INVITATION TO BID
BID NO. 9904
ASBESTOS ABATEMENT
TROY SCHOOL DISTRICT

The Troy School District will receive firm, sealed bids for all labor, material, equipment and all other services to complete Bid No. 9904 Asbestos Abatement at Smith Middle School, Hill Elementary School, Larson Middle School, Boulan Park Middle School, Costello Elementary School, Wattles Elementary School, Barnard Elementary School and Athens High School, for Troy Schools.

Specifications and proposal forms can be obtained online after January 23, 2020 at http://www.troy.k12.mi.us. From the main page click the "Business Services" tab listed under "Departments", then click "Purchasing" and scroll down to locate and access the bid document.

Your proposal and two copies marked **"Bid No. 9904 Asbestos Abatement"** must be delivered no later than 10:00 a.m., Wednesday, February 5, 2020, Troy School District Maintenance/Operations and Purchasing Offices, 1140 Rankin, Troy, MI 48083, at which time all bids will be publicly opened and read aloud immediately thereafter. Bid proposals received after this time will not be considered or accepted.

A mandatory pre-bid walk through has been scheduled for 3:45 p.m., Thursday, January 23, 2020, Hill Elementary School, 4600 Forsyth Ave, Troy MI 48085. Interested parties should meet outside the main office.

All bidders must provide familial disclosure in compliance with MCL 380.1267 and attach this information to the bid proposal. The bid proposal will be accompanied by a sworn and notarized statement disclosing any familial relationship that exists between the owner or any employee of the bidder and any member of the Troy School Board or the Troy School Districts Superintendent. Also, a sworn and notarized Affidavit of compliance for the Iran Economic Sanctions Act certifying the vendor does and will comply with Public Act 517 of 2012 shall accompany all proposals. Both forms will be enclosed in the specification's booklet that shall be used for this purpose. The District will not accept a bid proposal that does not include these sworn and notarized disclosure statement.

In accordance with Michigan Compiled Laws Section 129.201, successful bidders whose proposals are $50,000 or more, for any bid category, will be required to furnish a U.S. Treasury Listed Company Performance and Payment Bond in the amount of 100% of their bid. The cost of the Bond shall be identified within each proposal.

The Troy Board of Education reserves the right to accept or reject any or all bids, either in whole or in part; to award contract to other than the low bidder; to waive any irregularities and/or informalities; and in general to make awards in any manner deemed to be in the best interest of the owner.

Purchasing Department
Troy School District
1140 Rankin
Troy, MI 48083

INSTRUCTIONS TO BIDDERS

PROPOSAL/INTENT

1. The Troy School District will receive firm, sealed bids for all labor, material, equipment and all other services to complete Asbestos Abatement, in accordance with the attached specifications.

2. Proposals will be submitted only on the forms provided, will be enclosed in a sealed envelope marked with the name of the bidder, the title of the work and must be delivered to Troy School District Maintenance/Operations and Purchasing Offices, 1140 Rankin, Troy, MI 48083, no later than 10:00 a.m., Wednesday, February 5, 2020 at which time all bids will be publicly opened and read aloud immediately thereafter. Bid proposals received after this time will not be considered or accepted. Oral, telephone, fax or electronic mail bids are invalid and will not receive consideration. Submit one original and two copies.

3. A mandatory pre-bid walk through has been scheduled for 3:45 p.m., Thursday, January 23, 2020, Hill Elementary School, 4600 Forsyth Ave, Troy MI 48083.

4. Proposals will be made in conformity with all the conditions set forth in the specifications. All items of furniture and equipment must conform to the specifications.

5. Any questions regarding bid specifications must be received no later than noon, Thursday, January 30, 2020. Questions must be submitted in writing to the attention of Lisa Whitton, Nova Environmental at lwhitton@nova-env.com.

6. Bidder shall be reputable and a recognized organization, with at least five (5) years successful experience on work of this type and scope, of equal or better quality than this project.

7. References in the specifications to any article, product, material, fixture, form or type of construction, etc., by proprietary name, manufacturer, make or catalog number will be interpreted as establishing a standard quality of design and will not be construed as limiting proposals.

8. Bid bond or certified check, for an amount not less than five (5%) percent of the amount of the bid, must accompany each bid. Failure to submit proper bid security shall constitute rejection of bid.

9. A performance bond shall be required for the project if the cost is in excess of $50,000 and must be listed separately on the proposal form as an individual line item.

10. A completed Familial Disclosure and an Iran Economic Sanctions form must be included with each proposal submitted or the proposal will not be accepted, please note these forms must be notarized.

11. The Troy Board of Education reserves the right to accept or reject any or all proposals either in whole or in part; to waive any irregularities and/or informalities; and in general to make awards or cancel this proposal, if deemed to be in the best interests of the owner.

SCOPE

This bid includes Asbestos Abatement at Smith Middle School, Hill Elementary School, Larson Middle School, Boulan Park Middle School, Costello Elementary School, Wattles Elementary School, Barnard Elementary School and Athens High School. Proposals will be on a line item lump sum basis, according to the schedule listed below and where specified only the qualified products listed will be considered in this proposal.

WARRANTY

All material and equipment will be guaranteed to be free from defects in both workmanship and materials for no less than one year from date of receipt/installation. If manufacturer warranty exceeds this minimum requirement,

the manufacturer warranty will prevail. Any item(s) found to be defective will be replaced or repaired within seven working days at Vendor(s) expense.

WITHDRAWAL OF BIDS

Any bidder may withdraw their bid at any time prior to the scheduled time for receipt of bids. No proposal may be withdrawn until after 45 days after bid opening.

FIRM PRICING

Unit pricing will prevail when computing total quantity on bids. No price allowance or extra consideration on behalf of the bidder will subsequently be allowed by reason of error or oversight on the part of the bidder. The successful bidder(s) will hold bid prices firm for all purchase orders placed for a period of approximately one full year.

PERMITS, FEES AND REGULATIONS

The Contractor shall obtain and pay for all permits, assessments, fees, bonds, and other charges as necessary to perform and complete the work of this contract, including disconnection charges, capping and unplugging utilities.

The Contractor shall be responsible for obtaining all permits and licenses necessary for the proper completion of project. Permits and licenses are available from the appropriate agencies having jurisdiction. The Contractor shall give all notices, pay all fees and comply with all laws, ordinances, rules and regulations bearing on the work.

At the completion of the project, the Contractor will provide to the District all paperwork related to the full execution of the permits(s), including all payments and inspections.

If any of the work of the Contractor is done contrary to such laws, ordinance rules and regulations without such notice, he shall bear all costs arising therefrom. The Contractor shall include all cost and taxes in its bid, and make proper provisions for payment of all other State and Federal applicable taxes, fees or other costs.

TAXES

Troy School District is not automatically exempt from State of Michigan Sales and Use Taxes. The District must pay these taxes when materials are to be incorporated into reality. Materials that are permanently attached, built-in, incorporated or otherwise made part of the structure all applicable taxes shall be paid by the Vendor. Troy School District shall not be responsible for any taxes that are imposed on the Vendor. Furthermore, the Vendor understands that it cannot claim exemption from taxes by virtue of any exemption that is provided to Troy School District.

DELIVERY/INSTALLATION

Time of delivery is part of the consideration. It is understood that the bidder agrees to deliver prepaid to the schools, specified from the resulting contract, all items. All cost of delivery, drayage, freight, packing, unpacking, and setup are to be included in the prices bid.

The Contractor is responsible for removing from the project all waste materials and rubbish resulting from his operations and installation including all packing cartons and debris. Removal is to occur on a daily basis. Failure to do so will result in the Owner doing so and the cost thereof shall be charged to the Contractor as a deduction in his contract price.

The Contractor shall provide an adequate number of qualified, experienced installers, in harmony with other works at the site.

BID BOND

Bid Bond or certified check, for an amount not less than five (5%) percent of the amount of the bid, must accompany each bid. The check or bond of each unsuccessful bidder will be returned within ten (10) days after

the bid is awarded. Failure of any accepted bidder to enter into a contract to complete the specified work may forfeiture of his bid security. Failure to submit proper bid security shall constitute rejection of bid.

PERFORMANCE BOND/PAYMENT BOND

Within fourteen (14) days after date of issuance of written notice of selection for the award of a contract, which shall be considered as the notice to proceed, the successful bidder shall enter into a contract with the Owner and shall execute and file with the Owner, the following in the amount 100% equal to full contract sum.

A performance bond shall be required for the project if the cost is in excess of $50,000 and must be listed separately on the proposal form as an individual line item. The Performance Bond must insure the faithful performance of all provisions of the contract and satisfactory completion of the specified work, within the time agreed upon.

The payment bond must insure the payment and protection of claimants supplying labor or materials to the principal contractor or his subcontractors in the prosecution of the work provided for in the contract. The successful contractor's bond company must be listed by the State of Michigan as a licensed carrier and have an excellent or superior rating from AM Best Company.

PREVAILING WAGE

This is not prevailing wage project.

SAFETY

Under the "General Conditions of the Contract for Construction" of the contract to be awarded, the Contractor;

a) shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures;
b) shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the contract;
c) shall take reasonable precautions for safety of all persons who may be affected, including employees of the Contractor and Subcontractor; and
d) shall have an accident prevention representative at the site.

The general conditions of the contract for construction and the agreement also require that the Contractor indemnify the Owner in the event of certain claims arising out of the performance of the work.

INSURANCE REQUIREMENTS

The Contractor shall protect, defend and indemnify the Owner, its officers, agents, servants, volunteers, and employees from any and all liabilities, claims, liens, demands, and costs of whatsoever kind and nature which may result in injury or death to any persons, and for any result in injury or death to any person, and for loss or damage to any property, including property owned or in the care, custody, or control of the Owner in connection with or in any way incident to or arising out of the occupancy, use, with this Agreement resulting in whole or in part from negligent acts or omissions of the Contractor, any Subcontractor, or any employee, agent or representative of the Contractor or any Subcontractor.

The Contractor shall maintain, at its expense, during the term of this contract the following insurance:

a) Worker's Compensation Insurance with statutory limits and Employer's Liability Insurance with a minimum limit of $1,000,000 each occurrence.

b) Comprehensive General Liability Insurance with a minimum combined single limit of $1,000,000 per occurrence, $1,000,000 aggregate, in the same amount made for bodily injury and property damage. The policy is to include products and completed operations, cross liability, broad form property damage, independent contractors, and contractual liability coverage. The policy shall be endorsed to provide sixty

(60) days written notice to the District of any material change of coverage, cancellation, or non-renewal of coverage.

c) If Subcontractors are likely to be used, the Comprehensive General Liability policy shall include coverage for independent Contractors.

d) Owner's Contractor's Protective Policy-comprehensive in the name of the Owner, with a minimum combined single limit of $1,000,000 per occurrence in the same amount for bodily injury or property damage.

e) Automobile Liability insurance covering all owned, hired, and non-owned vehicles with personal protection insurance and property insurance to comply with the provisions of the Michigan no-fault Insurance Law, including residual liability insurance with a minimum combined single limit of $1,000,000 each occurrence of bodily injury and property damage.

f) All insurance policies shall be issued by companies licensed to do business in the State of Michigan. The companies issuing the policies must be domestic (on-shore) companies and have an A rating by AM Best.

g) The Contractor shall be responsible for payment of all deductibles contained in any insurance policy required in this contract.

COMPLIANCE WITH SCHOOL SAFETY INITIATIVE LEGISLATION

Meeting the requirements of the School Safety Initiative Legislation, being MCL 380.1230, 80.1230a, 380.1230c, 380.1230d and 380.1230g.

The Bidder acknowledges and agrees that the Bidder will have any and all of its installation personnel (including sub-contractors) subjected to criminal history and background checks. **Personnel that fall into this group will be working on District premises for more than one continuous week.** Criminal history and background checks will be done within a year of the beginning of the project and should be completed before worked begins on this project.

The Bidder is required to provide written documentation listing all personnel who fall into the group indicated in the above paragraph. The documentation will also verify that none of the personnel have a "listed offense" as indicated below. This documentation is to be provided before the beginning of the project and updated as necessary for any additions or subtractions from the list as long as the project lasts.

The Bidder shall indemnify, defend and hold the District, its employees, Board of Education, and each member thereof, agents and consultants, harmless from and against any and all claims, counter-claims, suits, debts, demands, actions, judgments, liens, liabilities, costs, expenses, including actual attorney's fees and actual expert witness fees, arising out of or in connection with any violation of, or the Bidder's failure to comply with the above paragraphs.

The Bidder shall be responsible for all costs and expenses associated with the above-required criminal history and background checks.

LISTED OFFENSES

1. MCL 750.145a - Accosting, enticing or soliciting child (less than 16 years of age) for immoral purposes.
2. MCL 750.145b - Accosting, enticing or soliciting childe (less than 16 years of age) immoral purposes – second or subsequent offenses.
3. MCL 750.145c - Involvement in child sexually abusive activity or material, including possession of child sexually abusive material ("child" is a person less than 18 years of age who has not been legally emancipated.)

