

Asbestos Abatement Project Specifications

**TAYLOR ELEMENTARY SCHOOL
2130 TAYLOR AVENUE, OGDEN, UTAH**

Flooring Abatement

Work Period: 4 weeks (26 calendar days)

**Ogden City School District
1950 Monroe Boulevard
Ogden, Utah 84401**

Date: December 16, 2009

Prepared by:

**R & R Environmental, Inc.
47 West 9000 South, Suite 2
Sandy, UT 84070
801-352-2380
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Contents

This manual contains the following:

- " Notice to Bidders**
- " Instructions to Bidders**
- " Contractor's Bid Form**
- " Bid Bond**
- " Performance Bond**
- " Payment Bond**
- " General Conditions**
- " Division 01-General Requirements**
- " Division 02-Site Work**

Notice to Bidders

Project:

Flooring Abatement
Taylor Elementary School

Location:

2130 Taylor Ave.
Ogden, Utah

3. Owner:

The Ogden Board of Education
Ogden City School District
1950 Monroe Boulevard
Ogden, Utah 84401

4. Consultant:

R & R Environmental, Inc.
47 West 9000 South, Suite 2
Sandy, UT 84070
(801) 352-2380 Fax: (801) 352-2381 (Eldon Romney cellular: 801-541-0615)

5. A pre-bid conference will be held on Wednesday, December 30, 2009, commencing at 9:00 a.m. at the front entrance of Taylor Elementary School, 2130 Taylor Ave., Ogden, Utah. Attendance at the entire bid conference is a prerequisite for bidding.
6. Sealed bids will be received at the Office of the Director of Purchasing, room #209, Ogden City Board of Education, 1950 Monroe Boulevard until the hour of 2:00 p.m., January 6th, 2010. Bids will be publicly opened in the presence of the Consultant and the Representative of the Owner at that time and place. Reference all correspondence to District RFP 10-009.

The Owner reserves the right to accept or reject any or all bids.

Drawings, Specifications, Contractual Documents, Bid Blanks, and any other detailed instructions will be on file at the Asbestos Department.

Instructions to Bidders

1. **Scope of Contract:**
 - a. Contractor shall be fully responsible for all labor, fees, materials, and equipment necessary for the complete hazardous waste abatement including asbestos as required in the Contract Documents.

2. **Securing of and Compliance with Bidding Documents:**
 - a. Drawings, Specifications, and other bidding documents may be obtained at the time and place indicated on the Notice to Bidders. Bidders shall comply with all conditions stipulated in such bidding documents.

3. **Requirements before Submitting Bids:**
 - a. The site and any building located thereon shall be thoroughly examined in relation to conditions which might directly or indirectly affect the contract work. The bid sum shall reflect all such affecting conditions. Bidders shall be responsible for verifying all dimensions which may affect the work.
 - b. Bids will not be accepted from Contractors that do not attend the pre-bid site meeting.

4. **Interpretation of Drawings and Documents:**
 - a. If any Bidder is in doubt as to the true meaning of any part of the Contract Documents or finds errors, discrepancies, or omissions in them, he shall at once request interpretation or correction thereof by the Consultant.
 - b. The Consultant will promptly clarify the area in question and issue written instructions to all prospective Bidders. Verbal instructions or interpretations will have no validity regardless of source.
 - c. Request for such clarification must be in the office of the Consultant a minimum of five working days before bid opening.

5. **Preparing and Submitting Bids:**
 - a. Bids shall be prepared on forms provided in this document.
 - b. Bid forms may be obtained from the Asbestos Department.
 - c. The Bidder's legal name and business address shall be stated in full.
 - d. Bids must bear no marks, erasures, writing, changes, or interlineations other than those provided or requested.
 - e. Base bids shall include all work contemplated by the Contract Documents except as specifically requested.
 - f. No verbal, telegraphic, or telephonic bid, modifications, or cancellations will be considered.
 - g. The Bidder guarantees there shall be no revisions or withdrawal of the bid amount for a period of 90 days after the bid opening.
 - h. Signatures shall be in longhand and executed by a Principal duly authorized to make contracts.

- i. The bid proposal shall reflect the cost of all work required by the bidding documents, plus additions, deletions, or modifications required by addenda issued prior to bid opening.
- j. Contractors shall submit his work plan for review along with his bid.
- k. **Envelopes shall contain nothing but bid, bid bond, work plan, and contractors documentation 12.o. of this document.** Envelopes shall be opaque, bear Bidder's name, be sealed, and addressed as follows:

Bid For:

**RFP 10-009
Taylor Elementary School
Flooring Abatement**

If bid is mailed, bids must arrive in envelope as specified above placed inside a courier/ mailing envelope. Bids submitted loose in courier/ mailing envelope will be voided and returned.

- l. It is Bidder's sole responsibility to see that his Bid is received at the proper time. Any Bid received after scheduled bid opening time will be returned to Bidder unopened.
 - m. All taxes imposed by city, state, or federal government, as specified in Division 01, shall be included in the bid sum.
6. **Bid Withdrawals:**
- a. Prior to bid opening, Bidders may withdraw bid by written request or by reclaiming bid envelope.
7. **Opening of Bids:**
- a. See Notice to Bidders.
8. **Factors Affecting Contract Award:**
- a. A Bidder's past performance, organization, subcontractors, equipment, and ability to perform and complete his contract in the manner and within the time specified, together with the amount of the bid, will be vital elements considered in the award of the contract.
9. **Award or Rejection of Bid:**
- a. The Owner reserves the right to reject any or all bids and to waive any irregularity therein.
10. **Acceptance of Bid:**
- a. No Bidder shall consider himself under contract after opening and reading of bids until the "Agreement" is signed, and compliance therewith has been made.

11. Time of Completion and Liquidated Damages:

- a. The number of calendar days and the amount required for liquidated damages are listed in the Supplementary Conditions and in the Agreement. The conditions governing liquidated damages are listed in the General Conditions.

12. Additional Instructions to Bidders:

- a. The Contractor shall furnish all labor, materials, facilities, equipment, services, employee training and testing, permits, license, and agreements required to safely remove asbestos in the areas identified under the scope of work in the Asbestos Abatement Specifications, Division 02. Work shall be performed in accordance with those specifications and applicable EPA, OSHA, NIOSH and local regulations. Whenever there is a conflict or overlap, the most stringent regulation applies.
- b. By submitting a bid, the Contractor acknowledges that he has investigated and satisfied himself as to the conditions affecting the work including, but not limited to, physical conditions of the site which may bear upon site access, handling and storage of tools and materials, access to water, electric, or other utilities, or other wise affect performance of required activities; the character and quantity of all surface and subsurface materials or obstacles to be encountered in so far as this information reasonably ascertainable from an inspection of the site, including exploratory work done by The Ogden Board of Education or the Consultant, as well as information presented in specifications included with this contract. Any failure by the Contractor to acquaint himself with available information will not relieve him from the responsibility for estimating properly the difficulty or cost of successfully performing the work. The Ogden Board of Education (Owner) is not responsible for any conclusions or interpretations made by the Contractor solely on the basis of information made available by the owner.
- c. No bids will be accepted from any contractor who has not inspected the job site either in person or through a qualified designated representative.
- d. Bidders shall attend a pre-bid meeting to be held at a time designated by the Owner or his Consultant. Attendance at this meeting by the Bidder or the qualified representative is a mandatory prerequisite for acceptance of a bid from the contractor.
- e. Should a Bidder find discrepancies in the specifications or should he be in doubt as to the meaning or intent of any part thereof, he must, no later than 5 days prior to the bid opening, request clarification from the Consultant. Failure to request such clarification is a waiver to any claim by the Bidder for expense made necessary by reason of later interpretation of the contract documents by the Owner.
- f. Explanations desired by a prospective Bidder regarding the specifications or other bid documents shall be requested in writing from the Owner or his Consultant no later than 5 days prior to the bid opening, Requests shall

include the project number and building name and shall be directed to the Consultant.

- g. Oral explanations or instructions will not be binding. Only written addenda are binding. Any addenda resulting from these requests will be forwarded to all listed holders of the bid document to arrive no later than 48 hours prior to bid opening. Bidders shall acknowledge the receipt of all addenda.
- h. Withdrawal or modification to bids are effective only if written notice thereof is filed prior to time of bid opening and at the place specified in the Notice to Bidders. A notice of withdrawal or modifications to a bid must be signed by the Contractor or his designator representative.
- i. No withdrawal or modifications shall be accepted after the time for opening of proposals.
- j. The Contractor shall purchase and maintain insurance that will protect him from claims that may arise out of, or result from, his activities under this contract, whether those activities are performed by himself 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.
- k. Bidders shall submit proof of coverage under the Workman's Compensation insurance system of the State or other similar benefits acts.
- l. If the Owner permits the Contractor to use any of the School District's equipment, tools, or facilities, such use will be gratuitous and the Contractor shall release the School District from any responsibility arising from claims for personal injuries, including death, arising out of the use of such equipment, tools, or facilities irrespective of the condition thereof or any negligence on the part of the School District in permitting their use.
- m. Should the Bidder to whom the contract is awarded fail or be unable to execute the contract for any reason within 14 days after the notification of award, then an amount equal to the difference between the acceptable bid price, and that of the next highest Bidder shall be paid to the School District as liquidated damages.
- n. As a prerequisite to signing the contract, the Bidder shall have furnished the certificates of insurance.
- o. Bidders shall submit in the bid package, the attached statement, notarized and signed by an officer of the company, containing the following information:
 - 1) A list of three (3) previous **AHERA** projects of similar or larger size and similar scope, completed by the company. Include projects completed, dates of completion and a contact person and phone number for the school district where the projects were completed.
 - 2) A record of any citations issued by Federal, State, or local regulatory agencies relating to asbestos abatement activity. Include projects, dates, and resolutions, or check the statement saying none of these items apply.
 - 3) A list of penalties incurred through non-compliance with asbestos abatement project specifications, including liquidated damages, overruns in scheduled time limitations, and resolutions, or check the statement saying none of these items apply.

4) Situations in which an asbestos-related contract has been terminated including projects, dates, and reasons for termination, or check the statement saying none of these items apply.

5) Situations in which any asbestos-related legal proceedings/claims are or have been ongoing or in which the Contractor (or employees scheduled to participate in this project) have participated or are currently involved. Include descriptions of role, issue, and resolution to date, or check the statement saying none of these items apply.

Bidders shall use and include the statement and checklist following paragraph 13 b. in the bid package.

13. a. The Owner reserves the right to reject bids for any reason that serves the best interest of the School District or building occupants. The School District also reserves the right to waive any technicality or irregularity in a bid. Failure to submit requested information/documentation or the submission of incorrect information/documentation will result in disqualification of a bid package.
- b. In addition to obtaining insurance coverage as required above, the Contractor shall indemnify and hold the Owner, the Consultant, and their agents and employees harmless from and against any and all liability demands, causes of action, or claims thereof, wither well-founded or otherwise, including the cost of defending the same, for infringement of patent right, in the course of asbestos abatement as a result of the negligence or willful conduct of the Contractor, the subcontractors or materialmen, their agents or employees.

Bid Submittal Statement and Checklist

- _____ Bid Form (as provided in this document)
- _____ Bid Bond (as specified herein)
- _____ Work Plan (description of work including options exercised as detailed in the Scope of Work)

Documentation 12.o.:

- _____ 1) List of three (3) previous **AHERA** projects (similar or larger size and scope), including projects, dates of completion, contact person and phone number.
- _____ 2) Record of citations issued by Federal, State, or local regulatory agencies relating to asbestos abatement activity, including projects, dates, and resolutions, or, if none of these items apply (check here) _____
- _____ 3) List of penalties incurred through non-compliance with asbestos abatement project specifications, including liquidated damages, overruns in scheduled time limitations, and resolutions, or if none of these items apply (check here) _____
- _____ 4) Situations in which an asbestos-related contract has been terminated including projects, dates, and reasons for termination, or if none of these items apply (check here) _____
- _____ 5) Situations in which any asbestos-related legal proceedings/claims are or have been ongoing or in which the Contractor (or employees scheduled to participate in this project) have participated or are currently involved, including descriptions of role, issue, and resolution to date, or if none of these items apply (check here) _____
- _____ This checklist (included in the bid package).

Notarized:

Company Officer Signature

Notary Seal

Title _____

BID – RFP 10-009

NAME OF BIDDER _____ Date _____

To the Board of Education of Ogden City School District
1950 Monroe Boulevard
Ogden, Utah 84401

Gentlemen:

The undersigned, in compliance with your invitation for bids for Taylor Elementary School Flooring Abatement, having examined the Drawings and Specification and related documents as prepared by R & R Environmental, Inc., and the sites of the proposed work and being familiar with all of the conditions surrounding the construction of the proposed project, including the availability of labor, do hereby propose to furnish all labor, material and supplies as required for the work in accordance with the Contract Documents as specified and within the time set forth and at the price stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents of which this bid is a part:

I/We acknowledge receipt of the following addenda:

- #1 _____ Date _____
- #2 _____ Date _____
- #3 _____ Date _____
- #4 _____ Date _____

For all work shown on the Drawings and described in the Specification, I/We agree to perform for the sum of:

_____ Dollars (\$ _____)
(In case of discrepancy, written amount shall govern)

I/We guarantee to complete the work as defined in the Drawings and Specifications (on or before Finish date).

This Bid shall be good for 120 days after the bid opening.

Enclosed is _____ for bid security as required in the sum of \$ _____.

