	Y N		
76,77,78	76,77,78	4-12-13	Roofing Material	Y N		
79,80,81	79,80,81	4-12-13	Roof Flashing	(Y) N		
				Y N		
				Y N		

SPECIAL INSTRUCTIONS: Composite only on the drywall and joint compound

Sample Collector: (Print) Dale L. Edgerley

(Signature) *Dale L. Edgerley*

Relinquished by: Dale L. Edgerley Date/Time: 4-12-13 Received by: *A. Jone* Date/Time: 4/15/13

Relinquished by: *A. Jone* Date/Time: 4/15/13 Received by: *A. Jone* Date/Time: 4/15/13

Relinquished by: _____ Date/Time _____ Received by: _____ Date/Time: _____

** In the event of any dispute between the above parties for these services or otherwise, parties agree that jurisdiction and venue will be in Phoenix, Arizona and prevailing party will be entitled to attorney's fees and court costs.

CHAIN OF CUSTODY
EMC Laboratories
 9830 S. 51ST St., Ste B-109
 Phoenix, AZ 85044
 (800) 362-3373 Fax (480) 893-1726

LAB#: 125274
 TAT: 1-2 days
 Rec'd APR 15 PM

COMPANY NAME: ENVIRONMENTAL OPERATIONS, INC.
1530 S. 2ND Street
St. Louis, MO 63104
 CONTACT: Dale Edgerley - Cell (314) 258-2053
 Phone/Fax: (314) 241-0900 / (314) 436-2900
 Email: Dale@environmentalops.com

BILL TO: _____ (If Different Location)

 SAME

 E-MAILED APR 17 2013

Now Accepting: **VISA - MASTERCARD** Price Quoted: \$ _____ / Sample \$ _____ / Layers

COMPLETE ITEMS 1-4: (Failure to complete any items may cause a delay in processing or analyzing your samples)

1. **TURNAROUND TIME:** [4hr rush] [8hr rush] [1-Day] / [2-Day] [3-Day] [5-Day] [6-10 Day]

****Prior confirmation of turnaround time is required
 ****Additional charges for rush analysis (please call marketing department for pricing details)
 ****Laboratory analysis may be subject to delay if credit terms are not met

2. **TYPE OF ANALYSIS:** [Bulk-PLM] [Air-PCM] [Lead] [Point Count] [Fungi: AOC, W-C, Bulk, Swab, Tape]

3. **DISPOSAL INSTRUCTIONS:** [Dispose of samples at EMC] / [Return samples to me at my expense]
 (If you do not indicate preference, EMC will dispose of samples 60 days from analysis.)

4. Project Name: <u>Former Porter Oil Concrete Maintenance Building and Pump Shed</u>							
P.O. Number: <u>4927</u>			Project Number: <u>4927</u>				
EMC SAMPLE #	CLIENT SAMPLE #	DATE & TIME SAMPLED	LOCATION/MATERIAL TYPE	Samples Accepted Yes / No	AIR SAMPLE INFO / COMMENTS		
					ON	OFF	FLOW RATE
<u>1,2,3</u>	<u>1,2,3</u>	<u>4-9-13</u>	<u>Main Bldg. Window Glazing</u>	<u>Y</u> N			
<u>4,5,6</u>	<u>4,5,6</u>	<u>4-9-13</u>	<u>Main Bldg. Electrical Panel</u>	Y N			
<u>7,8,9</u>	<u>7,8,9</u>	<u>4-9-13</u>	<u>Main Bldg. Brake Pads</u>	Y N			
<u>10,11,12</u>	<u>10,11,12</u>	<u>4-9-13</u>	<u>Pump Shed Roofing</u>	Y N			
<u>13,14,15</u>	<u>13,14,15</u>	<u>4-9-13</u>	<u>Pump Shed Flashing</u>	Y N			
<u>16,17,18</u>	<u>16,17,18</u>	<u>4-9-13</u>	<u>Pump Shed Pipe Insulation</u>	Y N			
<u>19,20,21</u>	<u>19,20,21</u>	<u>4-9-13</u>	<u>Main Bldg. Roofing/Flashing</u>	<u>Y</u> N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			

SPECIAL INSTRUCTIONS:

Sample Collector: (Print) Dale L. Edgerley (Signature) [Signature]
 Relinquished by: Dale L. Edgerley Date/Time: 4-12-13 Received by: [Signature] Date/Time: 4/15/13
 Relinquished by: [Signature] Date/Time: 4/15/13 Received by: [Signature] Date/Time: 4/16/13
 Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____

** In the event of any dispute between the above parties for these services or otherwise, parties agree that jurisdiction and venue will be in Phoenix, Arizona and prevailing party will be entitled to attorney's fees and court costs.

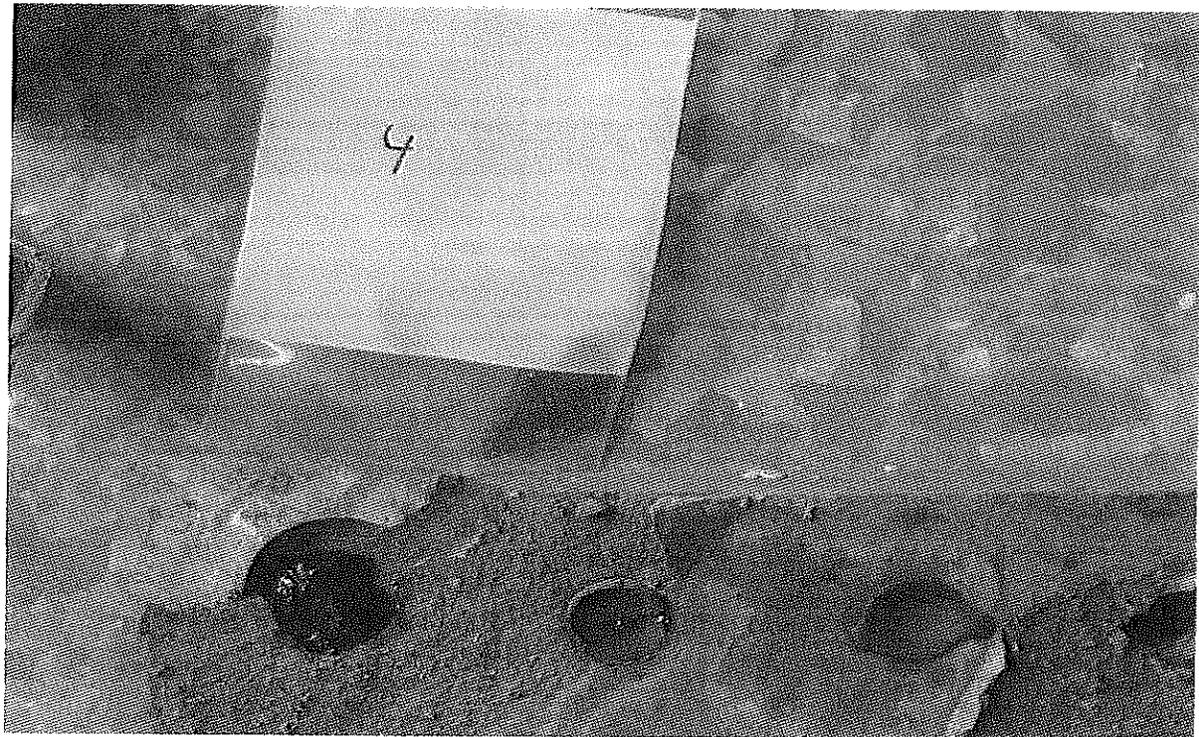
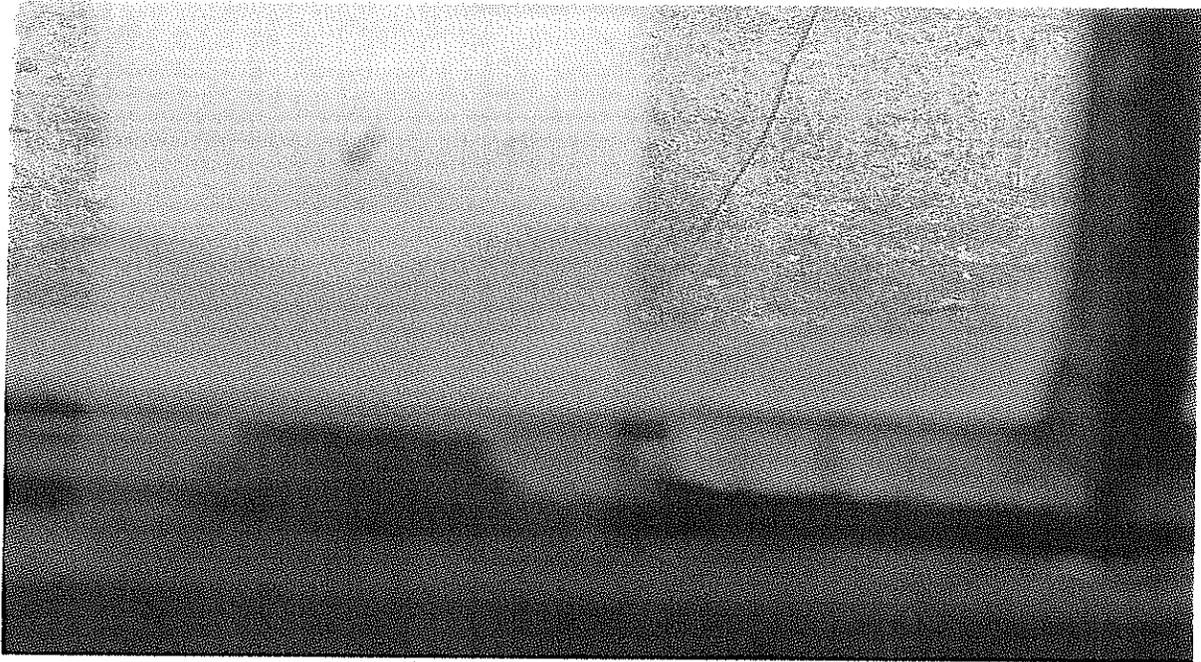
EO1 Project #4927
St. Louis Development Corporation
May 21, 2013

ATTACHMENT 4

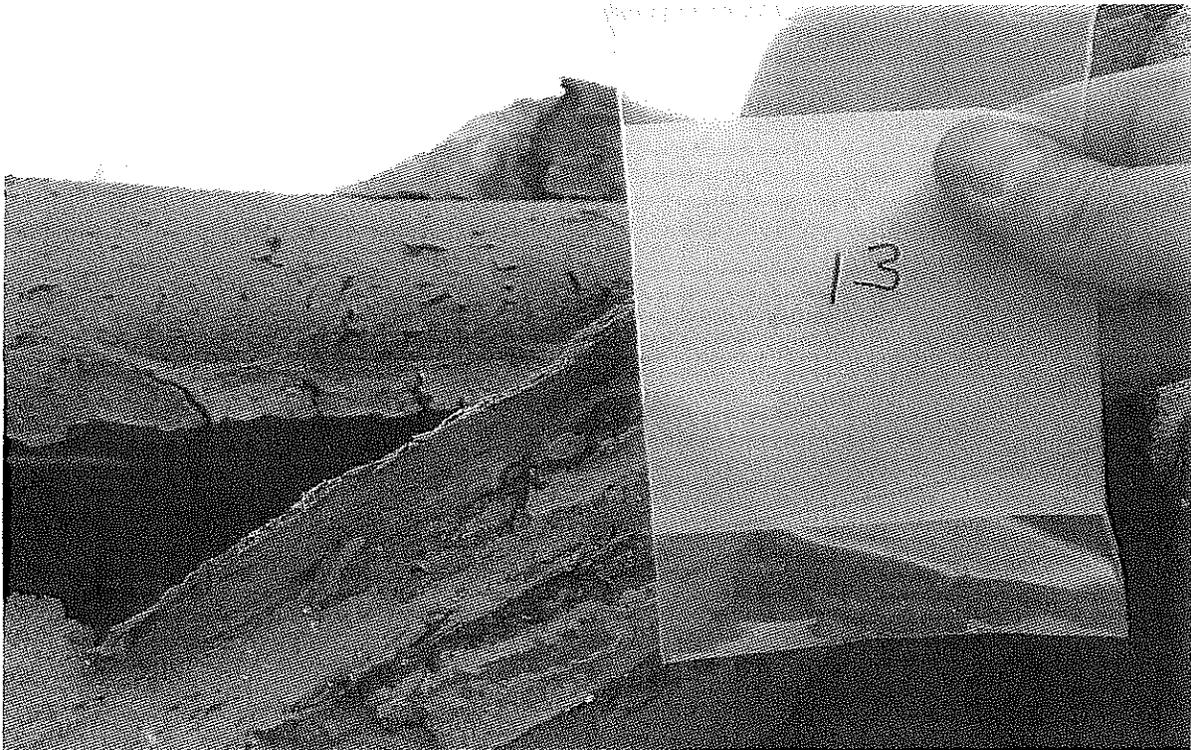
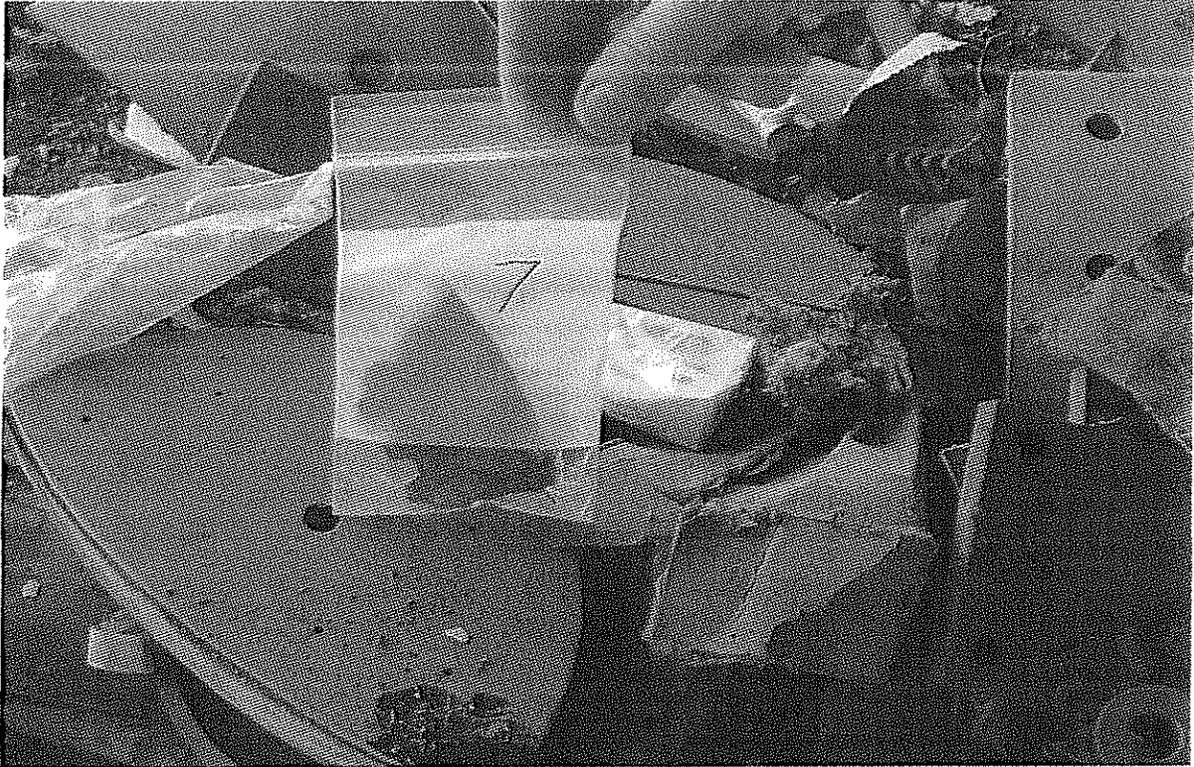
ACM Pictures

Pictures of ACM Findings

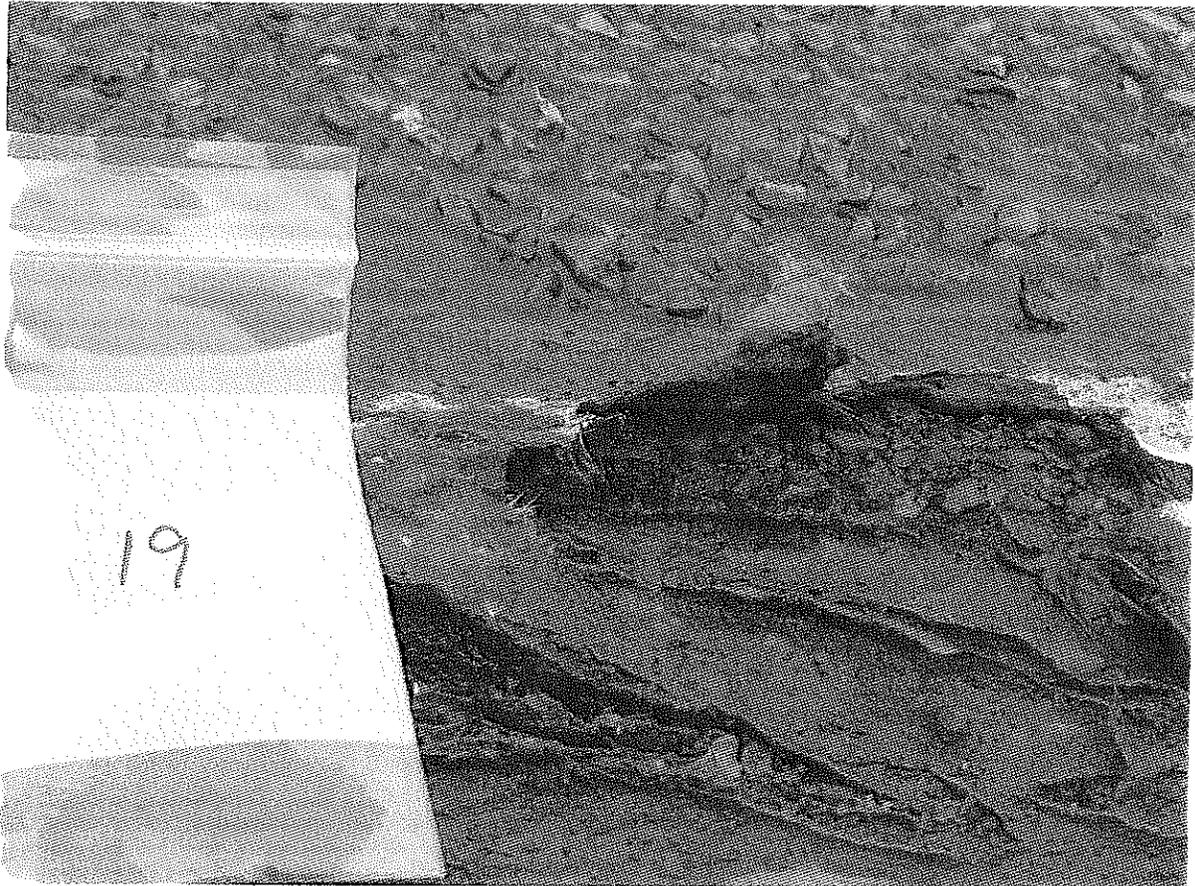
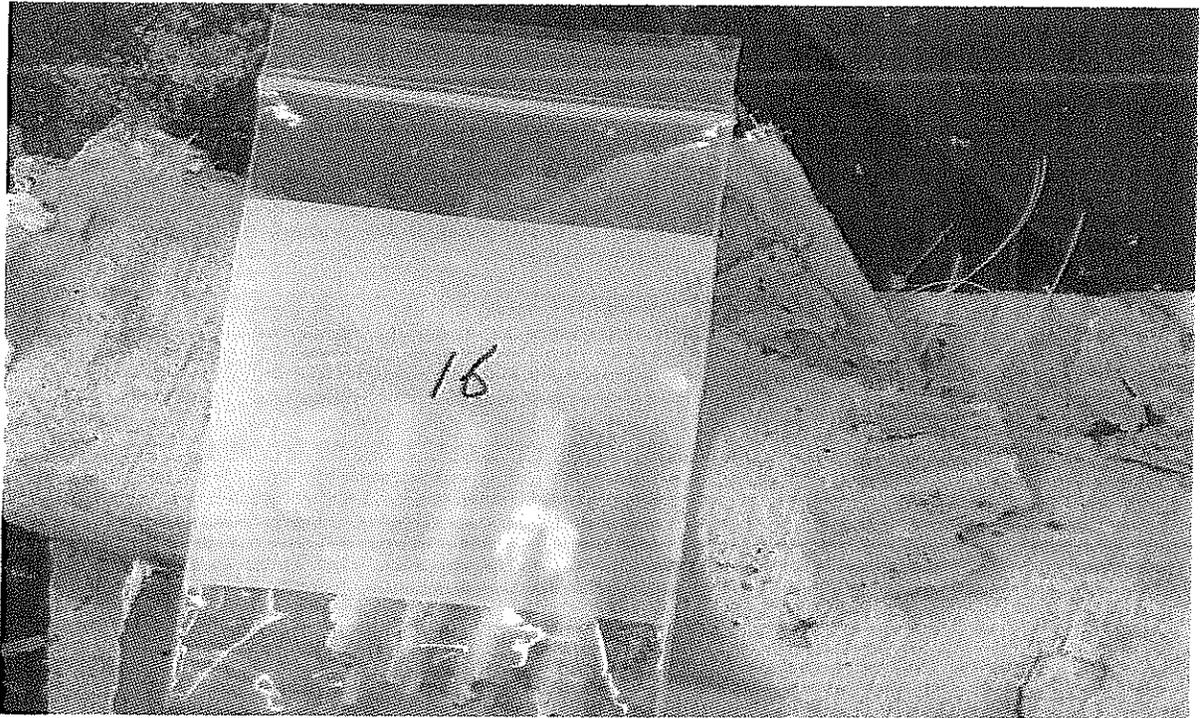
Maintenance bulding and Pump shed