4. MCL 750.158 - Crime against nature (i.e., sodomy and beastiality) if the victim is an individual less than 18 years of age.
5. A third of subsequent violation of any combination of the following:
    a. MCL 750.167(1)(f) - indecent or obscene conduct in a public place;
    b. MCL 750.335a - indecent exposure;
    c. A local ordinance of a municipality substantially corresponding to a section described in (a) or (b), *supra.*
6. Except for juvenile disposition or adjudication, a violation of:
    a. MCL 750.338 - gross indecency between males; fellatio or masturbation;
    b. MCL 750.338a - gross indecency between females; oral sex;
    c. MCL 750.338b - gross indecency between male and female persons;
    if the victim is an individual less than 18 years of age.
7. MCL 750.349 - Kidnapping, if victim is an individual less than 18 years of age.
8. MCL 750.350 - Kidnapping; child under 14 years of age with intent to detain or conceal from child's parent or legal guardian.
9. MCL 750.448 - Soliciting or accosting by a person 16 years of age or older, if victim is an individual less than 18 years of age.
10. MCL 750.455 - Pandering
11. MCL 750.520b - First degree criminal sexual conduct.
12. MCL 750.520c - Second degree criminal sexual conduct.
13. MCL 750.520d - Third degree criminal sexual conduct.
14. MCL 750.520e - Fourth degree criminal sexual conduct.
15. MCL 750.520g - Assault with intent to commit criminal sexual conduct.
16. Any other violation of a law of the state or a local ordinance of municipality that by its nature constitutes a sexual offense against an individual who is less than 18 years of age.
17. MCL 750.10a - Offense by sexually delinquent person (i.e., "any person whose sexual behavior is characterized by repetitive or compulsive acts which indicate a disregard of consequences or the recognized rights of others, or by the use of force upon another person in attempting sexual relations of either a heterosexual or homosexual nature, or by the commission of sexual aggressions against children under the age of 16").
18. An attempt or conspiracy to commit an offense described in (1) through (17).
19. An offense substantially similar to an offense described in (1) through (17) under a law of the United States, any state, or any country or any tribal or military law.

<u>TERMINATION BY THE DISTRICT FOR CONVENIENCE</u>
The District may, at any time, terminate the Contract for the District's convenience and without cause.

Upon receipt of written notice from the District of such termination for the District's convenience, the Contractor shall:

a) Cease operations as directed by the District in the notice;
b) Take actions necessary, or that the District may direct, for the protection and preservation of the Work; and
c) Except for Work directed to performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further Subcontracts and purchase orders.

<u>Owner Is An Equal Opportunity Employer</u>

The Owner is an Equal Opportunity Employer. Pursuant to the Executive Order 11246 as amended, you are advised that under the provisions of this order, Contractors and Subcontractors are obligated to take affirmative action to provide equal opportunity without regard to race, creed, color, national origin, age or sex.

<u>Michigan Right to Know Law</u>

Troy School District will comply with the Michigan Right to Know Law by informing Contractors of hazardous chemicals to which they may be exposed. All Contractors will be required to provide Material Safety Data Sheets for any hazardous chemicals brought to the workplace. The Contractor shall comply with all applicable provisions of the Occupational Safety and Health Act for the duration of the specified work.

Asbestos Hazard Emergency Response Act

As required by the Environmental Protection Agency Asbestos Hazard Emergency Response Act, each school district is responsible for providing contractors with information regarding locations of known or assumed asbestos containing material prior to the Contractor entering a building under the school district's jurisdiction. The successful bidder will be required to complete the school district's Contractor Notification forms.

Notification of Assumed Lead-Containing Materials

The intent of this section is to formally notify all Contractors and Sub-Contractors applying for or bidding on work covered within this specification that, due to the age of the facilities within this District, there is the presumption that building components do contain lead-based paint pursuant to OSHA definition. The District has not conducted lead-based paint inspections. As a result, all Contractors and Sub-Contractors bidding must assume that building components do contain lead-based paint.

Furthermore, all awarded Contractors and Sub-Contractors shall be responsible to comply with all applicable Federal and Michigan State lead regulations including, but not limited to, 29 CFR Part 1926.62 of the OSHA Lead Construction Standard, (Part 603 of the Michigan State Standards). All costs associated with regulatory compliance shall be borne by the Contractor and/or Sub-Contractor.

General Conditions

The District reserves the right to accept or reject any or all proposals, to waive irregularities, and to accept a proposal which, in the District's opinion, is in the District's best interest.

The District reserves the right to declare as non-responsive, and reject, any bid which is incomplete or where material information requested in not furnished, or where indirect or incomplete answers or information is provided.

In the event, the Administration Building is closed due to unforeseen circumstances on the day Proposals are due, Proposals will be due at the same time on the next day that the District and/or the Administration Building is open.

Negligence in preparation, improper preparation, errors in, or omissions from, proposal shall not relieve a bidder from fulfillment of any and all obligations and requirements of the proposed Contract Documents.

The District expects that the awarded bidder will complete the work as outlined in the specifications for the amount bid by the bidder. Any additional costs above the amount bid and awarded, must be approved by the District in advance of any work.

Voluntary alternates for bids are acceptable but should NOT be put in the space for the Base Bid on the Bid Response Form but on an attached sheet, clearly labeled Voluntary Alternative. Such Alternates should be described in enough detail for the District to understand the Bidder's intent.

Owner may choose to conduct testing to verify correct products and installation. If the materials and installation are found not to be per spec, owner will require subsequent tests to be performed by Owners testing company at contractors' expense.

Any exceptions to the terms and conditions contained in this RFP or any special considerations or conditions requested or required by the Contractor MUST be specifically enumerated by the Contractor and be submitted as part of its Proposal, together with an explanation as to the reason such terms and conditions of this RFP cannot be met by, or in the Contractor's opinion should not be applicable to, the Contractor. The Contractor shall be required and expected to meet the specifications and the requirements as set forth in this RFP in their entirety, except to the extent exceptions or special considerations or conditions are expressly set forth in the Contractor's Proposal and those exceptions or special considerations or conditions are expressly accepted by the District.

No responsibility shall attach to the District, or the authorized representatives of either one, for the premature opening of any proposal, which is not properly addressed and identified.

The Contract Documents, as outlined in the executed Agreement, shall imply the inclusion of the entire agreement between the parties thereto, and the Contractor shall not claim any modification thereof resulting from any representation or promise made at any time by an officer, agent or employee of the District or by any other person.

Opening and Awarding of Bids

Bids will be publicly opened and read aloud at the Troy School District Maintenance/Operations and Purchasing Offices, 1140 Rankin, Troy, MI 48083, at 2:00 p.m., Thursday, February 6, 2020.

The recommendation for award will be submitted to the Board of Education at the regular Board of Education Meeting to be held on Tuesday, February 11, 2020.

SCOPE OF WORK

FOR

TROY SCHOOL DISTRICT

AT

HILL ELEMENTARY SCHOOL
4600 FORSYTH AVENUE
TROY, MICHIGAN 48085

WATTLES ELEMENTARY SCHOOL
3555 ELLENBORO DRIVE
TROY, MICHIGAN 48083

ATHENS HIGH SCHOOL
4333 JOHN R ROAD
TROY, MICHIGAN 48085

COSTELLO ELEMENTARY SCHOOL
1333 HAMMAN DRIVE
TROY, MICHIGAN 48085

BARNARD ELEMENTARY SCHOOL
3601 FORGE DRIVE
TROY, MICHIGAN 48083

SMITH MIDDLE SCHOOL
5835 DONALDSON ROAD
TROY, MICHIGAN 48085

BOULAN PARK MIDDLE SCHOOL
3570 NORTHFIELD PARKWAY
TROY, MICHIGAN 48084

LARSON MIDDLE SCHOOL
2222 LONG LAKE ROAD
TROY, MICHIGAN 48085

SCOPE-OF-WORK

For all projects: Various construction activities may be occurring during abatement schedule. Dumpster, mobilization, decon chamber locations may change without notice. Owner may be moving items from work areas at beginning of each PHASE. Contractor responsible for removing/replacing any remaining items. Contractor shall provide all necessary utilities if not otherwise provided.

BID #1: HILL ELEMENTARY SCHOOL

Abatement Activities

This section defines the asbestos abatement activities the awarded Contractor will perform at Hill Elementary School.

PHASE 1 – Boiler Room

1. Remove 2 boilers, approximately 4' x 5' x 6', from the Boiler Room.
2. Remove all breeching/duct insulation, approximately 100 square feet, from the Boiler Room.
3. Remove all pipe fitting insulation, approximately 100 linear feet, from the Boiler Room.

NOTE: 1. One full enclosure for removal of all materials with glovebags for fittings outside enclosure.
2. Contractor to remove and dispose of all boiler materials as ACM.
3. Contractor to remove all boiler materials to concrete pad.
4. Contractor to use fire rated poly for enclosure in boiler room.
5. Contractor to work second shift for Phase 2.
6. Contractor to build plywood bag-out as necessary for waste at boiler room exit door.

PHASE 2 – Rooms 1-5

1. Remove all carpet, floor tile and mastic (and associated covebase), approximately 6,400 square feet, from Rooms 1-5 and Centrum.

NOTES: 1. One full enclosure for removal of all materials with poly ceilings in mastic removal areas.
2. Contractor to remove all layers of flooring (to concrete in mastic removal areas).
3. Contractor to remove all floor tile as non-friable.
4. Contractor to remove mastic with grinding or other approved method.
5. No chemical mastic remover to be used.
6. Contractor to protect flooring to remain in hallway or other areas.
7. Contractor to connect rooms as necessary.

PHASE 3 – Rooms 9-18

1. Remove all carpet, floor tile and mastic (and associated covebase), approximately 10,300 square feet, from Rooms 9-18 and Hallway.

NOTES: 1. One full enclosure for removal of all materials with poly ceilings in mastic removal areas.
2. Contractor to remove all layers of flooring (to concrete in mastic removal areas).
3. Contractor to remove all floor tile as non-friable.
4. Contractor to remove mastic with grinding or other approved method.
5. No chemical mastic remover to be used.
6. Contractor to protect flooring to remain in hallway or other areas.
7. Contractor to connect rooms as necessary.

PHASE 4 – Rooms 19-24

1. Remove all carpet, floor tile and mastic (and associated covebase), approximately 5,800 square feet, from Rooms 19-24, Conference Room A, and Staff Lounge.

NOTES: 1. One full enclosure for removal of all materials with poly ceilings in mastic removal areas.
2. Contractor to remove all layers of flooring (to concrete in mastic removal areas).
3. Contractor to remove all floor tile as non-friable.
4. Contractor to remove mastic with grinding or other approved method.
5. No chemical mastic remover to be used.
6. Contractor to protect flooring to remain in hallway or other areas.
7. Contractor to connect rooms as necessary.

PHASE 5 – Gym Areas

1. Remove all wood floor and mastic (and associated cork/felt/mastic), approximately 2,700 square feet, from the Cafeteria.

2. Remove all floor tile and mastic (and associated covebase/carpet), approximately 840 square feet, from the Gym Storage Rooms and Offices.

NOTES: 1. One full enclosure for removal of all materials with poly ceilings in mastic removal areas.
2. Contractor to remove all layers of flooring (to concrete in mastic removal areas).
3. Contractor to remove mastic with grinding or other approved method.
4. No chemical mastic remover to be used.
5. Contractor to protect flooring to remain in hallway or other areas.

BID #1: WATTLES ELEMENTARY SCHOOL

Abatement Activities
This section defines the asbestos abatement activities the awarded Contractor will perform at Wattles Elementary School.

PHASE 1 – Rooms 16-21

1. Remove all carpet, floor tile and mastic (and associated covebase), approximately 8,260 square feet, from Rooms 16-21, Conference J, Commons, and First Aid Room.

NOTES: 1. One full enclosure for removal of all materials with poly ceilings in mastic removal areas.
2. Contractor to remove all layers of flooring (to concrete in mastic removal areas).
3. Contractor to remove all floor tile as non-friable.
4. Contractor to remove mastic with grinding or other approved method.
5. No chemical mastic remover to be used.
6. Contractor to protect flooring to remain in hallway or other areas.
7. Contractor to connect rooms as necessary.

BID #1: COSTELLO ELEMENTARY SCHOOL

Abatement Activities
This section defines the asbestos abatement activities the awarded Contractor will perform at Costello Elementary School.

PHASE 1 – Stage

1. Remove all floor tile and mastic (and associated covebase and stairtread), approximately 150 square feet, from the Stage Areas.

NOTES: 1. Three full enclosures for removal of all materials with poly ceilings in mastic removal areas.
2. Contractor to remove all layers of flooring (to concrete in mastic removal areas).
3. Contractor to remove all floor tile as non-friable.
4. Contractor to remove mastic with grinding or other approved method.
5. No chemical mastic remover to be used.
6. Contractor to protect flooring to remain in hallway or other areas.
7. Contractor to connect rooms as necessary.

BID #1: ATHENS HIGH SCHOOL

Abatement Activities
This section defines the asbestos abatement activities the awarded Contractor will perform at Athens High School.

PHASE 1 – Art Room

1. Remove all floor tile and mastic (and associated covebase), approximately 2,500 square feet, from the Art Rooms and Storage Room.

2. Remove all sinks, approximately 5 total, from the Art Rooms.

NOTES: 1. One full enclosure for removal of all materials with poly ceilings in mastic removal areas.
2. Contractor to remove all layers of flooring (to concrete in mastic removal areas).
3. Contractor to remove all floor tile as non-friable.
4. Contractor to remove mastic with grinding or other approved method.
5. No chemical mastic remover to be used.
6. Contractor to protect flooring to remain in hallway or other areas.
7. Contractor to connect rooms as necessary.
8. Sinks will be removed at a separate mobilization after June 15, 2020.