The undersigned Contractor's license number for Utah is _____ and my bid limit is \$ _____.

Upon receipt of Notice of Acceptance of this bid, the Undersigned agrees to execute the Contract and within five (5) days deliver Owner's Protective Bonds in the prescribed form in the amount of 100% of the General Construction Contract Price for faithful performance of the contract. The certified Check, Cashier's Check or Bid Bond attached, in the amount not less than five percent (5%) of the Bid shall become the property of the Board of Education of Ogden City School District in the Event that the Contract is not negotiated and/or the Owner's Protective Bonds delivered within the time set forth, as liquidated damages for the delay and additional expense caused thereby.

Respectfully submitted,

Seal
(If a Corporation)

Name of Bidder

Address

Authorized Signature

BID BOND

Date Bond Executed

Principal

Surety

Sum of Bond

KNOW ALL MEN OF THESE PRESENT, that we, the PRINCIPAL AND SURETY above named, are held and firmly bound unto THE BOARD OF EDUCATION OGDEN CITY SCHOOL DISTRICT, IN THE SUM OF THE AMOUNT STATED ABOVE, FOR THE PAYMENT OF WHICH SUM WELL AND TRULY TO BE MADE, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents. THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has submitted the accompanying bid, dated as shown above, for

Taylor Elementary School Flooring Abatement

NOW THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that if the said Principal shall execute a contract and give bonds to be approved by the obligee for the faithful performance thereof within ten (10) days after being notified in writing of such contract to the Principal, then this obligation shall be null and void, otherwise it shall remain in full force and effect.

IN WITNESS WHEREOF, the above bounded parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

INDIVIDUAL OR PARTNERSHIP PRINCIPAL Corporate Principal

Business Address

SEAL By: _____

Title: _____

 Corporate Surety:

 Business Address

SEAL By: _____

Attorney-in Fact: _____

NOTE: If certified or cashier's check is used in lieu of bid bond, a certificate from an approved surety company guaranteeing execution of a full performance bond must accompany bid.

STATE OF UTAH)
)ss:
COUNTY OF WEBER)

_____ being duly sworn, on oath disposes and says that he is the Attorney-in-Fact of the above-named Surety Company, and that he is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations.

SUBSCRIBED AND SWORN to before me this _____ day of _____, 20____.

My commission expires _____

Notary Public Attorney-in-Fact

PERFORMANCE BOND

(Title 63, Chapter 56, U.C.A. 1953, as Amended)

KNOW ALL MEN BY THESE PRESENTS:

That _____ hereinafter referred to as the "Principal" and _____, a corporation organized and existing under the laws of the State of _____ with its principal office in the City of _____, hereinafter referred to as the "Surety", are held and firmly bound unto

_____, hereinafter referred to as the "Obligee", in the amount of _____ DOLLARS (\$_____) for the payment whereof, the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the _____ day of _____, 20____, which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW THEREFORE, the condition of this obligation is such that if the said Principal shall faithfully perform the contract in accordance with the drawings, specifications and conditions thereof, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Title 63, Chapter 56, Utah Code Annotated, 1953, as Amended, and all liabilities on this bond shall be determined in accordance with said provisions to the same extent as if it were copied at length herein.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this _____ day of _____, 20____.

WITNESS OR ATTESTATION: _____(Seal)
_____ (Seal)
_____ (Seal)
Principal

PERFORMANCE BOND (Cont'd_)

Surety

By:_____

WITNESS:

STATE OF UTAH)
) :ss
COUNTY OF WEBER)

_____ being first duly sworn on oath deposes and says that he is the Attorney-in-Fact of the _____ and that he is duly authorized to execute and deliver the foregoing obligation that said Company is authorized to execute the same, and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations.

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

NOTARY PUBLIC
Residing at:

My Commission Expires _____

PAYMENT BOND

(Title 63, Chapter 56, U.C.A. 1953, as Amended)

KNOW ALL MEN BY THESE PRESENTS:

That _____ hereinafter referred to as the "Principal" and _____, a corporation organized and existing under the laws of the State of _____ with its principal office in the City of _____, hereinafter referred to as the "Surety", are held and firmly bound unto

_____ hereinafter referred to as the "Obligee", in the amount of _____ DOLLARS (\$_____) for payment whereof, the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the _____ day of _____, 20____, which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW THEREFORE, the condition of this obligation is such that if the said Principal shall pay all claimants supplying labor or materials to him or his subcontractors in the prosecution of the work provided for in said contract, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Title 63, Chapter 56, Utah Code Annotated, 1953, as amended and all liabilities on this bond to all such claimants shall be determined in accordance with said provisions to the same extent as if it were copied at length herein.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this _____ day of _____, 20____.

WITNESS OR ATTESTATION: _____(Seal)
_____(Seal)

Principal _____(Seal)

PAYMENT BOND (Cont'd_)

Surety

By:_____

WITNESS:

STATE OF UTAH)
) :ss
COUNTY OF WEBER)

_____ being first duly sworn on oath deposes and says that he is the Attorney-in-Fact of the _____ and that he is duly authorized to execute and deliver the foregoing obligation that said Company is authorized to execute the same, and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations.

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

NOTARY PUBLIC
Residing at:

My Commission Expires _____

General Conditions

Section	1.	Definitions
Section	2.	Contract Documents
Section	3.	Discrepancy in Contract Documents
Section	4.	Additional Drawings & Instructions
Section	5.	Ownership of Drawings
Section	6.	Copies Furnished
Section	7.	Testing
Section	8.	Surveys, Building Layout, & Site Examination
Section	9.	Royalties & Patents
Section	10.	Contractor's Liability Insurance
Section	11.	Hold Harmless Agreement
Section	12.	Builder's Risk Losses
Section	13.	Measurements
Section	14.	Inspection of Work
Section	15.	Supervision & Abatement Procedures
Section	16.	Consultant's Status
Section	17.	Consultant's Decisions
Section	18.	Emergencies
Section	19.	Temporary or Trial Usage of any Mechanical Devices (N/A)
Section	20.	Condemnation of Work
Section	21.	Changes in Work
Section	22.	Claims for Extra Cost
Section	23.	Delays and Extension of Time
Section	24.	Disputes
Section	25.	Correction & Warranty of Work
Section	26.	Owner's Right to Do Work
Section	27.	Contractor's Application for Payment (N/A)
Section	28.	Payments to Contractor (N/A)
Section	29.	Payments withheld
Section	30.	Contractor's Responsibility
Section	31.	Owner's Right to Terminate Contract
Section	32.	Contractor's Right to Stop Work and Terminate Contract (N/A)
Section	33.	Separate Contracts

Section	34.	Assignment
Section	35.	Subcontractors
Section	36.	Liquidated Damages

General Conditions

Section 1. Definitions:

1. Owner:
 - a. The Ogden Board of Education, Ogden City School District in which legal title to the real property involved is vested, as listed in the Notice to Bidders, hereinafter referred to as "Owner."
2. Asbestos Project Manager:
 - a. A professional Hazardous Waste or Asbestos Consultant or Industrial Hygienist or State Certified Supervisor, Management Planner/Inspector, certified or licensed as required, being the person or organization so designated in the Agreement, hereinafter referred to as "Consultant."
3. Contractor:
 - a. The Contractor is the person or organization State Certified or Licensed to perform asbestos abatement projects and identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term "Contractor" means Asbestos Abatement Contractor or his authorized representative.
5. Subcontractor:
 - a. The person, firm, or corporation supplying direct or indirect labor and/or materials at the site of the Project, or services in an hazardous waste disposal area, and under separate contract or agreement with the Contractor.
6. The Work:
 - a. The Work includes all labor necessary to perform asbestos abatement and removal required by the Contract Documents.
7. The Project:
 - a. The Project is the total asbestos abatement program designed by the Consultant of which the Work performed under the Contract Documents may be the whole or a part.
8. Written Notice:
 - a. Written Notice shall be deemed to have been duly served if delivered in person to the individual or member of the firm or to an officer of the Corporation for whom it was intended or, if delivered at or sent through the United States Mail, to the last business address known to him who gives the notice.

Section 2. The Contract Documents:

1. The Contract Documents consist of the Agreement, the Conditions of the Contract (General, Supplementary, and other Conditions), the Drawings, the Specifications, all Addenda issued prior to execution of the Contract, and all Modifications thereto. A Modification may be made only after execution of a Contract. A Modification is:
 - a. A written amendment to the Contract signed by both parties,
 - b. A Change Order,
 - c. A written interpretation issued by the Consultant pursuant to Section 4, or
 - d. A written order for a minor change in the Work issued by the Consultant pursuant to Section 21.
2. The Contract:
 - a. The Contract Documents form the Contract. The Contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral, including the Bidding Documents. The Contract may be amended or modified only by a Modification as defined in Section 2, paragraph 1, above.
3. The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. The intention of the Contract Documents is to include all labor, materials, equipment, and other items necessary for the proper execution and completion of the Work.
4. Words which have well known technical or trade meanings are used herein in accordance with such recognized meanings.
5. Within Contract Documents, there shall be the following precedence:
 - a. The Agreement takes precedence over all other documents.
 - b. Supplementary General Conditions take precedence over General Conditions.
 - c. General Conditions take precedence over Drawings and Specifications.
 - d. Addenda or Modifications of any nature, to the Drawings and Specifications, take precedence over the original.
 - e. Specifications take precedence over Drawings.
 - f. Within the Working Drawings, the larger scale takes precedence over smaller, figured dimensions over scaled, and noted materials over graphic indications.

Section 3. Discrepancies in Contract Documents:

1. Should any question arise regarding the Contract Documents, the Contractor shall request interpretation and clarification from the Consultant before proceeding. In the absence of such request and authorization, the Contractor proceeds at his own risk.

Section 4. Additional Drawings & Instructions:

1. The Consultant shall furnish with promptness any additional instructions or clarification necessary for proper execution of the Work specified in the Contract Documents.

Section 5. Ownership of Drawings:

1. Drawings, Specifications, and copies thereof which are furnished to the Contractor are the property of the Owner. They are not to be used on other work and are to be returned to the Consultant if so requested except for one copy which may be retained by the Contractor as a part of the Contract Documents.

Section 6. Copies Furnished:

1. The Consultant shall furnish, free of charge, to the Contractor all copies of Drawings and Specifications reasonably necessary for the execution of the Work. The Contractor shall keep in good order on the Project one copy of Drawings, Addenda, and Specifications which shall be readily available to the Consultant, the Owner, and their Representatives.

Section 7. Testing

1. The Owner and/or the Consultant reserve the right to have tests made when deemed necessary.
2. Tests not specified as part of a trade section shall be paid for by the Owner.
3. Should tests reveal a failure of the Work to meet the contract requirements, subsequent tests, related to the failure, shall be paid for by the Contractor.
4. Tests shall be made in accordance with recognized standards by a competent, independent testing laboratory.
5. Bulk or air samples (all but personal samples) required for testing shall be obtained by the Consultant.

Section 8. Building Examination

1. The Contractor shall be responsible for:
 - a. Examination of the building and scheduling the Work hereunder.
 - b. If the condition of the building indicated in the Contract Documents differ materially from those the Contractor encounters in the performance of the Work, the Contractor shall, within ten days and before such conditions are disturbed, notify the Consultant in writing of"
 - 1) Differing latent conditions, or

- 2) Unknown physical conditions or conditions of an unusual nature at the site, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract.
2. The Consultant shall promptly investigate the reported differing conditions and if he finds such conditions do materially so differ and cause an increase or decrease in the Contractor's cost of or the time required for performance of any part of the Work under this Contract, whether or not changed as a result of such condition, the Owner shall cause an equitable adjustment to be made and modify Contract in writing.

Section 9. Royalties & Patents:

1. Where containment using reduced pressurization will be required, the Contractor shall at his own cost and expense obtain and maintain for the period during which work is performed under or incident to the Contract a valid, current license to use the system for asbestos containment and removal using reduced pressurization and filtration as specified in US Patent No 4,604,111, issued August 5, 1986, and reaffirmed by the United States and Trademark Office before the Board of Patent Appeals and Interferences on March 31, 1989.

Note: As of this writing, the holder of the patent for reduced pressurization and filtration (GPAC, based in Florida) is awaiting a circuit court of appeals decision on whether the patent is still valid. At this time, therefore, obtaining the patent is not required. However, should it again become required, contractors will have to again purchase a patent license as outlined above.

2. The Contractor shall submit to the Owner written proof that he holds the license referred to in Section 9, paragraph 1 above prior to beginning of work under the Contract.
3. All inquiries with respect to the scope of the patent referred to in Section 9, paragraph 1 above, the rights thereunder, and the application of a duly authorized license thereto, may be directed to:
 - a. GPAC, Inc, 7854 Browning Road, Pennsauken, NJ 08109.
4. In addition to those royalties and license fees specifically referred to in the Contract, the Contractor shall pay any and all other royalties and license fees which are required to be paid pursuant to activities performed under or incident to the Contract.
5. The Contractor shall indemnify and save the Owner and its agents and employees harmless from and against any and all liability, demands, causes of action or claims whether well-founded or otherwise, including the cost of defending the same, for any and all patent infringement or other patent claims arising out of activities performed under or incident to the Contract.