Pictures of ACM Findings

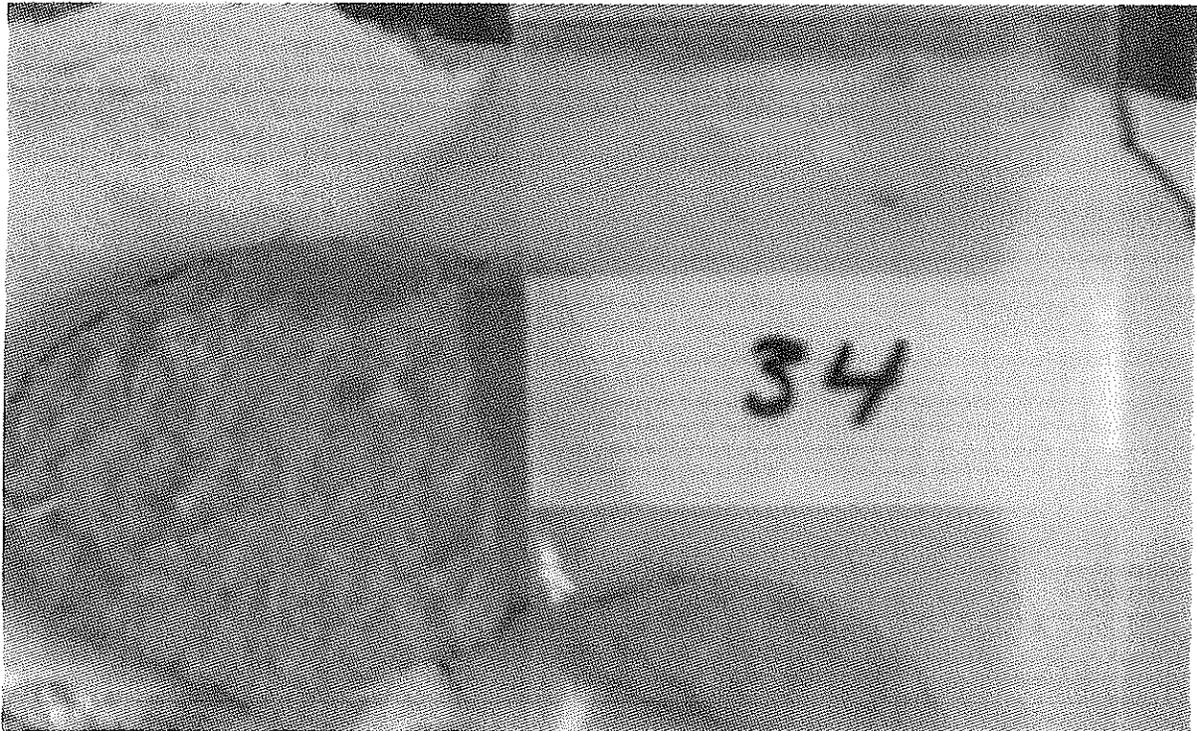


Pictures of ACM Findings

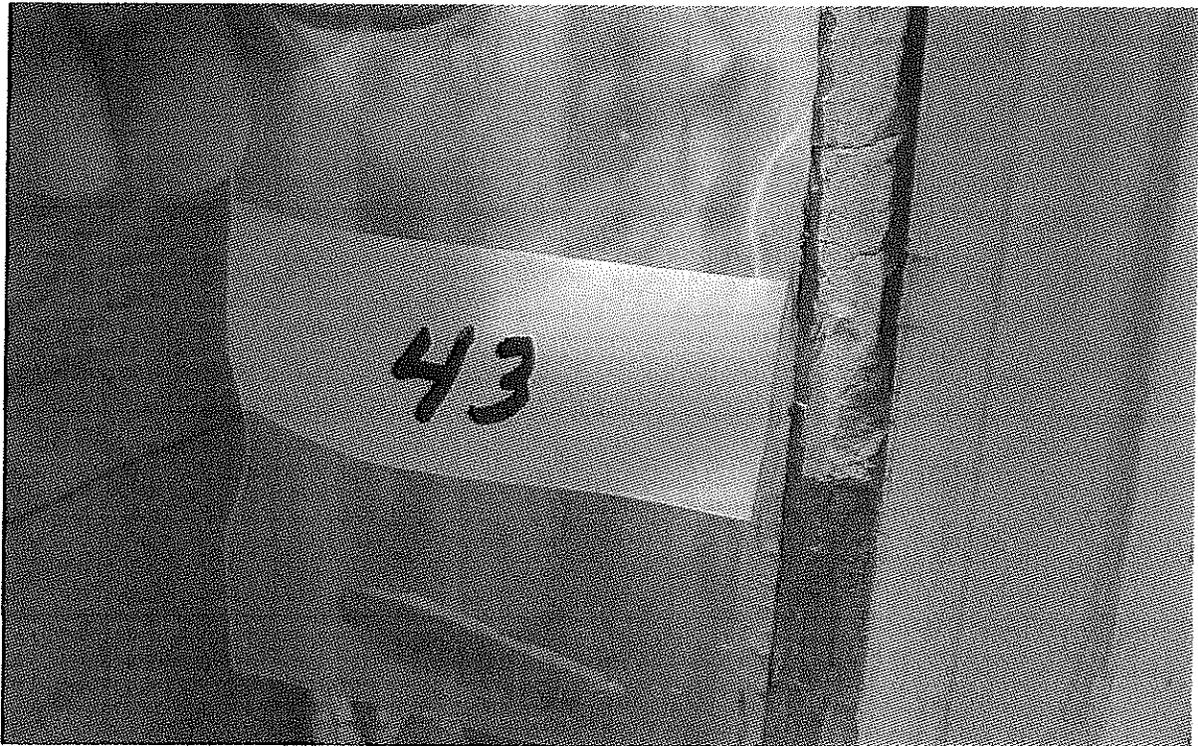
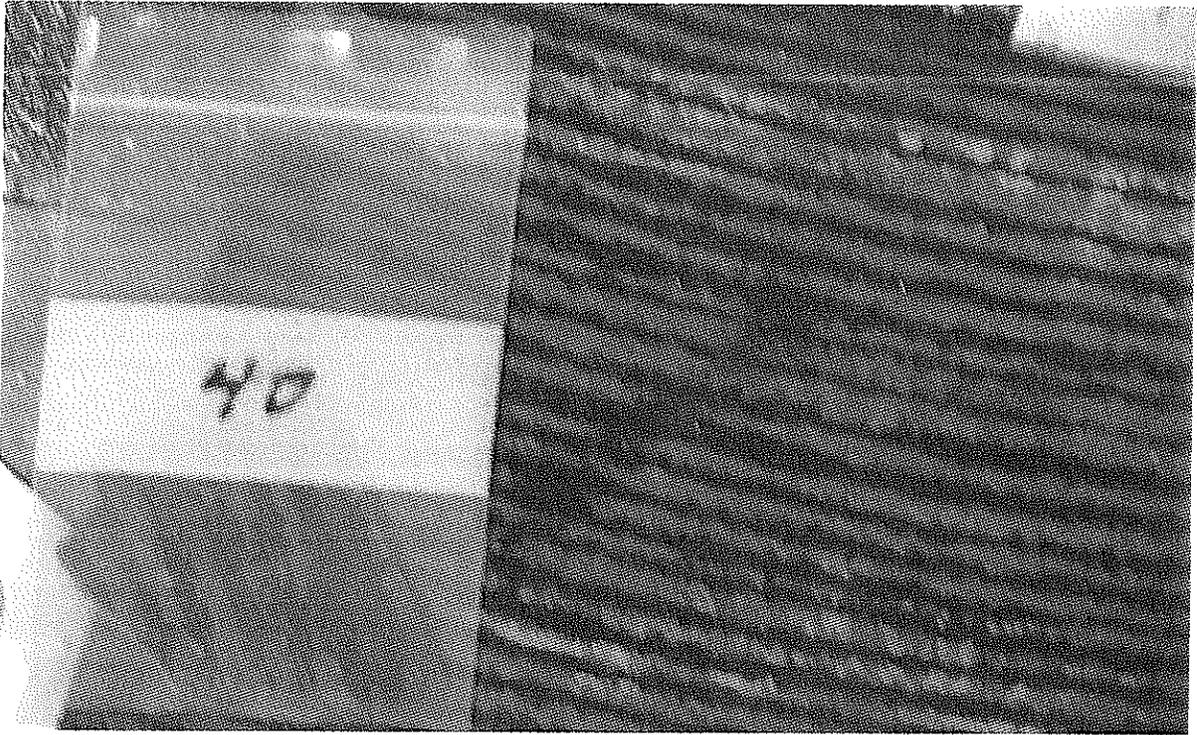


Pictures of ACM Findings

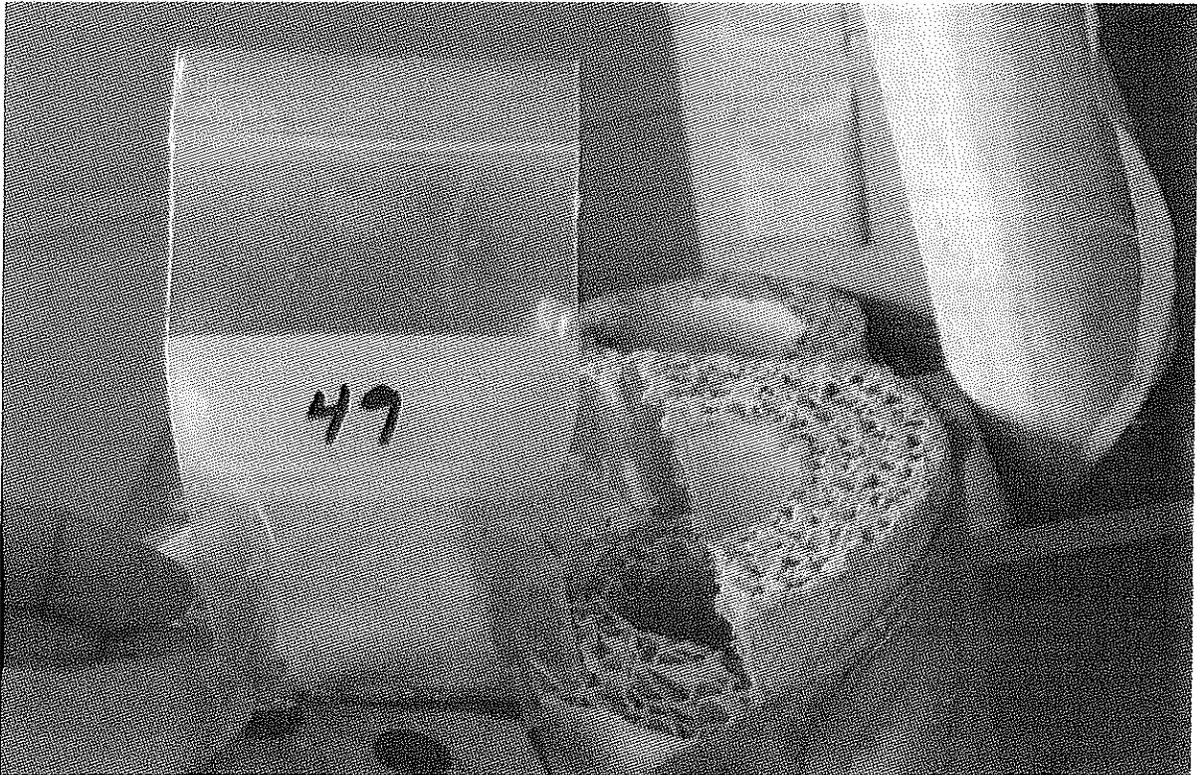
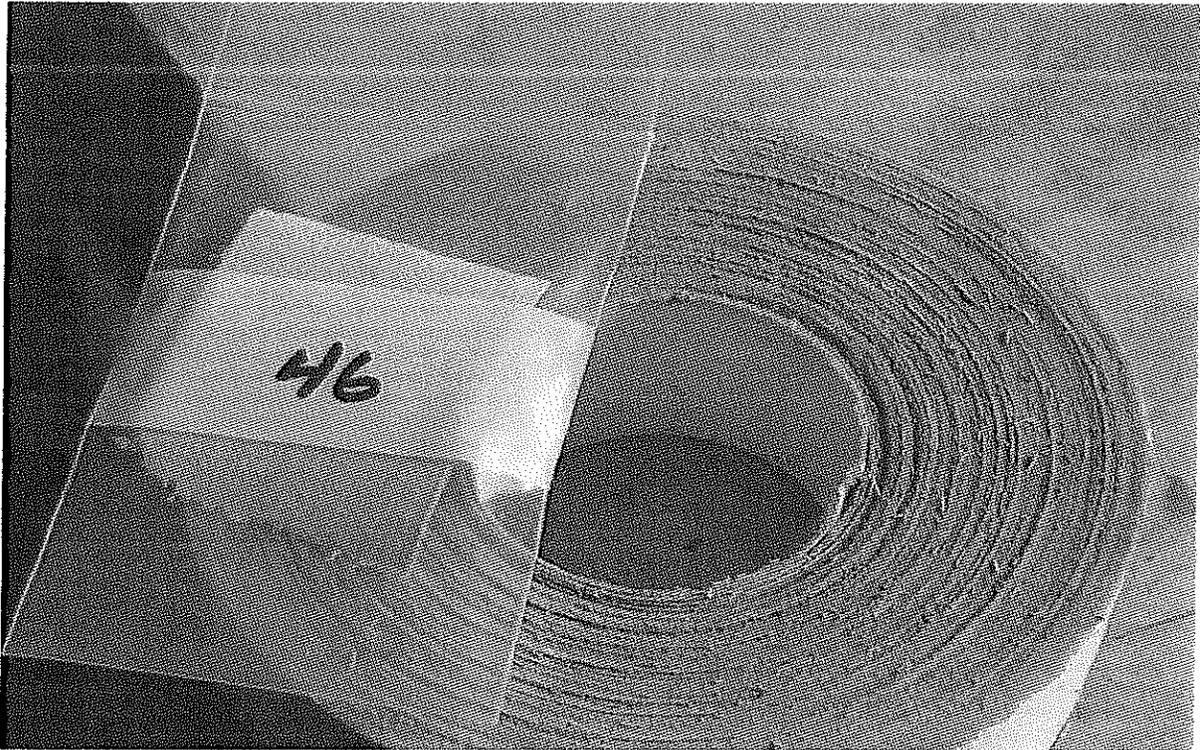
Office building



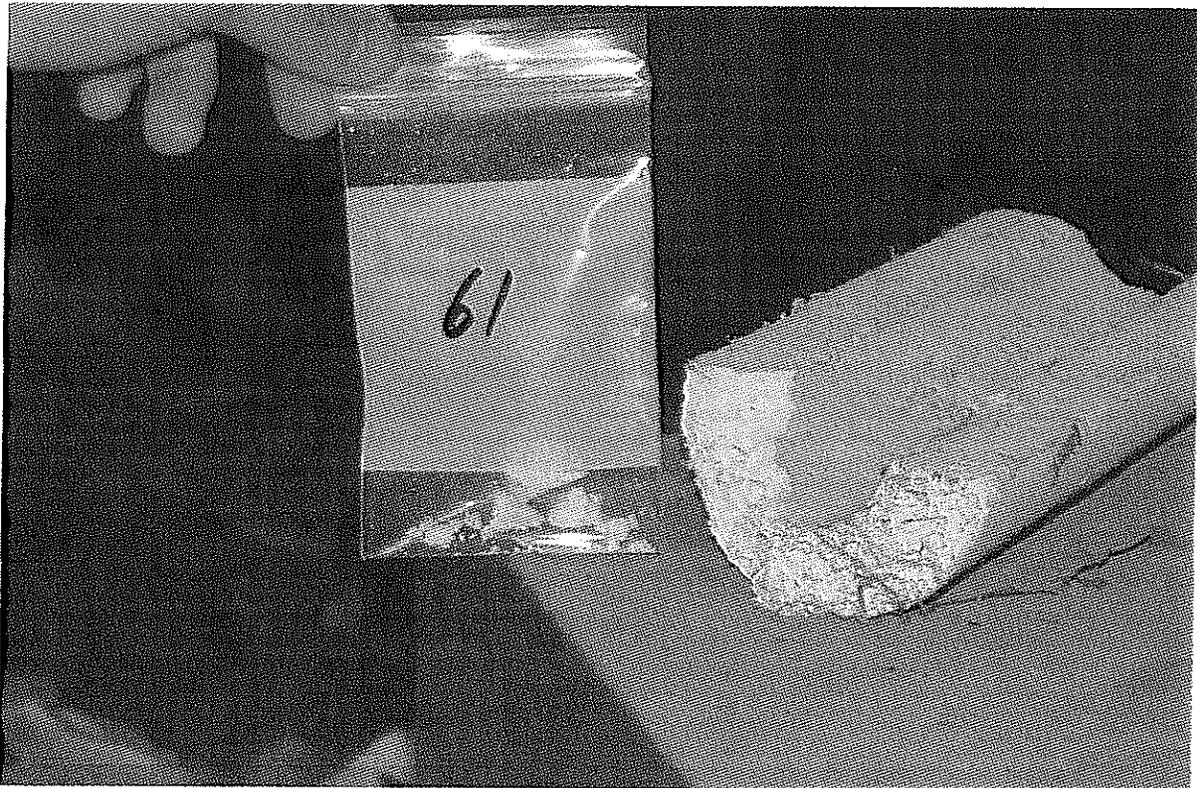
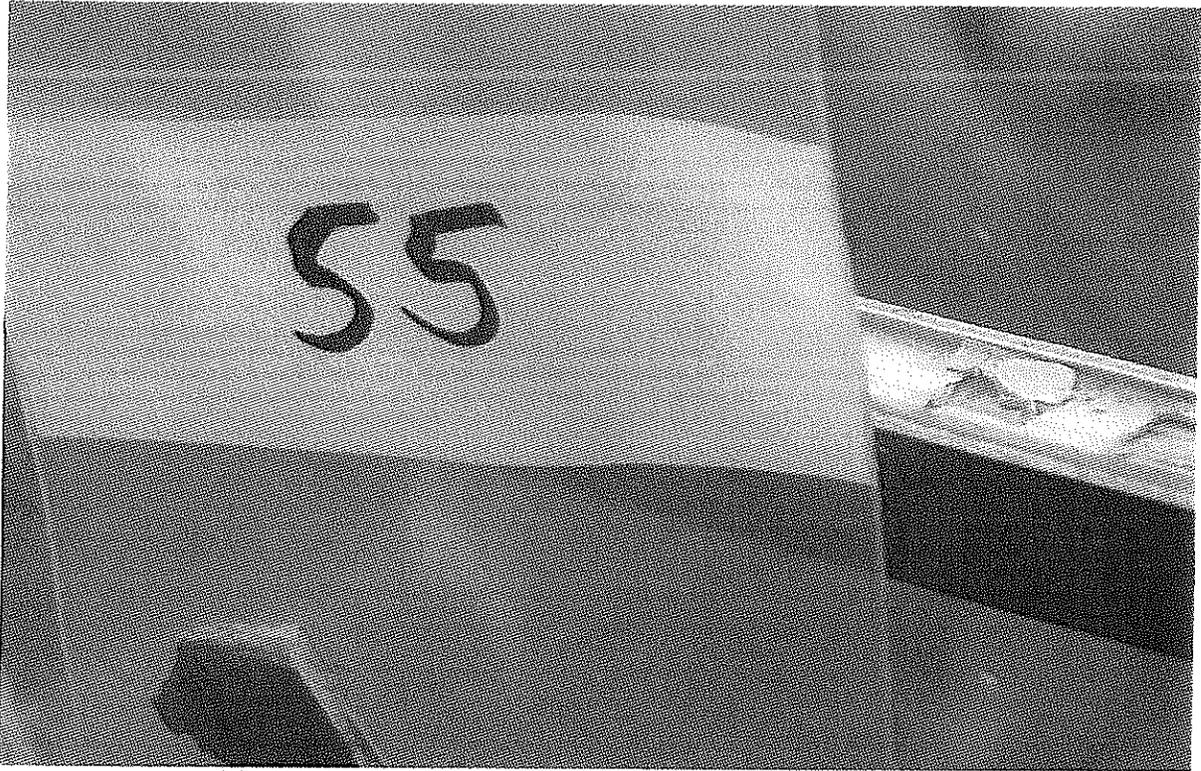
Pictures of ACM Findings



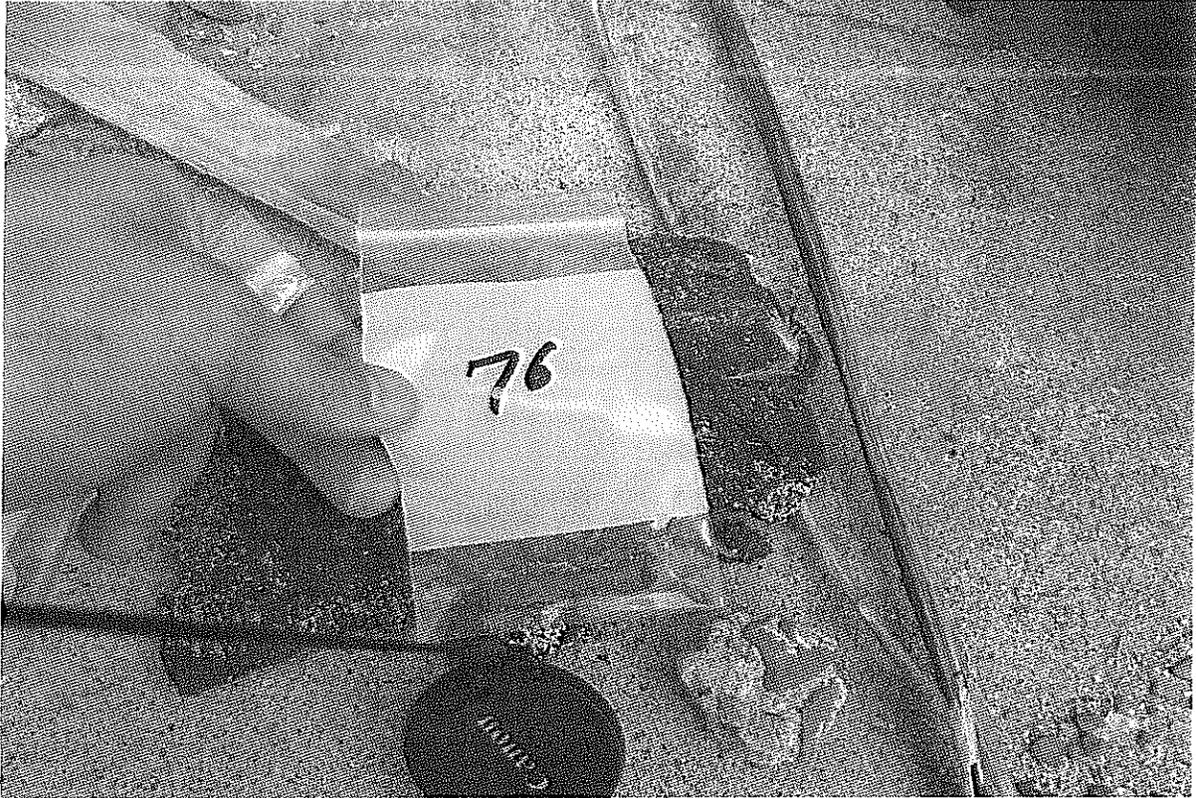
Pictures of ACM Findings



Pictures of ACM Findings



Pictures of ACM Findings



EOI Project #4927
St. Louis Development Corporation
May 21, 2013

ATTACHMENT 5
Inspector Certifications

Expiration Date 8/27/2013

Certificate Number: 7118081712MOIR2193

Training Date: 8/17/2012

Missouri State Certificate for Asbestos Related Occupations

Issued by Department of Natural Resources

P.O. Box 176

Jefferson City, MO 65102

Phone (573) 751-4817

Dale L. Edgerley

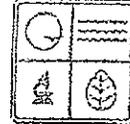
has successfully completed the requirements for certification as a INSPECTOR. This Missouri State Certification is subject to review and the director may deny, suspend or revoke the certification per RSMo chapter 643.230.

8/28/2012

Date

Kyra L Moore

Director of Air Pollution Control Program



Expiration Date 4/24/2014 Certificate Number: 7118041213MOIR15594
Training Date: 4/12/2013

Missouri State Certificate for Asbestos Related Occupations

issued by Department of Natural Resources
P. O. Box 176
Jefferson City, MO 65102
Phone (573) 751-4817

Andrew G Adkins

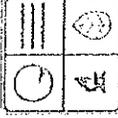
has successfully completed the requirements for certification as a INSPECTOR. This Missouri State Certification is subject to review and the director may deny, suspend or revoke the certification per RSMo chapter 643.230.

4/25/2013

Date

Lynne E. Thomas

Director of Air Pollution Control Program



Attachment C

Heavy Metals Report

August 28, 2014



**Environmental
Operations, Inc.**
CLEARING THE WAY

EOI Project #4927

Mr. Chadwick Howell
St. Louis Development Corporation
1520 Market Street Suite 2000
St. Louis, Missouri 63103

Re: RCRA Heavy Metals Testing
Porter Oil Site
1439 Kentucky
St. Louis, Missouri

Dear Mr. Howell,

Environmental Operations, Inc. (EOI) has completed the RCRA metals testing of the interior and exterior masonry of the buildings located at the former Porter Oil Site in St. Louis, Missouri.

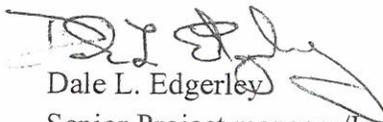
EOI used the Niton XL2 Gold XRF to test for the eight RCRA metals of the painted masonry. The results of the testing indicated that the interior and the exterior masonry located in the buildings were above the Missouri Department of Natural resources Solid Waste Management Program levels for use as clean fill.

The analytical chart is attached and the areas that are highlighted in yellow all exceed the maximum parts per million (PPM) for the specific heavy metal.

The painted masonry on the concrete building, pump shed and office building/house should all be sent off to a construction debris landfill and may not be used as clean fill.

Thank you for the opportunity to work with St. Louis Development Corporation on this project.

Sincerely,
ENVIRONMENTAL OPERATIONS, INC.