BID #1: BARNARD ELEMENTARY SCHOOL

Abatement Activities
This section defines the asbestos abatement activities the awarded Contractor will perform at Barnard Elementary School.

PHASE 1 – Rooms 19-21

1. Remove all carpet, floor tile and mastic (and associated covebase), approximately 4,800 square feet, from Rooms 19-21 and Storage Room.

NOTES: 1. One full enclosure for removal of all materials with poly ceilings in mastic removal areas.
2. Contractor to remove all layers of flooring (to concrete in mastic removal areas).
3. Contractor to remove all floor tile as non-friable.
4. Contractor to remove mastic with grinding or other approved method.
5. No chemical mastic remover to be used.
6. Contractor to protect flooring to remain in hallway or other areas.
7. Contractor to connect rooms as necessary.

BID #1: SMITH MIDDLE SCHOOL

Abatement Activities
This section defines the asbestos abatement activities the awarded Contractor will perform at Smith Middle School.

PHASE 1 – Rooms 1-6

3. Remove all floor tile and mastic (and associated covebase), approximately 6,500 square feet, from Rooms 1-6 and Storage Rooms and Offices.

NOTES: 1. One full enclosure for removal of all materials with poly ceilings in mastic removal areas.
2. Contractor to remove all layers of flooring (to concrete in mastic removal areas).
3. Contractor to remove all floor tile as non-friable.
4. Contractor to remove mastic with grinding or other approved method.
5. No chemical mastic remover to be used.
6. Contractor to protect flooring to remain in hallway or other areas.
7. Contractor to connect rooms as necessary.

BID #1: BOULAN PARK MIDDLE SCHOOL

Abatement Activities
This section defines the asbestos abatement activities the awarded Contractor will perform at Boulan Park Middle School.

PHASE 1 – Exterior

1. Remove all windows/doors (including all caulks/frames/panels/glass/doors) as designated on drawings, from throughout the building. Sizes as follows:

   130 @ 4’ x 5’, 64 @ 11’ x 5’

2. Remove all window/door panels as designated on drawings, approximately 500 square feet total, from throughout the building.

NOTE: 1. Mini-enclosures for removal of all windows, panels and caulk.
2. Contractor to remove all windows/frames/caulk/glazing/glass/panels/trim/doors.
3. Contractor to remove all window materials flush with block/brick.
4. Contractor to remove caulk to the satisfaction of Owner’s Representative.
5. All windows/caulk/panels to be removed as non-friable.
6. Contractor to replace all window openings with 2x4 framing and plywood.
7. Contractor to coordinate with Owner’s window installation company for removal of all windows.
8. Contractor to remove interior sill.
9. Contractor to work second shift for Phase 1.

BID #1: LARSON MIDDLE SCHOOL

Abatement Activities
This section defines the asbestos abatement activities the awarded Contractor will perform at Larson Middle School.

PHASE 1 – Exterior

1. Remove all windows/doors (including all caulks/frames/panels/glass/doors) as designated on drawings, from throughout the building. Sizes as follows:

   130 @ 4’ x 5’, 64 @ 11’ x 5’

2. Remove all window/door panels as designated on drawings, approximately 500 square feet total, from throughout the building.

NOTE: 1. Mini-enclosures for removal of all windows, panels and caulk.
2. Contractor to remove all windows/frames/caulk/glazing/glass/panels/trim/doors.
3. Contractor to remove all window materials flush with block/brick.
4. Contractor to remove caulk to the satisfaction of Owner’s Representative.
5. All windows/caulk/panels to be removed as non-friable.
6. Contractor to replace all window openings with 2x4 framing and plywood.
7. Contractor to coordinate with Owner’s window installation company for removal of all windows.
8. Contractor to remove interior sill.

Additional Abatement Requirements (For all Bids)
This section defines other requirements that the awarded Contractor must follow during the course of the above abatement projects.

1. The Contractor shall construct full enclosures for the removal of the materials identified in the Scope-of-Work. All walls shall be sealed with a minimum of one (1) layer of four (4) mil polyethylene. Contractor shall construct polyethylene tunnels, in Halls, to connect rooms. All floors shall be sealed with a minimum of two (2) layers of six (6) mil polyethylene. Contractor shall construct wood frame and polyethylene barriers in Halls. All lockers shall be pre-sealed. Full decontamination chambers shall be constructed and used for the duration of the projects.

2. Floor Tile/Mastic Removal Areas: The Contractor shall construct full enclosures for the removal of the materials identified in the Scope-of-Work. All walls shall be sealed with a minimum of two (2) layers of four (4) mil polyethylene. Contractor shall construct polyethylene tunnels, in Halls, to connect rooms. All floors to remain shall be sealed with a minimum of two (2) layers of six (6) mil polyethylene. Contractor shall construct wood frame and polyethylene barriers in Halls. All lockers/cabinets/shelving shall be pre-sealed. Full decontamination chambers shall be constructed and used for the duration of the projects. All floor tile shall be removed as non-friable. Contractor shall be responsible for removing all layers of flooring. Contractor shall construct a poly ceiling in all mastic removal areas. No chemical mastic remover may be used.

3. The Contractor shall construct mini-enclosures for the removal of the exterior materials identified in the Scope-of-Work. All walls shall be sealed with a minimum of one (1) layer of four (4) mil polyethylene. All existing floors to remain shall be sealed with a minimum of two (2) layers of six (6) mil polyethylene. Contractor shall construct knee walls as necessary to segregate enclosure. Full decontamination chambers shall be constructed and used for the duration of the projects.

4. Contractor shall remove applicable exterior doors/frames/panels/caulks as non-friable. All materials shall be wrapped in several layers of six (6) mil polyethylene, properly labeled and disposed of as ACM. All exterior windows shall be replaced/secured with wood frame and 1/2” plywood. The Contractor shall construct mini-enclosure(s) for the removal of the materials identified in the Scope-of-Work.

5. The Contractor shall construct full enclosures for the removal of the boiler room materials identified in the Scope-of-Work. All walls shall be sealed with a minimum of two (2) layers of fire rated four (4) mil polyethylene. All existing floors to remain shall be sealed with a minimum of two (2) layers of six (6) mil polyethylene. Contractor shall construct knee walls as necessary to segregate enclosure. Full decontamination chambers shall be constructed and used for the duration of the projects.

6. It shall be the Contractor's responsibility to locate all applicable floor tile/mastic behind/within/below all carpet, univents, walls, cabinets, shelves, lockers casework and any other item and remove/dispose of the materials and associated debris as asbestos. The Contractor shall only remove materials necessary to access and safely remove asbestos materials.

7. It shall be the Contractor's responsibility to locate all applicable pipe and pipe fitting insulation behind/within/below all ceilings, univents, walls, cabinets, shelves, lockers casework and any other item and remove/dispose of the materials and associated debris as asbestos whether identified in scope of work or not. Base bid is lump sum for all buildings. Unit prices will only apply to Auditorium Areas at Rogers Elementary School. The Contractor shall only remove materials necessary to access and safely remove asbestos materials.

8. Contractor shall remove all caulks as non-friable. Contractor shall replace all openings with 2x4 framing and plywood. Contractor shall coordinate window/door removal with Owner’s Representative.

9. Contractor shall provide all lift/support/access/structural/scaffold/safety needs and such other protocols for safety and structural integrity satisfying all applicable regulations. Contractor shall provide all necessary fall protection to Owner and Owner's Representatives.

10. The Contractor shall place Air Filtration Devices (AFD's) in work areas only. Wood with cutouts for exhaust ducts shall be placed in doors and windows. The Contractor shall secure the wood in the doors and windows to ensure a protected and secure work area. The following minimum of 2,000 CFM AFD's, abatement techniques and clearance sampling shall be utilized during each phase of abatement.

HILL ELEMENTARY SCHOOL

Phase	Area	# of AFD's	Abatement Technique	Clearance
PHASE 1	Boiler Room	2	full enclosure	TEM 5 < 70 structures avg
PHASE 2	Rooms 1-5	10	full enclosure	TEM 5 < 70 structures avg
PHASE 3	Rooms 9-18	12	full enclosure	TEM 5 < 70 structures avg
PHASE 4	Rooms 19-24	8	full enclosure	TEM 5 < 70 structures avg
PHASE 5	Gymnasium	4	full enclosure	TEM 5 < 70 structures avg

WATTLES ELEMENTARY SCHOOL

Phase	Area	# of AFD's	Abatement Technique	Clearance
PHASE 1	Rooms 16-21	8	full enclosure	TEM 5 < 70 structures avg

COSTELLO ELEMENTARY SCHOOL

Phase	Area	# of AFD's	Abatement Technique	Clearance
PHASE 1	Stage	1	full enclosure	PCM 5 < 0.01 f/cc

ATHENS HIGH SCHOOL

Phase	Area	# of AFD's	Abatement Technique	Clearance
PHASE 1	Art Room	4	full enclosure	TEM 5 < 70 structures avg

BARNARD ELEMENTARY SCHOOL

Phase	Area	# of AFD's	Abatement Technique	Clearance
PHASE 1	Rooms 19-21	3	full enclosure	TEM 5 < 70 structures avg

SMITH MIDDLE SCHOOL

Phase	Area	# of AFD's	Abatement Technique	Clearance
PHASE 1	Rooms 1-6	7	full enclosure	TEM 5 < 70 structures avg

BOULAN PARK MIDDLE SCHOOL

Phase	Area	# of AFD's	Abatement Technique	Clearance
PHASE 1	Exterior	1/room	mini enclosure	PCM 1 < 0.01 f/cc

LARSON MIDDLE SCHOOL

Phase	Area	# of AFD's	Abatement Technique	Clearance
PHASE 1	Exterior	1/room	mini enclosure	PCM 1 < 0.01 f/cc

Abatement Requirements for all projects

1. The Contractor is responsible for all measurements. Measurements for bidding purposes as well as material procurement are the sole responsibility of the Contractor. The Maps included within this specification may not identify all materials listed in the Scope-of-Work. The Scope-Of-work may not identify all materials on Maps. The Contractor is responsible for abatement of all materials whether identified in the Scope-of-Work, the maps or not.

2. **The Contractor shall be responsible for moving any non-fixed item in the work area. The Contractor is responsible for returning the work area to the Owner in a condition that satisfies the Owner and the Owner's representative.**

3. The Owner shall provide necessary utilities whenever possible. The Contractor shall be responsible for providing any necessary utilities (for Contractor and Owner's Representative) to complete the projects as scheduled, if not provided by the Owner.

4. Complete decontamination chambers with showers shall be constructed for all projects. The Owner and the Owner's Consultant must approve the decontamination chamber location, bag out location, Air Filtration device (AFD) placement and dumpster location.

5. The Contractor may construct a bag out area to facilitate disposal of the materials. The bag out chamber (2 chambers) shall be constructed of wood frame and plywood and shall be sealed with polyethylene (walls/floors/ceilings). The bag out area shall have a wood door with lock.

6. The Contractor shall be responsible for the security and safety of the building. Wood with cutouts for exhaust duct shall be placed in doors and windows. The Contractor shall secure the wood in the doors and windows to ensure a secure work area.

7. The Contractor is responsible for any damage to surfaces, electrical and mechanical equipment. The Contractor shall be responsible for repairing (painting) surfaces: walls, ceilings, floors, windows, doors etc. The Contractor is responsible for all damage resulting from removal operations. All wires shall be properly adhered with cable ties to appropriate hangers.

8. If a Vac Loader is used, the personnel operating the Vac Loader, its placement and standard operating procedures must be approved by the Owner's Representative.

9. Fiber drums shall be utilized for floor tile disposal. They shall have had no hazardous substances placed into them. All drums must be clean and free of hazardous labels when they arrive on the project site. Floor tile and mastic must be placed into lined fiber drums.

10. All areas shall be encapsulated with clear encapsulant.

11. The Workers shall wear PAPRs.

12. The Contractor shall supply a manometer and will be required to maintain a minimum negative pressure of .02 inches of water equivalent. In addition, the Contractor must smoke test the enclosure daily at a minimum.

13. Six sided locked dumpsters only - no open top dumpsters. Dumpsters must be removed from the premises within one day of project completion.

14. No bladder bags may be used without the permission of the Owner or Owner's Representative with conditions.

15. The Contractor shall provide utility lighting for all work areas.

16. No salvaging, by the Contractor or their employees, of any item.

17. The Contractor shall construct wood frame and plywood barriers at all locations requested by the Owner or Owner's Representative.

18. The Contractor will be required to construct an enclosure that satisfies all the requirements of Appendix F of OSHA 1926.1101 "Work Practices and Engineering Controls for Major Asbestos Removal, Renovation and Demolition Operations

Meeting Requirements
All Contractors submitting bids will be required to attend the following meetings if requested by the Owner's Consultant:

- Post-Bid Examination: The three lowest bids may be required to meet with the Owner's Consultant to discuss the Contractor's submitted bid and various aspects of the project.