Section 10. Contractor's Liability Insurance:

1. Insurance for projects \$50,000.00 and under:
 - a. Insurance:
 - 1) The Contractor shall not commence work under the Contract until he has obtained, as a minimum, the insurance required hereunder and evidence of such insurance has been submitted to and approved by the Owner. The submittal of said evidence to the Owner shall not relieve or decrease the liability of the Contractor hereunder.
 - a) Worker's Compensation & Employers' Liability Insurance:
 - (1) As required by statute.
 - b) Commercial General Liability Insurance; ISO Form CG 00 01 (11/85) or equivalent, Occurrence Policy, with:
 - (1) Limits of not less than:

(a.) General Aggregate	\$1,000,000.00
(b.) Products-Comp/OPS Aggregate	\$1,000,000.00
(c.) Personal and Advertising Injury	\$500,000.00
(d.) Each Occurrence	\$500,000.00
(e.) Fire Damage (any one fire)	\$50,000.00
(f.) Medical Expense (any one person)	\$5,000.00
 - (2) Endorsements attached thereto including the following or their equivalent:
 - (a.) ISO Form CG 25 03 (11/85), Amendment of Limits of Insurance (Designated Project or Premises), describing the subject Contract and specifying limits as shown above.
 - (b.) ISO Form CG 20 10 (11/85), Additional Insured-Owners, Lessees, or Contractors (Form B), naming the Owner as additional insured and containing the following statement: "This Endorsement Also Constitutes Primary Coverage in the Event of any Occurrence, Lien, or Suit."
 - c) Automobile Liability Insurance, with:
 - (1) Limits of not less than \$500,000.00 Combined Single Limit per accident.
 - (2) Coverage applying to any auto.
 2. Insurance for projects over \$50,000.00:
 - a. The Contractor shall not commence work under this Contract until he has obtained, as a minimum, the insurance required hereunder and evidence of such insurance has been submitted to and approved by the Owner. The

submittal of said evidence to the Owner shall not relieve or decrease the liability of the Contractor hereunder.

- 1) Workers' Compensation & Employers' Liability Insurance:
 - a) As required by statute.

 - 2) Commercial General Liability Insurance-ISO Form CG 00 01 (11/85) or equivalent, Occurrence Policy, with:
 - a) Limits of not less than:

(1) General Aggregate	\$2,000,000.00
(2) Products-Comp/OPS Aggregate	\$2,000,000.00
(3) Personal and Advertising Injury	\$1,000,000.00
(4) Each Occurrence	\$1,000,000.00
(5) Fire Damage (any one fire)	\$50,000.00
(6) Medical Expense (any one person)	\$5,000.00
 - b) Endorsements attached thereto including the following or their equivalent:
 - (1) ISO Form CG 25 03 (11/85), Amendment of Limits of Insurance (Designated Project or Premises), describing the subject Contract and specifying limits as shown above.
 - (2) ISO Form CG 20 10 (11/85), Additional Insured-Owners, Lessees, or Contractors (Form B), naming the Owner as additional insured and containing the following statement: "This Endorsement also Constitutes Primary Coverage in the Event of any Occurrence, Claim, or Suit."

 - 3) Automobile Liability Insurance, with:
 - a) Limits of not less than \$1,000,000.00 Combined Single Limit per accident.
 - b) Coverage applying to any auto.
3. Certificate of Insurance, on ACORD 25-S (3/88) Form, or equivalent, filed with the Owner identifying:
- a. Owner, as defined in the Asbestos Abatement Agreement, as Certificate Holder and Additional Insured.
 - b. Endorsements, as listed above. (Note: If forms other than ISO forms are used, copies of the non-ISO forms are to be attached to this certificate)
 - c. Project as defined in the Asbestos Abatement Agreement.
 - d. Cancellation clause of the certificate amended to read, "Should any of the above described policies be canceled before the expiration thereof, the issuing company will mail 30 days written notice to the certificate holder named to the left."

- e. Insurance Companies Providing Coverage: All companies listed must be rated "B Class V" or better in the A.M. Best Company Key Rating GuidefPropertyfCasualty, current edition.
 - f. The Name, Address, and Telephone Number of the "Producer" "The certificate to bear an original signature of the Authorized Representative of the Producer. Facsimile or mechanically reproduced signatures will not be accepted.
- 4. The Owner reserves the right to reject any insurance company, policy, endorsement, certificate of insurance, or certificate of insurance with or without cause.
 - 5. The cost of such insurance as required above shall be the obligation of the Contractor.

Section 11. Hold Harmless Agreement:

- 1. In addition to obtaining insurance coverage as required above, Contractor shall indemnify and save the Owner, the Consultant, and their agents and employees harmless from and against any and all liability, demands, causes of action, or claims thereof, whether well-founded or otherwise, including the cost of defending the same, for bodily injury to any person whatsoever (including the employees of the Owner or the Consultant) or damage to property of any person in the asbestos abatement process as a result of the negligence of the Contractor, the subcontractors or materialmen, their agents or employees.
- 2. In addition to the foregoing, the Contractor shall be liable to defend the Owner in any lawsuit filed by any subcontractor or materialmen as a result of the building project which is the subject matter of this Contract.
- 3. In addition to the foregoing, Contractor shall be liable to defend the Owner in any lawsuit filed by any subcontractor or materialman as a result of the Project which is the subject matter of this Contract. Where liens have been filed against the Owner's property, this shall include and require the Contractor and/or his bonding company which has issued bonds upon the Project, to obtain lien releases and record them in the appropriate county and/or local jurisdiction as the case may be so as to disencumber and provide the Owner with a title free and clear from any liens filed by subcontractors and/or material suppliers, which have supplied labor and/or materials to the said Project.
- 4. No subcontract shall relieve the Contractor of any of his liability or obligation under the Contract. The Contractor agrees that he is fully responsible to the Owner for acts or omissions of his subcontractors and of person either directly or indirectly employed by them.

Section 12. Builders Risk Losses:

1. The Owner will reimburse the Contractor, including the interests of the Contractor and the subcontractors, for their losses to the Project, described herein, to the extent to which such losses would have been covered under the All-Risk Builders Risk Insurance Policy Forms promulgated by Insurance Services Office, Inc, and more particularly described as Builders" Risk Coverage Form CP 00 20 (07/88)** and Causes of Loss Special Form CP 10 30 (07/88)**. Loss adjustments will also be subject to the following:
 - a. Coverage, Exclusions, Limits of Insurance, Deductible, Loss Conditions, Additional Conditions, and Definitions as given in ISO Builders" Risk Coverage Form CP 00 20 (07/88)** and Covered Causes of Loss, Exclusions, Limitations, Additional Coverage Collapse, Additional Coverage Extensions, and Definitions as given in ISO Causes of Loss Special Form CP 10 30 (07/88)**.
 - b. Deductible Clause: The sum of One Thousand Dollars (\$1,000.00) shall be deducted from the total sum of all loss or claim, or series of claims, arising out of any one occurrence. This deductible amount is the responsibility of the Contractor.
 - c. Loss Reporting Procedure: All losses requiring reimbursement under this Section shall be reported to the Consultant prior to the beginning of repairs in order that details of loss can be obtained and verified to facilitate a prompt loss adjustment.
2. Copies of the insurance forms referred to above may be obtained through most licensed property, casualty, and surety agents or brokers. Upon request, Owner will assist in obtaining copies should such assistance be necessary.

** Includes copyrighted material of Insurance Services Office Inc, with its permission. Copyright, Insurance Services Office Inc, Forms CP 00 20 and CP 10 30 1988.

Section 13. Measurements

1. Before ordering any materials or doing any work, the Contractor shall verify all measurements to properly size or fit the Work. No extra charge or compensation will be allowed by the Owner resulting from the Contractor's failure to comply with this requirement.

Section 14. Inspection of Work

1. The Consultant shall at all times during its progress have full access to all phases of the Work. Contractor shall provide adequate means to facilitate inspection by the Consultant.

Section 15. Supervision & Abatement Procedures

1. The Contractor shall supervise and direct the Work, using his best skill and attention. He shall be solely responsible for asbestos abatement methods, techniques, sequences, and procedures and for coordinating portions of the Work under the Contract in coordination with the Consultant.

Section 16. Consultant's Status

1. The Consultant shall be the Owner's representative during the asbestos abatement process period.
 - a. The Consultant will provide full time inspection of the project, insuring that the Work is proceeding in accordance with the Contract Documents. He will be required to make inspections to check the quality and quantity of the Work. On the basis of his inspections he will keep the Owner informed of the progress of the Work, will endeavor to guard the Owner against defects and deficiencies in the work of the Contractor, and he may reject the abatement process as failing to conform to the Contract Documents and stop the work.
 - b. The Consultant shall be in the first instance the interpreter of the conditions of the Contract and the judge of its performance. He shall use his powers under the Contract to enforce its faithful performance by the Contractor. The Consultant will prepare Change Orders and will have authority to order minor changes in the Work as defined in Section 21 of the General Conditions. Major changes in the work will be coordinated and approved by the Owner. The Consultant will determine the date of final completion, will receive and review written guarantees and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment.
 - c. In case of the termination of the employment of the Consultant, the Owner shall appoint a Consultant against whom the Contractor makes no reasonable objection, whose status under the Contract shall be that of the former Consultant in all respects.

Section 17. Consultant's Decisions:

1. The Consultant's decisions will be final if consistent with the intent of the Contract Documents.

Section 18. Emergencies:

1. In case of an emergency endangering life or threatening the safety of the structure or of adjoining property, the Contractor may, without waiting for specific authorization from the Consultant or Owner, act at his own discretion to safeguard life or property. Compensation and time shall be allowed the Contractor for such emergency work, the amount of both to be determined between the Contractor, the Consultant, and the Owner by agreement.

2. The Contractor shall make a full written report of such emergency action to the Consultant within five days after the event.

Section 19. Temporary or Trial Usage of any Mechanical Devices:

1. HVAC system may be used only if authorized in writing by the Consultant and at no additional cost or damages to the Owner. At completion of the project, air filters shall be replaced with new and the HVAC systems used will be thoroughly cleaned.

Section 20. Condemnation of Work

1. The Owner and/or the Consultant shall have the right to condemn and require removal of the following at the Contractor's expense.
 - a. Any portions of the Work done under this contract which do not meet the requirements of the Contract Documents.
 - b. Any portions of the Work damaged or rendered unsuitable resulting from failure to exercise proper protection.

Section 21. Changes in the Work

1. The Owner, as represented by a manager from the School District named in the Work documents, may, at any time, without notice to the sureties, by written order designated or indicated to be a Change Order, make any change within the general scope of the Contract, including but not limited to changes.
 - a. In the Specifications (including Drawings and design),
 - b. In the method or manner of performance of the Work,
 - c. In the Owner-furnished facilities, equipment, materials, or site, or
 - d. Directing acceleration in the performance of the Work.
2. Any other written order or an oral order from the Owner or Consultant, which in the opinion of the Contractor causes any such change, shall be treated as a Change Order under this clause, provided the Contractor gives the Owner and Consultant written notice stating the date, circumstances and source of the order, and a statement that the Contractor regards the order as a Change order.
3. If any Change Order under this Contract causes an increase or decrease in the Contractor's cost of or the time required for the performance of any part of the work under this Contract, an equitable adjustment shall be made and the Contract modified in writing accordingly, provided however, that no claim for any Change Order under Section 21, paragraph 2 shall be allowed for any costs incurred more than twenty (20) calendar days before Contractor gives written notice to the Owner as therein required.
4. Field Changes:
 - a. The Consultant is authorized to order minor changes during the course of the

Work which will not involve extra cost or time and which are consistent with the general intent of the Contract Documents. Further, the Consultant, with the concurrence of the OCS D Supervisor of Buildings and Grounds, is authorized to order on-the-spot minor changes of a value of \$1,000.00 or less with no time extension in order to avoid delaying the Work. The price of such minor changes will be mutually agreed between the Consultant and the Contractor and recorded on a Field Change Instruction form.

- b. The Contractor will proceed with the changed work forthwith. These minor field changes will subsequently be included in a Contract Modification.
5. Change Orders:
- a. Except for Field Changes in Section 21, paragraph 4, Emergencies in Section 18, and to avoid delay as hereinafter provided, no change in the Work shall be made without a written Contract Modification in the form of a Change Order. The Contractor's proposal furnished in accordance with Section 21, Paragraph 6 shall be the basis of negotiation for Contract price and/or time adjustments made by Change Order.
 - b. If the Owner determines it is necessary to proceed with changed work to avoid delay before prices or time have been negotiated, he may order the Contractor to proceed on a time and materials basis or on a mutually agreed not-to-exceed price and/or time. This notice to proceed will be in writing or confirmed in writing by the Consultant.
 - c. Upon receipt of such order, the Contractor shall immediately perform the changed work with due diligence. Thereafter, the Owner and the Contractor shall negotiate the Change Order price and/or time as soon as practicable, and a Contract Modification will be made. If negotiations for price and/or time on any Change Order do not result in agreement within a reasonable time, the parties to the Contract shall handle the matter as a dispute under Section 24, "Disputes."
6. The Contractor, in connection with any proposal he makes for a Contract Modification, shall furnish a price breakdown itemized as required by the Owner. Unless otherwise directed, the breakdown shall be in sufficient detail to permit an analysis of all material, labor, equipment, subcontract and overhead costs as well as profit, and shall cover all work involved in the Modification, whether such work was deleted, added, or changed. Any amount claimed for subcontracts shall be supported by a similar price breakdown. In addition, if the proposal includes a time extension, a justification therefore shall also be furnished. The proposal, together with the price breakdown and time extension justification, shall be furnished within thirty (30) days of the date first requested by the Consultant.
- a. In such proposals, profit and overhead shall be computed as follows"
 - 1) Subcontractor's profit and overhead shall not exceed 15% of total direct costs.
 - 2) The Contractor's profit and overhead on work performed by his own crews shall not exceed 15% of total direct costs.
 - 3) The Contractor's profit and overhead on work performed by his

- subcontractors shall not exceed 5% of total direct costs.
- 4) On credit changes, profit and overhead on the originally estimated work will not have to be returned to the Owner.
 7. Upon accepting a Change Order by signing it, the Contractor releases the Owner from any further claim in money and for time by reason of the changed work.
 8. No claim by the Contractor for an equitable adjustment of any Change Order shall be allowed if submitted after final payment under this Contract.