Dale L. Edgerley
Senior Project manager/Industrial Hygienist
Industrial Hygiene and Safety


Bill Witts, CHMM
Vice President

Attachments: Sample Results

Environmental Consulting & Remediation, Demolition, & Geotechnical Engineering
1530 South Second Street • Saint Louis, Missouri 63104-4500 • 314-241-0900

www.environmentalops.com

XRF RCRA METAL SURVEY FORM

INSPECTOR: Kevin Schoenborn

LOCATION: Former Porter Oil Concrete Building & Pump Shed

DATE: _____

Reading #	Room	Component	Substrate	Color	Lead Pb	Silver Ag	Arsenic As	Barium Ba	Cadmium Cd	Chromium Cr	Mercury Hg	Selenium Se
31	1 st Floor	South Wall	Concrete	Red	9950.7	<LOD	1172.39	1632.48	<LOD	1169.06	<LOD	<LOD
32	1 st Floor	South Wall	Concrete	White	4,999	99	87	15,200	429	3,285	100	50
33	1 st Floor	West Wall	Concrete	Red	522.46	<LOD	<LOD	2793.33	34.12	311.81	17.86	<LOD
34	1 st Floor	West Wall	Concrete	Red	10869.52	103.54	2063.71	1684.22	20.89	4433.4	<LOD	<LOD
35	1 st Floor	West Wall	Concrete	Green	11304.96	180.17	2639.35	2209.53	68.75	9960.04	<LOD	<LOD
36	1 st Floor	West Wall	Concrete	White	534.74	<LOD	<LOD	1728.42	26.99	281.62	<LOD	<LOD
37	1 st Floor	North Wall	Concrete	White	485.28	<LOD	<LOD	1991.34	40.82	262.34	<LOD	<LOD
38	1 st Floor	North Wall	Concrete	Red	8450.96	103.65	683.96	1702.69	32.82	627.64	<LOD	<LOD
39	1 st Floor	North Wall	Concrete	Green	7303.1	<LOD	1638.53	1443.51	45.56	6531.46	<LOD	<LOD
40	1 st Floor	East Wall	Concrete	White	1076.75	<LOD	<LOD	1318.72	<LOD	250.77	<LOD	<LOD
41	1 st Floor	East Wall	Concrete	Red	11776.93	<LOD	1160.22	1067.47	<LOD	1294.96	<LOD	<LOD
42	1 st Floor	East Wall	Concrete	Green	11194.62	150.13	2532.34	1925.14	82.15	9438.87	<LOD	<LOD
43	1 st Floor	Column	Concrete	Red	789.4	<LOD	<LOD	1077.16	<LOD	249.44	<LOD	<LOD
44	1 st Floor	Column	Concrete	Green	20736.16	189.38	4279.8	2916.02	86.27	16750.92	<LOD	<LOD
45	1 st Floor	Column	Concrete	Yellow	38911.98	170.94	6522.21	2297.57	82.77	19998.29	<LOD	<LOD
46	Exterior	West Wall	Concrete	Dark Gray	820.98	<LOD	119.11	1151.85	27.13	<LOD	<LOD	<LOD
47	Exterior	West Wall	Concrete	Light Gray	1071.09	<LOD	119.42	1002.0	33.28	<LOD	<LOD	<LOD
48	Exterior	Window Trim	Metal	Light Gray	2768.86	<LOD	367.57	<LOD	<LOD	1577.07	<LOD	<LOD
49	Exterior	Window	Metal	Light Gray	11827.87	<LOD	1729.81	<LOD	<LOD	2138.83	<LOD	<LOD
50	Exterior	North Wall	Concrete	Gray	79.32	<LOD	<LOD	789.65	<LOD	<LOD	<LOD	<LOD
51	Exterior	North Wall	Concrete	Yellow	111349.7	421.06	5543.25	5152.75	196.27	21836.2	<LOD	<LOD
	Pump Shed Exterior	North Wall	Brick	White	353.94	<LOD	41.54	750.68	<LOD	<LOD	12.74	<LOD

XRF RCRA METAL SURVEY FORM

INSPECTOR: Kevin Schoenborn

LOCATION: Former Porter Oil 1439 Kentucky St. Louis, Missouri

DATE: _____

Reading #	Room	Component	Substrate	Color	Lead Pb 4,999	Silver Ag 99	Arsenic As 87	Barium Ba 15,200	Cadmium Cd 429	Chromium Cr 3,285	Mercury Hg 100	Selenium Se 50
52	Exterior	Foundation	Concrete	White	274.02	<LOD	23.28	889.82	32.02	<LOD	<LOD	<LOD
53	Exterior	North Wall	Brick	Yellow	172.26	<LOD	29.57	1091.52	27.57	<LOD	<LOD	<LOD
54	Exterior	North Wall	Brick	White	135.23	<LOD	28.86	737.06	<LOD	<LOD	<LOD	<LOD
55	Exterior	West Wall	Brick	White	210.47	<LOD	42.11	850.4	23.44	<LOD	<LOD	<LOD
56	Exterior	West Wall	Brick	Yellow	193.15	<LOD	<LOD	1238.72	27.05	<LOD	<LOD	<LOD
57	Exterior	Foundation	Concrete	White	335.74	<LOD	<LOD	521.09	20.62	<LOD	<LOD	<LOD
58	Basement South	South Wall	Stone	White	444.75	<LOD	<LOD	4568.41	<LOD	214.51	<LOD	<LOD
59	Basement South	West Wall	Stone	White	<LOD	104.65	<LOD	840.01	<LOD	<LOD	<LOD	<LOD
60	Basement South	North Wall	Stone	White	107.61	104.02	<LOD	3093.16	47.13	<LOD	15.71	<LOD
61	Basement South	North Wall	Brick	White	97.37	<LOD	<LOD	5416.39	<LOD	<LOD	20.15	<LOD
62	1 st Floor	South Wall	Brick	White	1352.49	125.13	<LOD	32.72	36.45	<LOD	<LOD	<LOD

All Numbers are in Parts Per Million (PPM)

Exhibit 2

Bid Proposal Form

**CONTRACTOR BID FORM
ENVIRONMENTAL REMEDIATION AND DEMOLITION
FORMER PORTER OIL SITE
1439 KENTUCKY AVENUE
ST. LOUIS, MISSOURI**

Bidder: _____

Address: _____

City, State, and Zip Code: _____

Telephone Number: _____

Grand Total Bid: _____

TO: City of St. Louis Land Reutilization Authority
1520 Market Street, Suite 2000
St. Louis, Missouri 63103
Attention: Mr. Chad Howell

1. **General:** The Bidder, having familiarized itself with the existing conditions in the area of the work affecting the cost of the work, with the Bid Documents, which included the Invitation, Instructions to Bidders, the Form of Bid Proposal, the Bid Guaranty requirements, the Form of Non-Collusive Affidavit, the Form of Contract, the Performance and Payment Bond requirements, the General Conditions, the Special Conditions, the Technical Specification, Bid Documents, and Drawings and Addenda, if any thereto, as prepared by the St. Louis Land Reutilization Authority, 1520 Market Street, Suite 2000, St. Louis, Missouri 63103, and the Engineers, hereby proposes to furnish at the price indicated on this Bid Proposal, all technical personnel, labor, materials, equipment and services required to perform and complete all work required for the **Porter Oil Site – Environmental Remediation and Demolition.**

2. **Qualifications:** For the undersigned's Proposal to be considered for award of the contract, the following qualification documents, executed where necessary, are submitted herewith:
 - a. Contractor's Qualifications, including AIA Document 305 signed by an officer of the company
 - b. If the Bidder is a partnership or joint venture, provide a copy of the partnership or joint venture contract;
 - c. The number of years Contractor has been engaged in remediation/demolition work of a similar nature to this project.

- d. List of full time on-site supervisory personnel to be engaged in the contract, their name, title, resumes, references, length of service with Contractor's company, specific experience including the size and dollar value of projects supervised for the on site supervisor who will be responsible for the work under this project. The identified supervisory official shall have complete authority to speak for and make commitments for the Contractor. The supervisory official shall have a minimum of five (5) years experience in projects of similar size and scope, and submit a list of owner contacts for projects performed within that time frame.
- e. A complete list of contracts performed by the Bidder involving work similar in nature, scope or technical requirements to that required for this Project, including names, addresses, telephone numbers and contact persons of the owners.
- f. A detailed description of the means, methods or procedures that will be employed by the Bidder in connection with the performance of the work on the Project.
- g. Detailed project schedule for all work reflecting completion by **August 31, 2015**.
- h. Evidence of Contractor's ability to obtain Performance and Payment Bond as required by the Bid Documents, shown by a letter signed by the Contractor's bonding company.
- i. Evidence of Contractor's ability to obtain insurance as required by the Bid Documents, shown by a letter signed by the Contractor's insurance company, and addressing specifically each item under the General Conditions, Section 30, Insurance.
- j. Credentials and copies of licenses of the landfill site and operator to be used for waste materials/debris.
- k. Each Bidder shall (i) submit with its Proposal, a notarized statement describing any citations and /or violations issued by any regulatory agency concerning performance on previous contracts, (ii) briefly describe the circumstance(s) involving the job(s) and citation(s)/ violation(s) and involved persons and agencies, (iii) discuss the outcome(s) of any violation(s) and (iv) answer the question, "has your firm or its agents been issued a Stop Work Order on any project within the last 24 months?" If the answer to the questions is "yes", provide details as specified above.
- l. Each Bidder shall answer the question, "Are you now or have been in the past, a party to any litigation or arbitration arising out of your performance of any contract?" If the answer to the question is "yes", provide details as specified in (1) above. You shall describe any liquidated damages assessed against you within the last 24 months.

Failure to report properly or truthfully any of the required information in Section 2, Qualifications, shall be considered sufficient cause for the Authority's rejection of the submitted Bid. In addition, the Authority reserves the right to take such steps as it deems necessary to determine the ability of each Bidder to perform the work. The Bidder shall provide to the Authority such additional information and data for this purpose as the Authority may request. The Authority reserves the right to reject any bid or Bidder for any reason considered by the Authority to be relevant to the

Bidder's potential performance, including but not limited to the Authority's investigation or consideration of the information submitted by such Bidder.

The Bidder has indicated, in figures, a Price for each of the separate items called for in the Proposal, and has shown the Gross Sum ("Grand Total Bid") in the place indicated in the Proposal as the summation of said items.

In case of Discrepancy between the Gross Sum shown in the Proposal and that obtained by adding the items of the work, the Bidder agrees that the sum of the items shall govern, and any errors found in said Sum may be corrected by the Authority.

Unbalanced proposals on which the prices for some items are out of proportion to the prices for other items will be considered as sufficient cause for the disqualification of a Bidder and the rejection of its proposal.

The Bidder agrees that the Authority may reject its bid for any or no reason and award the contract to another party, and hereby waives any claim of damages for said.

If written notice of acceptance of the above bid is mailed, telegraphed, faxed, or delivered to the Bidder within ninety (90) calendar days after the opening thereof, or at any time thereafter before this bid is withdrawn, the Bidder agrees to execute and deliver a Contract in the prescribed form and to furnish the required bond and insurance within five working days after the Contract is presented to it for signature.

Security in the sum of _____ Dollars (\$ _____) in the form of _____ is submitted herewith in accordance with the Instructions to Bidders.

Attached hereto is an affidavit of proof that the Bidder has not colluded with any person with respect to this bid or any other bid submitted for this Contract.

The Bidder has submitted or has enclosed financial and experience statements in accordance with the Bid Documents.

Receipt is hereby acknowledged of the following addenda:

<u>Addendum No.</u>	<u>Dated</u>	<u>Acknowledged</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

3. Prices: The following price breakdown must be filled out for the purpose of bid evaluation and to establish a schedule of values for the work. Bidders are reminded that the goal of this project is **to properly abate and demolish onsite buildings and properly dispose miscellaneous liquid wastes in the basement of the Wittenberg Warehouse building. The Grand Total Bid will be used in determining the selected bidder, but it is likely that some bid items will not be included in the final contract.** The bid prices shall include all labor, materials, overhead, profit, insurance, taxes, fees, permits, etc. to cover the finished work. Successful bidder agrees to:

- Accomplish the scope-of-work in accordance with requirements of the Bid Document;
- Maintain compliance with all regulatory requirements and accepted industry standards;
- Follow the HASP to maintain a safe environment during performance of the work; and
- Perform the scope-of-work in a manner that minimizes disruption to the site operations.

LUMP-SUM PRICING:

Lump-sum price includes all labor, materials, profit, insurance, taxes, and fees to complete the abatement, demolition and liquid waste disposal work as specified in the Bid Document.

Abatement/Demolition of Wittenberg Warehouse Building

Abate and properly dispose asbestos containing materials, remove and properly dispose all household hazardous wastes and properly dispose demolition debris containing lead-based paint associated with the Wittenberg Warehouse building. Lump-sum price includes all labor, materials, profit, insurance, taxes, and fees to complete the abatement and demolition activities for the Wittenberg Warehouse building as specified in Part 2 and Part 3 of the Bid Document.

\$ _____

Basement Oil/Water Disposal

Remove, containerize (as necessary), characterize (includes profile acceptance); transport and dispose of the oil and water in the basement of the Wittenberg Warehouse building (assumed 80,000 gallons of water direct discharged to MSD, 20,000 gallons of oil/water from the basement and 15,000 gallons of oil/water from the vaults will be disposed offsite at an approved disposal/recycling facility); cover and secure elevator shaft at south loading dock sufficient to prevent further flooding of the basement during rain events. Lump-sum price includes all labor, materials, profit, insurance, taxes, and fees to complete the removal and disposal of liquid wastes as specified in Part 4 of the Bid Document.

\$ _____

GRAND TOTAL BID:

\$ _____

ADD ALTERNATE (NOT CONSIDERED FOR GRAND TOTAL BID):

Abatement/Demolition of Office Building and Pump House

Abate and properly dispose asbestos containing materials, remove and properly dispose all household hazardous wastes and properly dispose demolition debris containing lead-based paint associated with the Office Building and Pump House. Lump-sum price includes all labor, materials, profit, insurance, taxes, and fees to complete the abatement and demolition activities for the Office Building and Pump House as specified in Part 2 and Part 3 of the Bid Document.

\$ _____

UNIT-RATE PRICING:

Unit rates will apply in addition to the lump-sum pricing for the following tasks. Add/deduct pricing will adjust Grand Total Bid for actual site conditions versus what is assumed for individual lump-sum pricing.

Disposal of Basement Liquids

Provide a unit-rate price for removal, transportation, and off-site disposal of basement liquids as specified in Section 4.1.2 of the Bid Document.

Characterizing and Profiling Fee \$ _____

Waste Disposal (Bulk Liquid) – Direct Discharge \$ _____ add/deduct per gallon

Waste Disposal (Bulk Liquids) – Beneficial Re-Use \$ _____ add/deduct per gallon

Waste Disposal (Bulk Liquid) – Non-Hazardous \$ _____ add/deduct per gallon

Waste Disposal (Bulk Liquid) – Hazardous \$ _____ add/deduct per gallon

Waste Disposal – Non-Hazardous Solids/Sludges \$ _____ add/deduct per gallon

Waste Disposal – Hazardous Solids/Sludges \$ _____ add/deduct per gallon

NOTE TO BIDDERS: Each unit item identified above shall include all costs to accomplish the specified item (including necessary supervision, labor, equipment, applicable permits, taxes, etc.). Please note that quantity estimates on the bid sheet are provided for bid comparison purposes only. Payment will be based upon actual quantities as determined by Engineer (or its representative's) field observations and measurements.

ITEMIZED FEE SCHEDULE: Bidder will submit an itemized fee schedule with their Bid Form indicating unit rates for labor, materials, and equipment for performing the UST work. The fee schedule will become part of the subcontract agreement.

The contract resulting from this opportunity is subject to the Davis-Bacon Act, as amended (40 U.S.C. 276a to a-7) and as supplemented by Department of Labor regulations (29 CFR part 5, "Labor Standards Provisions Applicable to Contracts Governing Federally Financed and Assisted Construction"). Under this Act, contractors shall be required to pay wages to laborers and mechanics at a rate not less than the minimum wages specified in a wage determination made by the Secretary of Labor. In addition, contractors shall be required to pay wages not less than once a week. The current prevailing wage determination issued by the Department of Labor is provided in Appendix F-5.

BID EXECUTION:

Bidder agrees that the bid pricing will remain firm for a period of 60 calendar days following the bid-closing time. The Bid Form will be executed by an authorized agent of the company binding the Bidder to a legal subcontract agreement.

4. Subcontractors. The names and addresses of the major subcontractors who will be used on the project are (use additional sheets as necessary):

<u>Name</u>	<u>Address</u>	<u>Specialty</u>
a.	_____	_____
	_____	_____
b.	_____	_____
	_____	_____
c.	_____	_____
	_____	_____

The undersigned further declares that it has carefully examined the Bid Documents, plans, specifications, and the job site, and has satisfied itself as to all quantities and conditions and understands that in signing this proposal, it waives all right to plead any misunderstanding regarding these documents and conditions.

The total fee proposed to accomplish all of the work indicated on the plans and specifications shall be reflected in the above line item breakdown. In the event that there is some doubt as to where a specific material or labor cost should be included, Contractor shall verify with the Authority or provide a written clarification as to the description of work included in a specific category. This proposal shall be binding on all of the heirs, successors, assigns, executors, and administrators of the undersigned.

Company: _____

Address: _____

City, State, and Zip Code: _____

Telephone Number: _____

Authorized Agent: _____

Title: _____

Signature: _____

Date: _____

Exhibit 3

Mayor's Executive Order #47



**EXECUTIVE DEPARTMENT
MAYOR'S OFFICE
ST. LOUIS
EXECUTIVE ORDER NO. 47**

An Executive Order relating to minority and women's business enterprises' participation in City contracts:

WHEREAS, Clarence Harmon, as Mayor of the City of Saint Louis, executed an Executive Order Number 28 on July 24, 1997, relating to minority and women's business enterprises' participation; and

WHEREAS, Francis G. Slay, Mayor of the City of Saint Louis, extended Executive Order Number 28 by issuing Executive Orders numbered 33, 34, 36, 39 and 44; and

WHEREAS, Executive Orders numbered 33, 34, 36, 39 and 44 assisted in enhancing the opportunities of minorities and women participating fully in City-funded contracts; and

WHEREAS, Executive Order Number 44 expires on April 30, 2013; and

WHEREAS, it is in the best interests of the City to continue to utilize the skills of minority business enterprises and women's business enterprises in City-funded contracts.

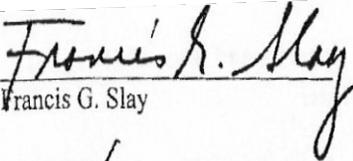
NOW, THEREFORE, I, Francis G. Slay, Mayor and Chief Executive Officer of the City of Saint Louis, hereby amend, re-issue and extend Executive Order Number 28 until April 30, 2017, unless a new Executive Order or Ordinance with the same subject matter supersedes this re-issuance and extension. Executive Order Number 28 is hereby amended as follows:

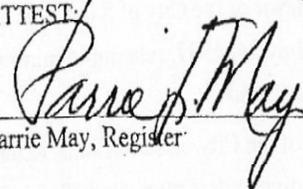
Section 13(2) shall be amended and re-stated to read: "The committee shall consist of the following ten (10) members appointed by the Mayor":

- (a) One (1) member of the Commission of the Civil Rights Enforcement Agency;
- (b) One (1) member of the Minority Contractor Initiative (MCI);
- (c) One (1) member of the MOKAN Construction Contractors Assistance Center;
- (d) One (1) member of the National Association of Women in Construction;
- (e) One (1) member of the Associated General Contractors of St. Louis;
- (f) One (1) member of the Hispanic Chamber of Commerce;
- (g) One (1) member of the National Indian Community Association;
- (h) One (1) member of the Asian-American Chamber of Commerce;
- (i) One (1) member of the St. Louis Minority Supplier Development Council; and
- (j) One (1) member of the St. Louis Council of Construction Consumers;

As modified and amended by this Amendment, Executive Order Number 28 shall remain in full force and effect in accordance with the respective terms thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the City of Saint Louis this 30th day of April 2013.


Francis G. Slay

ATTEST:

Parrie May, Register

EXECUTIVE ORDER

MINORITY AND WOMEN-OWNED BUSINESS PARTICIPATION ON CITY CONTRACTS

An Executive Order relating to minority and women's business enterprises' participation in City contracts,

WHEREAS, the City of St. Louis is particularly concerned that local minority and women's business enterprises be afforded an equal opportunity to participate and be utilized in City-funded contracts; and

WHEREAS, there is ample evidence that there has been discrimination against minority and women's business enterprises in the City of St. Louis and the effects of that discrimination are continuing; and

WHEREAS, it is the policy of the City of St. Louis to rectify the effects of identified discrimination within its jurisdiction; and

WHEREAS, it is the City's goal to fully utilize the skills of minority business enterprises and women's business enterprises in all sectors of the economy so as to best advance the City's economic and business development objectives; and

WHEREAS, the City of St. Louis, Missouri, the St. Louis Minority Contractors Association, Inc., and the United States Department of Housing and Urban Development entered into a Consent decree in the United States District Court for the Eastern District of Missouri on or about December 11, 1990 toward the end of establishing a program to enhance the opportunities of minority and women's businesses to participate fully in City-funded public work contracts; and

WHEREAS, the Board of Aldermen adopted Ordinance 62035, approved July 29, 1990, establishing a review committee to make recommendations to the Board.

SECTION ONE. DEFINITIONS

For purposes of this policy, the following terms have the meanings indicated:

- 1. Minority Business Enterprise (MBE): a sole proprietorship, partnership, or corporation owned, operated, and controlled by minority group members who have at least 51% ownership. The minority group member(s) must have day to day operational and managerial control, and an interest in capital and earnings commensurate with his or her percentage of ownership.**
- 2. Minority Group member(s): persons legally residing in the United States who are African-American, Asian-American, Native-American or Hispanic-American.**
- 3. Women's Business Enterprise (WBE): a sole proprietorship, partnership, or corporation owned, operated and controlled by a woman or women who have at least 51% ownership. The woman or women must have day to day operational and managerial control, and an interest in capital and earnings commensurate with her or their percentage of ownership.**
- 4. Certification: The process by which the St. Louis Development Corporation determines a person, firm or legal entity to be a bona fide minority or women's business enterprise.**
- 5. Contracting Agency: Any Agency or Department making a contract on behalf of the City of St. Louis.**

SECTION TWO. POLICY

It is hereby declared to be the policy of the City of St. Louis that the effects of identified discrimination against minority business enterprises and women's business enterprises within its jurisdiction shall be eradicated as part of the overall City business and economic development strategy. The method that the City shall employ to implement that policy is the established of a goal of at least

25% minority business enterprise participation and at least 5% women's business enterprise participation in contracts and purchases wherein City funds are expended. That goal shall be pursued by the programs described below.

SECTION THREE. PROGRAM ADMINISTRATION

1. SLDC shall be charged with overall responsibility for the administration and enforcement of the City's minority and women's business enterprise participation policy. SLDC will establish procedures for all contracting agencies for the purpose of monitoring the City's overall performance with respect to minority and women's business enterprise participation. The duties and responsibilities of SLDC shall include:

- (a) adopting rules and regulations to effectuate this order;**
- (b) developing and distributing a directory of certified MBE's and WBE's;**
- (c) providing information and needed assistance to MBE's and WBE's to increase their ability to compete effectively for the award of City contracts;**
- (d) investigating alleged violations of this order and making written recommendations for remedial action when appropriate;**
- (e) developing and distributing all necessary forms, applications, and documents necessary to comply with implement and effectuate this order;**
- (f) reviewing, on a regular basis, the progress of each contracting agency toward achieving the goals for the utilization of minority and women's business enterprises and making an annual report as of June 30 of each year, which report shall be delivered to the Mayor no later than September 30, commencing September 30, 1998, reporting that progress which has been made, together with recommendations as to such further remedial action that should be taken, if any;**

- (g) making recommendations to appropriate City officials regarding methods to further the policies and goals of this order;**
- (h) monitoring contractors throughout the duration of the contract to ensure that all efforts are made to comply with the requirements of this order; and**
- (j) certifying that the requirements of this order have been satisfied before contracts are signed or countersigned.**

2. It shall be the responsibility of the contracting agency to ensure that bids or proposals from the agency adhere to the procedures and provisions set forth in this order.

- (a) The contracting agency director or designee shall assume primary responsibility for achieving the goals of this program and shall review, on a continuing basis, all aspects of the program's operations to assure that the purpose is being attained;**
- (b) The contracting agency shall take the following actions to ensure that MBE's and WBE's have maximum opportunity to participate on City contracts for which bids are solicited:**
 - (i) the advertisements for bids, if any, shall appear in the City Journal no less than 21 days before bids are due for specific contracting opportunities, except where the contracts are awarded on an emergency basis;**
 - (ii) a written notification shall be sent to such minority and women's trade and professional associations and contractors' associations as are designated by SLDC about the availability of contracting opportunities no less than 21 days before bids are due, except where the contracts are awarded on an emergency basis, in which case the notice shall be sent as soon as may be;**
 - (iii) all contract solicitations shall include the MBE/WBE policy and any other materials required;**

- (iv) all contracting opportunities shall be evaluated in an effort to divide the total requirements of a contract to provide reasonable opportunities for minority and women's business enterprises;
- (v) guidelines shall be established to ensure that a notice to proceed is not issued until signed letters of intent or executed agreements with the MBE's and WBE's proposed in the bid documents have been submitted; and
- (vi) actions shall be taken to ensure that all required statistics and documentation are submitted to SLDC as requested.

- (c) The contracting agency shall annually formulate a contract forecast estimating the number, probable monetary value, type of contracts and the estimated solicitation date for the contracts the contracting agency expects to award in the upcoming year. In addition, an implementation plan describing how the contracting agency will accomplish its MBE/WBE utilization goals shall be formulated. Each contracting agency will submit these documents to SLDC on or before June 30.
- (d) The contracting agency shall make quarterly reports to SLDC concerning the agency's progress in achieving the goals established by this order.

3. It shall be the responsibility of each bidder and proposer to adhere to the procedures and provisions set forth in this order.