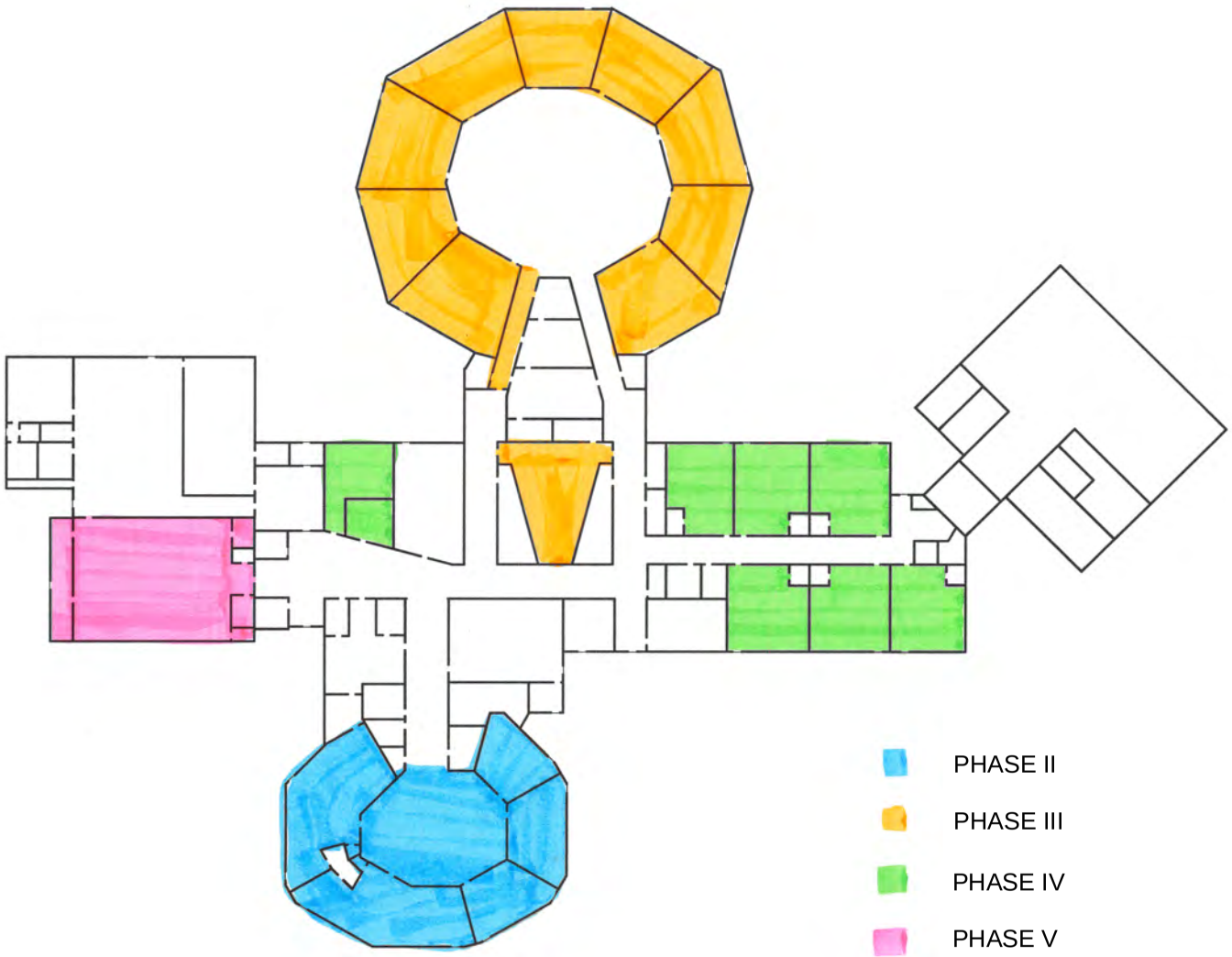
- Pre-Start Scheduling Meeting: The Awarded Contractor will be required to attend a pre-start meeting on-site with the Owner and Owner's Consultant to schedule the logistics of the project. At this meeting, the Awarded Contractor will be required to furnish all paperwork as required in Item 2 of the "Technical Specifications for Asbestos Abatement."

Floor Plans

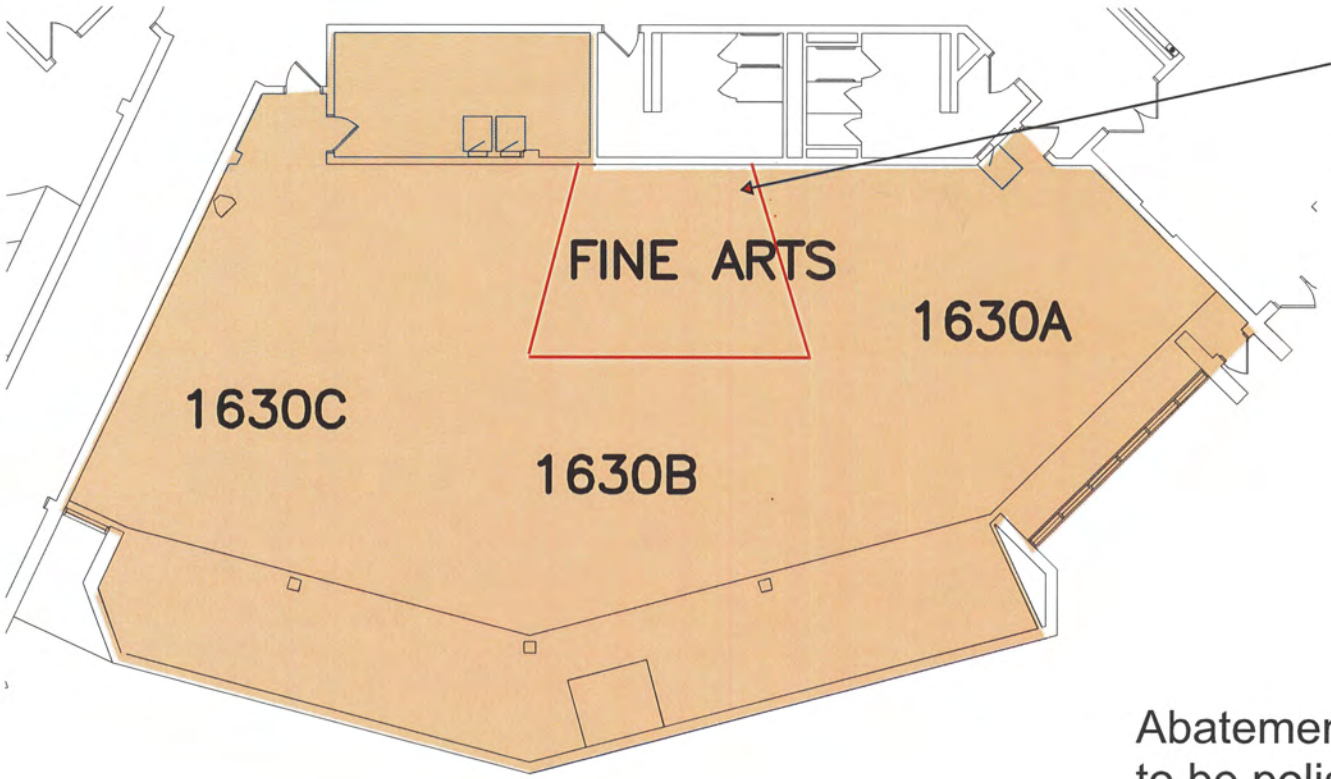
The following floor plans/maps/diagrams will provide additional information which will be useful for proper orientation and descriptions of the building areas. These plans do not include all materials in the scope of work to be removed. While every effort has been made to provide plans at a scale or with listed approximate measurements, all Bidders should be reminded that they are responsible for their own field measurements.

TROY SCHOOL DISTRICT

HILL ELEMENTARY SCHOOL



WATTLES ELEMENTARY SCHOOL



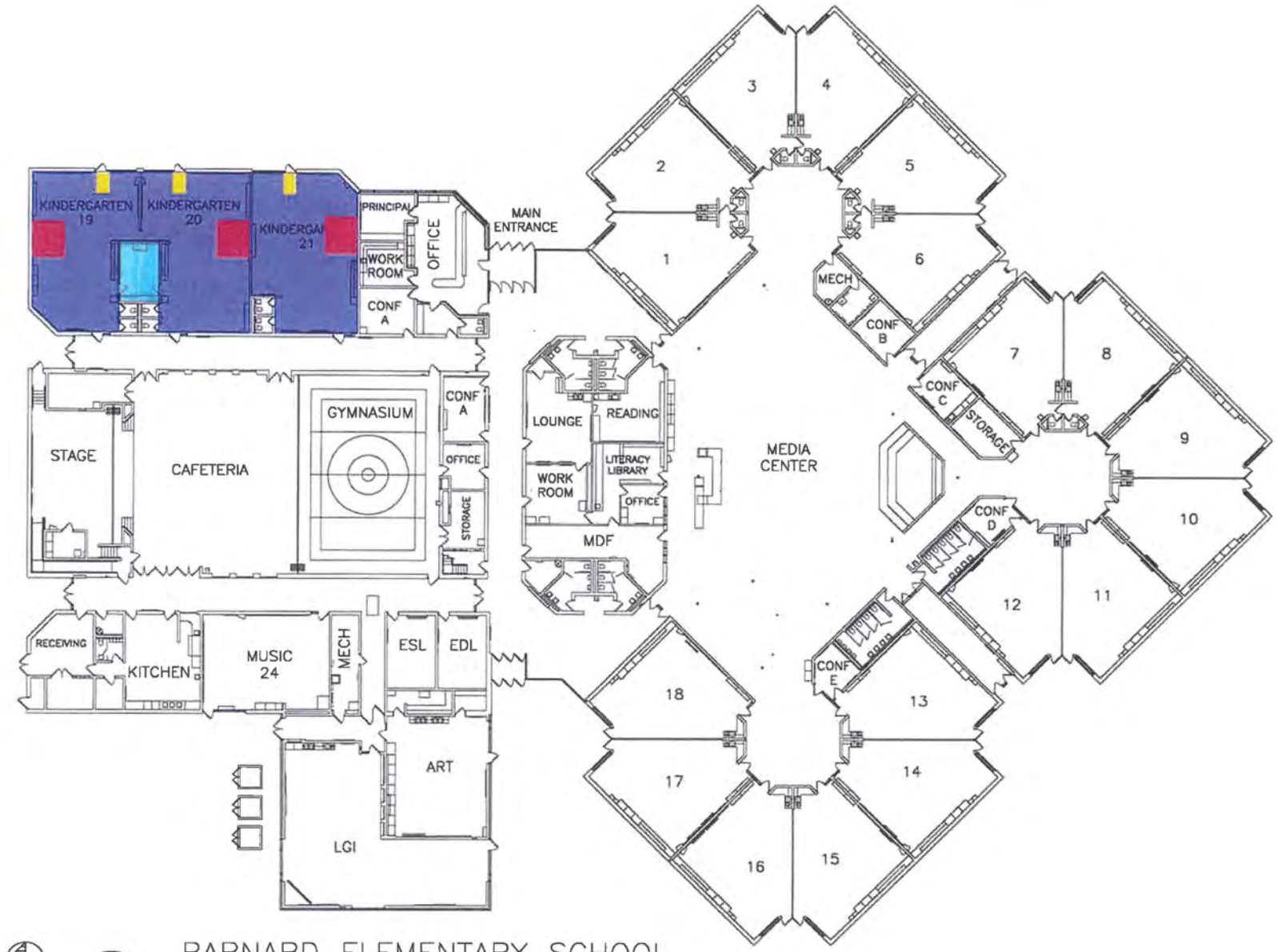
Area of existing ceramic tile to be demo'd by polishing contractor.

Abatement by TSD. Area to be polished is shaded.