Section 22. Claims for Extra Cost:

1. If the Contractor intends to assert a claim for equitable adjustment of cost or time by reason of any instruction given him or because of an event or circumstance, he must, within thirty (30) calendar days after receipt of such instruction or such event or circumstance submit to the Consultant and the Owner a written statement setting forth in detail the nature and monetary extent of such claim. This time limit may be extended by Owner. If a mutually acceptable settlement of the claim cannot be reached within a reasonable time, the parties to the Contract shall handle the matter as a dispute under Section 24, "Disputes."

Section 23. Delays and Extension of Time

1. All time limits stated in the Contract Documents are of the essence of the Contract.
2. If the Contractor is delayed at any time in the progress of the work because of changes ordered in the work, labor disputes, inclement weather, unusual delay in transportation, or any other causes beyond the Contractor's control, which the Owner may determine justifies the delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Owner may determine.
 - a. All claims for extension of time shall be made in writing to the Consultant.
 - 1) Claims for delay due to inclement weather shall be made by the 10th of the month following the month of the delay.
 - 2) Other claims shall be made no more than twenty days after the commencement of the delay.
 - 3) Claims made beyond these time limits shall be null and void.
 - b. Requests for extension of time shall be fully documented by including copies of daily logs, letters, shipping orders, delivery tickets, and other supporting information.
 - c. In case of a continuing cause of delay only one claim is necessary.
 - d. Normal working days are based on a five day week.
 - e. For agreements based on calendar days, extensions of time shall be determined by multiplying working days allowed for time extension by a factor of 1.4.

Section 24. Disputes:

1. Except as otherwise provided in the Contract Documents, any dispute concerning a question of fact arising under this Contract which is not disposed of by agreement shall be decided by the Consultant, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Contractor. The decision of the Consultant will be final and conclusive unless within thirty days from the date of receipt of such copy, the Contractor mails or otherwise furnishes to the Owner a written appeal addressed to the Owner. The decision of the Owner shall be final and conclusive.
2. Pending final decision of a dispute hereunder, the Contractor shall proceed diligently with the performance of the Contract and in accordance with the above Director's decision.

Section 25. Correction & Warranty of Work:

1. The Contractor shall promptly correct any work that fails to conform to the requirements of the Contract Documents where such failure to conform appears during the progress of the Work, and shall remedy any defects due to faulty materials, equipment, or workmanship which appear within a period of one year from the Date of Substantial Completion of the Contract or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents. The Contractor shall pay all costs of correcting faulty work, including additional Consultant's fees when incurred.

Section 26. Owner's Right To Do Work:

1. If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents or fails to perform any provision of the Contract, the Owner may, seven days after providing written notice to the Contractor and without prejudice to any other remedy he may have, make good such deficiencies. In such case, an appropriate Change Order will be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies including the cost of the Consultant's additional services made necessary by such default, neglect, or failure. The Consultant must concur with both such action and the amount charged to the Contractor. If payments then or thereafter due the Contractor are not sufficient to cover such amount, Contractor shall pay the difference to the Owner.

Section 27. Contractor's Application for Payment:

1. See Article 7 of the Form of Agreement.

Section 28. Payments to Contractors

1. See Article 7 of the Form of Agreement.

Section 29. Payments Withheld

1. Payments may be withheld from the Contractor by the Owner in order to protect the Owner from loss due to:
 - a. Defective work not remedied,
 - b. Liens or claims filed or reasonable evidence of probable filing,
 - c. The Contractor's failure to promptly pay subcontractors for labor and materials accepted by the Contractor,
 - d. The Consultant's reasonable doubt that the Project can be completed for the unpaid balance of the Contract price,
 - e. Damage to another Contractor, or
 - f. Failure to maintain scheduled progress.
 - g. Failure to provide Consultant with required documentation.
2. Upon satisfactory removal of any such grounds, payments so withheld will be made.

Section 30. Contractor Responsibility:

1. Notwithstanding the provisions of sections 12 and 27, the Contractor is fully responsible for the Project and all materials and work connected therewith until the Owner has accepted the completed Project in writing. The Contractor shall replace or repair at his own expense any materials or work damaged or stolen, regardless of whether he has received payment for the work or materials from the Owner.
2. By executing the Contract, the Contractor represents that he has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents.
3. The Contractor shall employ a competent superintendent who speaks English and is satisfactory to the Consultant. The superintendent shall be in attendance at the Project site during the progress of the Work. This superintendent shall not be changed except with the prior consent of the Consultant, unless the superintendent ceases to be in Contractor's employ. The replacement superintendent shall also be subject to these conditions. The superintendent shall represent the Contractor, and all communications given to the superintendent shall be as binding as if given to the Contractor. Important communication will be confirmed in writing. Other communications will be so confirmed on written request in each case.
4. The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated in writing by the Contractor to the Owner and the Consultant.

5. The Contractor shall forward all communications to the Owner through the Consultant.
6. Unless otherwise directed, the Contractor shall immediately after the bid opening, furnish to the Consultant and Owner a list of the proposed subcontractors who will be working on the Project. Within forty-eight (48) hours thereafter, the Consultant or Owner will notify the Contractor in writing if any of the listed subcontractors are unacceptable. Failure by the Consultant or Owner to give such notice within the forty-eight hour period shall constitute acceptance.
7. The Contractor shall not contract with any subcontractor or any person or organization proposed for portions of the Work designated in the Contract Document who has been rejected by the Owner or the Consultant. The Contractor will not be required to contract with any subcontractor or person or organization against whom he has a reasonable objection.
8. If the Owner or the Consultant refuses to accept any subcontractor or person or organization on a list submitted by the Contractor in response to the requirements of the Contract Documents, the Contractor shall submit an acceptable substitute and an equitable adjustment will be made in the Contract sum by Change Order if made necessary by reason of such substitution. However, no increase in the Contract sum shall be allowed for any such substitution unless the Contractor has acted promptly and responsively in submitting for acceptance any list of names as required by the Contract Documents.
9. If the Owner or the Consultant requires a change of any proposed subcontractor or person or organization previously accepted by them, the contract sum shall be increased or decreased by the difference in cost occasioned by such change and an appropriate Change Order shall be issued.
10. The Contractor shall not make any substitution for any subcontractor or person or organization who has been accepted by the Owner and the Consultant unless the substitution is acceptable to the Owner and the Consultant.
11. All damage or loss to any property, beyond what is considered unavoidable by the Consultant and the Owner, caused in whole or in part by the Contractor, any subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, shall be remedied by the Contractor at no cost to the Owner.
12. The Contractor shall be solely responsible for initiating and supervising all safety programs including, but not limited to:
 - a. All persons on the site including the general public,
 - b. All conditions specified in Division 01, and
 - c. All conditions required by codes and/or governmental regulations including OSHA.

Section 31. Owner's Right to Terminate Contract:

1. Contractor shall give Owner at least 20 days written notice before filing any petition for bankruptcy. In the event that Contractor files any petition, without first giving the above required notice, this shall constitute a material breach of the Contract; and this Contract will automatically become null and void without any further action on the part of either party, as of the time the intent to file the petition was formed.
2. Should the Contractor make a general assignment for the benefit of his creditors, or if he should persistently or repeatedly refuse or fail, except in cases for which extension of time is granted, to apply enough properly-skilled workmen or proper materials to properly prosecute the Work, or if he should fail to make prompt payment to the subcontractors or materialmen for accepted material or labor, or persistently disregard laws, ordinances, or instructions of the Consultant and the Owner, or otherwise guilty of substantial violation of any provision of the Contract, then the Owner may, without any prejudice to any other right or remedy and after giving the Contractor five (5) days written notice, terminate employment of the Contractor and take possession of the premises and all materials, tools, and appliances thereon, and finish the Work by whatever method the Owner deems expedient. In such case, the Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract price exceeds the expense of finishing the Work, including compensation for additional administrative services, such excess shall be paid to the Contractor. If such expense shall exceed the unpaid balance, the Contractor shall pay the difference to the Owner.

Section 32. Contractor's Right to Stop Work or Terminate Contract:

1. Not applicable.

Section 33. Separate Contracts:

1. The Owner reserves the right to award other contracts in connection with other portions of the Project under these or similar Conditions of the Contract.
2. When separate contracts are awarded for different portions of the Project, "The Contractor" in the Contract Documents in each case shall be the contractor who signs each separate contract.
3. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work, and shall properly connect and coordinate his Work with theirs.
4. If any part of the Contractor's Work depends for proper execution or results upon the work of any other separate contractor, the Contractor shall inspect and promptly report to the Consultant any apparent discrepancies or defects in such work that

render it unsuitable for such proper execution and results. Failure of the Contractor so to inspect and report shall constitute an acceptance of the work of the other contractor as fit and proper to receive his work, except as to defects which may develop in the other separate contractor's work after the execution of the Contractor's work.

5. Should the Contractor cause damage to the work or property of any separate contractor on the Project, the Contractor shall, upon due notice, settle with such other contractor by agreement if he will so settle.

Section 34. Assignment:

1. Contractor shall not assign or sublet this Contract or any part thereof or any monies due him thereunder without prior written consent of the Owner.

Section 35. Subcontractors:

1. The Contractor's responsibility for this Project includes the work of all subcontractors and materialmen including those recommended or approved by the Owner or its Representatives. The Contractor shall be held responsible to the Owner for proper completion and guarantee of all workmanship and materials under subcontracts and for the acts and omissions of his subcontractors or their employees. Any warranties required in such work shall be obtained by the Contractor in favor of the Owner and delivered to the Owner. It is expressly understood and agreed that there is no contractual relationship between the Owner and any subcontractor, and under no circumstances shall the Owner be responsible for the non-performance or financial failure of any subcontractor or any effects therefrom.
2. The Contractor shall require each subcontractor to agree:
 - a. To be bound by terms of the Contract Documents as far as applicable to his work,
 - b. To assume toward the Contractor the same obligations the Contractor has assumed toward the Owner, including the prompt payment of his employees and materialmen affected by the work,
 - c. To submit his applications for payment to the Contractor in time to permit the Contractor to make timely application to the Owner,
 - d. To execute claim or lien releases or lien waivers as requested by the Contractor for payments made by the Contractor, and
 - e. To make all claims for extra work done or for extensions of time to the Contractor in the same manner the Contractor is to make this type of claim to the Owner.
3. The Contractor agrees in his relationship with the subcontractors"
 - a. To bind himself to the subcontractors by all the obligations that the Owner assumes to the Contractor and
 - b. To pay the subcontractors promptly upon receipt of payment from the Owner

that portion of the funds received as represents the subcontractor's portion of the Work completed to the Contractor's satisfaction for which payment was made by the Owner.

Section 36. Liquidated Damages:

1. For each and every calendar day the Work or any portion thereof remains incomplete after the expiration of the time limit set in the Contract, or as extended by the Owner, the amount per calendar day indicated in the Supplementary Conditions will be deducted from the money due or to become due to the Contractor not as a penalty, but as liquidated damages and added expense, including administrative and inspection cost. As may be required, the amounts of liquidated damages, if any, shall be accrued and back charged against Contractor.

Supplementary Conditions

Item 1. Commencement, Prosecution, & Completion of Work:

1. The Contractor shall be required to commence work promptly after receipt of notice to proceed from the Owner unless the time of commencement has been previously agreed to by the Owner and the Contractor. He shall prosecute the Work diligently so as to complete it within the time limit allowed in the Contract Documents.
2. The time limit for completion of this Work shall be 26 calendar days after receipt of notice to proceed regardless of time of commencement.

Item 2. Liquidated Damages:

1. The amount agreed upon and established as liquidated damages up to substantial completion is \$1,000.00 per calendar day.

Item 3. Stopping the Work:

1. Work shall be stopped at any time it is determined that conditions are not within the specification requirements or the requirements of applicable regulations. Stopping the work may be initiated by"
 - a. The Contractor.
 - b. The Consultant.
 - c. Federal, State, or local regulatory officials.
2. Stoppage of Work shall continue until conditions have been corrected and corrective steps have been taken to the satisfaction of the persons having jurisdiction.
3. Standby time required to resolve violations shall be at the Contractor's expense.

Item 4. Bonds:

1. For contracts of sufficient duration or dollar value (\$100,000.00) to require performance bonds and labor and material bonds, add the following to Section 10 of the General Conditions:
 - a. Performance Bond and Labor & Material Payment Bond:
 - 1) The contractor shall furnish to the Owner a performance bond and a labor and material payment bond each in an amount equal to 100 percent of the Contract sum, as security for all obligations arising under the asbestos abatement agreement. Such bonds shall"
 - a) Be written on Form AIA Document A312. Where the laws of the state in which the Project is located mandate a statutory payment bond form, such mandated payment bond form shall be used, but is to be accompanied by the AIA Document A312 Performance Bond.