- (a) each bidder and proposer must complete an MBE and WBE Utilization Form and identify therein its commitment, if any, to utilize MBE's and WBE's. Any failure to complete and sign the MBE and WBE utilization form will result in the bid or proposal being declared nonresponsive. In its response to an invitation to bid or request for proposal, the bidder or proposer shall include the names of minority and women's business enterprises to whom it

intends to award subcontracts, if any, the dollar value of the subcontracts, and the scope of work to be performed;

- (b) it is the bidder's or proposer's responsibility to ensure that all MBE's and WBE's projected for use have been certified by the City prior to bid opening;
- (c) whenever additional contract supplements, extra work orders, or change orders are made that individually, or in the aggregate, increase the total dollar value of the original contract, the contractor shall make every effort to maintain the level of MBE and WBE participation as established in the original contract;
- (d) the awardee of a contract must submit copies of executed agreements with the MBE's and WBE's being utilized;
- (e) the awardee of a contract must submit reports and documentation as required by SLDC, verifying payments to the MBE's and WBE's being utilized.

4. Contracting Agencies, contractors, subcontractors, and the construction clearinghouses shall consider, and follow where appropriate, the following guidelines in making good faith efforts to meet the goals of this order. All good faith efforts shall be made prior to bid opening. These guidelines are not all inclusive.

SHARED RESPONSIBILITIES FOR GOOD FAITH EFFORTS

(a) CONSTRUCTION CLEARINGHOUSE

The SLDC's contractors assistance agency and construction clearinghouse, the Contractor's Assistance Program (CAP), will distribute information on the City's needs to all of the M/WBEs who may be interested in performing all or part of the work that the City requires.

(i) DISTRUBUTION OF INFORMATION

By first class mail, fax or E-mail, the construction clearinghouse shall promptly distribute all information that the City and its plan holders may provide. The clearinghouse shall act on all information that it receives in no more than two business days.

(ii) DIRECTORY OF M/WBEs IN THE RELEVANT AREA

The construction clearinghouse shall have access to sufficient quantities of the SLDC M/WBE Directory and the St. Louis Airport Authority's DBE Directory, including but not limited to information on the categories of work that each firm performs.

(iii) BONDING AND INSURANCE

The construction clearinghouse shall create and regularly update a directory of the bonding and insurance agents in the relevant area. Upon request, the clearinghouse should give a copy of the directory to any interested party. In addition, the clearinghouse should be prepared to provide the name, address and telephone number of a bonding or insurance agent who may be able to respond to a firm's request for assistance. The clearinghouse should also encourage and facilitate liaison between the bonding and insurance industries and the M/WBEs in the relevant area.

(b) CONTRACTING AGENCIES

(i) GENERAL

The City shall ensure, to the extent practical, that its plans and specifications are clear and reflect the actual requirements. The City shall delete any contractual provisions that would require M/WBEs to take unreasonable business risks.

ADVERTISING

(ii) The City will publicly advertise every project, taking advantage of general circulation magazines and newspapers, and any publications that target minorities or business women in the relevant area. The City shall also use the construction clearinghouse to notify all M/WBEs of all business opportunities. The City should run its advertisements and notify the clearinghouse as soon as practical, but not less than two weeks before the date on which bids are due.

The City's advertisements and its notice to the clearinghouse shall include:

- The date, time, place and contact person for any pre-bid meeting;**
- Expressly encourage M/WBEs to bid for the prime contract, or to the prime contractors holding plans for the project;**
- Estimate the subcontracting opportunities that the project will provide, including but not limited to the type of work that prime contractors are likely to subcontract; and**
- Explain that the City has provided a copy of the plans and specifications to the construction clearinghouse.**

(iii) PRE-BID MEETINGS

The City may conduct a pre-bid meeting or make its project manager readily available to discuss the project with interested parties. In addition, the City shall reduce all questions and answers to writing and should promptly provide that information to all plan holders, including the construction clearinghouse.

The City shall use at least part of any pre-bid meeting to encourage prime contractors and M/WBEs to work together, providing an opportunity for all firms to identify themselves, and for all M/WBEs to identify the type(s) of work that

they perform. The City should also emphasize that it expects all firms to perform a commercially useful function.

(iv) PLAN HOLDERS

No more than seven calendar days after it has advertised the project, the City should give a list of plan holders to the construction clearinghouse, including the name, street address, telephone number, fax number, E-mail address and contact person for each firm. The City should update the list of plan holders at least once a week.

(v) PLANS AND SPECIFICATIONS

The City shall provide one copy of its plans and specifications to the construction clearinghouse free of charge. The plans and specifications shall be provided on the same date on which the project is formally advertised.

The City shall expressly direct and require its design professionals to satisfy these requirements and to make themselves readily available to all contractors, to the extent necessary to eliminate any ambiguities.

In addition, the City shall reduce all questions and answers to writing and should promptly provide that information to all plan holders, including the construction clearinghouse.

(c) PRIME CONTRACT BIDDERS AND OTHER PLAN HOLDERS

(i) NOTICE TO CLEARINGHOUSE

Any firm that intends to bid for the prime contract should have a notice of its intention delivered to the construction clearinghouse as soon as feasible, but no fewer than seven calendar days before the date on which the firm desires to have all quotes in hand.

That notice may be delivered by fax or E-mail, but should be in writing, in addition, it should:

- **Include the name, street address, fax number, telephone number and E-mail address of a contact person;**
- **Specify the items of work that the plan holder may subcontract; and**
- **Expressly encourage M/WBEs to quote those items.**

(ii) PREBID MEETINGS

The prime contract bidder should attend any pre-bid meeting that the City may schedule.

(iii) FOLLOW-UP WITH M/WBEs

The prime contract bidder should promptly return all calls, faxes, and E-mail that it receives from interested M/WBEs. The follow-up should take the form of a telephone call, fax or E-mail during normal business hours.

(iv) PLANS AND SPECIFICATIONS

Upon request, the plan holder should permit any interested M/WBE to review the project's plans and specifications at the plan holder's place of business during normal business hours. In addition, the prime contract bidder should have at least one employee available to help the M/WBE identify the specific item(s) in which the latter may have an interest.

(v) BONDING AND INSURANCE

The prime contract bidder should be encouraged not to deny a subcontract to an otherwise qualified and competitive, and if necessary, certified M/WBE solely because the latter cannot provide a performance or payment bond for the work, unless the bidder's bonding is contingent upon bonding for all subcontractors.

(vi) BID PACKAGES

The prime contract bidder should break its subcontracts down into discrete items or packages that at least some of the M/WBEs in the relevant area may find economically feasible to perform.

The prime contract bidder should not deny a subcontract to an otherwise qualified and competitive M/WBE solely because the latter cannot perform an entire package of related items, but the bidder may deny a request to repackage the work where doing so would jeopardize scheduling, or increase that bidder's cost of performing the original package by more than 5%.

(vii) SUBCONTRACTOR QUOTES

Where two or more quotes cover the same item(s) of work, the prime contractor bidder should have the discretion to accept the low quote.

(viii) LETTER OF INTENT

No more than five business days after the bid date, the prime contract bidder should send a letter of intent to the M/WBEs that the bidder intends to use on the project.

(ix) REASONS FOR REJECTION

No more than one week after it determines that it has been successful, the prime contract bidder should also communicate with any M/WBE that unsuccessfully bid for a portion of the work. The prime contract bidder should provide a legitimate and non-discriminatory reason for not using the M/WBE.

(x) WRITTEN POLICY

Independent and apart from its interest in any one project, the prime contract bidder should have a written policy stating that it affirmatively supports

subcontracting to M/WBEs, and that bringing such firms into the mainstream of the construction industry is a priority for that firm. This policy shall be made available to the City upon request.

(xi) LIAISON WITH M/WBEs

Independent and apart from its interest in any one project, the prime contract bidder should assign a senior official the responsibility of serving as a liaison between the firm and the M/WBEs in the relevant area.

(d) MINORITY AND WOMEN BUSINESS ENTERPRISES

(i) PRE-BID MEETINGS

The M/WBEs should attend any pre-bid meetings that the City may schedule.

(ii) EXPRESSION OF INTEREST

The M/WBE shall promptly call, send a fax or E-mail to any prime contract bidder to whom it would like to provide a quote. The M/WBE should clearly express an interest in providing a quote. The M/WBE should also send a notice of its interest in the project to the construction clearinghouse. To the extent practical, the M/WBEs should take such actions during normal business hours and at least five business days before the date on which bids are due.

(iii) SCOPE LETTER

At least five business days before the date on which bids are due, the M/WBEs should also give the prime contract bidder a scope letter that clearly defines the items that the M/WBE would like to perform.

SECTION FOUR. PUBLIC WORKS CONTRACTS

- 1. This section shall be applicable to all contracts let for public works contracts or improvements.**

- 2. If a prime contractor's bid does not indicate an intent to utilize a minimum of 25% MBE participation and 5% WBE participation, the contractor shall request a waiver from the contracting agency who then must submit such request to SLDC.**
- 3. SLDC will grant a waiver from meeting the 25% MBE and 5% WBE goals, or some portion of them, when documentation submitted by the bidder substantiates that all available resources have been exhausted in locating and soliciting bids or proposals from minority and women contractors, suppliers, and service providers.**
- 4. MBE and WBE participation shall be counted in accordance with the following provisions:**
 - (a) A contracting agency may count as MBE or WBE participation only expenditures to MBE's and WBE's that perform commercially useful functions in the execution of a contract. An MBE or WBE is considered to perform a commercially useful function when it is responsible for executing a distinct element of the work and carrying out its responsibilities by actually performing, managing, and supervising the work involved. To determine whether an MBE or WBE is performing a commercially useful function, SLDC will evaluate the amount of work subcontracted, industry practices, and other relevant factors.**
 - (b) A contracting agency may count as MBE or WBE participation the total dollar value of a contract with an MBE or WBE prime contractor less any amount that is subcontracted to non-MBE's/WBE's (including any persons or firms that are identified as MBE and/or WBE but are not so certified by the City of St. Louis).**
 - (c) The total dollar value of a contract with an enterprise owned and controlled by minority women may be counted as either minority or women's business participation, but not both. The contracting agency must choose which category of participation to which the dollar value is applied.**

- (d) A contracting agency may count as MBE or WBE participation a portion of the total dollar value of a contract with a joint venture equal to the percentage of MBE or WBE participation in the joint venture. The joint venture must be certified by the City of St. Louis and the MBE or WBE participant in the joint venture must be responsible for a clearly defined portion of the work to be performed, equal to a share in the ownership, control, management, responsibility, risks and profits of the joint venture.**
- (e) A contracting agency may count toward a bidder's MBE and WBE goals expenditures for material and supplies obtained from MBE/WBE suppliers and manufacturers, provided that the MBE/WBE assumes the actual and contractual responsibility for the provision of materials and supplies.**

 - (i) A contracting agency may count a bidder's entire expenditure to a MBE/WBE manufacturer. A manufacturer is defined as an individual or entity that produces goods from raw materials or substantially alters them before resale.**
 - (ii) The bidder may count twenty percent (20%) of its expenditures to MBE/WBE suppliers that are not manufacturers.**
- (f) A contracting agency may count as MBE or WBE participation the entire expenditure to an MBE or WBE supplier when the supplier:**

 - (i) assumes the actual and contractual responsibility for furnishing the supplies and materials; and**
 - (ii) is recognized as a distributor by the industry involved in the contracted supplies and materials; and**
 - (iii) owns or leases a warehouse, yard, building or whatever other facilities are viewed as customary or necessary by the industry; and**
 - (iv) distributes, delivers and services products with its own staff and/or equipment.**

- (g) A contracting agency may count as MBE and WBE participation only those firms that have been certified as MBE's and WBE's by SLDC prior to bid opening. If a firm listed by a bidder in its bid documents has not been so certified as MBE or WBE, the amount of participation it represents will be deducted from the total MBE or WBE participation proposed to determine the actual level of MBE and WBE participation proposed by the bidder.
- (h) Joint ventures or mentor-protégé-relationships between prime contractors and subcontractors with local MBE and WBE firms are encouraged.
- (i) Participation of MBE and WBE firms located outside of the St. Louis Metropolitan Statistical Area (MSA) shall not count towards the goals established in this order.

5. To meet the requirements of the order, the following guidelines must be followed by prime contractors:

- (a) For any work to be subcontracted or materials to be supplied, prime contractors shall solicit bids from MBE's and WBE's to the maximum extent possible, referring to the City's Directory as necessary. All firms, including non-MBE's and non-WBE's should be solicited in the same time period. If an MBE or WBE firm submits the low or equally low bid for work to be subcontracted or materials to be supplied, the prime contractor shall use the MBE or WBE firm unless the bid is non-responsive or the prime contractor is able to document that the MBE or WBE firm is unqualified or otherwise unable to perform the work or supply the needed materials. Where second tier subcontracting is to occur, the same procedure shall be employed for each type of work or materials to be supplied under a second tier subcontract.
- (b) All solicitations shall be made prior to the bid opening and there shall be no negotiation of bids or "bid shopping" by the contracting agency. Contractors

- bidding on more than one contract must solicit bids from MBE's and WBE's for each contract for which they are bidding regardless of the proximity of the bid dates or the previous lack of responsiveness of MBE's and WBE's.
- (c) Prime contractors may count as MBE or WBE participation only those firms that have been certified as MBE's or WBE's by the City of St. Louis prior to the bid opening.
 - (d) Joint ventures or mentor-protégé relationships between prime contractors and subcontractors with local MBE and WBE firms are encouraged.
 - (e) Participation of MBE and WBE firms located outside the MSA shall not count towards the goals established in this order.
6. The contracting agency shall notify SLDC of the date and time for the formal bid opening. After the bids have been opened and read, the contracting agency will review the M/WBE statement, included as part of the bid documents, to determine whether the low bidder intends to meet the MBE and WBE participation goals established by this order. If the low bidder does not meet the specified goals for MBE and WBE participation, the low bidder shall be instructed to request a total or partial waiver of the goals.
7. Within 48 hours following bid opening the apparent low bidder, and any other bidder still desiring to be considered for contract award, shall submit to the Contracting Agency the M/WBE Utilization Plan, and any other documents required by the bid documents, including, where appropriate, a request for waiver. If the M/WBE Utilization Plan does not meet the project goals, the bidder shall seek a partial or total waiver of the M/WBE goals. The application for waiver of all or part of the M/WBE goals shall include full documentary evidence of the bidder's good faith efforts to meet the goals prior to bid opening and why the request for waiver should be granted. The application, which shall

be in writing, must include a narrative, affidavits or exhibits which verify the actions taken by the bidder to meet the M/WBE goals.

8. The contracting agency will conduct a preaward conference following the bid opening. A representative from SLDC and SLDC's designated minority and women's contractors assistance agency shall attend this meeting. At that time, the contracting agency will review the bidder's proposed MBE and WBE participation. If the bidder fails to meet the goals established by this order, it will be allowed to request a waiver from those provisions. The waiver request must be supported by evidence establishing that the bidder has exhausted all available resources in locating and soliciting bids or proposals from minority and women's businesses and has found it impossible to meet the established goals. Denial of a waiver may be appealed by the bidder, within 10 days of notice of the denial, to the Mayor, who shall rule upon the appeal in due course. Failure on the low bidder's part to exhaust all reasonable methods in a good faith effort to solicit bids prior to bid opening from the MBE and WBE firms listed in the City's Directory may place the award of the contract to the low bidder in jeopardy.
9. Prior to the preaward conference, copies of the bid documents will be distributed to SLDC. SLDC will immediately begin a review of the bid documents and, within two weeks following the preaward conference, will make a recommendation as to the apparent low bidder's good faith efforts to meet the city's goals prior to bid opening. In making this determination, SLDC will contact MBE's and WBE's to verify that the apparent low bidder solicited bids from each of them, that the MBE and WBE subcontractor bid amounts listed accurately reflect the amounts actually quoted by those firms and, in the case of those MBE/WBE firms proposed to be utilized by the low bidder, that the apparent low bidder has tentative agreements with them in the amounts shown. For work being

subcontracted to non-MBE/WBE firms, SLDC will contact the certified MBE and WBE firms in that particular trade, service or supply area to verify that, after solicitation of bids by the proposed prime contractor, the MBE and WBE firms submitted high or non-responsive bids or no bids at all. After the verification process, SLDC may make a positive recommendation to the contracting agency for contract award to the low bidder and/or grant the request for a waiver to the MBE/WBE goals established by this order, or SLDC may recommend denial of the contract award and/or the request for a waiver. The contracting agency shall not award any contract in excess of \$10,000 without the positive recommendation of SLDC.

10. Each contracting agency shall maintain files documenting the efforts of successful bidders to achieve the City's goals regarding utilization of minority and women's business. In addition, each contracting agency is responsible for documenting that the prime contractor (including MBE and WBE prime contractors) has signed and valid contracts with each MBE and/or WBE subcontractor proposed by the prime contractor in its bid documents. The contracting agency shall not authorize any payments to the prime contractor until acceptable documentation has been submitted to SLDC and the contracting agency.
11. At contract completion, the contracting agency shall obtain final documentation of MBE and WBE participation. The contracting agency must have complete and acceptable documentation as determined by SLDC of amounts paid to all project MBE and WBE subcontractors on file before the final payment is made to the prime contractor.
12. Representatives of the contracting agency and/or SLDC or its designee shall make periodic visits to the project site to verify minority and women's business enterprise participation.
13. In the event that a public works or improvement contract is awarded on an emergency basis, the contracting agency shall give preference to MBE's and WBE's if, at the time

that the contract is let, those contracts that have been awarded as of that date, do not, in the aggregate, meet the City-wide goals specified in this order.

14. The provision of this order shall be made part of all contracts regulated by this order.

SECTION FIVE. SERVICE CONTRACTS

1. It shall be the goal of each contracting agency where anticipated service contracts, including professional service contracts, for any year exceed the sum of \$150,000 in the aggregate that 25% of the aggregate value of contracts awarded each fiscal year be let with MBE's and that 5% of the aggregate value of contracts awarded each fiscal year be let with WBE's.
2. It shall be the goal of the city that of the aggregate value of contracts awarded by contracting agencies that anticipate letting service contracts, including professional service contracts, aggregating \$150,000 or less, 25% shall be let with MBE's and 5% be let with WBE's.
3. The methods by which contracting agencies shall pursue those goals shall include, but not be limited to,
 - (a) consultation with SLDC and observation of all rules and regulations promulgated by SLDC;
 - (b) active solicitations of proposals by MBE's and WBE's;
 - (c) encouragement of joint ventures or mentor-protégé relationships that include MBE's and WBE's;
 - (d) encouragement of subcontracting to MBE's and WBE's;
 - (e) solicitation of proposals from MBE and WBE firms in a time frame that will allow those firms to respond;
 - (f) division of contract requirements where possible to allow MBE's and WBE's reasonable contracting opportunities; and

(g) contacting minority and women trade and professional organizations to solicit participation.

- 4. All requests for services, including professional services, shall require proposers to make every good faith effort to utilize minority business enterprises and women's business enterprises as subcontractors and suppliers whenever possible. Proposers shall be required to submit their projected utilization of minority and women's business enterprises, if any, along with a description of the efforts made to utilize such businesses.**
- 5. Each contracting agency shall make a report to SLDC of the MBE and WBE participation in each professional service contract that it makes.**
- 6. Joint ventures or mentor-protégé relationships between prime contractors and subcontractors with local MBE and WBE firms are encouraged.**
- 7. Participation of MBE and WBE firms located outside the MSA shall not count towards the goals established in this order.**
- 8. Contracts with non-MBE's and non-WBE's shall be counted towards the MBE and WBE goals under the following circumstances and according to the following standards:**
 - (a) where the non-MBE or non-WBE firm assigns one or more minority or women partners or owners, 75% of the billable hours attribute to that partner or owner shall be counted as MBE or WBE participation, as the case may be.**
 - (b) where the non-MBE or non-WBE firm assigns one or more minority or women associates or employees, 25% of the billable hours attributed to the associates or employees shall be counted as MBE or WBE participation, as the case may be.**
 - (c) where the non-MBE or non-WBE enters into a subcontract with an SLDC-certified MBE or WBE, that portion of the value of the contract that is subcontracted shall be counted as MBE or WBE participation as the case may be.**

SECTION SIX. SUPPLY CONTRACTS

- 1. The goal of the City of St. Louis is that 25% of the value of all contracts let and purchases made by the Supply Commissioner shall be let or made with MBE's and that 5% of the value of all contracts let and purchases made by the Supply Commissioner shall be let or made with WBE's.**
- 2. All contracts let by the Supply Division for the purchase or lease of materials, equipment, supplies, commodities or services, the estimated cost of which exceeds \$500, shall be subject to this goal;**
- 3. The methods by which the Supply Commissioner shall pursue this goal shall include but not be limited to the following:**
 - (a) The Supply Commissioner shall solicit bids from minority business enterprises and women's business enterprises certified to supply the required materials, equipment, supplies or services;**
 - (b) SLDC shall provide the Supply Commissioner with a list of minority business enterprises and women's business enterprises qualified to provide each of those commodities that the Supply Commissioner indicates are required by the City;**
 - (c) The Supply Commissioner shall notify SLDC prior to solicitation of bids whenever no such qualified businesses are available;**
 - (d) SLDC shall attempt to identify such qualified businesses, and if successful, shall notify the Supply Commissioner of their availability, and**
 - (e) The Supply Commissioner shall provide such minority business enterprises and women's business enterprises every practical opportunity to submit bids.**
- 4. Joint ventures or mentor-protégé relationships between prime contractors and subcontractors with local MBE and WBE firms are encouraged.**

5. **Participation of MBE and WBE firms located outside the MSA shall not count towards the goals established in this order.**

SECTION SEVEN. CONCESSION CONTRACTS

1. **It shall be the goal of each contracting agency to award concession contracts in such a manner as to achieve the City's goals for MBE and WBE participation.**
2. **The methods by which contracting agencies shall pursue this goal shall include, but not be limited to, the following:**
 - (a) **consultation with SLDC and observation of all rules and regulations promulgated by SLDC;**
 - (b) **active solicitations of proposals by MBE's and WBE's;**
 - (c) **encouragement of joint ventures or mentor-protégé relationships that include MBE's and WBE's;**
 - (d) **encouragement of subcontracting to MBE's and WBE's;**
 - (e) **solicitation of proposals from MBE and WBE firms in a time frame that will allow those firms to respond;**
 - (f) **division of contract requirements where possible to allow MBE's and WBE's reasonable contracting opportunities;**
 - (g) **contacting minority and women trade and professional organizations to solicit participation.**
2. **All requests for concession proposals shall require proposers to make every good faith effort to utilize minority business enterprises and women's business enterprises as subcontractors and suppliers whenever possible. Concession contract proposers shall be required to submit their projected utilization of minority and women's business enterprises, if any, along with a description of the efforts made to utilize such businesses.**

3. **Joint ventures or mentor-protégé relationships between prime contractors and subcontractors with local MBE and WBE firms are encouraged.**
4. **Participation of MBE and WBE firms located outside the MSA shall not count towards the goals established in this order.**

SECTION EIGHT. BONDING ASSISTANCE

SLDC shall develop a program to assist small business enterprises, including MBE's and WBE's in obtaining information and resources on the availability of bonding for public sector contracts. SLDC shall provide;

1. **Individualized counseling;**
2. **Conduct seminars relating to bonding;**
3. **Explore methods of creating a bonding program for small businesses with public and private sector resources;**
4. **Monitor the bonding practices in the local market and to document any instances of discrimination in the bonding industry; and**
5. **Provide advice and information to the Board of Public Service or the appropriate user department as to the level of bonding generally available to subcontractors, so that such information may be considered in the process of reducing such projects to a size that small business enterprises might successfully bid.**

SECTION NINE. FINANCIAL ASSISTANCE

SLDC will assist small business enterprises in locating available financial resources in the St. Louis business sector. SLDC shall:

1. **Act as a clearinghouse for information on financial assistance programs for small business enterprises, MBEs, and WBEs;**
2. **Assist in packaging loan requests for small business enterprises;**

3. **Contract seminars relating to financing;**
4. **Monitor and document any instances of discrimination against small business enterprises, MBEs, and WBEs; and**
5. **Explore public and private resources to provide financial services to small business enterprises.**

SECTION TEN. EMPLOYMENT

All firms doing business with the City of St. Louis are encouraged to act affirmatively to hire residents of the City of St. Louis as employees, with particular emphasis on residents of the City who are members of minority groups or who are women.

SECTION ELEVEN. CITY-FUNDED PROJECTS

All contracts between the City of St. Louis and a second party wherein the City of St. Louis provides City or other governmental funds to the second party and wherein the second party agrees to provide services or engage in a project shall contain a provision obligating the second party to observe the program established by this Order, except with respect to non-construction contracts to which not-for-profit corporations are a party.