Athens High School - Art

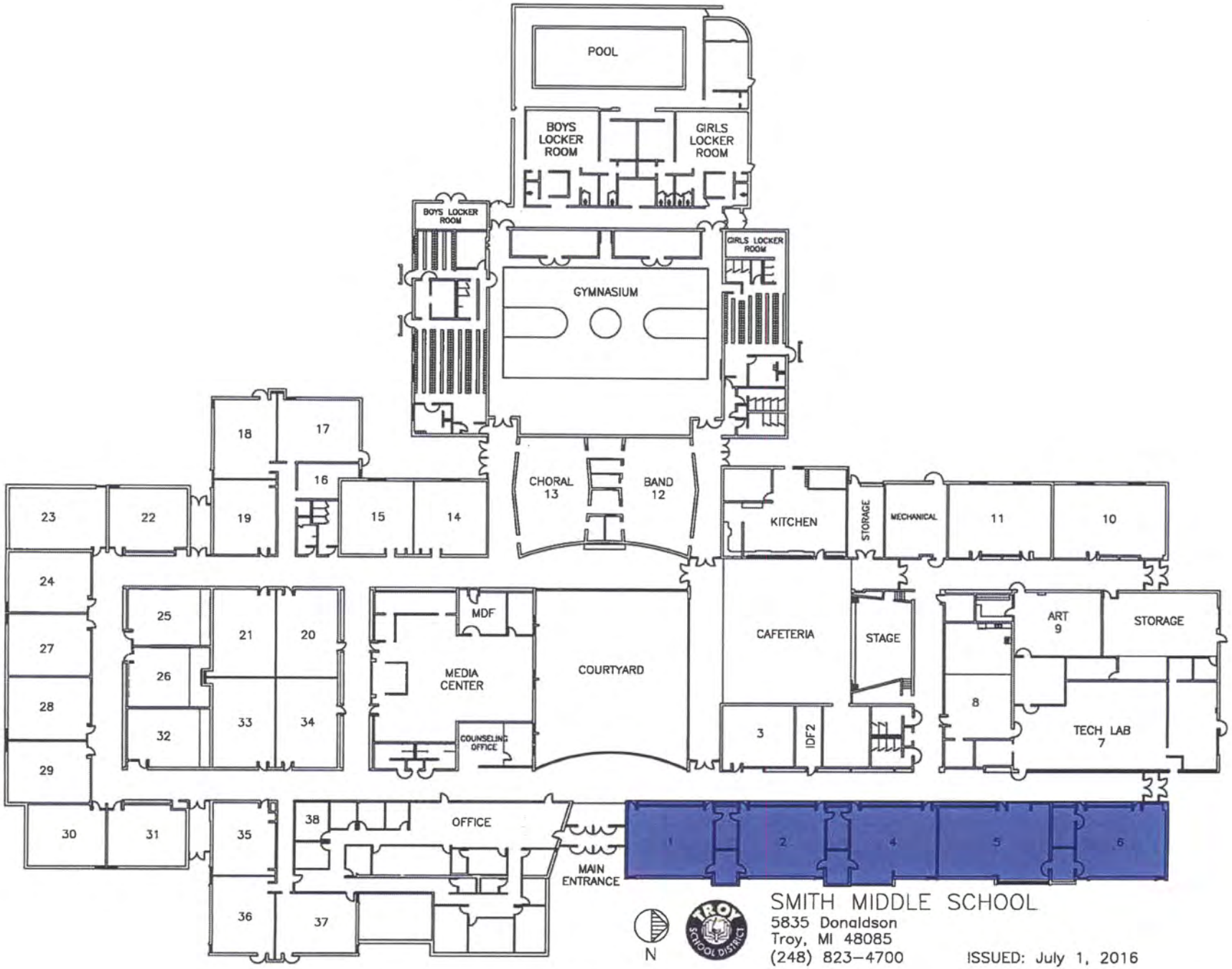
A2

Troy School District
Costello Elementary School

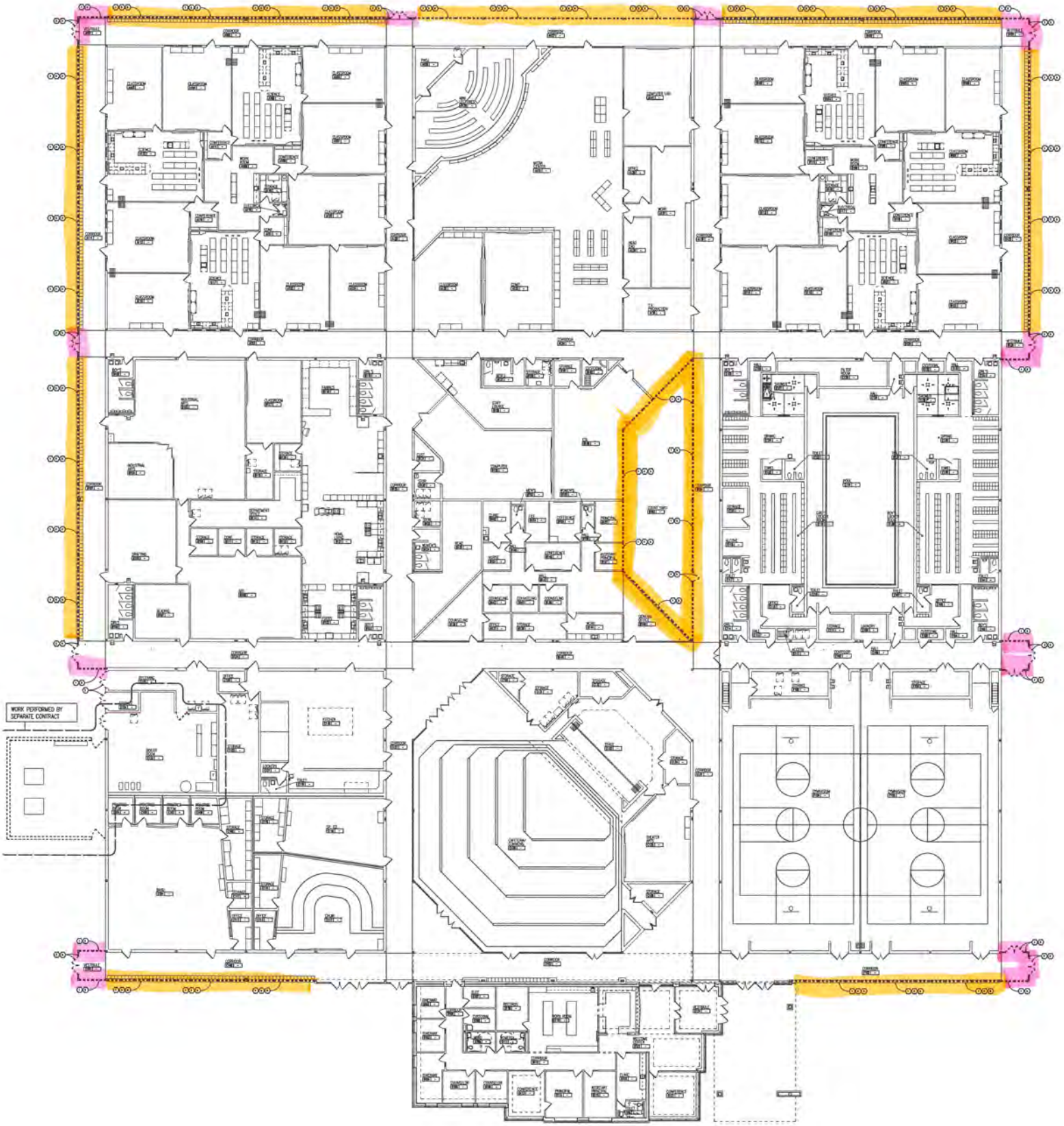


BARNARD ELEMENTARY SCHOOL

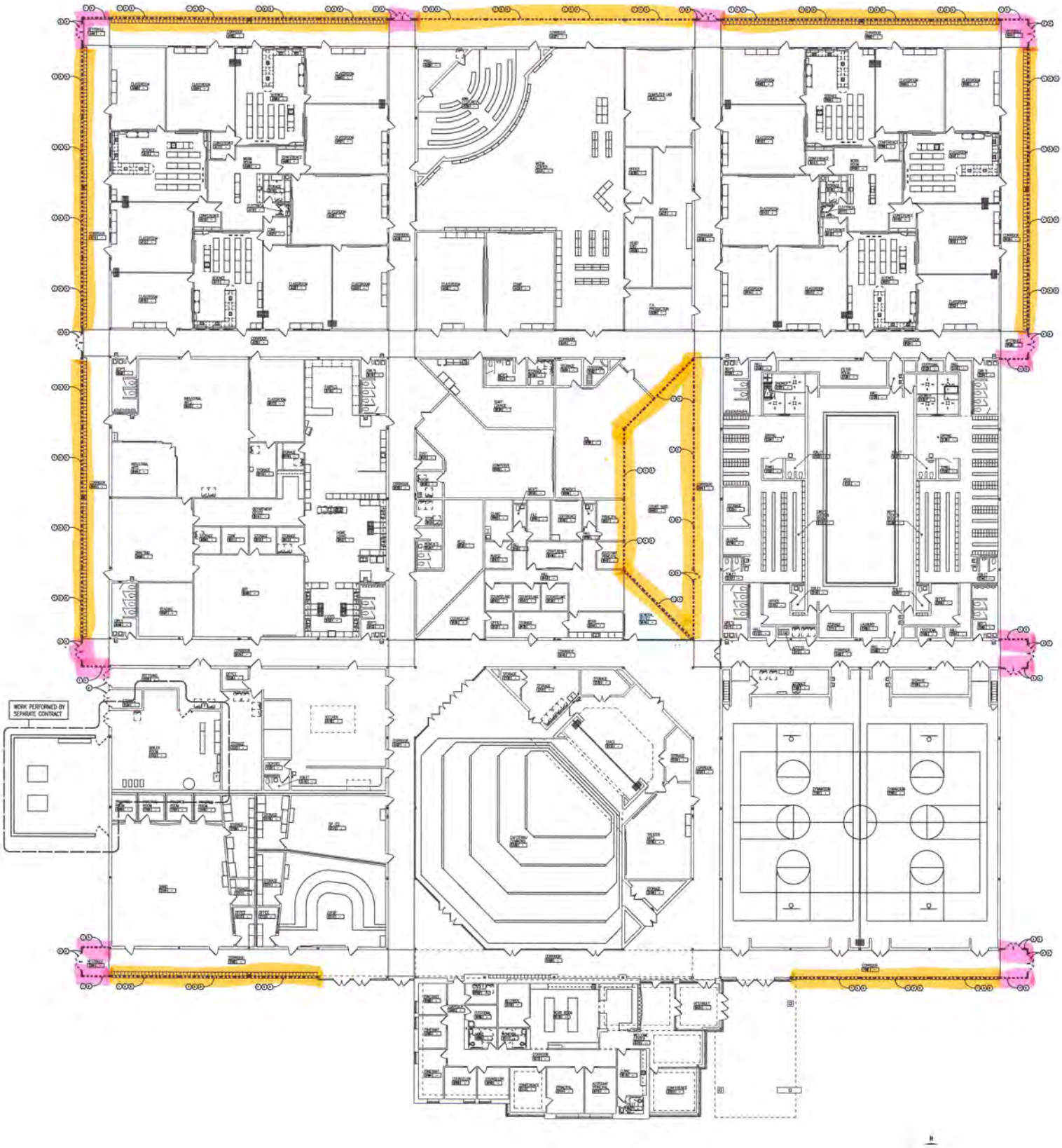
3601 Forge
Troy, MI 48083
(248) 823-4300
ISSUED: July 1, 2016


POOL
BOYS LOCKER ROOM
GIRLS LOCKER ROOM
BOYS LOCKER ROOM
GIRLS LOCKER ROOM
GYMNASIUM
18
17
16
23
22
19
15
14
CHORAL 13
BAND 12
KITCHEN
STORAGE
MECHANICAL
11
10
24
25
21
20
MDF
CAFETERIA
STAGE
ART 9
STORAGE
27
26
MEDIA CENTER
COURTYARD
28
32
33
34
COUNSELING OFFICE
3
IDF2
8
TECH LAB 7
29
30
31
35
38
OFFICE
1
2
4
5
6
MAIN ENTRANCE
36
37
N
TROY SCHOOL DISTRICT
SMITH MIDDLE SCHOOL
5835 Donaldson
Troy, MI 48085
(248) 823-4700
ISSUED: July 1, 2016

BOULAN PARK MIDDLE SCHOOL



LARSON MIDDLE SCHOOL



TIME SCHEDULE

The following time schedule must be adhered to by the awarded Contractor(s). This schedule will be made part of the contract documents and will be strictly enforced by the Owner and the Owner's Representative. Any and all variances to this schedule must be cleared by the Owner and the Owner's Representative prior to the commencement of the project(s). If the project(s) is/are not completed within the time period outlined below, the Owner may impose liquidated damages as described below.

ASBESTOS ABATEMENT PROJECTS

Notification
All regulatory agencies including, but not limited to, the Environmental Protection Agency, the Michigan Department of Public Health, and all other applicable Federal, State, County or City municipalities should be notified within 7 days of the signed contract and at least in a period allowable for the project to begin on the start date given below. The Contractor shall also be solely responsible for payment of all applicable fees and charges. Failure to notify in a timely manner will not excuse the awarded Contractor(s) from liquidated damages.

Start and Completion Dates
The Contractor will commence and complete all projects according to the following calendar:

HILL ELEMENTARY SCHOOL

BID 1 PHASE 1	**Start Date:**	May 18, 2020
	Completion Date:	May 22, 2020
BID 1 PHASE 2	**Start Date:**	June 15, 2020
	Completion Date:	June 19, 2020
BID 1 PHASE 3	**Start Date:**	June 22, 2020
	Completion Date:	June 26, 2020
BID 1 PHASE 4	**Start Date:**	June 29, 2020
	Completion Date:	July 6, 2020
BID 1 PHASE 5	**Start Date:**	July 6, 2020
	Completion Date:	July 14, 2020

WATTLES ELEMENTARY SCHOOL

BID 1 PHASE 1	**Start Date:**	June 29, 2020
	Completion Date:	July 8, 2020

COSTELLO ELEMENTARY SCHOOL

BID 1 PHASE 1	**Start Date:**	June 13, 2020
	Completion Date:	June 13, 2020

ATHENS HIGH SCHOOL

BID 1 PHASE 1	**Start Date:**	April 3, 2020
	Completion Date:	April 8, 2020

BARNARD ELEMENTARY SCHOOL

BID 1 PHASE 1	**Start Date:**	July 6, 2020
	Completion Date:	July 15, 2020

SMITH MIDDLE SCHOOL

BID 1 PHASE 1	**Start Date:**	July 13, 2020
	Completion Date:	June 17, 2020

BOULAN PARK MIDDLE SCHOOL

BID 1 PHASE 1	**Start Date:**	May 18, 2020
	Completion Date:	June 12, 2020

LARSON MIDDLE SCHOOL

BID 1 PHASE 1	**Start Date:**	June 15, 2020
	Completion Date:	July 10, 2020

*Contractor shall coordinate with Owner, Owner's Representative and Construction Manager for removal of exterior materials to ensure security of the facilities.