- b) Be issued by a surety company or companies licensed in the state in which the Project is located and holding valid certificates of authority under Sections 6-13, Title 6, of the United States code as acceptable sureties or reinsurance companies on federal bonds. The penal sum obligation assumed by each surety, shall not exceed the authorization shown in the current revision of Circular #570 as issued by the United States Treasury Department, i.e., "Treasury List."
 - c) Be accompanied by a certified copy of the Power of Attorney stating the authority of the Attorney-in-fact executing the bonds on behalf of the Surety.
 - d) Bonds that have been modified in any way from the standard require approval by the Owner minimum five days prior to bid opening.
- b. The Owner reserves the right to reject any insurance company, policy, endorsement, certificate for insurance, surety company, certificate of insurance, performance bond, or labor and material payment bond with or without cause.
- c. The cost of such insurance and such bonds as required above shall be the obligation of the Contractor.

Division 01 - General Requirements

01 000 General

01 010 Summary of the Work

01 011 Work Covered by Contract Documents

01 040 Coordination

01 045 Cutting and Patching

01 060 Regulatory Requirements

01 061 Publications

01 062 Easements, Permits, & Regulations

01 100 Special Project Procedures

01 102 Acceleration of the Work

01 200 Project Meetings

01 210 Pre-abatement Conference

01 220 Coordination Meetings

01 300 Submittals

01 310 Work Completion Schedule

01 315 Submittal Schedule

01 320 Progress Reports

01 400 Qualify Controls

01 410 Testing Laboratory Services

01 500 Abatement Facilities & Temporary Controls

01 510 Temporary Utilities

01 511 Temporary Electricity

01 512 Temporary Lighting

01 513 Temporary Heating, Cooling, & Ventilating

01 514 Temporary Telephone

01 515 Temporary Water

01 516 Temporary Sanitary Facilities

01 527 Scaffolding, Platforms, etc.

- 01 543 Bracing, Shoring, & Sheathing
- 01 544 Protection of Persons
- 01 545 Protection Against the Weather
- 01 546 Protection of Existing Work
- 01 547 Fire Protection
- 01 548 Protection of Adjacent Property

01 700 Contract Closeout

- 01 710 Final Cleaning
- 01 711 Final Inspections & Testing
- 01 715 Prefinal & Final Inspections
- 01 720 Project Record Documents
- 01 740 Warranties & Bonds

Division 01 General Requirements

01 000 General

1. *Conditions:*
 - a. General Conditions and other Contractual Documents apply to each Division of the Specifications.
 - b. Provisions contained in this Division apply to each Division of the Specifications.
 - c. Contractor shall develop and implement standard operating procedure to ensure maximum protection of workers, facility employees, visitors, and environment for asbestos exposure. Operating procedures shall be based on applicable section of standards listed in Section 01 061. Procedure shall ensure that"
 - 1) Impermeable security shall be provided on 24-hour basis to prevent unauthorized entry into workplace.
 - 2) Proper protective clothing and respiratory protection are worn prior to entering workplace from outside.
 - 3) Asbestos is removed in manner that minimizes release of fibers.
 - 4) Packing, labeling, loading, transporting, and disposing of contaminated material is performed in a manner that minimizes exposure and contamination.
 - 5) Emergency evacuation for medical or safety (fire and smoke) reasons is performed in manner so exposure will be minimized.
 - 6) Accidents in workspace, especially from electrical shocks, slippery surfaces, and entanglements in loose hoses and equipment is minimized.
 - 7) Provisions for effective supervision and personal monitoring for exposure during work are implemented.
 - 8) Engineering systems minimizing exposure to fibers in workplace are used.
 - 9) Safe work practices in work place, including provisions for inter-room communications, exclusion of eating, drinking, smoking, or in any way breaking respiratory protection.
2. *Workmen:*
 - a. Contractor shall at all times enforce strict discipline and good order among his workmen and shall not employ on the Work any unfit person or anyone not skilled in the work assigned to him.
 - b. Contractor shall provide appropriate places on the Project site for those persons desiring to smoke during the course of the asbestos abatement process. There shall be no smoking in the building. Contractor shall post "No Smoking" signs to this effect and enforce the above provision.
 - c. Alcoholic beverages will not be allowed on the Project site at any time.

- d. All of Contractor's personnel involved with asbestos abatement work must be trained and tested prior to any work and shall be thoroughly familiar and comply with written standard operating procedures of Contractor for abatement work. The Contractor and supervising personnel shall be thoroughly familiar with all applicable standards and practices for asbestos work. All abatement personnel shall have participated in at least two abatement projects in the last two years. Anyone without above qualifications shall not be allowed to work in abatement area at any time.
 - f. Superintendent and Foreman shall have:
 - 1) Training and knowledge of applicable regulations and expertise in safety and environmental protection.
 - 2) Records of medical examination required under applicable Federal or State regulations.
 - g. Workmen shall have:
 - 1) Training as evidenced by participation and successful completion of required training courses applicable under Federal, State, and Local requirements.
 - 2) Skills and experience with all phases of abatement work.
 - 3) Records of medical examination required under applicable Federal or State regulations.
 - h. Maintain sufficient number of trained and qualified workers, foremen, and superintendents to accomplish work within required schedule. Since general work cannot start prior to successful removal of all asbestos-containing materials and final decontamination, it is imperative that sufficient number of trained personnel be engaged throughout abatement process. No untrained persons, or persons not fully qualified shall be employed in an effort to speed up completion of abatement work. All persons have to be approved by the Consultant.
3. *Taxes.*
- a. Except as contained in the Supplementary Conditions, sales, use, payroll, unemployment, old age pension, and surtax applicable to this Project shall be paid by Contractor with the exception of sales or use tax on materials furnished by Owner.
 - b. Taxes and assessments on real property comprising the site of this Project shall be paid by Owner.
4. *Manufacturer's Directions:*
- a. Follow Manufacturer's directions unless otherwise indicated in Contract Documents.

01 010 Summary of the Work

01 011 Work Covered by Contract Documents

- 1. Contractor shall furnish all labor, materials, facilities, equipment, services, employee

training and testing, permits and agreements necessary to safely remove asbestos in accordance with Specifications, applicable EPA, OSHA, and NIOSH regulation and any other applicable Federal, State, and Local Government regulations. Whenever there is a conflict or overlap of above reference, the most stringent regulations are applied.

2. Contractor shall always be mindful of possible presence of asbestos (in addition to asbestos materials to be abated under this Contract) and shall carry out his work with due diligence in light of this possibility. Contractor shall be, and remain at all times, solely responsible for safety of his employees in performance of the Work, and shall take all precautions necessary to ensure such safety. If Contractor discovers asbestos, other than asbestos materials to be abated under this Contract, he shall take such action as is reasonably necessary and feasible to provide an interim safe and secure environment for employees and third parties until determination can be made as to how next to proceed, and shall immediately notify the Consultant.

01 040 Coordination

01 045 Cutting and Patching

1. Contractor shall coordinate all cutting, fitting, or patching of work that may be required to make the several parts of the Work come together properly and fit it to receive or to be received by other portions of his own work or that of subcontractors or installing materialmen as shown or reasonably implied by Contract Documents for completed structure. Also, make or have made proper and sufficient repair or closure as Consultant may direct.
2. Do not endanger any work by cutting, digging, etc., and do not cut or alter work of any Section without prior consent of Consultant.

01 060 Regulatory Requirements

01 061 Publications

1. Publications listed below form a part of the Specification to extent referenced. Publications are referenced in text by basic designation only.
 - a. Environmental Protection Agency (EPA): Regulations for Asbestos (Code of Federal Regulations Title 40, Part 61).
 - b. Environmental Protection Agency (EPA): "Guidance for Controlling Asbestos Containing Materials in Buildings," EPA 560/5-85-024.
 - c. US Department of Labor Occupational Safety and Health Administration (OSHA) Regulations, with special attention to the following:
 - 1) (OSHA) 29 CFR 1926 (Constructions Safety Standards)
 - 2) (OSHA) 29 CFR 1926.1101 (Asbestos Regulations)

- d. National Institute of Occupational Safety and Health (NIOSH): "Respiratory Protection . . . A guide for the Employee."
- e. US Department of Transportation (DOT): "Hazardous Substances" Title 29 of the Code of Federal Regulations.
- f. American National Standards Institute (ANSI): Z86.11973 . . . Commodity Specification for Air.
- g. National Electrical Code, National Fire Protection Association, NFPA 70.
- h. Standard for Electrical Safety Requirements for Employee Work Places, NFPA 70E.
- i. National Plumbing Code, American National Standards Institute, ANSI A 40.8.
- j. State Occupations Safety and Health Rules and Regulations.

01 062 Easements, Permits, and Regulations

- 1. Permits:
 - a. Contractor shall obtain and pay cost of permits and licenses necessary for completion of this Work.
 - b. Contractor shall secure certificates of inspection and of occupancy that may be required by authorities having jurisdiction over the Work. He shall deliver these certificates to the Consultant prior to execution of Certificate of Substantial Completion.
- 2. Regulations:
 - a. Contractor and others working under his jurisdiction shall perform all work in compliance with laws, regulations, and ordinances of an kind required by governmental authority or other agency having jurisdiction over this Work.
 - b. If Contractor observes that Contract Documents are in variance with any laws, regulations, and ordinances, he shall notify Consultant and shall not proceed unless necessary changes required for compliance with said laws, regulations, and ordinances have been effected as provided in General Conditions, Section 21. Contractor shall be fully responsible for any work knowingly performed contrary to said laws, regulations, and ordinances, and shall fully indemnify Owner against loss and bear all costs and penalties arising therefrom.

01 100 Special Project Procedures

01 102 Acceleration of the Work

- 1. If, in judgment of Consultant or Owner, it becomes necessary at any time to accelerate the Work or a portion thereof, Contractor, when ordered or directed by Consultant or Owner, shall deploy the workmen in such portions of the Project where directed to enable others to properly engage and carry on their work.
 - a. If circumstances require that the entire Work or a portion thereof be completed

at a date earlier than contract completion date as adjusted by change orders, Contractor, when ordered or directed by Owner or Consultant, shall increase his forces, equipment, hours of work, and/or number of shifts and shall expedite delivery of materials to meet the altered completion date or dates ordered or directed. Any increase in cost to Contractor in compliance with such orders or directives will be adjusted in accordance with the Work.

2. If, in judgment of Consultant or Owner, the Work is behind schedule and rate of placement of work is inadequate to regain scheduled progress so as to ensure timely completion of the Work or a separable portion thereof, Contractor, when so informed by Consultant or Owner, shall immediately take action to increase rate of work placement.
 - a. This shall be accomplished by any one or a combination of the following or other suitable measures:
 - 1) An increase in working forces.
 - 2) An increase in equipment or tools.
 - 3) An increase in hours of work or number of shifts.
 - 4) Expediting delivery of materials.
 - b. Contractor shall, within ten (10) calendar days after being so informed, notify Consultant of specific measures taken and/or planned to increase rate of progress together with an estimate of when scheduled progress will be regained. Should the plan of action be deemed inadequate by Consultant or Owner, Contractor will take additional steps or make adjustments as necessary to his plan of action until it meets with Consultant's or Owner's approval.
 - c. Acceleration of work will continue until scheduled progress is regained. Scheduled progress shall be established from the latest revised approved progress is regained. Scheduled progress shall be established from the latest revised approved progress schedule for the job. Timely completion will be understood as contract completion date as revised by all time extensions granted at the time acceleration is undertaken.
 - d. Contractor shall not be entitled to additional compensation for additional effort he applies to the Work under the terms of this sub-paragraph.
3. Any directive or order to accelerate the work will be in writing. Any directive or order terminating accelerated work will be in writing.

01 200 Project Meetings

01 210 Pre-abatement Conference

1. A pre-abatement conference between Consultant, Supervisor, Buildings and Grounds, and Contractor shall be held at the site prior to commencement of the Work.
 - a. This meeting shall be for the purpose of"

- 1) Resolving current problems,
 - 2) Further orienting Contractor to requirements of the Contract Documents.
 - 3) Informing Contractor of Consultant's responsibility to Owner for inspection.
 - 4) Working out with Contractor a general schedule of inspection.
 - 5) Reviewing Contractor's documents and safety procedures.
 - 6) Reviewing Contractor's work plan, i.e., what work is to be done when.
- b. At this conference, the Contractor shall present a general overview of the following:
- 1) Abatement Plans including"
 - a) Drawings of decontamination facilities and their location.
 - b) Work area isolation plan with layout of engineering controls (e.g., HEPA filters, etc.).
 - c) Security Program.
 - d) Routing plan for removal of contaminated material from building.
 - e) Listing of all tools, equipment, and supplies proposed for use in abatement program.
 - 2) Description of protective clothing and approved respirators to be used.
 - 3) Explanation of decontamination sequence to be used.
 - 4) Description of final clean-up procedures to be used.
 - 5) Proposed landfill for disposal of waste materials.
2. In order to expedite approval of above documents, Contractor is encouraged to confer with Consultant during document preparation. No abatement work shall be performed without approval of abatement plans.

01 220 Coordination meetings

1. Periodic job site meetings will be held by Consultant.
 - a. Contractor shall attend such meetings.
 - b. These meetings are for the purpose of"
 - 1) Ensuring that all activities are being coordinated properly on project.
 - 2) To assist in staying on schedule.
 - 3) Checking Status of"
 - a) Submittals,
 - b) Changes,
 - c) Procedures, regulatory compliance, etc.
 - d) Other matters will be reviewed.