SECTION TWELVE. PENALTIES

1. **If SLDC determines that a contractor, bidder or proposer has failed to comply with the City's program regarding utilization of minority and women's business enterprises, it shall report its determination to the Mayor.**
2. **The Mayor, pursuant to Article VII, 1 of the Charter, may subject the offending party to any or all of the following penalties and sanctions:**
 - (a) **withholding of contract award;**
 - (b) **suspension of contract;**
 - (c) **withholding of payments;**

- (d) **recession of contract based upon a material breach of contract pertaining to MBE and/or WBE participation;**
- (e) **refusal to accept a proposal; and**
- (f) **disqualification of a bidder, proposer or contractor from eligibility for providing goods or services to the City for a period not to exceed one year.**

3. The Mayor shall report the imposition of any penalty to the Comptroller and to the City Counselor.

SECTION THIRTEEN. MINORITY AND WOMEN'S BUSINESS ENTERPRISE ADVISORY COMMITTEE

- 1. There is hereby created and established an advisory committee to be known as the Minority and Women Business Enterprise Advisory Committee.**
- 2. The committee shall consist of the following ten (10) members appointed by the Mayor, with the consent of the Board of Aldermen:**
 - (a) One (1) member of the Commission of the Civil Rights Enforcement Agency;**
 - (b) One (1) member of the Contractors Assistance Program (CAP);**
 - (c) One (1) member of the St. Louis Minority Contractors Association;**
 - (d) One (1) member of the National Association of Women in Construction;**
 - (e) One (1) member of the Associated General Contractors of St. Louis;**
 - (f) One (1) member of the Hispanic Chamber of Commerce;**
 - (g) One (1) member of the National Indian Community Association;**
 - (h) One (1) member of the Asian-Americans for Equal Opportunity;**
 - (i) One (1) member of the St. Louis Minority Business Council; and**
 - (j) One (1) member of the St. Louis Council of Construction Consumers;**

3. **Members shall serve for staggered terms of three (3) years. Initially four (4) members shall be appointed for a term of three (3) years, three (3) members shall be appointed for a term of two (2) years and three (3) members shall be appointed for a term of one (1) year. Vacancies shall be filled in the same manner as the original appointments for the remainder of the vacant term. Each member shall serve without compensation.**
4. **The committee shall elect a Chairman and a Secretary who shall each serve for three (3) years. One (1) month prior to the end of the Chairman's and the Secretary's term, successors shall be elected. The committee shall adopt rules consistent with applicable laws for the conduct of its business.**
5. **The committee shall meet quarterly to review compliance with this Order. In addition, the committee shall at a minimum meet twice annually in open public session to receive general testimony from the public. All minutes and records of the committee shall be open to the public.**
6. **The committee shall monitor the effectiveness of the City's program described in this order and make such recommendations to SLDC as it sees fit. The actions, decisions and recommendations of the Committee are to further the policies and goals of this Order and shall not be final or binding on the City but shall be advisory only.**

SECTION FOURTEEN. TERM

The program established by this order shall cease June 30, 2002, except SLDC shall submit its final report on September 20, 2002.

SECTION FIFTEEN. REPORT

No later than September 30, 1998 and beginning in 1998, and every year thereafter, SLDC shall deliver a report to the Mayor reviewing the progress made as of the preceding June 30 in achieving the

City's goals, and making such recommendations as to further remedial action that should be taken, if any.

SECTION SIXTEEN. FEDERAL AND STATE REGULATIONS

Projects that utilize federal or state funds in whole or in part must comply with any applicable federal or state regulations and such regulations may not be waived by the City.

Dated: July 24, 1997

Signed by: Clarence Hammer

Mayor, City of St. Louis

Exhibit 4

MBE/WBE Submission Instructions and Forms

**CITY OF ST. LOUIS
M/WBE PARTICIPATION**

1. Policy. Under the Mayor's Executive Order #28 as amended, it is the policy of the City of St. Louis that the effects of identified discrimination against minority business enterprises and women business enterprises within its jurisdiction shall be eradicated as part of the overall City business and economic development strategy. The method that the City shall employ to implement that policy is the establishment of a goal of at least 25% minority business enterprise participation and 5% women business enterprise participation, as defined in the Mayor's Executive Order #28 as amended, in contracts and purchases wherein city funds are expended. Consequently, the requirements of the Mayor's Executive Order #28 and the directives developed by the City of St. Louis to ensure compliance with the Mayor's Executive Order #28 apply to Agreements issued by the City of St. Louis.

2. M/WBE Obligation. The Consultant agrees to take all reasonable steps necessary to ensure that Minority and Women Business enterprises (M/WBE), as defined in the Mayor's Executive Order #28, have a maximum opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with city funds provided under this Agreement. The Consultant shall not discriminate on the basis of race, religion, color, national origin, or sex in the award and performance of contracts financed in whole or in part by the City of St. Louis. The Consultant shall utilize the services of banks in the community, which are owned and controlled by minorities and women when feasible and beneficial.

3. Failure to Comply with M/WBE Requirements. The Consultant is hereby advised that failure to carry out the requirements as set forth above may constitute a breach of contract and may result in rejection of the proposal, termination of the contract; a deduction from the contract fund due or may become due to the consultant; or other such remedy as the City of St. Louis deems appropriate.

4. Eligibility of M/WBE's. A current directory containing the names of firms that have been certified as eligible to participate as M/WBE's on City contracts can be obtained from the St. Louis Airport Authority DBE Office. Firms certified subsequent to the printing of this directory may be utilized on the project only if their certification is active at the time of the proposal submittal. Consultants should contact the DBE Program Office, (314)551-5000 to verify the current status of a firm's certification. The M/W/DBE Directory is accessible on the internet at www.mwdbe.org.

5. Counting M/WBE Utilization. M/WBE utilization will be counted on the following basis:

- a) The total value of sub-consulting arrangements for services awarded to the M/WBE provided the M/WBE performs a commercially useful function.
- b) That portion of the dollar value of a joint venture equal to the percentage of ownership and control of the M/WBE partner in the joint venture may be counted.
- c) Participation of MBE and WBE firms located outside the St. Louis Metropolitan Statistical Area (SMSA) shall not count towards the goals established by the Mayor's Executive Order #28.

6. Contract Documentation. The Consultant will submit the M/WBE Utilization Plan as part of and in the same format as the proposed agreement. The information will include, but not be limited to, a definitive statement of the services to be provided by the M/WBE sub-Consultants, products and schedules, M/WBE outreach goals and estimated man-months, labor budget and expense costs.

7. Agreement Compliance.

a) If the Agreement is approved on less than 25% M/WBE utilization, such approval will not relieve the Consultant of the responsibility to continue good faith efforts to maximize participation of M/WBE's throughout the term of the Agreement. The Consultant shall submit a request to sublet prior to any subcontracting of additional work items. The Consultant will be required to document good faith efforts to utilize M/WBE Consultants prior to entering into an agreement with a non-M/WBE.

b) When the Agreement is approved on M/WBE utilization is excess of the goal, the Consultant will be required to achieve the percentage stated in the M/WBE utilization plan included in the Agreement regardless of the stated 25% and 5% minimum overall goal in the Agreement.

c) The Consultant shall enter into subcontracts or written agreements with the M/WBE identified in the Agreement Utilization Plan for the kind and amount of services specified. The Consultant shall submit copies of subcontracts or agreements with the M/WBE to SLAA DBE office upon request. The Consultant shall submit a Certification of Agreed M/WBE Utilization for each M/WBE sub-consultant identified in the Agreement with the City prior to the start of work.

d) The Consultant shall keep each M/WBE sub-consultant informed of the project progress schedule and allow each M/WBE adequate time to schedule work and otherwise prepare for subcontract work.

e) At any point during the project when it appears that the scheduled amount of M/WBE utilization may not be achieved, the Consultant shall provide evidence demonstrating how the goal will be met.

f) If the Consultant fails to achieve the scheduled M/WBE utilization, the Consultant shall demonstrate to the City's satisfaction that said failure was due to reasons such as elimination of items contracted to the M/WBE and that good faith efforts were made to obtain the scheduled Agreement utilization.

8. Substitution of M/WBE Consultants After Award.

a) The Consultant shall conform to the agreed upon amounts of M/WBE utilization.

b) Services designated as being performed by M/WBE sub-consultants in the Agreement shall be performed by the designated M/WBE or a City approved substitute. Approval must be in writing.

c) A M/WBE may not assign portions of its service agreement without the written approval of the City.

9. Good Faith Efforts. If any agreement is submitted without the minimum goal utilization levels of M/WBE sub-consultants, the Consultant shall document and submit justification as to why the agreed level of utilization will not be met and demonstrate the good faith efforts taken to attain it, including but not limited to the following:

Efforts made to select portions of the work proposed to be performed by M/WBE's in order to increase the likelihood of achieving the stated goal, including where appropriate, but not limited to, breaking down projects into economically feasible units to facilitate M/WBE participation. Selections of portions of work are required to at least equal the goal for M/WBE utilization specified in the Agreement.

The demonstration of good faith efforts by the Consultant must in the end prove the Consultant has actively and aggressively sought to utilize M/WBE's.

The information provided will be evaluated to determine if the Consultant has been responsible. All the information provided must be accurate and complete in every detail. The Consultant's attainment of the M/WBE goals or demonstrations of good faith effort will determine the award of the agreement. Documentation of initial good faith efforts is to be submitted with the Agreement.

10. Record Keeping Requirements. The Consultant shall keep such records as are necessary for the City to determine compliance with the M/WBE contract obligations. These records shall include the names of sub-consultants, including M/WBE's, copies of sub-consulting agreements; the type of work being performed; documentation such as canceled checks and paid invoices verifying payment for work, services and procurement and documentation of correspondence, verbal contracts, telephone calls and other efforts to obtain services of M/WBE's. When requested, the Consultant shall submit all subcontracts and other financial transactions executed with the M/WBE in such form, manner and content as prescribed by the City. The City reserves the rights to audit, investigate, monitor and/or review actions, statements and documents submitted by any contractor, subcontractor or M/WBE.

11. Reporting Requirements. The Consultant shall submit monthly reports on M/WBE involvement. At the conclusion of each billing period, the Consultant shall submit the Consultant Monthly DBE Utilization Report to the City to verify actual payments to the M/WBE for the previous month's reporting period. These reports are required regardless of whether or not M/WBE activity has occurred in the monthly reporting period.

Upon completion of all M/WBE participation and prior to final payment, the Consultant shall submit the M/WBE Utilization Final Report to the City detailing all M/WBE subcontract payments and a completed Certification of Actual M/WBE Utilization for each M/WBE sub-consultant utilized. When the actual amount paid to an M/WBE is less than the award amount, a complete explanation of the differences is required. If the agreement is not met, documentation supporting good faith efforts shall be submitted. Failure to submit the required reports will result in the withholding of partial payments to the Consultant until the reports are submitted. All

payments due sub-consultants which affect Agreement goal attainment, including retainage, shall be paid by the Consultant before the City releases the contract/retainage bond. The City reserves the right to conduct an audit of M/WBE participation prior to processing the final estimate and at any time during the work.

CITY OF ST. LOUIS
M/WBE INDEX AND SUBMISSION INSTRUCTIONS

Submit all reports to the authority's designated Project Manager.

FORM	WHEN TO SUBMIT
M/WBE UTILIZATION STATEMENT	With Bid Proposal
SUBCONTRACTOR LIST	With Bid Proposal
M/WBE UTILIZATION PLAN	Within 48 Hours of Bid Opening
NOTICE OF INTENT TO PERFORM AS A SUBCONTRACTOR AND/OR MATERIAL SUPPLIER	At Pre-Award Conference All subcontractors and material suppliers should complete this form.
CONTRACTOR'S GOOD FAITH EFFORTS REPORT AND STATEMENT	At Pre-Award Conference Required if M/WBE goals are not met
COPIES OF M/WBE SUBCONTRACTS	Upon execution of a contract with the City, the Contractor shall provide fully executed copies of all M/WBE subcontractors.
RECORD OF PAYMENTS TO SUBCONTRACTORS, MATERIAL SUPPLIERS AND OTHER VENDORS REPORT	The 15th of the month for the month preceding. (Example: January's report should be submitted by February 15th.)
SUBCONTRACTOR OR SUPPLIER SUBSTITUTION FORM	Prior to substituting a subcontractor or supplier. Approval from the City is required prior to substitution.
FINAL RECORD OF PAYMENTS REPORT	Within 15 days after the completion of all work items to be performed under the contract.

**CITY OF ST. LOUIS
M/WBE UTILIZATION PLAN**

CONTRACTING AGENCY: _____

PROJECT GOAL: 25% MBE; 5% WBE

PROJECT NAME: _____

NAME OF PRIME CONTRACTOR: _____

The prime contractor shall utilize and require all subcontractors to utilize the maximum number of certified minority/women business enterprises possible and will purchase materials and supplies from minority/women business enterprises to the maximum extent feasible, and to this end, the prime contractor will inform each subcontractor of this requirement, The prime contractor shall utilize the services and/or supplies to be provided by the following certified minority/women business enterprises in the execution of this contract.

FIRM NAME ADDRESS PHONE NUMBER CONTACT PERSON	CERTIFYING AGENCY CERTIFICATION DATE CATEGORY CERTIFICATION NO.	WORK TO BE PERFORMED	M/WBE PERCENT

PRIME CONTRACTOR AUTHORIZED SIGNATURE

DATE

Letting No. _____

**CITY OF ST. LOUIS
MBE/WBE UTILIZATION STATEMENT**

Policy: It is the policy of the City of St. Louis that minority and women-owned businesses, as defined in the Mayor's Executive Order of July 24, 1997, shall have an opportunity to participate in the performance of contracts utilizing City funds, in whole or in part. Consequently, the requirements of the aforementioned Executive Order apply to this contract.

Project and Bid Identification:

Contracting Agency: _____

Project Name: _____

Letting Number: _____ Date: _____

Contract MBE/WBE Participation Goal: 25% MBE and 5%WBE

Total Dollar Amount of Prime Contract: \$ _____

Total Dollar Amount of Proposed MBE: \$ _____ Percent MBE _____

Total Dollar Amount of Proposed WBE: \$ _____ Percent WBE _____

Obligation: The undersigned certifies that (s)he has read, understands and agrees to be bound by the bid specifications, including the accompanying exhibits and other items and conditions of the request for proposals regarding minority and women business enterprise utilization. The undersigned further certifies that (s)he is legally authorized by the respondent to make the statements and representations in the M/WBE Forms and Exhibits and that said statements and representations are true and correct to the best of his/her knowledge and belief. The undersigned will enter into formal agreements with the minority/women business enterprises listed in the Subcontractor List, which are deemed by the City to be legitimate and responsible. The undersigned understands that if any of the statements and representations are made by the respondent knowing them to be false, or if there is a failure of the successful respondent to implement any of the stated agreements, intentions, objectives, goals and commitments set forth herein without prior approval of the City, then in any such events, the contractor's act or failure to act, as the case may be, shall constitute a material breach of the contract, entitling the City to terminate the contract for default. The right to so terminate shall be in addition to, and not in lieu of, any other rights and remedies the City may have for other defaults under the contract. Additionally, the contractor may be subject to the penalties cited in Section Twelve of the Mayor's Executive Order #44.

Assurance: I, acting as an officer of the undersigned bidder or joint venture bidders, hereby assure the City that on this project my company will (check one):

- Meet or exceed contract award goals and provide participation as shown above.
- Fail to meet contract award goals but will demonstrate that good faith efforts were made to meet the goals and my company will provide participation as shown above.

Name of Prime Contractor(s): _____

Prime Contractor Authorized Signature Title Date

CONTRACT BID TOTAL \$ 0.00

TOTAL AMOUNT OF MBE PARTICIPATION: _____
 PERCENT MBE PARTICIPATION: _____
 TOTAL AMOUNT OF WBE PARTICIPATION: _____
 PERCENT WBE PARTICIPATION: _____

In considering all levels of subcontracting on City contracts the following categories of Bid Item(s) or Work and Trade have been suggested by various private and governmental organizations and professional groups involved in commercial and industrial construction: air conditioning, final clean-up, caulking, ceilings, conduit, concrete, cement, cabinets, doors, drainage, drilling, drywall, asphalt, carpentry, communications, electrical, equipment rental, excavating, elevators, earthwork, decorators, fencing, flooring, automatic sprinklers, foundations, brick masonry, pile caps, pile driving, sewers, stone masonry, insulation, tile setting and terrazzo, lathing and plastering, asbestos, painting, security guard service, sign painting, painting, insurance and bonding, photographers, plumbing, paving, grading, landscaping, toilet partitions, siding, roof decking, flooring, paperhangers, sky lights, steel erections, re-bars, sheet metal, movable partitions, ornamental iron, glazing, accessories suppliers, exterminators, millwork, wall covering, advertisers, data programmers, wrecking and demolition, sodding, construction and design consultants, hauling, financing institutions, public movers, specialties, carpeting, piping, heating, and sanitary and safety facilities.

Note: On attached sheets, provide the complete mailing address, telephone number, contact person and title for each firm listed on this and previous pages. Additionally, provide the City Business License Number and Federal Identification Number for each.

 Name of Firm

 Signature and Date

CITY OF ST. LOUIS
NOTICE OF INTENT TO PERFORM AS A SUBCONTRACTOR
AND/OR MATERIAL SUPPLIER

NAME OF PROJECT: _____

LETTING NUMBER: _____

PART I

(NOTE: Pursuant to the City's policies, M/WBE firms participating in the City's M/WBE Program must have "current" certification status with the City or the Missouri Regional Certification prior to bid opening. The M/WBE certification of any firm is effective for two (2) years from the date of written notification of certification. Firms not certified by the City or the Missouri Regional Certification cannot be counted towards the City's M/WBE goals on this project. Firms certified by the U.S. Small Business Administration (SBA) must attach a copy of a the firm's 8(a) program approval letter from the SBA)

1. TO: _____
(Name of Contractor)

2. The undersigned intends to perform work in connection with the above project as (check one):

an individual / sole proprietorship
a corporation

a partnership
a joint venture

3. The undersigned (check applicable statements):

has been certified by the St. Louis Airport Authority (SLAA)
(Certification # _____)

has been certified as a DBE by the Missouri Regional Certification Committee.
(Certification # _____)

has a current 8(a) status with the U.S. Small Business Administration.

4. The undersigned is prepared to perform the following described work and/or supply the material listed in connection with the above project (where applicable specify "supply" or "install" or both).

and at the following price \$_____. With respect to the proposed subcontract described above _____% of the dollar value of such subcontract will be sublet and/or awarded to non-M/WBE subcontractors.

PART II: SUBCONTRACTOR PARTICIPATION

4b	Name of Firm Receiving Subcontract	Work to Be Performed	Amount of Subcontract

Total amount to be subcontracted out by M/WBE \$ 0.00

(Name of General Contractor) BY: _____ PHONE: _____ DATE: _____
(Signature of Authorized Representative)

(Name of M/WBE Firm) BY: _____ PHONE: _____ DATE: _____
(Signature of Authorized Representative)

**CITY OF ST. LOUIS
CONTRACTOR'S GOOD FAITH EFFORTS REPORT**

CONTRACTING AGENCY: _____
 PROJECT NAME: _____
 PRIME CONTRACTOR: _____

In addition to the minority or women-owned business enterprises listed and proposed for utilization on this contract, the following minority and women-owned business enterprises were also contacted regarding this contract. However, the prime contractor is unable to utilize these firms for the reasons listed below:

FIRM NAME ADDRESS, PHONE # CONTACT PERSON	BID ITEM(S) OF WORK TO BE PERFORMED AND/OR MATERIALS SUPPLIED	BID AMOUNTS	DATE AND METHOD OF SOLICITATION	COMMENTS: REASONS REJECTED

_____ Title _____ Date

Note: Attach additional sheets if necessary.

**CITY OF ST. LOUIS
M/WBE SUBSTITUTION FORM**

CONTRACTING AGENCY: _____
PROJECT NAME: _____
NAME OF PRIME CONTRACTOR: _____
TOTAL CONTRACT AMOUNT: _____

In accordance with the City of St. Louis' Minority/Women Business Participation Program, when adding, changing or deleting subcontractors or suppliers on City projects, the City of St. Louis Substitution Form shall be used. All changes to the original list of approved subcontractors or suppliers shall be submitted to the contracting agency and SLAA DBE Office for review and written approval prior to the use of any substitute contractor and/or supplier on a City project. Contractors shall make a good faith effort to replace M/WBE subcontractors or suppliers unable to perform on the project with another certified M/WBE firm.

1. Is the subcontractor/supplier being replaced a M/WBE? YES NO
2. Type of work to be performed/material to be supplied: _____
3. Dollar Amount: _____
4. Name of the subcontractor/supplier being replaced: _____
Contact Person: _____ Telephone No. _____
5. Percent of work/material that was completed /supplied by the subcontractor/supplier _____
6. Amount paid to the subcontractor/supplier (if any): _____
7. The reason the subcontractor/supplier is being replaced is stated as follows:

8. Document the efforts made to replace or add a M/WBE to perform the work/supply the required materials:

9. Name of substitute subcontractor/supplier: _____
Address: _____ Federal ID: _____
M/WBE: Yes No Contact Person: _____ Telephone No. _____

This form should be completed and submitted to the contracting agency when a subcontractor or supplier is being added, deleted or changed. The same criterion used for establishing good faith efforts in maximizing the participation of M/WBEs prior to awarding this contract will also apply to the substitution of M/WBE subcontractors or suppliers during the performance of the contract.

**CITY OF ST. LOUIS
FINAL RECORD OF PAYMENTS REPORT**

PROJECT NAME: _____ M/WBE GOAL: 25% MBE; 5% WBE

CONTRACT NUMBER: _____ FINAL CONTRACT AMOUNT: _____
(Including Change Orders to Date)

The Final Record of Payments Report is completed by the contractor and submitted to the contracting agency and SLAA upon completion of the project. The report should reflect all activity, regardless of tier, on the project. If the M/WBE goal was not met, the contractor shall submit documentation supporting good faith efforts.

SUBCONTRACTOR OR SUPPLIER	MBE or WBE	WORK PERFORMED	TOTAL DOLLAR AMOUNT PAID TO SUBCONTRACTOR OR SUPPLIER

This certifies that \$ _____ 0.00 has been paid to M/WBE Subcontractors or Suppliers as stated above.

By: _____ Name of Contractor

Per: _____ Authorized Signature

Subscribed and sworn to, before me, this _____ day of _____, A.D. _____

Notary Public: _____ My commission expires: _____

Exhibit 5

Wage Determination

General Decision Number: M0150051 02/20/2015 M051

Superseded General Decision Number: M020140051

State: Missouri

Construction Type: Building

County: St Louis City County in Missouri.

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

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is 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 \$10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. 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	01/02/2015
1	02/06/2015
2	02/13/2015
3	02/20/2015

ASBE0001-005 10/06/2014

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 38.06	20.71

BOIL0027-001 01/01/2012

	Rates	Fringes
BOILERMAKER.....	\$ 31.20	27.72

BRM00001-007 06/04/2014

	Rates	Fringes
BRICKLAYER.....	\$ 34.61	17.04

BRM00018-006 07/01/2014

	Rates	Fringes
TILE FINISHER.....	\$ 27.48	12.49
TILE SETTER.....	\$ 31.19	13.21

CARP0002-007 05/04/2014

Rates Fringes

CARPENTER (Including Drywall Hanging & Form Work).....\$ 35.67 15.05

CARP1310-001 05/01/2014

Rates Fringes

CARPENTER (Floor Laying-Carpet and Vinyl Only)....\$ 30.33 14.95

* ELEC0001-001 06/01/2014

Rates Fringes

ELECTRICIAN (Including Low Voltage Wiring Installer; Alarm, Computer & Telephone Installation).....\$ 33.15 17.04

ELEV0003-001 01/01/2013

Rates Fringes

ELEVATOR MECHANIC.....\$ 43.715 25.185+a+b

a. VACATION: Employer contributes 8% of basic hourly rate as vacation pay credit for more than 5 years of service; and 6% for 6 months to 5 years of service.

b. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the Friday after Thanksgiving Day and Christmas Day.

ENGI0513-003 05/07/2014

Rates Fringes

POWER EQUIPMENT OPERATOR: Backhoe/Excavator.....\$ 31.31 23.66 Bobcat/Skid Loader.....\$ 31.31 23.66 Crane.....\$ 31.31 23.66 Forklift.....\$ 31.31 23.66 Grader/Blade.....\$ 31.31 23.66 Loader.....\$ 31.31 23.66 Paver.....\$ 31.31 23.66 Roller.....\$ 31.31 23.66

IRON0396-001 08/01/2012

Rates Fringes

IRONWORKER, ORNAMENTAL, REINFORCING, AND STRUCTURAL.....\$ 32.28 20.31

LAB00042-001 03/06/2013

Rates Fringes

LABORER

Brick & Cement/Concrete		
Mason Tender.....	\$ 30.11	14.27
Common or General; Asphalt		
Shoveler; Pipelayer.....	\$ 29.52	13.22

PAIN0002-001 09/01/2013

Rates Fringes

PAINTER

Brush & Roller.....	\$ 28.69	13.51
Drywall Finishing/Taping....	\$ 28.69	13.51

PAIN0513-006 11/01/2013

Rates Fringes

GLAZIER.....	\$ 32.78	24.47
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PLAS0527-002 04/01/2014

Rates Fringes

CEMENT MASON/CONCRETE FINISHER...	\$ 30.20	16.51
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PLUM0562-005 07/01/2014

Rates Fringes

PIPEFITTER, Includes HVAC		
Pipe Installation.....	\$ 35.75	25.83
PLUMBER, Excludes HVAC Pipe		
Installation.....	\$ 35.75	25.83

ROOF0002-001 03/01/2014

Rates Fringes

ROOFER.....	\$ 30.10	16.14
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SFMO0268-002 01/01/2014

Rates Fringes

SPRINKLER FITTER (Fire		
Sprinklers).....	\$ 40.03	20.90

SHEE0036-001 02/01/2011

Rates Fringes

SHEET METAL WORKER, Includes		
HVAC Duct and Unit		
Installation.....	\$ 35.86	21.20

TEAM0682-003 04/01/2014

Rates Fringes

TRUCK DRIVER, Includes Dump		
-----------------------------	--	--

Truck.....\$ 19.85 a+b

a.PAID HOLIDAYS: Christmas, Fourth of July, Labor Day, Memorial Day, New Years Day and Thanksgiving Day.

b.PAID VACATION: 1 week paid vacation after 2 years continuous service; 2 weeks paid vacation after 5 years continuous service; 3 weeks paid vacation after 10 years continuous service.