Owner may be moving items from work areas at beginning of each PHASE.

Dates are subject to change by the Owner. An equal amount of time shall be allowed for the project.
The Contractor will be responsible for fulfilling all notification requirements.

All projects will be considered complete for schedule purposes when the project site has passed required clearance testing, the Contractor has completed removal of all supplies and equipment and the Contractor has returned the building to the Owner in a condition that satisfies the Owner and Owner's Representative.

Post Abatement PCM Clearance Testing
Post Abatement PCM Clearance Samples will be collected, analyzed and results verbally expressed to the Owner and to the Contractor within twenty-four (24) hours, with the time period beginning at the completion of the lock down activities. Delays in clearance testing, after the accepted final visual inspection and lock down, will be cause for a proportional extension of the project completion date.

It will be in the judgment of the Owner's Representative as to when Post Abatement PCM Clearance Samples will be collected. All Post Abatement PCM Clearance Samples will be analyzed on-site. PCM Clearance Samples shall not be collected on the same day as visual inspection and lockdown.

Liquidated Damages
Liquidated damages will be incurred by the Contractor if the project(s) is/are not completed by the above completion date(s). Liquidated damages will also be incurred by the Contractor if the post abatement air samples do not pass the required levels set by the Environmental Protection Agencies AHERA Regulations, any other applicable government agency, or by the specifications.

If the Contractor(s) does not complete the projects detailed in the Scope-of-Work within the specified time allotment, the Contractor will be assessed liquidated damages in the amount of **3,000 dollars plus Owner's Consultant costs** per day that the project extends beyond the completion date.

If the project site does not pass the post abatement air sampling tests as required by the State of Michigan Public Act No. 147 (as amended), by any other applicable governmental agency, or by the specifications, the Contractor will by assessed liquidated damages in the amount of **3,000 dollars plus Owner's Consultant costs** for each day needed to perform additional cleaning, ***regardless of whether or not the project completion date has been surpassed***. The Contractor shall also be solely responsible for payment of all costs incurred by the Owner due to the delay, including but not limited to additional charges for the Owner's Representative, any and all additional sampling costs incurred due to the failure of the project site to meet the clearance requirements (including any and all air samples collected during the additional cleaning) and any and all overtime charges required for custodial personnel. Liquidated damages as set forth herein and any additional costs incurred by the Owner shall be

cumulative and shall occur each and every time the Contractor fails the post abatement air sampling tests as defined by regulation. Said liquidated damages and additional charges will be deducted from the contract price immediately upon the occurrence of such charges.

SITE AVAILABILITY

The Contractor shall be allowed in the building between the hours of 7:00 a.m. and 6:00 p.m., or as directed by Owner.

The Contractor shall not be allowed in the building on Sundays or holidays unless directed by Owner.

BIDDER'S QUALIFICATIONS QUESTIONNAIRE

All questions must be answered clearly and in a comprehensive manner. Any bidder failing to answer all questions may be rejected on these grounds. It is understood that the by submitting a signed bid, the Contractor is certifying the correctness of all statements and is hereby under oath. If necessary, the bidder may use additional sheets to answer these questions (when complete, any additional sheets that are used must have a reference to this Qualification Statement and must be attached to this Qualification Statement). The bidder may submit any additional information he/she desires.

1. Name of Bidder

2. Permanent Main Office Address

3. When (Name of Bidder) Organized?

4. If a Corporation, Where (Name of Bidder) Incorporated?

5. How many years have you been operating under the (Name of Bidder) name?

6. What other names has/are the principals of (Bidder) operated(ing) under that was/is associated with the asbestos abatement industry?

7. Have the principals of (Name of Bidder) filed for Chapter 11 or Chapter 13 for protection of (Name of Bidder) or for any other asbestos abatement related firm, company or organization, in the last five years? Describe. Use additional sheets if necessary.

8. List all contracts on hand. Show schedule (actual or anticipated commencement and completion dates) and gross dollar amount of each contract. Use additional sheets if necessary.

9. List all specifications (Name of Bidder) currently is submitting bids for which have overlapping working dates. Show schedule (anticipated commencement and completion dates) for each bid. Use additional sheets if necessary.

10. Have you (Bidder and other entities identified in question 6 answers) ever failed to complete any work awarded to you?

    If yes, where and why? Use additional sheets if necessary.

11. Have you (Name of Bidder and other entities identified in Question 6 answers) ever been disqualified from bidding in Troy School District?

    If yes, when and why? Use additional sheets if necessary.

12. Have you (Name of Bidder and other entities identified in Question 6 answers) ever not been recommended for bidded contracts when you were the low bidder in Troy School District?

    If yes, when and why? Use additional sheets if necessary.

13. Have you (Name of Bidder and other entities identified in Question 6 answers) ever not been recommended for bidded contracts when you were the low bidder on a project designed by Nova Environmental, Inc.?

    If yes, when and why? Use additional sheets if necessary.

14. List all projects (Name of Bidder) completed in Troy School District since January 1, 2015?

15. List any and all citations with or without monetary penalty received, pending, paid or disputed by (Name of Bidder and other entities identified in Question 6 answers) during the past 3 years for failure to comply with applicable federal, state or local regulations. Describe in detail the type of citation, the reason for the citation and the ultimate disposition of same. Provide copies of all citations received since January 1, 2015, and all correspondence associated with the citations. Use additional sheets if necessary.

16. When was the last on-site inspection by the Michigan Department of Consumer & Industry Services (Michigan Department of Public Health) and the Department of Environment Great Lakes and Energy (EGLE)?

    MDLARA (MDPH) - _____ DEQ (DNR) - _____

    What were the results of these visits? Use additional sheets if necessary.

17. List all penalties incurred through non-compliance with asbestos abatement project specifications, including projects designed by firms other than Nova Environmental, Inc., including liquidated damages, overruns in scheduled time limitations and any subsequent resolutions for (Name of Bidder and other entities identified in Question 6 answers). Use additional sheets if necessary.

18. List all contracts over $5,000 completed by (Name of Bidder) since January 1, 2015 (contracts with Troy School District) do not need to be listed in response to Question 18), stating approximate gross cost for each, and the month and year completed. Use additional sheets if necessary.

19. List your major equipment (as of January 1, 2020) which will be available for this contract.

20. List the experience of (Name of Bidder) in work similar to this project. Project references must include: names, addresses, and phone numbers of Building Owner's for whom projects were performed (minimum of four). Use additional sheets if necessary.

21. List bank references.

22. Name of Bonding Company and the name and address of agent.

DUE: 10:00 a.m., Wednesday, February 5, 2020
PROPOSAL: BID 9904 Asbestos Abatement

PROPOSAL FORM

We propose to furnish all material, labor and equipment, as per the specifications, for the Troy School District. and all other services to complete Asbestos Abatement, at Smith Middle School, Hill Elementary School, Larson Middle School, Boulan Park Middle School, Costello Elementary School, Wattles Elementary School, Barnard Elementary School and Athens High School, in accordance with these specifications:

Total Cost – Hill Elementary School	$ _____
Total Cost – Wattles Elementary School	$ _____
Total Cost – Costello Elementary School	$ _____
Total Costs – Athens High School	$ _____
Total Costs – Barnard Elementary School	$ _____
Total Costs – Smith Middle School	$ _____
Total Costs – Boulan Park Middle School	$ _____
Total Costs – Larson Middle School	$ _____
Grand Total	$ _____

BIDDER'S FIRM NAME _____

ADDRESS _____

CITY/STATE _____ ZIP _____

TELEPHONE NUMBER _____ FAX # _____

SIGNED BY _____ TITLE _____

TYPED NAME _____ DATE _____

E-MAIL ADDRESS _____

UNIT COST PRICING

Unit Cost Pricing: All prospective bidders shall be required to provide all inclusive Unit Cost Pricing for removal at all Troy School Buildings for Troy School District.

The Contractor hereby agrees and certifies to comply with all requirements within this Specification and further agrees to accept in payment the below listed unit cost prices for all work regarding Unit Cost Pricing as described in the above detailed Special Conditions, Scope-of-Work - Additional Requirements, Unit Cost Pricing, Time Schedule and Technical Specifications. Below prices to include: all necessary labor wages, overtime, transportation, equipment, materials, disposal, permits, bonds, fees, insurances, profit and overhead. Prevailing Wages shall not apply.

MOBILIZATION CHARGE – per new Scope-of-Work. $_____
(Does not apply when Contractor is already working on site)

ADD

a. removal of pipe fitting insulation (glovebag) $ _____ per fitting

b. removal of pipe insulation (glovebag) $_____ per linear foot

c. removal of pipe fitting insulation (in existing enclosure) $ _____ per fitting

d. removal of pipe insulation (in existing enclosure) $_____ per linear foot

e. removal of carpet $ _____ per square foot

f. removal of floor tile $ _____ per square foot

g. removal of floor tile mastic (grinding) $ _____ per square foot

h. removal of door/frame/caulk $ _____ per door/frame

i. removal of plaster wall/ceiling $ _____ per square foot

j. miscellaneous hourly work $ _____ per hour

k. miscellaneous hourly work (overtime) $ _____ per hour

All Unit Cost Pricing removal shall comply with above stated Additional Requirements and Technical Specifications. Contractor shall be required to clean/decontaminate associated debris/residue and local areas.

Unit Cost Pricing shall remain in effect until January 1, 2021.

The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the Owner or the Owner's Representative in verification of the recitals comprising the Bidder's Qualification Questionnaire.

PRINT COMPANY NAME _____
PRINT NAME _____
TITLE _____
SIGNATURE _____

VENDOR: LIST FIVE RECENT REFERENCES, PREFERABLY SCHOOL DISTRICTS:

School District	Person to Contact	Phone Number
School District	Person to Contact	Phone Number
School District	Person to Contact	Phone Number
School District	Person to Contact	Phone Number
School District	Person to Contact	Phone Number

Interested vendors will note in this space only any additional information, criteria or contingencies affecting their proposal, understanding that this additional information, criteria or contingency may be utilized in the evaluation process and subsequent award.

SWORN AND NOTARIZED FAMILIAL DISCLOSURE STATEMENT
FAMILIAR DISCLOSURE AFFIDAVIT

The undersigned, the owner or authorized office of the below–named contractor (the 'Contractor"), pursuant to the familial disclosure requirement provided to Troy Schools, hereby represents and warrants that, excepts as provided below, no familial relationship exists between the owner or key employee of the Contractor, and any member of the Troy School Board or the Troy School Superintendent. A list of the School District's Board of Education Members and its Superintendent may be found at http://www.troy.k12.mi.us.

List any Familial Relationships:

Contractor:

_____
Print Name of Contractor

By: _____

Its: _____

Subscribed and sworn before me, this _____ Seal:

day of _____, 20 ____, a Notary Public

in and for _____ County, _____

_____
(Signature)
NOTARY PUBLIC

My Commission expires _____

CERTIFICATION OF COMPLIANCE – IRAN ECONOMIC SANCTIONS ACT

Michigan Public Act No. 517 of 2012

The undersigned, the owner, or authorized officer of the below-named Company, pursuant to the compliance certification requirement provided in Troy School District's Request For Proposal, the "RFP", hereby certifies, represents, and warrants that the Company and its officers, directors and employees, is not an "Iran Linked Business" within the meaning of the Iran Economic Sanctions Act, Michigan Public Act No. 517 of 2012 (the "Act"), and that in the event the Company is awarded a contract by Troy School District as a result of the aforementioned RFP, the Company is not and will not become an "Iran Linked Business" at any time during the course of performing any services under the contract.

The Company further acknowledges that any person who is found to have submitted a false certification is responsible for a civil penalty of not more than $250,000.00 or two (2) times the amount of the contract or proposed contract for which the false certification was made, whichever is greater, the cost of Troy School District's investigation, and reasonable attorney fees, in addition to the fine. Moreover, any person who submitted a false certification shall be ineligible to bid on a request for proposal for three (3) years from the date the it is determined that the person has submitted the false certification.

_____

NAME OF COMPANY

_____

NAME AND TITLE OF AUTHORIZED REPRESENTIVE

_____

SIGNATURE

_____

DATE

Acceptance of Proposal

The undersigned agrees to execute a Contract for work covered by this Proposal provided that he is notified of its acceptance within thirty days after the opening of the Proposal.

It is agreed that this bid will not be withdrawn until after forty-five (45) days after receipt of bids.

The undersigned affirms that the bid was developed without any collusion, undertaking, or agreement, either directly or indirectly, with any other bidder(s) to maintain the prices of indicated work or prevent any other bidder(s) from bidding the work.

BIDDER'S FIRM NAME _____

BUSINESS ADDRESS _____

_____

TELEPHONE NUMBER _____

FAX NUMBER _____

BY (SIGNATURE) _____

PRINTED NAME _____

TITLE _____

SIGNED THIS _____ DAY OF _____, 20 _____

E-MAIL ADDRESS _____

TECHNICAL SPECIFICATIONS FOR ASBESTOS ABATEMENT
- GENERAL ABATEMENT PROCEDURES -

The following are technical specifications which shall be strictly enforced by **Troy School District**, hereafter referred to as the "Owner" or "Building Owner". The Asbestos Abatement Contractor will hereinafter be referred to as the "Contractor" for the asbestos abatement project and the Project Managers/Air Monitors will hereinafter be referred to as the "Owner's Consultant" or "Owners Representative".