01 300 Submittals

1. Deliver submittals to the Consultant unless indicated otherwise. Accompany each submittal with a letter of transmittal indicating:
 - a. Title of Project

- b. Name of Contractor
 - c. Title of Submittal
2. Contractor shall submit copies, when requested, of the following items to the Consultant:
 - a. Security and safety logs showing names of persons entering the workspace, date and time of entry and exit, record of any accident, emergency evacuation, and any other safety and/or health incident.
 - b. Disposal Certificates.
 - c. Required permits, clearances, licenses, etc.
 3. Contractor shall maintain a file of copies of all daily reports on site and make it available to Consultant or Owner upon request.
 4. Layout of project execution showing abatement work in stages, corresponding qualified personnel employed and configuration of workspace.
 5. Plans for engineering systems for controlling exposure and emission, that show number, location, and capacity of supply and exhaust systems, expected directions of air flow, and maximum and minimum negative pressures in each room.
 6. Plans for isolation enclosures including location and asbestos abatement methods.
 7. Detailed plans for decontamination facilities, toilets, and systems allowing intraroom communication and communication between work area and outside.
 8. Security system, warning signs, and labels for bags and drums.
 9. Standard operating procedures describing how workmen, visitors, and employees will be protected from exposure and how spaces outside work areas will be protected from contamination until completion of abatement.
 10. Respiratory system plan, including written respiratory protection program, sample respirators, hoses, and certificate from Manufacturer with system literature for air supply system stating the air supply system meets this Specification on quality, quantity, and escape time.
 - a. Local medical emergency personnel, both ambulance crews and hospital emergency room staff, shall be notified by the Contractor prior to commencement of abatement operations as to the possibility of having to handle contaminated or injured workmen and shall be advised regarding appropriate decontamination and procedures.
 11. Fire and emergency evacuation plan.
 12. Samples of wetting agents and low pressure wetting system.

1. Samples of fire retardant plastic sheeting to be used for sealing of walls, floors, and openings, and sealing tapes.
14. Samples of disposable protective clothing.
15. Certifications that applicable medical examinations, training, and respiratory protection program regulations have been met by the Contractor.

01 310 Work Completion Schedule

1. Immediately after being awarded the Contract, prepare and submit for review an estimated progress schedule for the Work. Progress schedule shall be in sufficient detail to include but not be limited to"
 - a. Significant elements of the Work.
 - b. Time frame for each element of work with a beginning and ending point.
 - c. Percentage of progress of work placed.
 - d. Value of the elements of work and relationship of elements of work one to the other for the total work under the Contract.
2. Progress schedule shall be updated if necessary and shall show the original progress schedule or revised progress schedule one entry for each item of work as follows:
 - a. Progress or work placed prior to period of partial payment then being requested.
 - b. Progress during period or partial payment being requested.
 - c. Remaining work to be done by each item of work and for total work remaining under the Contract.

01 315 Submittal Schedule

1. Contractor shall, within 48 hours after receipt of Notice to Proceed, furnish a submittal schedule listing all items that will be furnished for review to Owner and Consultant.
 - a. This schedule shall include, among other things, Manufacturer's literature, certificates of compliance, materials samples, guarantees, etc.
 - b. Schedule shall indicate type of item, contract requirement reference, Contractor's scheduled dates for submitting the items, and projected need dates for review answers from Consultant. Schedule shall show a minimum of 48 hours after receipt for review by Consultant. If resubmittal is required, an additional 48 hours will be allowed for after receipt. Contractor shall revise and/or update this schedule as appropriate and submit it with each payment estimate until all items have been submitted and reviewed.
 - c. Submittal schedule shall be coordinated with progress schedule for all the Work. Contractor shall revise and/or update the schedule to ensure consistency with the progress schedule as it may be revised and/or updated. Such revised submittal schedules shall be promptly provided.

- d. Furnishing of the submittal schedule or revision thereto shall not be interpreted as relieving Contractor of his obligation to comply with all the Specification requirements for items on the schedule.

01 320 Progress Reports

1. Contractor shall prepare daily reports of his operations and give them to the Consultant daily. This report will contain at least the following information:
 - a. Weather conditions,
 - b. Manpower on the job in each trade,
 - c. Major items of equipment on the job,
 - d. A brief summary of work accomplished that day,
 - e. Significant events,
 - f. Any tests made and their result if known,
 - g. Any oral instructions received,
 - h. Visitors to the job.
2. Contractor shall maintain a file of copies of all daily reports on the site and make it available to Consultant or Owner upon request.

01 400 Quality Controls

01 410 Testing Laboratory Services

1. Testing provisions are as outlined in the General Conditions.
2. At the option of the Consultant, electron microscopy tests may be performed by an independent testing laboratory to confirm the results of final testing. Such testing will be at the Owner's expense.

01 500 Abatement Facilities and Temporary Controls

01 510 Temporary Utilities

1. The Owner will provide (to the extent available) all necessary connections for temporary utilities in the workplace during abatement work.
 - a. Any additional requirements will be provided by the Contractor at no cost to the Owner.
2. Contractor shall preserve in operating condition all active ducts, piping, and utilities. If any of the above will be disturbed, notify the Consultant immediately and undertake remedial action as required.
 - a. If required, shut down and disconnect all electric power to work area so there

is not possibility of reactivation and electrical shock during the abatement process.

- b. Temporary electrical system shall comply with local codes and conditions.
3. Contractor shall remove all heating, ventilating, and air conditioning system filters and dispose of them as asbestos waste. Replace all filters with new filters provided by the Owner at end of decontamination work.

01 511 Temporary Electricity

1. Owner shall provide and pay for all power.
2. Temporary electrical system shall comply with local codes and Article 305, Temporary Wiring, of the National Electrical Code.

01 512 Temporary Lighting

1. Contractor shall provide temporary lighting.

01 513 Temporary Heating, Cooling, and Ventilating

1. Contractor shall provide and maintain, at his expense, temporary heating including fuel and required attendance necessary to protect and dry work during cold weather.
2. Salamanders or open fires will not be permitted.

01 514 Temporary Telephone

1. If necessary, Contractor shall install a job telephone at his own expense. Local calls shall be paid for by Contractor. Long-distance and toll calls shall be paid for by party making the call.

01 515 Temporary Water

1. Owner shall provide and pay for all water for abatement purposes which is required by all trades.
2. Temporary connections shall be provided and paid for by the Contractor.

01 527 Scaffolding, Platforms, etc.

1. Contractor or his subcontractors shall furnish and maintain all equipment such as temporary stairs, ladders, ramps, platforms, scaffolds, hoists, runways, derricks, chutes, elevators, etc., as required for proper execution of the Work.
2. All apparatus, equipment, and asbestos abatement procedures shall meet all

requirements of the Labor Law, safety regulations, and other State or local laws applicable thereto.

3. As soon as possible, permanent stair framing shall be erected. Contractor shall provided framing with temporary treads, handrails, and shaft protection.
4. At close of project, scaffolding, platforms, ladders, etc., shall be cleaned to be free of asbestos material and shall be inspected by the Consultant before removal.

01 543 Bracing, Shoring, and Sheathing

1. Contractor shall provide all shoring, bracing, and sheathing as required for safety and for proper execution of the work and have same removed if required when the Work is completed.

01544 Protection of Persons

1. Contractor shall provide installation and maintenance of necessary precautions to protect all persons on the site, including members of the general public, from injury or harm, including but not limited to"
 - a. Posting appropriate warning signs in hazardous areas.
 - b. Providing guardrails, barricades of adequate heights, together with warning lights around obstructions, pits, trenches, or similar areas in on-site or adjacent streets, roads, sidewalks, or on the site of structure itself. All such guardrails around openings in floors or roofs shall be at least 3" 6" in height.
 - c. When use or storage of combustible, flammable, or other hazardous materials or equipment is necessary for the execution of the work, Contractor shall exercise the utmost care and shall carry on such activities under the supervision or properly qualified personnel.
2. Contractor shall erect OSHA-required warning signs around workspace and at every point of potential entry from outside. Warning signs shall be bright color so they will be easily seen. Size of sign and size of lettering shall be no less than OSHA requirements. Warning signs shall bear the following information:

**DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING
ARE REQUIRED IN THIS AREA**

3. Contractor shall place OSHA required labels on plastic bags and drums utilized to transport contaminated material to approved disposal site. Warning labels shall contain the following information:

**DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD**

4. Contractor shall provide any other signs, labels, warnings and posted instructions that are required or necessary to protect, inform, and warn people of the hazard from asbestos exposure. Contractor shall post, in a prominent and convenient place for the workers, a copy of the latest applicable regulations.
5. Contractor shall establish emergency and fire exits from the work area. All emergency exits shall be equipped with two full sets of protective clothing and respirators at all times.
6. Contractor shall have on site Material Safety Data sheets as required by Federal, State, or local laws and verification of training for abatement personnel.
7. Contractor shall be prepared to administer first aid to injured personnel after decontamination.
 - a. Seriously injured personnel shall be treated immediately or evacuated without delay for decontamination.
 - b. When an injury occurs, the Contractor shall stop work and implement fiber reduction techniques (e.g., water spraying) until the injured person has been removed from the work area.
8. Asbestos abatement is, by its very nature, a hazardous activity. In addition to potential exposure to asbestos fibers, there are other safety and health hazards that are often present on the work site. The Contractor must continuously consider the proper erection of scaffolding, precautions for safe entry into confined spaces, prevention of falls; guarding against heat or cold stress, exposure to hazardous chemicals and the elimination of electrical shock hazards. Proper lighting must be provided. Adequate ventilation must be present to provide sufficient oxygen and prevent the buildup of carbon monoxide or other hazardous material such as combustion products from space heaters. Where necessary, head and foot protection must be provided and precautions taken to prevent burns to personnel from hot steam pipes or other equipment. Fire prevention must at all times be a high priority. The previously listed items are provided as guidelines and are not necessarily comprehensive. The Contractor shall ensure that all OSHA Safety and Health Standards (Title 29 CFR 1910 and CFR 1926) are complied with at all times.
9. The Consultant has the authority to stop work any time unsafe work practices or violations of regulations are noted. Work shall remain stopped until the unsafe conditions or violations are corrected. Standby time required to resolve unsafe conditions or violations shall be at the Contractor's expense.
10. The Consultant will only make periodic inspections of the work area. He cannot be

aware of unsafe conditions that may occur in his absence. The Contractor shall be, and remain at all times, solely responsible for the safety of his employees in the performance of the work and shall take all precautions necessary to ensure such safety.

11. Before the Contractor starts actual removal of the asbestos material, the local police and fire department shall be notified as to the danger of entering the work area and they shall be invited to attend a training session to be conducted by the Contractor which will provide information regarding abatement activities, decontamination practices, etc. The Contractor shall make every effort to assist these agencies from plans of actions should their personnel need to enter the contaminated area. Coordinate with Police all security aspects of the project and with the fire department all emergency evacuation and safety aspects.

01 545 Protection Against Weather

1. Contractor shall at all times provide protection against weather (rain, winds, storms, frost, or heat) so as to maintain all work, materials, apparatus, and fixtures free from injury or damage. At the end of the day's work, all new work likely to be damaged shall be covered.
2. During cold weather, Contractor shall protect all work from damage. If low temperatures make it impossible to continue operations safely in spite of cold weather precautions, Contractor shall cease work and so notify Consultant.

01 546 Protection of Existing Work

1. Contractor shall protect all trees, shrubs, lawns, and all landscape work from damage, providing guards and coverings. Any damaged work shall be repaired or replaced at Contractor's expense.
2. Contractor shall protect all streets, private roads, and sidewalks, including overhead protection where required, and shall make all necessary repairs for damage thereto during course of the work at his own expense.
3. Contractor shall provide proper protection of all old work, furnishings, and fixtures likely to be damaged. When exterior openings are made in old work, they shall be covered with weathertight protection at the end of the day's work.
4. Any work damaged by failure to provide protection shall be removed and replaced with new work at Contractor's expense.

01 547 Fire Protection

1. Contractor shall provide and maintain in working order two Standard UL Labeled ABC all purpose 10 lb fire extinguishers. These extinguishers shall not be

incorporated into the final Project.

2. Fires shall not be built on the premises.

01 548 Protection of Adjacent Property

1. Contractor shall provide all necessary protection for adjacent property and lateral support thereof.

01 700 Contract Closeout

01 710 Final Cleaning

1. After removal of asbestos has been completed and before removal of barriers, Contractor shall
 - a. Wet clean and/or vacuum with HEPA filtered vacuum entire area
 - b. Following successful inspection and final specified testing by the Consultant, remove HVAC filters and dispose of as asbestos waste.
 - c. Dispose of plastic barriers, tapes and disposable contaminated equipment as asbestos waste.
 - d. Thoroughly decontaminate reusable contaminated equipment, such as masks, hard hats, etc., by wet cleaning.
 - e. In the case where glove bags have been used and no bags have been broken or there is no other reason to believe that the area inside the secondary barrier has been contaminated, no cleaning of the area will be required prior to final inspection and testing in accordance with requirements of Contract Documents.
 - f. If results of final testing are not satisfactory (i.e., exceed 0.01 f/cc), cleaning requirements specified above shall apply.
2. Contractor shall, at completion of work and final inspection, remove all rubbish from under and about the building, all his tools, scaffolding, and surplus materials and shall leave the building clean and habitable.
3. If Contractor fails to clean up, Owner may do so and the cost thereof will be charged to the Contractor.