SUMO2010-050 06/14/2010

	Rates	Fringes
OPERATOR: Hoist.....	\$ 26.02	13.01
PAINTER: Spray.....	\$ 17.78	0.00

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

=====
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

General Decision Number: MO150001 02/20/2015 M01

Superseded General Decision Number: MO20140001

State: Missouri

Construction Types: Heavy and Highway

Counties: Missouri Statewide.

HEAVY AND HIGHWAY CONSTRUCTION PROJECTS

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is 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 \$10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. 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	01/02/2015
1	02/06/2015
2	02/20/2015

CARP0002-002 05/04/2014

ST. LOUIS COUNTY AND CITY

	Rates	Fringes
Carpenters.....	\$ 35.67	15.05

CARP0005-006 04/01/2008

CASS (Richards-Gebauer AFB ONLY), CLAY, JACKSON, PLATTE AND RAY COUNTIES

	Rates	Fringes
Carpenters:		
CARPENTERS & LATHERS.....	\$ 33.00	12.03
MILLWRIGHTS & PILEDRIVERS...	\$ 33.00	12.03

CARP0011-001 05/01/2014

	Rates	Fringes
Carpenter and Piledriver		
ADAIR, AUDRAIN (West of Hwy 19), BOONE, CALLAWAY, CHARITON, COLE, COOPER, HOWARD, KNOX, LINN, MACON, MILLER, MONITEAU, MONROE,		

OSAGE, PUTNAM, RANDOLPH, SCHUYLER, SHELBY AND SULLIVAN COUNTIES.....	\$ 30.01	15.05
ATCHISON, ANDREW, BATES, CALDWELL, CARROLL, DAVIESS, DEKALB, GENTRY, GRUNDY, HARRISON, HENRY, HOLT, LIVINGSTON, MERCER, NODAWAY, ST. CLAIR, SALINE AND WORTH COUNTIES.....	\$ 28.63	15.05
AUDRAIN (East of Hwy.19), RALLS, MARION, LEWIS, CLARK AND SCOTLAND COUNTIES.	\$ 30.02	15.05
BARRY, BARTON, CAMDEN, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY, JASPER, LACLEDE, LAWRENCE, MCDONALD, NEWTON, OZARK, POLK, STONE, TANEY, VERNON, WEBSTER AND WRIGHT COUNTIES.	\$ 28.27	15.05
BENTON, MORGAN AND PETTIS...	\$ 28.68	15.05
BOLLINGER, BUTLER, CAPE GIRARDEAU, DUNKLIN, MISSISSIPPI, NEW MADRID, PEMISCOT, PERRY, STE. GENEVIEVE, SCOTT, STODDARD AND WAYNE COUNTIES.....	\$ 29.87	15.05
BUCHANAN, CLINTON, JOHNSON AND LAFAYETTE COUNTIES.....	\$ 29.29	15.05
CARTER, HOWELL, OREGON AND RIPLEY COUNTIES.....	\$ 28.93	15.05
CRAWFORD, DENT, GASCONADE, IRON, MADISON, MARIES, MONTGOMERY, PHELPS, PULASKI, REYNOLDS, SHANNON AND TEXAS COUNTIES.....	\$ 29.86	15.05
FRANKLIN COUNTY.....	\$ 32.97	15.05
JEFFERSON AND ST. CHARLES COUNTIES.....	\$ 35.17	15.05
LINCOLN COUNTY.....	\$ 31.56	15.05
PIKE, ST. FRANCOIS AND WASHINGTON COUNTIES.....	\$ 30.59	15.05
WARREN COUNTY.....	\$ 31.95	15.05

 * ELEC0001-002 06/01/2014

BOLLINGER, BUTLER, CAPE GIRARDEAU, CARTER, DUNKLIN, FRANKLIN,
 IRON, JEFFERSON, LINCOLN, MADISON, MISSISSIPPI, NEW MADRID,
 PEMISCOT, PERRY, REYNOLDS, RIPLEY, ST. CHARLES, ST. FRANCOIS,
 ST. LOUIS (City and County), STE. GENEVIEVE, SCOTT, STODDARD,
 WARREN, WASHINGTON AND WAYNE COUNTIES

	Rates	Fringes
Electricians.....	\$ 33.15	17.04

 ELEC0002-001 09/01/2014

ADAIR, AUDRAIN, BOONE, CALLAWAY, CAMDEN, CARTER, CHARITON,

CLARK, COLE, COOPER, CRAWFORD, DENT, FRANKLIN, GASCONADE,
 HOWARD, HOWELL, IRON, JEFFERSON, KNOX, LEWIS, LINCON, LINN,
 MACON, MARIES, MARION, MILLER, MONITEAU, MONROE, MONTGOMERY,
 MORGAN, OREGON, OSAGE, PERRY, PHELPS, PIKE, PULASKI, PUTNAM,
 RALLS, RANDOLPH, REYNOLDS, RIPLEY, ST. CHARLES, ST. FRANCOIS,
 ST. LOUIS (City and County), STE. GENEVIEVE, SCHUYLER,
 SCOTLAND, SHANNON, SHELBY, SULLIVAN, TEXAS, WARREN AND
 WASHINGTON COUNTIES

	Rates	Fringes
Line Construction:		
Equipment Operator.....	\$ 35.46	36.5%+5.00
Groundman & Truck Driver....	\$ 27.42	36.5%+5.00
Lineman & Cable Splicer.....	\$ 41.08	36.5%+5.00

 ELEC0053-004 09/02/2012

	Rates	Fringes
Line Construction: (ANDREW, ATCHINSON, BARRY, BARTON, BUCHANAN, CALDWELL, CEDAR, CHRISTIAN, CLINTON, DADE, DALLAS, DAVIES,, DEKALB, DOUGLAS, GENTRY, GREENE, GRUNDY, HARRISON, HICKORY, HOLT, JASPER, LACLEDE, LAWRENCE, LIVINGSTON, MCDONALD, MERCER, NEWTON, NODAWAY, OZARK, POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER, WORTH AND WRIGHT COUNTIES)		
Groundman Powderman.....	\$ 25.88	13.93
Groundman.....	\$ 24.46	29.5%+6.22
Lineman Operator.....	\$ 35.82	29.5%+6.79
Lineman.....	\$ 37.84	29.5%+6.89

Line Construction; (BATES, BENTON, CARROLL, CASS, CLAY, HENRY, JACKSON, JOHNSON, LAFAYETTE, PETTIS, PLATTE, RAY AND SALINE COUNTIES)		
Groundman Powderman.....	\$ 26.84	14.26
Groundman.....	\$ 25.95	29.5%+6.30
Lineman Operator.....	\$ 36.54	29.5%+6.83
Lineman.....	\$ 39.17	29.5%+6.96

 ELEC0095-001 06/01/2014

BARRY, BARTON, CEDAR, DADE, JASPER, LAWRENCE, MCDONALD, NEWTON,
 ST CLAIR, AND VERNON COUNTIES

	Rates	Fringes
Electricians:		
Cable Splicers.....	\$ 25.40	12.19
Electricians.....	\$ 26.05	12.19

ELEC0124-007 09/02/2013

BATES, BENTON, CARROLL, CASS, CLAY, COOPER, HENRY, JACKSON, JOHNSON, LAFAYETTE, MORGAN, PETTIS, PLATTE, RAY AND SALINE COUNTIES:

	Rates	Fringes
Electricians.....	\$ 35.23	19.53

ELEC0257-003 03/01/2014

AUDRAIN (Except Cuivre Township), BOONE, CALLAWAY, CAMDEN, CHARITON, COLE, CRAWFORD, DENT, GASCONADE, HOWARD, MARIES, MILLER, MONITEAU, OSAGE, PHELPS AND RANDOLPH COUNTIES

	Rates	Fringes
Electricians:		
Cable Splicers.....	\$ 30.42	16.085
Electricians.....	\$ 31.04	13%+12.47

ELEC0350-002 12/01/2013

ADAIR, AUDRAIN (East of Highway 19), CLARK, KNOX, LEWIS, LINN, MACON, MARION, MONROE, MONTGOMERY, PIKE, PUTNAM, RALLS, SCHUYLER, SCOTLAND, SHELBY AND SULLIVAN COUNTIES

	Rates	Fringes
Electricians.....	\$ 29.41	5.67+35%

ELEC0453-001 09/01/2013

	Rates	Fringes
Electricians:		
CHRISITAN, DALLAS, DOUGLAS, GREENE, HICKORY, HOWELL, LACLEDE, OREGON, OZARK, POLK, SHANNON, WEBSTER and WRIGHT COUNTIES..	\$ 24.15	14.14
PULASKI and TEXAS COUNTIES..	\$ 28.80	14.58
STONE and TANEY COUNTIES....	\$ 19.94	13.33

ELEC0545-003 06/01/2014

ANDREW, BUCHANAN, CLINTON, DEKALB, ATCHISON, HOLT, MERCER, GENTRY, HARRISON, DAVIESS, GRUNDY, WORTH, LIVINGSTON, NODAWAY, AND CALDWELL COUNTIES

	Rates	Fringes
Electricians:.....	\$ 31.00	13.90

ELEC0702-004 06/30/2014

BOLLINGER, BUTLER, CAPE GIRARDEAU, DUNKLIN, MADISON,
 MISSISSIPPI, NEW MADRID, PEMISCOT, SCOTT, STODDARD AND WAYNE
 COUNTIES

	Rates	Fringes
Line Construction:		
Groundman - Class A.....	\$ 26.41	29%+5.76
Groundman-Equipment Operator Class II (all other equipment).....	\$ 33.38	29%+5.76
Heavy-Equipment Operator Class I (all crawler type equipment D-4 and larger)...	\$ 38.01	29%+5.76
Lineman.....	\$ 46.21	29%+5.76

 ENGI0101-001 05/01/2014

ANDREW, ATCHISON, BATES, BENTON, BUCHANAN, CALDWELL, CARROLL,
 CHARITON, CLINTON, COOPER, DAVIESS, DEKALB, GENTRY, GRUNDY,
 HARRISON, HENRY, HOLT, HOWARD, JOHNSON, LAFAYETTE, LINN,
 LIVINGSTON, MERCER, NODAWAY, PETTIS, SALINE, SULLIVAN AND WORTH
 COUNITIES

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 32.19	15.01
GROUP 2.....	\$ 31.79	15.01
GROUP 3.....	\$ 29.79	15.01

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt roller operator, finish; asphalt paver and spreader; asphalt plant operator; auto grader or trimmer or sub-grader; backhoe; blade operator (all types); boilers - 2; booster pump on dredge; bulldozer operator; boring machine (truck or crane mounted); clamshell operator; concrete mixer paver; concrete plant operator; concrete pump operator; crane operator; derrick or derrick trucks; ditching machine; dragline operator; dredge engineman; dredge operator; drill cat with compressor mounted (self-contained) or similar type self-propelled rotary drill (not air tract); drilling or boring machine (rotary-self-propelled); finishing machine operator; greaser; high loader-fork lift-skid loader (all types); hoisting engineer (2 active drums); locomotive operator (standard guage); mechanics and welders (field and plants); mucking machine operator; pile drive operator; pitman crane or boom truck (all types); push cat; quad track; scraper operators (all types); shovel operator; sideboom cats; side discharge spreader; skimmer scoop operators; slip form paver operator (CMI, Rex, Gomeco or equal); la tourneau rooter (all tiller types); tow boat operator; truck crane; wood and log chippers (all types).

GROUP 2: A-frame truck operator; articulated dump truck; back filler operator; boilers (1); chip spreader; churn drill operator; compressor; concrete mixer operator, skip

loader; concrete saws (self-propelled); conveyor operator; crusher operator; distributor operator; elevating grader operator; farm tractor (all attachments); fireman rig; float operator; form grade operator; hoisting engine (one drum); maintenance operator; multiple compactor; pavement breaker, self-propelled hydra-hammer (or similar type); paymill operator; power shield; pumps; roller operator (with or without blades); screening and washing plant; self-propelled street broom or sweeper; siphons and jets; straw blower; stump cutting machine; siphons and jets; tank car heater operator (combination boiler and booster); welding machine; vibrating machine operator (not hand held); welding machine.

GROUP 3: (a) Oiler;
(b) Oiler driver
(c) Mechanic.

HOURLY PREMIUMS:

THE FOLLOWING CLASSIFICATIONS SHALL RECEIVE (\$.25) ABOVE GROUP 1 RATE: Dragline operator - 3 yds. & over; shovel 3 yds. & over; clamshell 3 yds. & over; Crane, rigs or piledrivers, 100' of boom or over (incl. jib.), hoist - each additional active drum over 2 drums

THE FOLLOWING CLASSIFICATIONS SHALL RECEIVE (\$.50) ABOVE GROUP 1 RATE: Tandem scoop operator; crane, rigs or piledrivers 150' to 200' of boom (incl. jib.)

THE FOLLOWING CLASSIFICATIONS SHALL RECEIVE (\$.75) ABOVE GROUP 1 RATE: Crane rigs, or piledrivers 200 ft. of boom or over (including jib.)

ENGI0101-005 05/01/2014

CASS, CLAY, JACKSON, PLATTE AND RAY COUNTIES

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 34.58	15.13
GROUP 2.....	\$ 33.54	15.13
GROUP 3.....	\$ 29.07	15.13
GROUP 4.....	\$ 32.42	15.13

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt roller operator, finish; asphalt paver and spreader; asphalt plant operator; auto grader or trimmer or sub-grader; backhoe; blade operator (all types); boilers-2; booster pump on dredge; boring machine (truck or crane mounted); bulldozer operator; clamshell operator; concrete cleaning decontamination machine operator; concrete mixer paver; concrete plant operator; concrete pump operator; crane operator; derrick or derrick trucks; ditching machine; dragline operator; dredge engineman; dredge operator; drillcat with compressor mounted (self-contained) or similar type self propelled rotary drill (not air tract); drilling or boring machine (rotary - self-propelled); finishing machine operator; greaser; heavy

equipment robotics operator/mechanic; horizontal directional drill operator; horizontal directional drill locator; loader-forklift - skid loader (all types); hoisting engineer (2 active drums); locomotive operator (standard guage); master environmental maintenance mechanic; mechanics and welders (field and plants); mucking machine operator; piledrive operator; pitman crane or boom truck (all types); push cat; quad-track; scraper operators (all types); shovel operator; side discharge spreader; sideboom cats; skimmer scoop operator; slip-form paver (CMI, REX, Gomaco or equal); la tourneau rooter (all tiller types); tow boat operator; truck crane; ultra high perssure waterjet cutting tool system operator/mechanic; vacuum blasting machine operator/mechanic; wood and log chippers (all types)

GROUP 2: "A" Frame truck operator; back filler operator; boilers (1); chip spreader;churn drill operator; concrete mixer operator, skip loader; concrete saws (self-propelled); conveyor operator; crusher operator; distributor operator; elevating grader operator; farm tractor (all attachments); fireman rig; float operator; form grader operator; hoisting engine (1 drum); maintenance operator; multiple compactor; pavement breaker, self-propelled hydra- hammer (or similar type); power shield; paymill operator; pumps; siphons and jets; stump cutting machine; tank car heater operator (combination boiler and booster); compressor; roller operator (with or without blades); screening and washing plant; self-propelled street broom or sweeper; straw blower; tank car heater operator (combination boiler and booster); vibrating machine operator (not hand held)

GROUP 3: Oilers

GROUP 4: Oiler Driver (All Types)

FOOTNOTE:

HOURLY PREMIUMS FOLLOWING CLASSIFICATIONS SHALL RECEIVE (\$1.00) ABOVE GROUP 1 RATE:

Clamshells - 3 yd. capacity or over; Cranes or rigs, 80 ft. of boom or over (including jib); Draglines, 3 yd. capacity or over;

Piledrivers 80 ft. of boom or over (including jib);

Shovels & backhoes, 3 yd. capacity or over.

 ENGI0101-022 05/01/2014

BARRY, BARTON, CAMDEN, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY, JASPER, LACLEDE, LAWRENCE, MCDONALD, NEWTON, OZARK, POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER AND WRIGHT COUNTIES and CITY OF SPRINGFIELD

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 29.43	12.59
GROUP 2.....	\$ 29.08	12.59
GROUP 3.....	\$ 28.88	12.59

GROUP 4.....\$ 26.83

12.59

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt finishing machine & trench widening spreader; asphalt plant console operator; autograder; automatic slipform paver; backhoe; blade operator - all types; boat operator - tow; boilers-2; central mix concrete plant operator; clamshell operator; concrete mixer paver; crane operator; derrick or derrick trucks; ditching machine; dozer operator; dragline operator; dredge booster pump; dredge engineman; dredge operator; drill cat with compressor mounted on cat; drilling or boring machine rotary self-propelled; highloader; hoisting engine - 2 active drums; launch hammer wheel; locomotive operator; - standard gauge; mechanic and welders; mucking machine; off-road trucks; piledriver operator; pitman crane operator; push cat operator; quad trac; scoop operator - all types; shovel operator; sideboom cats; skimmer scoop operators; trenching machine operator; truck crane.

GROUP 2: A-frame; asphalt hot-mix silo; asphalt plant fireman (drum or boiler); asphalt plant man; asphalt plant man; asphalt plant mixer operator; asphalt roller operator; backfiller operator; barber-greene loader; boat operator (bridges and dams); chip spreader; concrete mixer operator - skip loader; concrete plant operator; concrete pump operator; crusher operator; dredge oiler; elevating grader operator; fork lift; greaser-fleet; hoisting engine - 1; locomotive operator - narrow gauge; multiple compactor; pavement breaker; powerbroom - self-propelled; power shield; roter; side discharge concrete spreader; slip form finishing machine; stumpcutter machine; throttle man; tractor operator (over 50 h.p.); winch truck.

GROUP 3: Boilers - 1; chip spreader (front man); churn drill operator; clef plane operator; concrete saw operator (self-propelled); curb finishing machine; distributor operator; finishing machine operator; flex plane operator; float operator; form grader operator; pugmill operator; roller operator, other than high type asphalt; screening & washing plant operator; siphons & jets; sub-grading machine operator; spreader box operator, self-propelled (not asphalt); tank car heater operator (combination boiler & booster); tractor operator (50 h.p. or less); Ulmac, Ulric or similar spreader; vibrating machine operator, not hand;

GROUP 4: Grade checker; Oiler; Oiler-Driver

HOURLY PREMIUMS:

The following classifications shall receive \$.25 above GROUP 1 rate:

Clamshells - 3 yds. or over; Cranes - Rigs or Piledrivers, 100 ft. of boom or over (including jib);
 Draglines - 3 yds. or over; Hoists - each additional active drum over 2 drums; Shovels - 3 yds. or over;

The following classifications shall receive \$.50 above GROUP 1 rate:

Tandem scoop operator; Cranes - Rigs or Piledrivers, 150 ft.

to 200 ft. of boom (including jib); Tandem scoop.

The following classifications shall receive \$.75 above GROUP 1 rate:

Cranes - Rigs or Piledrivers, 200 ft. of boom or over (including jib.).

ENGI0513-004 05/05/2014

FRANKLIN, JEFFERSON, LINCOLN, ST CHARLES, AND WARREN COUNTIES

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 31.31	23.66
GROUP 2.....	\$ 31.31	23.66
GROUP 3.....	\$ 30.01	23.66
GROUP 4.....	\$ 29.56	23.66

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Backhoe, Cable; Backhoe, Hydraulic (2 cu yds bucket and under regardless of attachment, one oiler for 2 or 3, two oilers for 4 through 6); Backhoe, Hydraulic over 2 cu yds; Cableway; Crane, Crawler or Truck; Crane, Hydraulic - Truck or Cruiser mounted, 16 tons and over; Crane, Locomotive; crane with boom including jib over 100 ft from pin to pin; Crane using rock socket tool; Derrick, Steam; Derrick Car and Derrick Boat; Dragline, 7 cu yds and over; Dredge; Gradall, Crawler or tire mounted; Locomotive, Gas, Steam & other powers; Pile Driver, Land or Floating; Scoop, Skimmer; Shovel, Power (Electric, Gas, Steam or other powers); Shovel, Power (7 cu yds and over); Switch Boat; Whirley; Air Tugger with air compressor; Anchor Placing Barge; Asphalt Spreader; Athey Force Feeder Loader, self-propelled; Backfilling Machine; Boat Operator - Push Boat or Tow Boat (job site); Boiler, High Pressure Breaking in Period; Boom Truck, Placing or Erecting; Boring Machine, Footing Foundation; Bullfloat; Cherry Picker; Combination Concrete Hoist and Mixer (such as Mixermobile); Compressor, Two 125 CFM and under; Compressor, Two through Four over 125 CFM; Compressor when operator runs throttle; Concrete Breaker (Truck or Tractor mounted); Concrete Pump (such as Pumpcrete machine); Concrete Saw (self-propelled); Concrete Spreader; Conveyor, Large (not selfpropelled) hoisting or moving brick and concrete into, or into and on floor level, one or both; Crane, Cimbing (such as Linden); Crane, Hydraulic - Rough Terrain, self-propelled; Crane, Hydraulic - Truck or Cruiser mounted - under 16 tons; Drilling machine - Self-powered, used for earth or rock drilling or boring (wagon drills and any hand drills obtaining power from other souces including concrete breakers, jackhammers and Barco equipmnet no engineer required); Elevating Grader; Engine Man, Dredge; Excavator or Powerbelt Machine; Finishing Machine, self- propelled oscillating screed; Forklift; Generators, Two through Six 30 KW or over; Grader, Road with power blade; Greaser; Highlift; Hoist, Concrete and Brick (Brick cages or concrete skips operating or on tower, Towermobile, or similar equipment); Hoist, Three or more drums in use; Hoist, Stack; Hydro-Hammer;

Lad-A-Vator, hoisting brick or concrete; Loading Machine such as Barber-Greene; Mechanic on job site

GROUP 2: Air Tugger with plant air; Boiler (for power or heating shell of building or temporary enclosures in connection with construction work); Boiler, Temporary; Compressor, One over 125 CFM; Compressor, truck mounted; Conveyor, Large (not self- propelled); Conveyor, Large (not self- propelled) moving brick and concrete (distributing) on floor level; Curb Finishing Machine; Ditch Paving Machine; Elevator (outside); Endless Chain Hoist; Fireman (as required); Form Grader; Hoist, One Drum regardless of size (except brick or concrete); Lad-A-Vator, other hoisting; Manlift; Mixer, Asphalt, over 8 cu ft capacity; Mixer, one bag capacity or less; Mixer, without side loader, two bag capacity or more; Mixer, with side loader, regardless of size, not Paver; Mud Jack (where mud jack is used in conjunction with an air compressor, operator shall be paid \$.55 per hour in addition to his basic hourly rate for covering both operations); Pug Mill operator; Pump, Sump - self powered, automatic controlled over 2"; Scissor Lift (used for hoisting); Skid Steer Loader; Sweeper, Street; Tractor, small wheel type 50 HP and under with grader blade and similar equipment; Welding Machine, One over 400 amp; Winch, operating from truck

GROUP 3: Boat operator - outboard motor, job site; Conveyors (such as Con-Vay-It) regardless of how used; Elevator (inside); Heater operator, 2 through 6; Sweeper, Floor

GROUP 4: Crane type

HOURLY PREMIUMS:

Backhoe, Hydraulic 2 cu yds or less without oiler - \$2.00;
 Crane, climbing (such as Linden) - \$.50;
 Crane, Pile Driving and Extracting - \$.50
 Crane with boom (including job) over
 100 ft from pin to pin - add \$.01 per foot
 to maximum of \$4.00);
 Crane, using rock socket tool - \$.50;
 Derrick, diesel, gas or electric hoisting material
 and erecting steel (150 ft or more above ground) - \$.50;
 Dragline, 7 cu yds and over - \$.50;
 Hoist, Three or more drums in use - \$.50;
 Scoop, Tandem - \$.50;
 Shovel, Power - 7 cu yds and over - \$.50;
 Tractor, Tandem Crawler - \$.50;
 Tunnel, man assigned to work in tunnel or
 tunnel shaft - \$.50;
 Wrecking, when machines are working on
 second floor or higher - \$.50

 ENGI0513-006 05/01/2014

ADAIR, AUDRAIN, BOLLINGER, BOONE, BUTLER, CALLAWAY, CAPE
 GIRARDEAU, CARTER, CLARK, COLE, CRAWFORD, DENT, DUNKLIN,
 GASCONADE, HOWELL, IRON, KNOX, LEWIS, MACON, MADISON, MARIES,
 MARION, MILLER, MISSISSIPPI, MONITEAU, MONROE, MONTGOMERY,
 MORGAN, NEW MADRID, OREGON, OSAGE, PEMISCOT, PERRY, PHELPS,

PIKE, PULASKI, PUTNAM, RALLS, RANDOLPH, REYNOLDS, RIPLEY, ST. FRANCOIS, STE. GENEVIEVE, SCHUYLER, SCOTLAND, SCOTT, SHANNON, SHELBY, STODDARD, TEXAS, WASHINGTON, AND WAYNE COUNTIES

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 26.89	23.64
GROUP 2.....	\$ 26.54	23.64
GROUP 3.....	\$ 26.34	23.64
GROUP 4.....	\$ 22.69	23.64

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt finishing machine & trench widening spreader, asphalt plant console operator; autograder; automatic slipform paver; back hoe; blade operator - all types; boat operator tow; boiler two; central mix concrete plant operator; clam shell operator; concrete mixer paver; crane operator; derrick or derrick trucks; ditching machine; dozer operator; dragline operator; dredge booster pump; dredge engineman; dredge operator; drill cat with compressor mounted on cat; drilling or boring machine rotary self-propelled; highloader; hoisting engine 2 active drums; launchhammer wheel; locomotive operator standrad guage; mechanics and welders; mucking machine; piledriver operator; pitman crane operator; push cat operator; guad-trac; scoop operator; sideboom cats; skimmer scoop operator; trenching machine operator; truck crane, shovel operator.