I. INITIAL REQUIREMENTS

1. General Terms

1.1 By submitting a bid, the Contractor acknowledges that he has investigated and satisfied himself as to:

1.1.1 The conditions affecting the work, including but not limited to the physical conditions of the site which may bear upon site access, handling and storage of tools and materials, access to water, electricity or other utilities that otherwise may affect performance of required activities;

1.1.2 The character and quantity of all surface and sub-surface material or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including exploratory work done by the Building Owner or a designated Consultant, as well as information presented in drawings and specifications included with this specification. Any failure by the Contractor to acquaint himself with available information will not relieve him of the responsibility of determining properly the difficulty, safety concerns or cost of successfully performing the work. The Building Owner and/or the Owner's Consultant is not responsible for any conclusions or interpretations made by the Contractor on the basis of the information made available by the Building Owner and/or the Owner's Consultant.

1.1.3 The methods and procedures detailed within the technical specifications of this bid package are merely illustrative of the procedures to be utilized on the asbestos abatement projects for the Owner. Other procedures, which are the equivalent of those described, are encouraged at the option of the Contractor but are always subject to the Owner and/or the Owner's Consultant approval.

1.2 The Contractor shall furnish all labor, materials, services, insurance, and equipment necessary to perform the asbestos abatement activities contemplated by this specification.

1.3 Additional work in the form of change orders, written or verbal agreements must also be completed in accordance with these Technical Specifications for Asbestos Abatement as well as all other sections of this specification document.

2. Pre-Start Meeting

2.1 Prior to commencement of work, the Contractor shall meet with the Owner and Owner's Consultant to present and review the items listed below. At that time, the Contractor shall designate at least one "competent" (as described by OSHA 1926.1101{o}) individual who shall be on-site throughout the project with full authority to act on the Contractor's behalf and this person shall attend the pre-start job meeting. This meeting is arranged to discuss and set procedures to be followed throughout the performance of the contract. At this meeting and to be included in the logbook, the Contractor shall provide:

2.1.1 Proof of Contractor licensing to conduct asbestos abatement activities in the State of Michigan in accordance with Act 135 P.A. 1986, as amended, (Asbestos Abatement Licensing Act) and any subsequent State of Michigan Acts.

2.1.2 A list of all employees who will participate in the project, including delineation of experience and assigned responsibilities (including subcontractors' employees who may enter the work area).

2.1.3 Proof that the "competent person" to be responsible for the execution of this project has had training in accordance with 29 CFR, 1926.1101 and the Michigan Department of Consumer & Industry Services. THIS PERSON SHALL BE ON SITE AT ALL TIMES.

2.1.4 Proof that employees who will work on this project have had a minimum of twenty-four (24) hours of training in accordance with 40 CFR, Part 763, Subpart E.

2.1.5 Proof that employees who work on this project have had proper medical screening as required by OSHA 29 CFR, Part 1926.1101 (M) (1) (2) (3) (4) and (N) (3) and 29 CFR 1910.20.

2.1.6 Proof that employees who work on this project have had proper respirator fit testing for all personnel who wear negative pressure respirators (when allowed).

2.1.7 Copies of all worker's Michigan State Accreditation "Cards" must be provided to the Owner's Consultant prior to being allowed within the project area. For any employee(s) who have approval but do not yet have cards in their possession; the Contractor must provide a signed statement (on company letterhead) stating that state approval has been given to that/those employee(s). This statement must include the name of the state employee who granted verbal approval. In addition to this letter, the Contractor must provide a copy of the employee's training certificate, appropriate fit test(s) and doctor's written opinion.

2.1.8 A detailed written explanation of the following items:

2.1.8.1 Preparation of the work area.
2.1.8.2 Decontamination procedure for personnel, work area and equipment.
2.1.8.3 Abatement methods and procedures to be utilized.
2.1.8.4 Procedures for handling and disposing of waste materials including the name and address of the landfill to be used.
2.1.8.5 Emergency Planning Procedures (see Section 8.0 of these specifications).
2.1.8.6 A sequence of work and a performance schedule.

The items discussed in this section must be presented at the Pre-Start Meeting and a copy must also be kept in a log book which will be in view at the job site at all times. The items listed in the "Regulations" section of this

specification must also be included in this log book. Proof of Contractor Licensing and Emergency Procedures as outlined above must also be posted in view near the decontamination chamber entrance as well as the notification addressed in Item 5 and the sign-in sheet addressed in Item 10 of these specifications.

2.2 At this meeting the Contractor and Owner shall agree on the existing conditions of the work area and the areas immediately surrounding this area.

3. Log Book/Regulations

3.1 The Contractor shall have the following items in view at the job site at all times. These items must be kept in a log book (three (3) ring binder) as described in the "Pre-Start Meeting" section and include all items stated in 2.1.

3.1.1 OSHA Regulation 29 CFR, Part 1926.1101.
3.1.2 Environmental Protection Agency 40 CFR, Part 61 Subpart M: (National Emission Standard for Hazardous Air Pollutants).
3.1.3 Environmental Protection Agency 40 CFR, Part 763.
3.1.4 A complete set of these specifications.
3.1.5 Appropriate MSDS's.

3.2 Whenever during the course of this contract the Contractor, his subcontractor or his employees encounter asbestos, the Contractor shall handle, remove, and dispose of the asbestos strictly in accordance with the rules, guidelines, and regulations specified by EPA, OSHA, the Michigan Department of Consumer & Industry Services, the Department of Environmental Health, and all other applicable regulatory agencies. The most recent edition or revision of any relevant regulation, standard, document or code shall be controlling. Where conflict among the requirements or with these specifications exists, the most stringent requirements shall be utilized.

4. Submittals to Owner's Representative/Consultant

4.1 The following shall be submitted for all employees who will participate in the project, to the Owner's Representative before project begins.

4.1.1 Copy of Employee Training Certificates.
4.1.2 Copy of MDPH accreditation cards or letter by Contractor with verbal acceptance from MDPH (see 2.1.7).
4.1.3 Copy of dated fit test.
4.1.4 Copy of doctors written opinion.

5. Notification Procedures

5.1 The Contractor will make all necessary notifications to the appropriate federal, state and local agencies.

5.2 The National Emission Standards for Hazardous Air Pollutants (NESHAP), Asbestos regulation 40 CFR 61, Subpart M, requires that in a facility being renovated, if the combined amount of regulated asbestos containing materials being removed is at least 80 linear meters (260 linear feet) on pipes or at least 15 square meters (160 square feet) on other facility components, or is at least 1 cubic meter (35 cubic feet) off of facility components where the length or area could not be measured previously, a ten (10) working day notification must be submitted to the EPA and the Michigan Department of Environmental Quality. All the requirements of 40 CFR 61.145 apply, including but not limited to the following:

5.2.1 An indication of whether the notice is an original or a revised notification.

5.2.2 Name, address, and telephone number of the facility Owner and operator and the Owner or operator of the asbestos removal firm.

5.2.3 Type of operation: demolition or renovation.

5.2.4 Facility description including at least the following:

5.2.4.1 Size (square meters (or square feet) and number of floors).
5.2.4.2 Age.
5.2.4.3 Present and prior uses.

5.2.5 Procedure, including analytical methods, employed to detect the presence of asbestos-containing material.

5.2.6 Estimate of the approximate amount of regulated asbestos-containing material to strip using the appropriate units, either linear meters (linear feet) for pipes, square meters (square feet) for other facility components, or cubic meters (cubic feet), if the asbestos-containing material will be stripped from the facility components without being measured.

5.2.7 Estimate of the amount of Category I and Category II non-friable asbestos-containing materials in the affected part of the facility that will not be removed before demolition.

5.2.8 Location and address, including building number or name and floor or room number, if appropriate, street address, city , county, and state of the facility being demolished or renovated.

5.2.9 Scheduled starting and completion dates of asbestos removal work (or any other activity, such as site preparation that would break up, dislodge, or similarly disturb asbestos material) in a demolition (with the exception of government ordered demolitions) or renovation, and scheduled starting and completion dates of the demolition or renovation.

5.2.10 The beginning and ending dates of the report period for planned renovation operations involving individual non-scheduled operations.

5.2.11 Description of planned demolition or renovation work including the demolition and renovation techniques to be used and description of the affected facility components.

5.2.12 Description of work practices and engineering controls to be used to comply with the requirements of this standard.

5.2.13 Name and location of the waste disposal site where the asbestos-containing waste material will be deposited.

5.2.14 Certification that only persons trained as required in paragraph (C) (8) will supervise the stripping and removal of asbestos-containing material (effective one (1) year after promulgation).

5.2.15 Description of procedures for handling the finding of unexpected regulated asbestos-containing material or Category II non-friable asbestos-containing material that has been crumbled, pulverized, or reduced to powder.

5.2.16 For government ordered demolitions, include the name, title, and authority of the government representative ordering the demolition, the date the order was issued, and the date the demolition was ordered to begin by the State or local government representative. Attach a copy of the order to the notification.

5.2.17 For emergency renovations, include the date and hour the emergency occurred, a description of the event and an explanation of how the event has caused unsafe conditions or would cause equipment damage or unreasonable financial burden.

5.2.18 Name, address, and telephone number of the waste transporter.

5.3 Section 220(1)(c) of Act 135 of the Public Acts of 1986, as amended, requires an asbestos abatement Contractor provide the Michigan Department of Consumer & Industry Services a minimum ten (10) day prior notification which includes items under 5.2 (above), in accordance with their requirements for any project that exceeds ten (10) linear feet or 15 square feet or both of friable asbestos-containing material.

5.4 All other agency notifications must be made on a timely basis as deemed necessary by those agencies.

5.5 Payments of all applicable regulatory required fees and/or charges are the sole responsibility of the Contractor.

II. ABATEMENT REQUIREMENTS

6. Worker's Dress and Safety Equipment

6.1 Worker's clothing shall be provided by the Contractor as required by current OSHA regulation. Rips and tears in the coveralls shall be repaired, or else the coveralls shall be replaced.

6.2 The Contractor shall provide protective clothing for the Owner's Consultant, and inspection personnel.

6.3 Worker's clothing shall consist of disposable full body coveralls (coveralls should be of Tyvek material - disposable paper), underwear, head covers, gloves, and boots. The Contractor shall supply whatever safety gear is necessary to protect those people authorized to enter the work site, including if necessary, hard hats and eye protection. OSHA approved footwear is mandatory while at the project site (inside and outside of the enclosure). No street clothing shall be worn under coveralls.

6.4 The Contractor shall have an appropriately rated fire extinguisher in the dirty room and clean room of each enclosure.

6.5 The Contractor shall adhere to all OSHA and other regulatory agency requirements regarding the safety of the employees, including but not limited to:
6.5.1 Fire Safety
6.5.2 Ladders
6.5.3 Scaffolding
6.5.4 Confined Spaces

7. Respiratory Protection

7.1 Respirator protection for workers shall be provided by the Contractor as required by current OSHA regulation.

7.2 Respiratory protection consisting of powered air purifying respirators (P.A.P.R.) with full-face piece and HEPA filters will be provided and used by all asbestos abatement workers. Half-face cartridge respirators may be used for setting up, tearing down, Pre-cleaning and post cleaning work area(s) with the approval and/or at the discretion of the Owner's representative. Workers will always wear a respirator when in the work area. While wearing the respirator, workers will not pull the respirator away from his/her face to talk, smoke, eat, or drink. No workers will be permitted to wear a half-face respirator unless clean shaven. If half-face cartridge respirators are used as described above, then a qualitative fit test for each employee engaged in this work must be completed. These fit tests must be completed in accordance with OSHA regulations.

7.3 Combination cartridges (Asbestos and Organic vapor) are required during the removal of mastic materials.

7.4 An adequate supply of cartridges and respirators must be on-site and available for workers (regardless of respirator type).

8. Emergency Planning

8.1 Emergency planning shall be developed prior to abatement initiation and agreed to by the Contractor and the Owner or Owner's Representative. All plans must be detailed in writing and posted at the job site (in view near the decontamination chamber entrance).

8.2 Emergency planning shall include written procedures for the following emergencies:

8.2.1 The Contractor must explain his contingency plan for the possibility of the negative air filtration devices blowing a fuse, tripping a circuit breaker, or losing power.

8.2.2 The Contractor must explain his contingency plan for the possibility that a disposal bag may break or leak.

8.2.3 The Contractor must explain his contingency plan for the possibility of an injury.

8.2.4 For non-life-threatening situations - employees injured or otherwise incapacitated shall decontaminate following normal procedures with assistance from fellow workers if necessary, before exiting the work place to obtain proper medical treatment

8.2.5 For life-threatening injury or illness, worker decontamination shall take least priority after measures to stabilize the injured worker, remove him/her from the work place and secure proper medical treatment.

8.2.6 The Contractor must detail emergency evacuation routes in case of fire, explosion, or toxic atmosphere, etc.

8.3 The Contractor shall take all necessary precautions and actions to protect his employees, subcontractors, Owner's Representatives, Owner's Consultants, government inspectors, general public, and the building and structure from exposure to asbestos.

9. Preparation of Work Area for Asbestos Abatement

9.1 The Owner shall attempt to furnish utility services for the Contractor's use, including electrical outlets (25 ampere) and water taps in or adjacent to the work area in sufficient quantities and located such that the Contractor can use them for equipment and abatement/decontamination practices. However, should such utility access not be available, the Contractor is solely responsible for the provision of the same. In the event of power failure (regardless of fault), the Contractor is responsible for continuing work using adequate generator power.