01 711 Final Inspections and Testing

1. After thorough cleaning of workspace, and if high degree of cleanliness has been achieved, notify Consultant that workspace is ready for inspection and final testing.
 - a. Consultant will visually inspect workspace for detection of visible asbestos dust or contamination. If visual inspection does not reveal dust or other signs of contamination, final testing will take place.

2. Final testing shall be conducted by the Consultant and will consist of air samples in workspace, to show that contamination levels do not exceed 0.01 fibers per cubic centimeter using phase contrast microscopy (PCM). Transmission electron microscopy (TEM) analysis may be used at the option of the Consultant to confirm results of air sampling and PCM analysis.
3. After decontamination levels specified have been confirmed through final specified testing, plastic enclosure shall be removed, and plastic tape and materials from equipment room and shower room bagged and disposed of as asbestos waste. Final check will be carried out by Consultant to ensure no dust or debris remain on surfaces as result of dismantling operation.
4. Decision of Consultant is final as to whether work areas pass inspection.
5. Final inspections shall be made after application of encapsulant or lockdown.

01 715 Prefinal and Final Inspections

1. Prefinal Inspection:
 - a. Upon Contractor's request, Consultant (and his consultants as appropriate) will make an inspection and furnish to Contractor a list of items to be corrected by Contractor.
 - b. Upon Correction of these items, Consultant will arrange a substantial completion inspection to include Owner and User representatives.
2. Final Inspection:
 - a. Final Completion Inspection will ensure that all deficiencies noted at the prefinal inspection have been corrected or noted for future resolution/correction.
 - b. When all items have been corrected, Consultant will issue a certificate authorizing final payment.
 - c. If all items have not been corrected as agreed, Owner may elect to complete the Work under provisions of Section 26 of the General Conditions.

01 720 Project Record Documents

1. Contractor shall deliver to Consultant prior to final payment:
 - a. Air monitoring reports
 - b. Documentation specified in Section 02 081
 - c. Emission Control Records
 - d. Monitoring, Testing, and Inspection Reports
 - e. Reports of final inspection and testing
 - f. Forms and documentation required by Federal, State, and Local governing agencies for hazardous waste materials.

- g. Documentation of compliance to all Federal, State, and local jurisdiction laws, regulations, and codes.
2. Certificates of inspection and of occupancy that may be required by authorities having jurisdiction over the Work.

01 740 Warranties and Bonds

1. When written guarantees beyond one year after substantial completion are required of any section of the Work, Contractor shall secure such guarantees and/or warranties properly addressed and signed and in favor of Owner. These documents shall be delivered to Consultant upon substantial completion of Contractor's work and prior to execution of Certificate of Substantial Completion.
2. Delivery of guarantees and warranties shall not relieve Contractor from any obligation assumed under any other provisions of his contract.
3. Nothing herein intends or implies that guarantees and/or warranties shall apply to work abused or neglected by Owner.

Division 02 - Site Work

02 000 General

02 080 Hazardous Material Abatement

02 081 Asbestos Abatement

Scope of Work for **Taylor Elementary School, December 16, 2009**

1. Flooring Removal

- A. Contractor shall remove all 9-inch floor tile, all floor or coved carpeting and some select 12-inch flooring from the building. This material contains up to **20% chrysotile asbestos**. These materials are currently **non-friable**. Contractor shall pre-clean the area of any suspect ACM.
- B. As Option 1 to the bid, Contractor shall submit a per-square foot price for removal of additional flooring to be removed: 1-floor tile and mastic; 2- mastic only.
- C. Contractor shall remove all flooring that is accessible adjacent to walls or cabinetry that has been erected on top of flooring. Cabinetry and shelving that precludes removal of flooring from underneath shall be brought to the attention of the Consultant or Owner so that it can be catalogued for the management plan. All existing installed cabinetry and shelving will remain and shall be protected from damage consequent to Contractor's work.

2. General

- A. Contractor shall provide a copy of the NESHAP/Utah notification form (if applicable) to Consultant as soon as possible after Contractor's submission to DAQ.
- B. Contractor shall perform daily air monitoring and post all personal air sampling results from the project at the job site no later than the end of the shift the following work day.
- C. Contractor shall provide Consultant with his friable material abatement project design, prepared by an AHERA-accredited Project Designer, no later than one week prior to the start of the project. Any modifications to the design shall be approved by an AHERA-accredited Project Designer. The design shall be faxed or otherwise delivered to the offices of R & R Environmental, Inc., to the attention of Eldon C. Romney, 47 West 9000 South, #2, Sandy, Utah 84070, FAX: (801)352-2381. This plan shall show anticipated locations for the HEPA units and decontamination facility, a projected time schedule, and shall be prepared by an AHERA-accredited Project Designer, who shall sign the plan and add their accreditation number and accreditation expiration date.
- D. Contractor shall ensure his electrical design and plans are compatible with the facility

operation and with the National Electrical Code. Contractor shall use only electrical equipment rated for work in damp environments in the containment area. Any equipment not labeled "rated for work in damp environments" may not be permitted in the containment.

- E. Contractor shall ensure all equipment brought onto the site is free of suspect asbestos-containing material (ACM). Consultant may disallow use of equipment with suspect ACM.
- F. Contractor may utilize restroom facilities during the work but will be responsible to maintain and provide them with adequate supplies and cleaning. Contractor shall monitor restrooms at least twice daily to ensure adequate maintenance.
- G. Contractor shall comply with Utah's applicable work practices for removal of floor tiles.
- H. Contractor shall take appropriate steps to safeguard existing items, which are scheduled to remain in the facility. These items may include existing fiberglass insulation, ducting, conduits, etc.
- I. Contractor shall provide a certificate of weight and measure (or other certification acceptable to the Industrial Hygiene Consultant) for all ACM waste taken from the site. The certification shall list gross, tare and net weights for all ACM waste. Contractor shall also provide, on Contractor's letterhead, a listing of each manifest used for the project, by number and waste tonnage (in pounds) specific to that manifest. Listing shall show if ACM was disposed of as regulated waste, non-hazardous or any other state-approved category of waste. This information shall be provided prior to, or at the time of invoice submission.
- J. All poly sheeting used by Contractor on the project shall be of the fire-retardant type. Each containment shall be built with a clear plexi-glass window no smaller than two feet square, which allows viewing of the work from outside the regulated area.
- K. Smoking is not allowed on the Owner's property. Any violation of this provision is grounds for expulsion of the offending party from the work site for the work's duration.
- L. The most stringent regulations in effect for the work site shall apply. Contractor shall determine the extent of city, county, AQMD, state, federal and all other applicable regulations and perform the work in compliance with these regulations.
- M. Reserved.
- N. Contractor shall provide the Industrial Hygiene Consultant with MSDSs for all materials used on their work site.
- O. Contractor shall limit his work day to ten hours in length unless agreed to in writing by the Industrial Hygiene Consultant. If longer shifts are agreed to, Contractor agrees to reimburse Owner for all additional expenses incurred as a result of the change in schedule (these expenses include additional Industrial Hygiene Consultant personnel expenses).

- P. Contractor shall provide an English-speaking interpreter on-site any time Contractor personnel are non-English-speaking.
- Q. Electrical extension cords shall be suspended off the floor of any regulated area. Contractor shall not use any existing electrical outlet in any regulated area (appliances or cords may not be plugged through the containment wall).
- R. Removed ACM shall be cleaned up and bagged on a continual basis. No removed ACM shall be left un-bagged at the end of the work-day. All waste shall be disposed of at an in-state waste facility unless agreed to in writing by the Industrial Hygiene Consultant prior to transport.
- S. Contractor shall install and maintain a job telephone at Contractor's expense. Telephone shall be operational prior to disturbance of any ACM. Contractor shall be fully responsible for all charges to this telephone.
- T. Contractor shall provide chemical toilets on the job site for Contractor's personnel, the Industrial Hygiene Consultant and any authorized visitors. Contractor shall ensure these toilets are maintained appropriately and in a hygienic manner. Contractor shall clean and furnish the toilets at least daily.
- U. Contractor shall utilize only "slinky-type" flex duct on HEPA units where the exhaust ducting goes around corners or where bends could otherwise crimp ducting, potentially decreasing its efficiency.

Division 02 Sitework

02 000 General

General - Part I

1.1 General Conditions and Division 01 apply to this Division.

1.2 Summary:

A. Provide labor, materials, and equipment necessary for completion of work unless noted otherwise.

02 080 Hazardous Material Abatement

General - Part I

1.1 Division 02 General applies to this section.

02 081 Asbestos Removal

General - Part I

1.1 Summary:

- A. Includes but not limited to"
 - 1. Furnish labor, materials, and equipment for the complete removal of asbestos identified at the site in accordance with Contract Documents.
- B. Related Sections"
 - 1. Furniture and furnishings shall be moved by the Owner.

1.2 System Description:

- A. Air Monitoring"
 - 1. Initial inspection by State OSHA representatives is to be arranged by Contractor.
 - a. Area will be air monitored and inspected for worker safety when initial (first day) removal starts.
 - b. A copy of this report shall be submitted to Consultant and Owner.
 - 2. Air sample monitoring shall be conducted throughout removal and

decontamination operations to ensure that Contractor is complying with all codes, regulations, and ordinances.

- a. Method used will comply with OSHA standards.
 - b. Contractor shall hire a certified (when certification is required by state law) air monitoring technician for this purpose.
 - c. Technicians credentials shall be submitted to Owner and copies and all test results shall be forwarded to Consultant and Owner within 48 hours.
 - a. Frequency of sampling shall meet requirements of OSHA or other governing agency.
3. 25% of work force shall use personnel air sampler carried on body at all times.
- a. A minimum of two workers will use personnel samplers when starting a new task.
 - b. Record of persons name, date, location, time on, time off, and task shall be recorded for each personnel air sampler in use. A copy of these reports shall be submitted to Owner with laboratory reports.

1.3 Submittals

- A. Documentation"
1. Submit proof of expertise in asbestos removal.
 2. Acceptable documentation shall be"
 - a. Letters of recommendation from municipalities, federal and/or state governments for work completed.
 - b. Proof of compliance with training requirements of EPA and OSHA.
 - c. Name and location of at least two asbestos abatement projects with the name and telephone number of purchaser of abatement services and the final decontamination levels achieved.
- B. Furnish written proof that employees have been given instructions on the dangers of asbestos exposure, respirator use, decontamination, and OSHA regulations.

1.4 Quality Assurance:

- A. Regulatory Requirements"
1. The guidelines and regulations of the responsible State or Federal Agency, EPA, NIOSH, and OSHA.
 2. Regulations covering this work include, but are not limited to"
 - a. OSHA Title 29, Part 1910, Section 1910.1001.
 - b. EPA Title 40, Part 61, Subparts A & B.
 - c. EPA Section 61.25 (Disposal).
 - d. State and local codes governing asbestos removal.
- B. Have in possession, at all times on the site, one copy of OSHA Regulation 1910.1001, Asbestos and one copy of Environmental Protection Agency 40 CFR Part

61, subpart B: National Emission Standards for Asbestos, Asbestos Stripping Work Practices, and Disposal of Asbestos Waste.

Products - Part II

2.1 Power Equipment:

- A. Vacuum unit"
 - 1. Self-contained mobile remote unit powered by a minimum 100 HP internal combustion engine.
 - 2. An integral waste hopper shall be equipped with a replaceable filter on the discharge opening.
 - 3. Duct size shall be 2 1/2" minimum.
 - 4. Mobile unit shall be capable of drawing waste materials through a vacuum hose of up to 125 lineal feet in length without adversely affecting the vacuum unit"s performance.
 - a. Filtration shall be by a high efficiency particulate asbestos filtration system capable of performing within permissible exposure limits of airborne concentrations or asbestos filters as specified in OSHA Standard 1910.1001 Asbestos.
 - b. Vacuum hose nozzles"
 - 1) Type 1"Equipped with a scraping blade to provide removal and suction simultaneously.
 - 2) Type 2"Equipped with a bristle brush all around lip for small particle removal.
- B. Interior Vacuum Cleaner"
 - 1. Single operator type portable unit with a high efficiency particulate absolute (HEPA) filter suitable for final decontamination of interior surfaces.

2.2 Wetting Agent:

- A. 50% polyethylene ester and 50% polyethylene ether.

2.3 Waste Bags:

- A. Sealable 6 mil minimum thick polyethylene with attached warning label reading"

**CAUTION
CONTAINS ASBESTOS FIBERS
DO NOT OPEN OR PUNCTURE**

2.4 Container Drums:

- A. Sealable, rigid, laminated or composition paper construction, able to be recycled.

Size, 33 to 45 gallon.

2.5 Plastic Sheeting:

- A. Polyethylene film reels, 12 feet wide by continuous length, 6 mil minimum thickness.