GROUP 2: A-Frame; asphalt hot-mix silo; asphalt roller operator asphalt plant fireman (drum or boiler); asphalt plant man; asphalt plant mixer operator; backfiller operator; barber-greene loader; boat operator (bridge & dams); chip spreader; concrete mixer operator skip loader; concrete plant operator; concrete pump operator; dredge oiler; elevating graded operator; fork lift; grease fleet; hoisting engine one; locomotive operator narrow guage; multiple compactor; pavement breaker; powerbroom self-propelled; power shield; rooter; slip-form finishing machine; stumpcutter machine; side discharge concrete spreader; throttleman; tractor operator (over 50 hp); winch truck; asphalt roller operator; crusher operator.

GROUP 3: Spreader box operator, self-propelled not asphalt; tractor operator (50 h.p. or less); boilers one; chip spreader (front man); churn drill operator; compressor over 105 CFM 2-3 pumps 4" & over; 2-3 light plant 7.5 KWA or any combination thereof; clef plane operator; compressor maintenance operator 2 or 3; concrete saw operator (self-propelled); curb finishing mancine; distributor operator; finishing machine operator; flex plane operator; float operator; form grader operator; pugmill operator; riller operator other than high type asphalt; screening & washing plant operator; siphons & jets; subgrading machine operator; tank car heater (combination boiler & booster); ulmac, ulric or similar spreader; vibrating machine operator; hydrobroom.

GROUP 4: Oiler; grout machine; oiler driver; compressor over 105 CFM one; conveyor operator one; maintenance operator; pump 4" & over one.

FOOTNOTE: HOURLY PREMIUMS

- Backhoe hydraulic, 2 cu. yds. or under Without oiler - \$2.00
- Certified Crane Operator - \$1.50;
- Certified Hazardous Material Operator \$1.50;
- Crane, climbing (such as Linden) - \$0.50;
- Crane, pile driving and extracting - \$0.50;
- Crane, with boom (including jib) over 100' from pin to pin add \$0.01 per foot to maximum of \$4.00;
- Crane, using rock socket tool - \$0.50;
- Derrick, diesel, gas or electric, hoisting material and erecting steel (150' or more above the ground) - \$0.50;
- Dragline, 7 cu. yds, and over - \$0.50;
- Hoist, three or more drums in use - \$0.50; Scoop, Tandem - \$0.50;
- Shovel, power - 7 cu. yds. or more - \$0.50;
- Tractor, tandem crawler - \$0.50;
- Tunnel, man assigned to work in tunnel or tunnel shaft - \$0.50;
- Wrecking, when machine is working on second floor or higher - \$0.50;

ENGI0513-007 05/05/2014

ST. LOUIS CITY AND COUNTY

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 31.31	23.66
GROUP 2.....	\$ 31.31	23.66
GROUP 3.....	\$ 30.01	23.66
GROUP 4.....	\$ 29.56	23.66

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Backhoe, cable or hydraulic; cableway; crane crawler or truck; crane, hydraulic-truck or cruiser mounted 16 tons & over; crane locomotive; derrick, steam; derrick car & derrick boat; dragline; dredge; gradall, crawler or tire mounted; locomotive, gas, steam & other powers; pile driver, land or floating; scoop, skimmer; shovel, power (steam, gas, electric or other powers); switch boat; whirley.

GROUP 2: Air tugger w/air compressor; anchor-placing barge; asphalt spreader; athey force feeder loader (self-propelled); backfilling machine; backhoe-loader; boat operator-push boat or tow boat (job site); boiler, high pressure breaking in period; boom truck, placing or erecting; boring machine, footing foundation; bull- float; cherry picker; combination concrete hoist & mixer (such as mixer mobile); compressor (when operator runs throttle); concrete breaker (truck or tractor mounted); concrete pump, such as pump-crete machine; concrete saw (self-propelled), concrete spreader; conveyor, large (not self-propelled),

hoisting or moving brick and concrete into, or into and on floor level, one or both; crane, hydraulic-rough terrain, self-propelled; crane hydraulic-truck or cruiser mounted-under 16 tons; drilling machines, self-powered use for earth or rock drilling or boring (wagon drills and any hand drills obtaining power from other sources including concrete breakers, jackhammers and barco equipment-no engineer required); elevating grader; engineman, dredge; excavator or powerbelt machine; finishing machine, self-propelled oscillating screed; forklift; grader, road with power blade; highlift. greaser; hoist, stack, hydro-hammer; loading machine (such as barber-greene); machanic, on job site; mixer, pipe wrapping machines; plant asphalt; plant, concrete producing or ready-mix job site; plant heating-job site; plant mixing-job site; plant power, generating-job site; pumps, two through six self-powered over 2"; pumps, electric submersible, two through six, over 4"; quad-track; roller, asphalt, top or sub-grade; scoop, tractor drawn; spreader box; sub-grader; tie tamper; tractor-crawler, or wheel type with or without power unit, power take-offs and attachments regardless of size; trenching machine; tunnel boring machine; vibrating machine automatic, automatic propelled; welding machines (gasoline or diesel) two through six; well drilling machine

GROUP 3: Conveyor, large (not self-propelled); conveyor, large (not self-propelled) moving brick and concrete distributing) on floor level; mixer two or more mixers of one bag capacity or less; air tugger w/plant air; boiler, for power or heating on construction projects; boiler, temporary; compressor (mounted on truck; curb finishing machine; ditch paving machine; elevator; endless chain hoist; form grader; hoist, one drum regardless of size; lad-a-vator; manlift; mixer, asphalt, over 8 cu. ft. capacity, without side loader, 2 bag capacity or more; mixer, with side loader, regardless of size; pug mill operator; pump, sump-self-powered, automatic controlled over 2" during use in connection with construction work; sweeper, street; welding machine, one over 400 amp.; winch operating from truck; scissor lift (used for hoisting); tractor, small wheel type 50 h.p. & under with grader blade & similar equipment; Oiler on dredge and on truck crane.

GROUP 4: Boat operator-outboard motor (job site); conveyor (such as con-vay-it) regardless of how used; sweeper, floor

HOURLY PREMIUMS:

Backhoe, hydraulic	
2 cu. yds. or under without oiler	\$2.00
Certified Crane Operator	1.50
Certified Hazardous Material Operator	1.50
Crane, climbing (such as Linden)	.50
Crane, pile driving and extracting	.50
Crane, with boom (including jib) over 100' (from pin to pin) add \$.01 per foot to maximum of	4.00
Crane, using rock socket tool	.50
Derrick, diesel, gas or electric, hoisting material and erecting steel (150' or more above ground)	.50
Dragline, 7 cu. yds. and over	.50

Hoist, three (3) or more drums in use	.50
Scoop, Tandem	.50
Shovel, power - 7 cu. yds. or more	.50
Tractor, tandem crawler	.50
Tunnel, man assigned to work in tunnel or tunnel shaft	.50
Wrecking, when machine is working on second floor or higher	.50

IRON0010-012 04/01/2014

Rates Fringes

Ironworkers:

ANDREW, BARTON, BENTON, CAMDEN, CEDAR, CHARITON, CHRISTIAN, COOPER, DADE, DALLAS, DAVIESS, DE KALB, GENTRY, GREENE, GRUNDY, HARRISON, HICKORY, HOLT, HOWARD, LACLEDE, LINN, LIVINGSTON, MERCER, MONITEAU, MORGAN, NODAWAY, PETTIS, POLK, PUTNAM, RANDLOPH, ST. CLAIR, SULLIVAN, TANEY, VERNON, WEBSTER, WRIGHT and WORTH Counties and portions of ADAIR, BOONE, MACON, MILLER and RANDOLPH Counties.....\$ 27.50	27.05
ATCHISON, BATES, BUCHANAN, CALDWELL, CARROLL, CASS, CLAY, CLINTON, HENRY, JACKSON, JOHNSON, LAFAYETTE, PETTIS, PLATTE, SALINE, AND RAY COUNTIES....\$ 30.50	27.05

IRON0321-002 08/01/2012

DOUGLAS, HOWELL and OZARK COUNTIES

Rates Fringes

Ironworker.....\$ 18.40	14.68
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IRON0396-004 08/01/2012

ST. LOUIS (City and County), ST. CHARLES, JEFFERSON, IRON,
FRANKLIN, LINCOLN, WARREN, WASHINGTON, ST. FRANCOIS, STE.
GENEVIEVE, and REYNOLDS Counties; and portions of MADISON,
PERRY, BOLLINGER, WAYNE, and CARTER Counties

Rates Fringes

Ironworker.....\$ 32.28	20.31
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IRON0396-009 08/01/2013

AUDRAIN, CALLAWAY, COLE, CRAWFORD, DENT, GASCONADE, MARIES, MONTGOMERY, OSAGE, PHELPS, PIKE, PULASKI, TEXAS and WRIGHT Counties; and portions of BOONE, CAMDEN, DOUGLAS, HOWELL, LACLEDE, MILLER, MONROE, OREGON, SHANNON and RALLS Counties

	Rates	Fringes
Ironworker.....	\$ 27.91	21.75

IRON0577-005 08/01/2012

ADAIR, CLARK, KNOX, LEWIS, MACON, MARION, MONROE, RALLS, SCHUYLER, SCOTLAND, AND SHELBY COUNTIES

	Rates	Fringes
Ironworker.....	\$ 24.44	17.31

IRON0584-004 06/01/2013

BARRY, JASPER, LAWRENCE, MCDONALD, NEWTON AND STONE Counties

	Rates	Fringes
Ironworkers:.....	\$ 23.10	12.88

IRON0782-003 08/01/2013

CAPE GIRARDEAU, MISSISSIPPI, NEW MADRID, SCOTT, & STODDARD Counties; and portions of BOLLINGER, BUTLER, CARTER, DUNKLIN, MADISON, PEMISCOT, PERRY, RIPLEY, and WAYNE Counties

	Rates	Fringes
Ironworkers:		
Locks, Dams, Bridges and other major work on the Mississippi and Ohio River only.....	\$ 29.39	18.79
All Other Work.....	\$ 24.12	18.79

LAB00042-003 03/06/2013

ST. LOUIS (City and County)

	Rates	Fringes
LABORER		
Plumber Laborer.....	\$ 29.52	13.22

LAB00042-005 03/08/2013

ST. LOUIS (City and County)

	Rates	Fringes
LABORER		
Dynamiter, Powderman.....	\$ 29.90	13.22

Laborers, Flaggers.....	\$ 29.52	13.22
Wrecking.....	\$ 29.40	13.22

LABO0424-002 05/01/2009

Rates Fringes

LABORER

ADAIR, AUDRAIN, BOONE,
 CALLAWAY, CHARITON, CLARK,
 COLE, COOPER, HOWARD,
 IRON, KNOX, LEWIS, LINN,
 MACON, MADISON, MARION,
 MILLER, MONITEAU, MONROE,
 PERRY, PIKE, PUTNAM,
 RALLS, RANDOLPH, REYNOLDS,
 ST. FRANCOIS, STE.
 GENEVIEVE, SCHUYLER,
 SCOTLAND, SHELBY AND
 SULLIVAN COUNTIES

GROUP 1.....	\$ 24.56	9.29
GROUP 2.....	\$ 25.16	9.29

BOLLINGER, BUTLER, CAPE
 GIRARDEAU, CARTER,
 CRAWFORD, DENT, DUNKLIN,
 GASCONADE, HOWELL, MARIES,
 MISSISSIPPI, NEW MADRID,
 OREGON, OSAGE, PEMISCOT,
 PHELPS, PULASKI, RIPLEY,
 SCOTT, SHANNON, STODDARD,
 TEXAS, WASHINGTON AND
 WAYNE COUNTIES

GROUP 1.....	\$ 24.56	9.29
GROUP 2.....	\$ 25.16	9.29

FRANKLIN COUNTY

GROUP 1.....	\$ 26.01	9.29
GROUP 2.....	\$ 26.61	9.29

JEFFERSON COUNTY

GROUP 1.....	\$ 26.06	9.29
GROUP 2.....	\$ 26.66	9.29

LINCOLN, MONTGOMERY AND WARREN COUNTIES

GROUP 1.....	\$ 24.81	9.29
GROUP 2.....	\$ 25.41	9.29

ST.CHARLES COUNTY

GROUP 1.....	\$ 27.33	9.29
GROUP 2.....	\$ 27.33	9.29

LABORERS CLASSIFICATIONS

GROUP 1 - General laborer-flagman, carpenter tenders; salamander Tenders; Dump Man; Ticket Takers; loading trucks under bins, hoppers, and conveyors; track man; cement handler; dump man on earth fill; georgie buggy man; material batch hopper man; spreader on asphalt machine; material mixer man (except on manholes); coffer dams; riprap pavers rock, block or brick; scaffolds over ten feet not self-supported from ground up; skip man on concrete paving; wire mesh setters on concrete paving; all work in connection with sewer, water, gas, gasoling, oil, drainage pipe, conduit pipe, tile and duct lines and all other pipe

lines; power tool operator; all work in connection with hydraulic or general dredging operations; form setters, puddlers (paving only); straw blower nozzle man; asphalt plant platform man; chuck tender; crusher feeder; men handling creosote ties or creosote materials; men working with and handling epoxy material; topper of standing trees; feeder man on wood pulverizers, board and willow mat weavers and cabelee tiers on river work; deck hands; pile dike and revetment work; all laborers working on underground tunnels less than 25 ft. where compressed air is not used; abutment and pier hole men working six (6) ft. or more below ground; men working in coffer dams for bridge piers and footing in the river; barco tamper; jackson or any other similar tamp; cutting torch man; liners, curb, gutters, ditch lines; hot mastic kettlemen; hot tar applicator; hand blade operator; mortar men or brick or block manholes; rubbing concrete, air tool operator under 65 lbs.; caulker and lead man; chain or concrete saw under 15 h.p.; signal Gan; Guard rail and sign erectors.

GROUP 2 - Skilled laborers - Vibrator man; asphalt raker; head pipe layer on sewer work; batterboard man on pipe and ditch work; cliff scalers working from bosun's chairs; scaffolds or platforms on dams or power plants over 10 ft. high; air tool operator over 65 lbs.; stringline man on concrete paving; sandblast man; laser beam man; wagon drill; churn drill; air track drill and all other similar type drills, gunite nozzle man; pressure grout man; screed man on asphalt; concrete saw 15 h.p. and over; grade checker; strigline man on electronic grade control; manhole builder; dynamite man; powder man; welder; tunnel man; waterblaster - 1000 psi or over; asbestos and/or hazardous waste removal and/or disposal

LABO0579-005 05/01/2014

	Rates	Fringes
LABORER (ANDREW, ATCHISON, BUCHANAN, CALDWELL, CLINTON, DAVIESS, DEKALB, GENTRY, GRUNDY, HARRISON, HOLT, LIVINGSTON, MERCER, NODAWAY and WORTH COUNTIES.)		
GROUP 1.....	\$ 24.67	12.36
GROUP 2.....	\$ 25.02	12.36
LABORER (BARRY, BARTON, BATES, BENTON, CAMDEN, CARROLL, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HENRY. HICKORY, JASPER, JOHNSON, LACLEDE, LAWRENCE, MCDONALD, MORGAN, NEWTON, OZARK, PETTIS, POLK, ST. CLAIR, SALINE, STONE, TANEY, VERNON, WEBSTER and WRIGHT COUNTIES)		
GROUP 1.....	\$ 23.22	12.01
GROUP 2.....	\$ 23.77	12.01

LABORER (LAFAYETTE COUNTY)

GROUP 1.....	\$ 24.77	12.26
GROUP 2.....	\$ 25.12	12.26

LABORERS CLASSIFICATIONS

GROUP 1: General Laborers - Carpenter tenders; salamander tenders; loading trucks under bins; hoppers & conveyors; track men & all other general laborers; air tool operator; cement handler-bulk or sack; dump man on earth fill; georgie buggy man; material batch hopper man; material mixer man (except on manholes); coffer dams; riprap pavers - rock, block or brick; signal man; scaffolds over ten feet not self-supported from ground up; skipman on concrete paving; wire mesh setters on concrete paving; all work in connection with sewer, water, gas, gasoline, oil drainage pipe, conduit pipe, tile and duct lines and all other pipe lines; power tool operator, all work in connection with hydraulic or general dredging operations; puddlers (paving only); straw blower nozzle man; asphalt plant platform man; chuck tender; crusher feeder; men handling creosote ties or creosote materials; men working with and handling epoxy material or materials (where special protection is required); rubbing concrete; topper of standing trees; batter board man on pipe and ditch work; feeder man on wood pulverizers; board and willow mat weavers and cable tiers on river work; deck hands; pile dike and revetment work; all laborers working on underground tunnels less than 25 feet where compressed air is not used; abutment and pier hole men working six (6) feet or more below ground; men working in coffer dams for bridge piers and footings in the river; ditchliners; pressure groutmen; caulker; chain or concrete saw; cliffscalers working from scaffolds, bosuns' chairs or platforms on dams or power plants over (10) feet above ground; mortarmen on brick or block manholes; toxic and hazardous waste work.

GROUP 2: Skilled Laborers - Head pipe layer on sewer work; laser beam man; Jackson or any other similar tamp; cutting torch man; form setters; liners and stringline men on concrete paving, curb, gutters; hot mastic kettleman; hot tar applicator; sandblasting and gunite nozzle men; air tool operator in tunnels; screed man on asphalt machine; asphalt raker; barco tamper; churn drills; air track drills and all similar drills; vibrator man; stringline man for electronic grade control; manhole builders-brick or block; dynamite and powder men; grade checker.

LAB00663-002 04/01/2014

CASS, CLAY, JACKSON, PLATTE AND RAY COUNTIES

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 28.06	14.25
GROUP 2.....	\$ 29.27	14.25

LABORERS CLASSIFICATIONS

GROUP 1: General laborers, Carpenter tenders, salamander tenders, loading trucks under bins, hoppers and conveyors, track men and all other general laborers, air tool operator, cement handler (bulk or sack), chain or concrete saw, deck hands, dump man on earth fill, Georgie Buggies man, material batch hopper man, scale man, material mixer man (except on manholes), coffer dams, abutments and pier hole men working below ground, riprap pavers rock, black or brick, signal man, scaffolds over ten feet not self-supported from ground up, skipman on concrete paving, wire mesh setters on concrete paving, all work in connection with sewer, water, gas, gasoling, oil, drainage pipe, conduit pipe, tile and duct lines and all other pipelines, power tool operator, all work in connection with hydraulic or general dredging operations, straw blower nozzleman, asphalt plant platform man, chuck tender, crusher feeder, men handling creosote ties on creosote materials, men working with and handling epoxy material or materials (where special protection is required), topper of standing trees, batter board man on pipe and ditch work, feeder man on wood pulverizers, board and willow mat weavers and cable tiers on river work, deck hands, pile dike and revetment work, all laborers working on underground tunnels less than 25 feet where compressed air is not used, abutment and pier hole men working six (6) feet or more below ground, men working in coffer dams for bridge piers and footings in the river, ditchliners, pressure groutmen, caulker and chain or concrete saw, cliffscalers working from scaffolds, bosuns' chairs or platforms on dams or power plants over (10) feet above ground, mortarmen on brick or block manholes, signal man.

GROUP 2: Skilled Laborer - spreader or screed man on asphalt machine, asphalt raker, grade checker, vibrator man, concrete saw over 5 hp., laser beam man, barco tamper, jackson or any other similar tamp, wagon driller, churn drills, air track drills and other similar drills, cutting torch man, form setters, liners and stringline men on concrete paving, curb, gutters and etc., hot mastic kettleman, hot tar applicator, hand blade operators, mortar men on brick or block manholes, sand blasting and gunnite nozzle men, rubbing concrete, air tool operator in tunnels, head pipe layer on sewer work, manhole builder (brick or block), dynamite and powder men.

 PAIN002-002 09/01/2007

CLARK, FRANKLIN, JEFFERSON, LEWIS, LINCOLN, MARION, PIKE, RALLS, ST. CHARLES, ST. LOUIS (CITY & COUNTY), AND WARREN COUNTIES

	Rates	Fringes
Painters:		
Brush and Roller; Taper.....	\$ 28.61	10.24
High work over 60 feet.....	\$ 29.11	10.24
Lead Abatement.....	\$ 29.36	10.24
Pressure Roller; High work		
under 60 ft.....	\$ 28.86	10.24

Spray & Abrasive Blasting; Water Blasting (Over 5000 PSI).....	\$ 30.61	10.24
Taper (Ames Tools & Bazooka).....	\$ 30.21	10.24

PAIN002-006 04/01/2014

ADAIR, AUDRAIN, BOONE, CALLAWAY, CHARITON, COLE, GASCONADE,
HOWARD, KNOX, LINN, MACON, MONROE, MONTGOMERY, OSAGE, PUTNAM,
RANDOLPH, SCHUYLER, SCOTLAND, SHELBY AND SULLIVAN COUNTIES and
the City of Booneville.

Rates Fringes

Painters:

Bridges, Dams, Locks or Powerhouses.....	\$ 24.00	11.72
Brush and Roll; Taping, Paperhanging.....	\$ 22.00	11.72
Epoxy or Any Two Part Coating; Sandblasting; Stage or other Aerial Work - Platforms over 50 feet high; Lead Abatement.....	\$ 23.00	11.72
Spray; Structural Steel (over 50 feet).....	\$ 23.50	11.72
Tapers using Ames or Comparable Tools.....	\$ 22.50	11.72

PAIN003-004 04/01/2013

CASS, CLAY, CLINTON, JACKSON, JOHNSON, LAFAYETTE, PLATTE & RAY
COUNTIES

Rates Fringes

Painters:

Bridgeman; Lead Abatement; Sandblast; Storage Bin & Tanks.....	\$ 30.20	15.07
Brush & Roller.....	\$ 28.58	15.07
Drywall.....	\$ 28.80	15.07
Paper Hanger.....	\$ 29.08	15.07
Stageman; Beltman; Steelman; Elevator Shaft; Bazooka, Boxes and Power Sander; Sprayman; Dipping... Steeplejack.....	\$ 29.70 \$ 33.77	15.07 15.07

PAIN003-011 04/01/2011

BATES, BENTON, CALDWELL, CARROLL, COOPER, DAVIESS, GRUNDY,
HARRISON, HENRY, LIVINGSTON, MERCER, MONITEAU, MORGAN, PETTIS &
SALINE COUNTIES

Rates Fringes

Painters:

Bridgeman; Lead Abatement;		
Sandblast; Storage Bin &		
Tanks.....	\$ 24.06	14.04
Brush & Roller.....	\$ 22.67	14.04
Drywall.....	\$ 22.84	14.04
Paper Hanger.....	\$ 23.07	14.04
Stageman; Beltman;		
Steelman; Elevator Shaft;		
Bazooka, Boxes and Power		
Sander; Sprayman; Dipping...	\$ 23.56	14.04
Steeplejack.....	\$ 26.82	14.04

PAIN0203-001 04/01/2012

BARRY, BARTON, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY, HOWELL, JASPER, LAWRENCE, MCDONALD, NEWTON, OZARK, POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER, and WRIGHT COUNTIES

Rates Fringes

Painters:

Finisher.....	\$ 20.18	11.33
Painter.....	\$ 19.75	11.76
Sandblaster, High Man,		
Spray Man, Vinyl Hanger,		
Tool Operator.....	\$ 21.18	11.33

PAIN1265-003 07/01/2013

CAMDEN, CRAWFORD, DENT, LACLEDE, MARIES, MILLER, PHELPS, PULASKI AND TEXAS COUNTIES

Rates Fringes

Painters:

Brush and Roller.....	\$ 25.64	13.27
Floor Work.....	\$ 26.14	13.27
Lead Abatement.....	\$ 27.89	13.27
Spray.....	\$ 27.14	13.27
Structural Steel,		
Sandblasting and All Tank		
Work.....	\$ 26.89	13.27
Taping, Paperhanging.....	\$ 26.64	13.27

PAIN1292-002 09/01/2014

BOLLINGER, BUTLER, CAPE GIRARDEAU, CARTER, DUNKLIN, MISSISSIPPI, NEW MADRID, OREGON, PEMISCOT, PERRY, REYNOLDS, RIPLEY, SCOTT, SHANNON, STODDARD and WAYNE COUNTIES

Rates Fringes

Painters:

Bridges, Stacks & Tanks.....	\$ 29.99	11.96
Brush & Roller.....	\$ 24.49	11.96
Spray & Abrasive Blasting;		

Waterblasting (over 5000 PSI).....	\$ 26.49	11.96
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Height Rates (All Areas):
Over 60 ft. \$0.50 per hour.
Under 60 ft. \$0.25 per hour.

PAIN1292-003 09/01/2014

IRON, MADISON, ST. FRANCOIS, STE. GENEVIEVE and WASHINGTON
COUNTIES

	Rates	Fringes
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Painters:

Bridges, Stacks & Tanks.....	\$ 29.99	11.96
Brush & Roller.....	\$ 25.64	11.96
Spray & Abrasive Blasting; Waterblasting (Over 5000 PSI).....	\$ 27.64	11.96

Height Rates (All Areas):
Over 60 ft. \$0.50 per hour
Under 60 ft. \$0.25 per hour.

PAIN2012-001 05/01/2012

ANDREW, ATCHISON, BUCHANAN, DE KALB, GENTRY, HOLT, NODAWAY &
WORTH COUNTIES

	Rates	Fringes
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Painters:

Brush & Roller.....	\$ 22.93	11.51
Sandblaster.....	\$ 23.93	11.51
Steeplejack.....	\$ 25.93	11.51

PLAS0518-006 04/01/2014

BARRY, BARTON, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE,
HICKORY, JASPER, LACLEDE, LAWRENCE, MCDONALD, NEWTON, OZARK,
POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER, AND WRIGHT
COUNTIES

	Rates	Fringes
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CEMENT MASON/CONCRETE FINISHER...	\$ 30.34	20.23
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PLAS0518-007 04/01/2014

CASS (Richards-Gebaur AFB only), CLAY, JACKSON, PLATTE AND RAY
COUNTIES

	Rates	Fringes
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Cement Masons:.....\$ 30.34 20.23

PLAS0518-011 04/01/2014

ANDREW, ATCHISON, BATES, BUCHANNAN, CLINTON, DEKALB, GENTRY,
HENRY, HOLT, JOHNSON, LAFAYETTE, NODAWAY & WORTH COUNTIES

Rates Fringes

CEMENT MASON/CONCRETE FINISHER...\$ 30.34 20.23

PLAS0527-001 04/01/2014

Rates Fringes

CEMENT MASON
FRANKLIN, LINCOLN AND
WARREN COUNTIES.....\$ 29.03 16.43
JEFFERSON, ST. CHARLES
COUNTIES AND ST. LOUIS
(City and County).....\$ 30.20 16.51

PLAS0527-004 06/01/2014

CRAWFORD, DENT, IRON, MADISON, MARION, PHELPS, PIKE, PULASKI,
RALLS, REYNOLDS, ST. FRANCOIS, STE. GENEVIEVE, SHANNON, TEXAS,
WASHINGTON COUNTIES

Rates Fringes

CEMENT MASON.....\$ 27.04 16.43

PLAS0908-001 05/01/2012

BOLLINGER, BUTLER, CAPE GIRARDEAU, CARTER, DUNKLIN, HOWELL,
MISSISSIPPI, NEW MADRID, OREGON, PEMISCOT, PERRY, RIPLEY,
SCOTT, STODDARD, AND WAYNE COUNTIES

Rates Fringes

CEMENT MASON.....\$ 25.25 12.55

PLAS0908-005 05/01/2012

BENTON, CALDWELL, CALLAWAY, CAMDEN, CARROLL, COLE, DAVIESS,
GASCONADE, GRUNDY, HARRISON, LIVINGSTON, MACON, MARIES, MERCER,
MILLER, MONTGOMERY, MORGAN, OSAGE, PETTIS & SALINE COUNTIES

Rates Fringes

CEMENT MASON.....\$ 25.25 12.55

PLUM0008-003 06/01/2013

CASS, CLAY, JACKSON, JOHNSON, AND PLATTE COUNTIES

Rates Fringes

Plumbers.....\$ 38.75 19.96

PLUM0008-017 06/01/2012

BATES, BENTON, CARROLL, HENRY, LAFAYETTE, MORGAN, PETTIS, RAY,
ST. CLAIR, SALINE AND VERNON COUNTIES

Rates Fringes

Plumbers.....\$ 35.01 20.41

PLUM0045-003 09/01/2014

ANDREW, ATCHISON, BUCHANAN, CALDWELL, CLINTON, DAVIESS, DEKALB,
GENTRY, HARRISON, HOLT, NODAWAY AND WORTH COUNTIES

Rates Fringes

Plumbers and Pipefitters.....\$ 34.50 19.05

PLUM0178-003 11/01/2013

BARRY, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE,
HICKORY, LACLEDE, LAWRENCE, POLK, STONE, TANEY, WEBSTER AND
WRIGHT COUNTIES

Rates Fringes

Plumbers and Pipefitters.....\$ 28.00 14.45

PLUM0178-006 11/01/2013

BARTON, JASPER, MCDONALD AND NEWTON COUNTIES

Rates Fringes

Plumbers and Pipefitters
Projects \$750,000 & under...\$ 25.03 14.45
Projects over \$750,000.....\$ 28.00 14.45

PLUM0533-004 06/01/2014

BATES, BENTON, CARROLL, CASS, CLAY, HENRY, HICKORY, JACKSON,
JOHNSON, LAFAYETTE, MORGAN, PETTIS, PLATTE, RAY, SALINE, ST.
CLAIR AND VERNON COUNTIES

Rates Fringes

Pipefitters.....\$ 41.83 19.32

PLUM0562-004 07/01/2014

ADAIR, AUDRAIN, BOLLINGER, BOONE, BUTLER, CALLAWAY, CAMDEN, CAPE
GIRARDEAU, CARTER, CHARITON, CLARK, COLE, COOPER, CRAWFORD,
DENT, DUNKLIN, FRANKLIN, GASCONADE, GRUNDY, HOWARD, HOWELL,
IRON, JEFFERSON, KNOX, LEWIS, LINCOLN, LINN, LIVINGSTON, MACON,

MADISON, MARIES, MARION, MERCER, MILLER, MISSISSIPPI, MONITEAU, MONROE, MONTGOMERY, NEW MADRID, OREGON, OSAGE, PEMISCOTT, PERRY, PHELPS, PIKE, PULASKI, PUTNAM, RALLS, RANDOLPH, REYNOLDS, RIPLEY, ST. CHARLES, ST. FRANCOIS, STE. GENEVIEVE, ST. LOUIS, SCHUYLER, SCOTLAND, SCOTT, SHANNON, SHELBY, STODDARD, SULLIVAN, TEXAS, WARREN, WASHINGTON, AND WAYNE COUNTIES.

	Rates	Fringes
Plumbers and Pipefitters		
Mechanical Contracts including all piping and temperature control work \$7.0 million & under.....	\$ 34.41	20.44
Mechanical Contracts including all piping and temperature control work over \$7.0 million.....	\$ 35.75	25.83

 PLUM0562-016 07/01/2014

CAMDEN, COLE, CRAWFORD, FRANKLIN, JEFFERSON, MARIES, MILLER, MONITEAU, OSAGE, PHELPS, PULASKI, ST. CHARLES, ST. LOUIS (City and County), WARREN and WASHINGTON COUNTIES

	Rates	Fringes
Plumbers		
Mechanical Contracts including all piping and temperature control work \$7.0 million & under.....	\$ 34.41	20.44
Mechanical Contracts including all piping and temperature control work over \$7.0 million.....	\$ 35.75	25.83

 TEAM0013-001 05/01/2010

	Rates	Fringes
Truck drivers (ADAIR, BUTLER, CLARK, DUNKIN, HOWELL, KNOX, LEWIS, OREGON, PUTNAM, RIPLEY, SCHUYLER AND SCOTLAND COUNTIES)		
GROUP 1.....	\$ 25.84	9.85
GROUP 2.....	\$ 26.00	9.85
GROUP 3.....	\$ 25.99	9.85
GROUP 4.....	\$ 26.11	9.85

Truck drivers (AUDRAIN, BOLLINGER, BOONE, CALLAWAY, CAPE GIRARDEAU, CARTER, COLE, CRAWFORD, DENT, GASCONADE, IRON, MACON, MADISON, MARIES, MARION, MILLER, MISSISSIPPI, MONROE, MONTGOMERY, NEW MADRID, OSAGE, PEMISCOT, PERRY, PHELPS, PIKE, PULASKI,

RALLS, REYNOLDS, ST.
FRANCOIS, STE. GENEVIEVE,
SCOTT, SHANNON, SHELBY,
STODDARD, TEXAS, WASHINGTON
AND WAYNE COUNTIES)

GROUP 1.....	\$ 26.57	9.85
GROUP 2.....	\$ 26.73	9.85
GROUP 3.....	\$ 26.72	9.85
GROUP 4.....	\$ 26.84	9.85

Truck drivers (FRANKLIN,
JEFFERSON and ST. CHARLES
COUNTIES)

GROUP 1.....	\$ 28.93	9.85
GROUP 2.....	\$ 29.04	9.85
GROUP 3.....	\$ 29.08	9.85
GROUP 4.....	\$ 29.15	9.85

Truck drivers (LINCOLN and
WARREN COUNTIES)

GROUP 1.....	\$ 27.58	9.85
GROUP 2.....	\$ 27.69	9.85
GROUP 3.....	\$ 28.73	9.85
GROUP 4.....	\$ 27.80	9.85

TRUCK DRIVERS CLASSIFICATIONS:

GROUP 1: Flat Bed Trucks, Single Axle; Station Wagons;
Pickup Trucks; Material Trucks, Single Axle; Tank Wagon,
Single Axle

GROUP 2: Agitator and Transit Mix Trucks

GROUP 3: Flat Bed Trucks, Tandem Axle; Articulated Dump
Trucks; Material Trucks, Tandem Axle; Tank Wagon, Tandem
Axle

GROUP 4: Semi and/or Pole Trailers; Winch, Fork & Steel
Trucks; Distributor Drivers and Operators; Tank Wagon,
Semi-Trailer; Insley Wagons, Dumpsters, Half-Tracks,
Speedace, Euclids and other similar equipment; A-Frame and
Derrick Trucks; Float or Low Boy

TEAM0056-001 09/01/2014

Rates Fringes

Truck drivers (ANDREW,
BARTON, BATES, BENTON,
CALDWELL, CAMDEN, CARROLL,
CEDAR, CHARITON, CHRISTIAN,
CLINTON, COOPER, DADE,
DALLAS, DAVIESS, DEKALB,
DOUGLAS, GREENE, HENRY,
HICKORY, HOWARD, JASPER,
LACLEDE, LAWRENCE, LINN,
LIVINGSTON, MONITEAU, MORGAN,
NEWTON, PETTIS, POLK,
RANDOLPH, ST. CLAIR, SALINE,
VERNON, WEBSTER AND WRIGHT
COUNTIES)

GROUP 1.....	\$ 28.22	11.75
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GROUP 2.....	\$ 28.38	11.75
GROUP 3.....	\$ 28.37	11.75
GROUP 4.....	\$ 28.49	11.75

Truck drivers: (ATCHISON,
BARRY, GENTRY, GRUNDY,
HARRISON, HOLT, MCDONALD,
MERCER, NODAWAY, OZARK,
STONE, SULLIVAN, TANEY AND
WORTH COUNTIES)

GROUP 1.....	\$ 27.49	11.75
GROUP 2.....	\$ 27.65	11.75
GROUP 3.....	\$ 27.64	11.75
GROUP 4.....	\$ 27.76	11.75

Truck drivers; (BUCHANAN,
JOHNSON AND LAFAYETTE
COUNTIES)

GROUP 1.....	\$ 29.43	11.75
GROUP 2.....	\$ 29.54	11.75
GROUP 3.....	\$ 29.58	11.75
GROUP 4.....	\$ 29.65	11.75

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Flat bed trucks single axle; station wagons; pickup trucks; material trucks single axle; tank wagons single axle.

GROUP 2: Agitator and transit mix-trucks.

GROUP 3: Flat bed trucks tandem axle; articulated dump trucks; material trucks tandem axle; tank wagons tandem axle.

GROUP 4: Semi and/or pole trailers; winch, fork & steel trucks; distributor drivers & operators; tank wagons semi-trailer; insley wagons, dumpsters, half-tracks, speedace, euclids & other similar equipment; A-frames and derrick trucks; float or low boy.

TEAM0245-001 03/26/2012

BARRY, BARTON, CAMDEN, CEDAR, CHRISTIAN, DALLAS, DENT, DOUGLAS,
GREENE, HICKORY, HOWELL, JASPER, LACLEDE, LAWRENCE, MCDONALD,
MILLER, NEWTON, OZARK, PHELPS, POLK, PULASKI, SHANNON, STONE,
TANEY, TEXAS, VERNON, WEBSTER AND WRIGHT COUNTIES

Rates Fringes

Truck drivers:

Traffic Control Service		
Driver.....	\$ 20.45	0.00

PAID HOLIDAYS: New Year's Day, Decoration Day, July 4th,
Labor Day, Thanksgiving Day, Christmas Day, employee's
birthday and 2 personal days.

TEAM0541-001 04/01/2014

CASS, CLAY, JACKSON, PLATTE AND RAY COUNTIES

	Rates	Fringes
Truck drivers:		
GROUP 1.....	\$ 30.71	13.20
GROUP 2.....	\$ 30.14	13.20
GROUP 3.....	\$ 29.62	13.20

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Mechanics and Welders, Field; A-Frame Low Boy-Boom truck Driver.

GROUP 2: Articulated Dump Truck; Insley Wagons: Dump Trucks, Excavating, 5 cu yds and over; Dumpsters; Half-Tracks: Speedace: Euclids & similar excavating equipment Material trucks, Tandem Two teams; Semi-Trailers; Winch trucks-Fork trucks; Distributor Drivers and Operators; Agitator and Transit Mix; Tank Wagon Drivers, Tandem or Semi; One Team; Station Wagons; Pickup Trucks; Material Trucks, Single Axle; Tank Wagon Drivers, Single Axle

GROUP 3: Oilers and Greasers - Field

TEAM0682-002 05/01/2012

ST LOUIS CITY AND COUNTY

	Rates	Fringes
Truck drivers:		
GROUP 1.....	\$ 30.605	8.69+a+b+c+d
GROUP 2.....	\$ 30.805	8.69+a+b+c+d
GROUP 3.....	\$ 30.69	8.69+a+b+c+d

a. PENSION: 5/1/2012 - \$182.20 per week.

b. HAZMAT PREMIUM: If Hazmat certification on a job site is required by a state or federal agency or requested by project owner or by the employer, employees on that job site shall receive \$1.50 premium pay.

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1 - Pick-up trucks; forklift, single axle; flatbed trucks; job site ambulance, and trucks or trailers of a water level capacity of 11.99 cu. yds. or less

GROUP 2 - Trucks or trailers of a water level capacity of 12.0 cu yds. up to 22.0 cu yds. including euclids, speedace and similar equipment of same capacity and compressors

GROUP 3 - Trucks or trailers of a water level capacity of 22.0 cu. yds & over including euclids, speedace & all floats, flatbed trailers, boom trucks, winch trucks, including small trailers, farm wagons tilt-top trailers, field offices, tool trailers, concrete pumps, concrete conveyors & gasoline tank trailers and truck mounted mobile concrete mixers

FOOTNOTE FOR TRUCK DRIVERS:

c. PAID HOLIDAYS: Christmas Day, Independence Day, Labor Day, Memorial Day, Veterans Day, New Years Day, Thanksgiving Day

d. PAID VACATION: 3 days paid vacation for 600 hours of service in any one contract year; 4 days paid vacation for 800 hours of service in any one contract year; 5 days paid vacation for 1,000 hours of service in any one contract year. When such an employee has completed 3 years of continuous employment with the same employer and then works the above required number of hours, he shall receive double the number of days of vacation specified above. When such an employee has completed 10 years of continuous employment with the same employer and then works the above required number of hours, he shall receive triple the number of days of vacation specified above. When such an employee has completed 15 years of continuous employment with the same employer and then works the above required number of hours, he shall receive 4 times the number of days of vacation specified above.

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

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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

Exhibit 6

Notice and Instructions Regarding Unauthorized Alien Employment

**NOTICE AND INSTRUCTIONS TO BIDDERS, RECIPIENTS AND SUBRECIPIENTS
REGARDING SECTIONS 285.525 THROUGH 285.550 RSMO
EFFECTIVE JANUARY 1, 2009**

Effective January 1, 2009 and pursuant to the State of Missouri's RSMO 285.530 (I), No business entity or employer shall knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the state of Missouri.

As a condition for the award of any contract or grant in excess of five thousand dollars by the state or by any political subdivision of the state (e.g., City of St. Louis, Missouri) to a business entity, the business entity (Company) shall, by sworn affidavit and provision of documentation, affirm its enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services. Every such business entity shall sign an affidavit affirming that it does not knowingly employ any person who is an unauthorized alien in connection with the contracted services. [RSMO 285.530 (2)]

The St. Louis Development Corporation acting on behalf of the Port Authority of the City of St. Louis, Missouri, in order to comply with sections 285.525 through 285.550 RSMO, requires the following bid and contract documents:

Required Affidavit for Contracts Over \$5,000.00 (US) - Effective January 1, 2009, Company shall comply with the provisions of Section 285.525 through 285.550 R.S.Mo. Contract award is contingent on Company providing an acceptable notarized affidavit stating:

1. that Company is enrolled in and participates in a federal work authorization program with respect to the employees working in connection with the contracted services; and
2. That Company does not knowingly employ any person who is an unauthorized alien in connection the contracted services.

Additionally, Company must provide documentation evidencing current enrollment in a federal work authorization program (e.g. a valid, completed copy of the first page of the E-Verify Memorandum of Understanding (MOU) identifying the employer and a valid copy of the signature page of the MOU completed and signed by the employer, the Social Security Administration and the Department of Homeland Security . *See attached sample*

- The City of St. Louis encourages companies that are not already enrolled and participating in a federal work authorization program to do so. E-Verify is an example of this type of program. Information regarding E-Verify is available at http://www.dhs.gov/xprevprot/programs/gc_1185221678150.shtm or by calling E-Verify: (888)-464-4218 or by e-mail at: e-verify@dhs.gov . E-Verify must be used for new hires only. It cannot be used to verify the employment eligibility of current employees.

**ST. LOUIS DEVELOPMENT CORPORATION
ACTING ON BEHALF OF THE AUTHORITY**

**AFFIDAVIT OF COMPLIANCE WITH SECTION 285.500 R.S.MO., ET SEQ.
FOR ALL AGREEMENTS AND AWARDS IN EXCESS OF \$5,000.00
EFFECTIVE 1/1/2009**

STATE OF MISSOURI)
) ss.
CITY/COUNTY OF _____)

Before me, the undersigned Notary Public, in and for the City/County of _____ ,
State of _____ , personally appeared _____ who is
_____ (Title) of _____ (Name of
company),(a corporation), (a partnership), (a sole proprietorship), (a limited liability company),
and after being duly sworn did depose and say:

(1) that said company is enrolled in and participates in a federal work authorization program with
respect to the employees working in connection with the contracted services; and

(2) That said company does not knowingly employ any person who is an unauthorized
alien in connection with the contracted services.

The terms used in this affidavit shall have the meaning set forth in Section 285.500 R.S.Mo., et
seq.

Documentation of participation in a federal work authorization program is attached to this
affidavit. (An example of acceptable documentation is the E-Verify Memorandum of
Understanding (MOU) - a valid, completed copy of the first page identifying the employer and a
valid copy of the signature page completed and signed by the employer, the Social Security
Administration and the Department of Homeland Security.)

By: _____
Print Name: _____
Title: _____
Date: _____

Subscribed and sworn to before me this _____ day _____ of, 20__.

Notary Public
Print Name: _____

My commission expires:

FEDERAL WORK AUTHORIZATION PROGRAM

What is E-Verify?

E-Verify is a free and simple to use Web-based system that electronically verifies the employment eligibility of newly hired employees.

E-Verify is a partnership between the Department of Homeland Security (DHS) and the Social Security Administration (SSA). U.S. Citizenship and Immigration Services (USCIS) oversees the program.

E-Verify works by allowing participating employers to electronically compare employee information taken from the Form I-9 (the paper-based employee eligibility verification form used for all new hires) against more than 425 million records in SSA's database and more than 60 million records in DHS immigration databases. Results are returned in seconds. Information regarding E-Verify is available at http://www.dhs.gov/xprevprot/programs/gc_1185221678150.shtm or by calling E-Verify: (888)-464-4218 or by e-mail at: e-verify@dhs.gov.

How Do I Register

An employer's participation in E-Verify is voluntary and is currently free to employers.

Users may access the Web-based access methods using any Internet-capable Windows-based personal computer and a Web browser of Internet Explorer 5.5 or Netscape 4.7 or higher (with the exception of Netscape 7.0).

To participate, an employer must register online and accept the electronic **Memorandum of Understanding (MOU)** that details the responsibilities of SSA, DHS, and the employer.

If your company wants to participate in E-Verify, as an E-Verify user, designated agent, or corporate administrator, or if your company is interested in the Web-service access method, select the "E-Verify Registration" link under "Related Links" on the right side of this page.

Frequently Asked Questions

Q : Why should I consider participating in E-Verify?

E-Verify is currently the best means available for employers to electronically verify the employment eligibility of their newly hired employees. E-Verify virtually eliminates Social Security mismatch letters, improves the accuracy of wage and tax reporting, protects jobs for authorized U.S. workers, and helps U.S. employers maintain a legal workforce.

Q : How do I register for participation in E-Verify?

You can register for E-Verify at <https://www.vis-dhs.com/EmployerRegistration>, which provides instructions for completing the registration process. At the end of the registration process, you will be required to sign a Memorandum of Understanding (MOU) that provides the terms of agreement between you the employer, the SSA, and USCIS. An employee who has signatory authority for the employer can sign the MOU.

Q : I am an employer with multiple hiring sites. Can one site verify everyone? How?

Yes, one site may verify new hires at all sites. When registering, the individual at the site that will be verifying new hires should select "multiple site registration" and give the number of sites per states it will be verifying.

Q : I am an employer with multiple hiring sites. Does every site need to enroll in E-Verify?

No, you can choose which sites to enroll.

Q : What is the required timeframe for conducting an employment eligibility check on a newly hired employee?

The earliest the employer may initiate a query is after an individual accepts an offer of employment and after the employee and employer complete the Form I-9. The employer must initiate the query no later than the end of three business days after the new hire's actual start date.

An employer may initiate the query before a new hire's actual start date; however, it may not pre-screen applicants and may not delay training or an actual start date based upon a tentative non-confirmation or a delay in the receipt of a confirmation of

employment authorization. An employee should not face any adverse employment consequences based upon an employer's use of E-Verify unless a query results in a final non-confirmation. In addition, an employer cannot use an employment authorization response to speed up an employee's start date. This would be unfair treatment to use E-Verify results to accelerate employment for this employee compared to another who may have received a tentative non-confirmation.

For example, Company X always assigns a start-date to new employees that is two weeks after the employee has completed an approved drug test. After the employee has accepted a job with Company X and after the employee and Company X completes the Form I-9, the company can initiate the E-Verify query. However, the company cannot speed up or delay the employee's start date based upon the results of the query (unless the program issues a final non-confirmation, in which case the employee should not be further employed).

Employers must verify employees in a non-discriminatory manner and may not schedule the timing of queries based upon the new hire's national origin, citizenship status, race, or other characteristic that is prohibited by U.S. law.