Execution - Part III

3.1 Preparation:

- A. Prior to asbestos removal, take all necessary steps to safeguard existing carpeting and floor tile and removal of equipment, such as fire and burglar sensors, speakers, clocks, etc. This equipment shall be reinstalled in working order and to the Owner's satisfaction at completion of removal.
- B. Turn off all heating, air conditioning, ventilation systems, and electrical circuits (lock electrical panels on boxes). Thoroughly seal all openings and fixtures including, but not limited to, heating and ventilation ducts, sky lights, doors, windows, and lighting with polyethylene taped securely in place.
- C. Provide temporary power/lighting if needed. Restore power after removal of asbestos material and decontamination.
- D. Cover entire floor and wall surfaces with 6 mil minimum thick fire retardant polyethylene sheets.
- E. Post warning signs outside all entrances as specified in OSHA 29 CFR 1910.1001 and erect construction fences, if required.
- F. Set up a decontamination facility in a predesignated area which will house the changing room, shower area, and equipment area.
- G. Adequate toilet facilities shall be provided in the work areas to avoid decontamination for this purpose.
- H. Written procedures shall be provided by Contractor for evacuation of injured workers. Aid for a seriously injured worker will not be delayed for reasons of decontamination.

3.2 Special Procedures:

- A. Respiratory Protection Systems:
 - 1. Provide workers with NIOSH and MSHA approved respirators for asbestos and a quantity of asbestos approved filters sufficient to permit several changes a day as needed. Respirators selected for use must provide protection factor for contaminant level expected.

- a. No filter shall be used longer than one working day.
- b. Store supply of respirator filters in change room.
- c. Totally protect respirator filters from exposure to asbestos prior to use.
2. Workers shall always wear respirators properly fitted to the face while in the work area and the mobile vacuum area.
 - a. Workers shall be trained in proper respirator use.

B. Protective Clothing:

1. Workers shall wear disposable, full body coveralls, head covers, and footwear in the work areas and mobile vacuum area.
2. Contractor shall furnish work clothes consisting of full body, disposable paper coveralls, disposable head covers, boots or sneakers, and respiratory protective equipment as required by OSHA.
 - a. Eye protection and hard hats shall be available as appropriate.
3. All workers, without exception, shall be required to change work clothes at designated areas prior to start of days work.
4. Each worker shall be required to:
 - a. Remove street clothing in the change room and put on the disposable coveralls, head cover, foot wear, and respirator before entering the work area.
 - b. Remove disposable coveralls, head cover, and footwear in the work areas before leaving the work area.
 - c. Still wearing the respirator, proceed to the shower area, not removing respirator until showering with soap and water.
 - d. Shower at the end of each days work before entering the change room to change to street clothes.
 - e. To eat, drink, smoke, chew gum or tobacco, a worker shall proceed through the end-of-day routine of removing disposable clothing then showering while removing respirator and then putting on fresh disposable clothing which can be worn to re-enter the work area or mobile vacuum area.
 - f. Official representatives of various government agencies, the Owner or his representatives or other personnel allowed to enter the work area shall be bound to the same rules applying to workers.
 - g. Work footwear will remain inside the work area until completion of the job.

C. Enclosures, Showers, and Toilets"

1. Contractor shall, for each abatement area, provide decontamination facilities located in an area agreed upon with the Consultant.
 - a. Decontamination facilities shall include a decontamination enclosure system for workers and visitors and a decontamination enclosure system for loading of asbestos into trucks for transportation to legal landfill.
2. Decontamination facilities for loading of asbestos into trucks shall consist of"
 - a. Airlock from work area leading into Drum Wash and Wipe Room and

- b. Airlock leading into open loading platform and truck.
 - c. Drum wash and wipe room shall be equipped with facilities to wash and wipe outside of drum prior to loading into trucks for transportation to landfill.
 - 1) Make provisions to prevent contaminated run-off from drum wash room.
 - 3. Decontamination enclosure system for workers and visitors shall consist of three rooms that serve as three airlocks.
 - a. Clean room at entrance,
 - b. Shower Room,
 - c. Equipment room leading to work area.
 - 4. Provide lockers for storage of street clothes of workers in clean room.
 - a. Provide in this room, uncontaminated disposable protective clothing and equipment.
 - 5. Provide equipment room with storage for contaminated clothing and equipment.
 - 6. Provide separate ventilation in decontamination system so air flow will be from outside toward workspace.
 - 7. Provide showering facilities with hot and cold water so arranged to provide complete showering of workers and visitors as they exit from contaminated area.
 - a. Make provisions to prevent contaminated runoff from shower room.
 - b. Comply with Federal, State, and local statutes, laws, regulations, guidelines, or similar directions regarding asbestos abatement that requires water filtration prior to effluent discharge.
 - 8. Provide adequate toilet facilities in work area so workers are not required to decontaminate every time they need to use the facility.
- D. Emission Controls"
- 1. Provide supply air to and exhaust air from work area to maintain negative pressure of 0.02 inches water.
 - a. Ventilation system shall operate on 24 hour basis throughout abatement process through second wet cleaning.
 - b. Ventilation design shall be in accordance with, or in the judgment of the Consultant, equivalent to, EPA recommendations included in the Guidance Controlling Friable Asbestos-Containing Materials in Buildings. Appendix F.
 - 2. Provide automatic recording instrument to monitor negative pressure differential.
 - a. Instrument shall continuously generate permanent record.

3.3 Performance:

- A. Spray asbestos material with water containing specified wetting agent at a concentration of one ounce per five gallons of water.
 - 1. A fine spray of this solution must be applied to prevent fiber disturbance

- preceding the removal of the asbestos material.
1. Asbestos shall be sufficiently saturated to prevent emission of airborne fibers in excess of the exposure limits prescribed in the OSHA standards reference in these specifications.
- B. Operate from staging platforms to provide optimum visual observation of surfaces.
1. Cover each surface with a scraping and suction action using a Type 1 nozzle followed by the use of a Type 2 nozzle until the surface is clean by touch and visual inspection.
- C. Position mobile vacuum unit as close as practicable to building at point of vacuum hose entry.
1. Close off area 50 feet in each direction with rope or plastic tape to which brightly colored pennants are attached.
 2. Post conspicuous warning signs on all sides, stating:

**DANGER - KEEP OUT
POSSIBLE HAZARDOUS ASBESTOS
PARTICLES IN AIR**

- D. Wet down exterior work area with wetting agent repeatedly during vacuuming operation.
- E. Bagging of Waste:
1. Shut down blower for one-half hour, permitting asbestos to settle, prior to opening hopper of mobile vacuum unit.
 2. Prepare a water spray containing specified wetting agent.
 - a. Direct spray into upper area of hopper to settle dust particles.
 - b. Open access doors slowly, continuing to direct treated spray directly into waste deposit as workmen begin removing wetted waste by shovel directly to plastic bags inserted in transport drums.
 - 1) Do not puncture bags during filling operation. Double bag immediately if puncture or tear occurs.
 3. All polyethylene material, tape, cleaning material, and used clothing will be placed in a plastic-lined drum and sealed and labeled as specified for asbestos material.
 4. Clean all equipment prior to leaving work area.
 5. Seal bags and drum top.
 - a. Place warning label on transport drums.
 - b. As drums accumulate, place them in a closed transport van while awaiting delivery to the land fill.
 - c. While unattended, secure van doors against unauthorized entry.
 - d. Provide Owner with a legible copy of the cashier's receipt from the land fill, showing date, time of day, and cashier' signature for each trip.

3.4 Decontamination:

- A. All air conditioning units shall be vacuumed and cleaned, and all filters replaced with equal or better filters.
 - 1. Supply ducts shall be cleaned on the inside for a length of 6 feet from air conditioning unit or until the first 90 degree turn.
 - 2. Interior duct insulation must be removed and replaced with new.
 - 3. The entire area shall now be wet cleaned.
- B. After dust has settled for 24 hours, entire area shall be wet cleaned again.
 - 1. During the 24 hour period no entry, activity, or ventilation shall be allowed.
- C. 24 hours after second cleaning, all surfaces in entire work area shall be thoroughly vacuumed and wet mopped.
 - 1. Clean all surfaces in each work area and all pathway areas through which the main vacuum nozzle passes with a single operator type vacuum, equipped with a HEPA filter.
 - 2. Surfaces included are top edges of doors, window frames, and sills.
- D. After third cleaning operation, following test shall be performed:
 - 1. Complete visual inspection shall be made to ensure dust free conditions, and two air samples shall be taken within 48 hours after completion of all cleaning work.
 - 2. Take all necessary steps to safeguard facilities, carpets, floor tile, walls, furniture, etc. Contractor shall assume full responsibility for any damage to building occurring during preparation, removal, decontamination, rehabilitation, or cleanup procedures and replace or repair damage at no cost to Owner.
- E. Airborne fiber count after cleanup must be equal to or less than fiber count (base) established at initial testing to be accepted by Owner.
 - 1. In case of noncompliance, cleaning will be repeated until fiber count meets requirements.

3.5 Field Quality Control:

- A. Monitoring, Testing, and Inspection:
 - 1. Performance and execution of work will be closely and continuously monitored by Consultant and his technicians.
 - 2. Removal monitoring:
 - a. Removal monitoring will include air samples in area surrounding containment area, checking containment area separation, work practices, engineering control system, HEPA vacuum system, respiratory protection system, packing material, packaging, transporting, and disposal of asbestos, decontamination facilities and procedures and any other aspects of abatement process that may impact health and safety of people and pollution of the environment.

- a. Monitoring frequency may be reduced to the proven record of the Contractor as the work proceeds. This will be determined by the Consultant and the Owner.
3. Conduct air monitoring as required by OSHA Asbestos Standard, 29 CFR 1926.1101.
 - a. Air monitoring shall be performed by the Contractor to provide samples during period of asbestos abatement in each work area.
 - b. Begin sampling when asbestos removal commences.
 - c. As a minimum, samples in each of the categories listed shall be taken once during each 8 hour period until abatement is complete in that work area.
 4. Contractor shall determine which worker each work area/activity is probably experiencing most severe exposure. This is the "Most Contaminated Worker" (MCW).
 - a. Personal sampling pump shall be attached to the MCW so a sample is drawn from the breathing zone of the MCW.
 - b. Additional area sample shall be collected with work enclosure.

<u>Area to be Sampled</u>	<u>Number of Samples</u>	<u>Limit of Detection</u>
"Most Contaminated Worker"	1	0.01 fibers/cc
Inside Work area	1	0.01 fibers/cc

5. Air samples must be analyzed by AIHA accredited laboratory or one that participates in NIOSH PAT program and has successfully participated in last three PAT rounds.
 - a. Air sampling shall be performed by a qualified air sampling technician to be paid for by the Contractor.
6. Performance and execution of air sampling will be closely monitored by the Consultant and all results shall be made available to him upon request. Additional air sampling may be conducted by the Consultant to confirm results obtained by the Contractor.

3.6 Cleaning and Final Decontamination:

- A. After removal of asbestos has been completed and before containment barriers are dismantled, entire area shall be thoroughly wet cleaned and/or vacuumed with HEPA filtered vacuum cleaners.
 1. Loose dust and debris shall be removed from walls and floors of containment area and from equipment within containment area.
 2. Ceiling, plastic on walls, and plastic on floor will be sprayed with encapsulant/sealer such as Serpilex Shield or equal approved by Consultant.
 3. After waiting 12 hours minimum with negative air filtration system operating, final inspection and testing will be performed as specified.

4. Following successful inspection and final testing, remove HVAC filters and dispose of as asbestos waste.
5. Dispose of plastic barriers, tapes, and disposable equipment as asbestos waste.
6. Thoroughly decontaminate reusable contaminated equipment such as masks, hard hats, etc., by wet cleaning.

3.7 Final Inspection and Testing:

- A. After thorough cleaning of workspace and after high degree of cleanliness has been achieved, the Consultant shall be notified that the workspace is ready for inspection and final testing.
 1. Consultant will visually inspect workspace for detection of visible asbestos dust or contamination. If visual inspection does not reveal dust or other signs of contamination, final testing will commence.
- B. Final testing will be conducted by Consultant and will consist of aggressive air sampling in workspace.
 1. A one-horsepower leaf blower and fans shall be supplied by Contractor. The leaf blower shall be used prior to air sampling and fans shall be run in area while representative air samples are taken.
 2. Large enough air samples shall be taken to allow detection of airborne fibers to concentration of 0.005 fibers/cc air.
 3. Work area shall be certified as clean when total airborne fiber concentrations are less than 0.01 fibers/cc using phase contrast microscopy (NIOSH P&CAM 239 or NIOSH 7400 methods).
 4. At option of Consultant, transmission electron microscopy may be employed for up to two samples to confirm results of final testing. With this method of testing, acceptable level shall be 70 structures/ml.
 5. If results of final testing are not satisfactory, thorough wet cleaning and /or HEPA vacuuming shall be repeated until required decontamination levels are achieved.
 6. Recleaning procedures and additional final sampling tests are to be performed at no additional cost to the Owner.
 7. After decontamination levels specified have been confirmed through final specified testing, plastic enclosure shall be removed, and plastic tape and materials from equipment room and shower room bagged and disposed of as asbestos waste. Final check will be carried out by consultant to ensure no dust or debris remain on surfaces as result of dismantling operation.
 8. Decision of Consultant is final as to whether work areas pass inspection.

SCOPE OF WORK

This project consists of work at the following location:

**TAYLOR ELEMENTARY SCHOOL
20th STREET
OGDEN, UTAH**

Asbestos-containing material in following area(s) shall be abated as specified herein:

1. 9" Flooring in the entire school (APPROXIMATELY 23,000 square feet), plus all floor/cove base carpeting and materials associated therewith

All work to be completed in twenty-six (26) calendar days from start date, February 1, 2010.

All specific requirements covered in other places in this document are in effect. The bidder is not exempt from reading all areas of this document for facts that affect the bid. No add-on or change order will be permitted because of failure to read all documents or to verify quantities and conditions.