9.2 Danger signs will be posted at a distance sufficiently far enough from the asbestos abatement work area to permit an employee to read the sign and take necessary protective measures to avoid exposure. Signs shall be in accordance with EPA and OSHA regulations. All possible entrances to the work area shall be posted. Additional signs will be placed at areas designated by the Owner's Consultant.

9.3 The building personnel shall attempt to shut down and lock out all heating, cooling, and air conditioning system components that are in, supply, or pass through the work areas. Should building personnel be unavailable or unable to so do, it is the sole responsibility of the Contractor to do so. The Contractor will seal all intake and exhaust vents in the work area with tape and 6-mil polyethylene, as well as any seams in system components that pass through the work area. All affected heating, ventilation and air conditioning system filters will be removed and placed in 6-mil polyethylene bags for disposal as asbestos waste.

9.4 The Contractor may be required to Pre-clean all movable objects within the work area using a HEPA filtered vacuum and/or wet cleaning methods. Pre-cleaning will be conducted by the Contractor as deemed necessary by the Owner or the Owner's Consultant. After cleaning, these objects shall be removed from the work area by the Contractor and carefully stored in an uncontaminated location as designated by the Owner's Consultant. (Carpeting, drapes, clothing, furniture, and other fabric items contaminated with asbestos may be required to be disposed of as asbestos contaminated waste.)

9.5 The Contractor may be required to Pre-clean all fixed objects in the work area using HEPA filtered vacuums and/or wet-cleaning methods. Pre-cleaning will be conducted by the Contractor as deemed necessary by the Owner or the Owner's Consultant. The extent of the Pre-cleaning will be determined by, but not limited to the following factors: the particular application of the asbestos-containing material, its present condition, friability, asbestos content, visible debris and the type of surface to which the material is applied

9.6 Where doors or other such building fixtures are removed by the Contractor prior to abatement activities, the Contractor is responsible for replacing doors and/or fixtures upon completion of abatement. Each door and/or fixture shall be sufficiently marked or otherwise identified by the Contractor to insure replacement in the proper location.

9.7 The Contractor shall seal all windows, doorways, elevator openings, corridor entrances, drains, ducts, grills, grates, diffusers, skylights and all other openings between the work area and the areas outside the work area with, at a minimum, 4-mil polyethylene sheeting.

9.8 Walls will be covered with at least one layer of 4-mil polyethylene sheeting. Walls that are non-porous and will not be damaged by water, surfactant, or encapsulation do not necessarily need protection. They can be decontaminated using HEPA vacuums and wet cleaning techniques. The Owner or the Owner's Consultant will advise the method deemed most appropriate and the Contractor shall comply with the method chosen.

9.9 Floors shall be covered with at least three layers of 6-mil polyethylene sheeting.

9.10 Non-waterproof tape may not be used for attaching polyethylene sheeting or for sealing polyethylene leaks. High quality duct tape or its equivalent shall be used for this purpose.

9.11 The Owner or the Owner's Consultant must approve the decontamination chamber location, Contractor parking, dumpster location and entrances that the Contractor will use for the movement of supplies and personnel.

9.12 Equipment storage, bathroom usage designation, foreman's office and designated break areas (if available) will be determined by the Owner or the Owner's Consultant. Only project areas and designated areas are to be used.

9.13 No asbestos abatement shall begin until the Owner's Consultant has inspected and approved the enclosure built around the work area.

10. Decontamination

10.1 The Contractor will construct decontamination facilities in a predesignated area which will house the clean room, shower room, dirty room, and, when feasible, an equipment room. This facility will be, at minimum, a three-chambered with an entrance airlock with shower facilities in its central chamber. The dimensions of these chambers will be adequate for the number of men needed for the project. At least two layers of 6-mil polyethylene will be placed on the floor of the entire decontamination chamber, to prevent leakage of water from the showers. The walls, floor, and ceiling covering of the airlock construction will be seamed to each other in a fashion making them air and water tight. One end of this construction will exit to the clean area outside the containment barrier walls. The other end of this construction will exit inside or at the containment barrier walls. Except for these doors, all three chambers will be partitioned from each other with air and water tight flaps made of 6-mil polyethylene. Four (4) flapped doors will be constructed with two (2) layers of 6-mil polyethylene. One door will be at the entrance of the clean room, one door at the entrance to the shower, one door at the entrance to the dirty room, and the last door at the entrance to the work area. Both layers will be attached to the side of the door which faces toward the work area. The first layer of polyethylene will be attached at the top, bottom, and sides of the door opening. It will be slit down the middle. The second layer of polyethylene will be attached only at the top of the door on the dirty side of the door opening. It will be wider than the slit made in the first layer and will hang like a flap. When air is drawn from the clean side of the airlock into the work area it will cause the door flaps to lift. It air attempts to move from the work area end of the airlock toward the clean end or outside of the enclosure, it will force the flaps shut, closing the slit in the first polyethylene layer and thus stopping the air flow. All four (4) door openings or flaps will be constructed to allow clean air into the enclosure, but stopping air from exiting the enclosure. The central chamber will contain shower(s). Each shower stall will sit in a pan with at least six-inch sides. Suitable hoses will be used to supply hot and cold water to the showers. A sump pump or other suitable and safe device will be used to filter and dispose of the shower waste water through a special HEPA filter. No water may leave the work area without undergoing HEPA filtration or being treated as asbestos waste. Black polyethylene sheeting may be used for privacy on the decontamination facility.

10.2 The Contractor may construct a two-chambered decontamination airlock to serve as a debris port. All asbestos waste will be moved out through this port or through the decontamination unit. The chamber will be constructed in the same manner as the main decontamination airlock, but excluding the shower facility. As each bag is filled, it will be set into the first room for temporary storage. Three workers will be needed to complete the waste decontamination process. A worker in the first room will wash and hand the bag to a worker in the second room where he/she will then double-bag the material. The second worker will then hand the double-bagged material to a third worker who loads the material on

the transport vehicle (airlocks must exist between each room, as in the main decontamination facility). If a debris port is not possible, all precautions should be taken when hauling waste through the main decontamination facility, where all bags will go through the decontamination process. If a separate decontamination facility is constructed it shall be sealed while not in use.

10.3 All workers, without exception, will change street clothes in designated areas (clean room) prior to the start of each days work. Lockers or acceptable substitutes will be provided by the Contractor for street and work clothes. After workers are properly dressed in protective gear, they will walk through the shower and dirty room into the work area.

10.4 At the end of the work shift, and anytime the worker leaves the work area, he/she will decontaminate by removing all contaminated work clothes in the dirty room, but leaving his/her respirator on. He/she will then proceed to the showers and properly wash. Respirators will be worn while showering and remain on until the respirator is clean of asbestos. The cartridges will then be removed and disposed of as asbestos waste and the respirator stored in the clean room. Workers will shower before breaks, lunch and at the end of each day's work. Hot water, towels, soap and hygienic conditions shall be provided by the Contractor.

10.5 Adequate toilet facilities may be located outside of the work area and decontamination for this purpose will be employed. Where such facilities do not exist, the Contractor will provide portable service.

10.6 No smoking, eating or drinking is to take place in the work area. Prior to smoking, eating, drinking or using toilet facilities, workers will fully decontaminate by showering. A new coverall will then be used to re-enter the work area.

10.7 Procedures developed for evacuation of injured workers (see 6.3, Emergency Planning) will be used. Aid for a seriously injured worker will not be delayed for reasons of decontamination.

10.8 Worker's footwear will remain inside the work area until the completion of the job.

10.9 All waste water must be passed through a HEPA filter or collected in an air tight container and disposed of as asbestos waste.

10.10 All Contractor's tools and supplies, including large items such as ladders and scaffolding must be properly decontaminated when removing them from the project area.

11. Methods of Asbestos Abatement

NOTE: The use of supplies, equipment, tools, etc., owned, rented or otherwise in the possession of the Building Owner is strictly prohibited.

11.1 The asbestos material will be sprayed with either removal encapsulant or "amended water" (which contains an additive to enhance penetration). A fine spray of either solution will be applied to prevent fiber disturbance preceding the removal of the asbestos material. The asbestos will be sufficiently saturated to prevent emission of airborne fibers in excess of the exposure limits prescribed in the OSHA standards referenced in these specifications. The Contractor shall not, however, allow excessive water to accumulate in the work area. If removal encapsulant water is not used, surrounding areas will be periodically sprayed and kept wet to facilitate removal with minimum fiber release. A high humidity will be maintained in the work area to assist in fiber settling. If at any time the Owner's Consultant determines the material is not kept adequately wet, misters and/or sprinklers will be mandatory.

11.2 Removal of asbestos material will be done in manageable sections with two-person teams (if needed). Material will be removed as intact sections or components whenever possible and carefully lowered to the floor.

11.3 The waste material will be packed in labeled 6-mil polyethylene bags (held within 55 gallon drums with the required EPA & OSHA labels where appropriate) prior to starting the next section to prevent the material from drying. Double bagging will always be used. Bags shall not be over-filled and will be securely taped or sealed at the top to prevent accidental opening or leakage during removal, storage and transport. All bags and/or drums shall have all appropriate warnings and labels attached to them.

11.4 Large components removed intact will be wrapped in two layers of 6-mil polyethylene sheeting secured with tape properly labeled for transport to the landfill. Such packaging shall have all appropriate warnings and labels attached to them.

11.5 When removal of building materials (electrical, light, duct work, etc.) is necessary, the Contractor shall develop drawings indicating existing materials and their exact locations.

11.6 Personnel knowledgeable and experienced in electrical work must be used when installing or making connections to any electrical components within the facility, as well as when removing and/or replacing lights.

11.7 All ceiling demolition, including but not limited to wires, hangers, steel bands, nails, screws, metal lath, tin sheeting, and other objects may be required to be treated as asbestos waste. These materials have sharp edged components that will tear the polyethylene bags and sheeting, thus, this waste must be placed into fiberglass or fiberboard drums for disposal and labeled appropriately.

11.8 No bags shall be thrown or dropped at any time.

11.9 All containerized asbestos waste that is stored on-site (if allowed) shall be properly labeled and placed in a locked or secured location until ready for final disposal. Labels shall be of sufficient size and contrast to be readily visible and legible. The sign shall read:

"Danger
Contains Asbestos Fibers
Avoid Creating Dust
Cancer and Lung Disease Hazard"

11.10 All asbestos abatement projects will be completed with the use of HEPA air filtration devices. Each unit must have three filters, including a HEPA filter capable of removing minute asbestos fibers. Each unit has ducts that must be exhausted to the outside air. Inlet and outlet ports of the air filtration devices must be covered with tape and 4-mil polyethylene sheeting when not in use. HEPA air filtration devices will be set up so that the air in the enclosure is drawn away from the abatement worker. Removal and cleaning operations will always move towards the air filtration devices. HEPA air filtration devices will be run until the completion of the project.

11.10.1 The Contractor will provide and maintain a pressure differential strip gauge. It will be activated prior to removal of any building material and continue operating until the final clearance results have been determined. Placement of the differential strip gauge is subject to the approval of the Owner's Consultant. The Owner's Consultant may, at their discretion, utilize additional pressure differential strip gauges or other devices to measure the pressure differential.

11.10.2 A minimum reading of 0.020 inches of water on a differential pressure gauge shall be maintained at all parts of the enclosure.

11.10.3 Sufficient negative pressure will be used in the enclosure to evacuate the air once every 15 minutes (minimum).

11.10.4 Smoke tubes shall be used daily by the Contractor to test for leaks and breeches in the containment.

11.11 All air filtration devices must be ducted to the outside of the building from a position that is securable. Flexible duct will be used and placed at a location approved by the Owner's Representative.

11.12 All gross amounts of asbestos debris shall be cleaned up, bagged, and sealed at the end of each working day.

11.13 The Contractor shall transport materials to the ground via leak-tight chutes or such other containers if the material is being removed or stripped more than 50 feet above ground level and not removed as units or in sections.

11.14 A thick encapsulant such as "VIAC" shall be applied to any exposed pipe insulation ends leading away from the enclosure area, regardless of material make-up.

11.15 Only vacuums and air filtration devices with "HEPA" filters will be allowed. No "shop-vacs", homemade hybrid vacuums or air filtration devices will be allowed on site.

12. Non-Friable Material

12.1 Under certain circumstances, asbestos-containing materials may be removed in a non-friable state. The circumstances which will allow such removal will be determined by and at the sole discretion of the Owner and/or the Owner's Representative.

12.2 Non-friable asbestos-containing floor tile may be removed utilizing infra-red heat machines. The following procedures shall be strictly adhered to.

12.2.1 Critical barriers will be established over all vents, doors or other openings between the work area and other areas of the facility. These barriers shall be constructed so as to prevent any objectionable smoke or odor from penetrating outside the work area.

12.2.2 The removal of the asbestos-containing floor tile will be conducted with the use of HEPA air filtration devices. Each unit must have three filters including a HEPA filter. Each unit shall be exhausted to the outside air. Inlet and outlet ducts of the air filtration devices must be covered with tape and at least 4-mil polyethylene when not in use. The HEPA air filtration devices will be activated prior to any removal operations being commenced and will remain running 24 hours per day until the completion of the project.

12.2.3 All air filtration devices must be ducted to the outside of the building. The area where the duct leaves the building must be made so as to be secure and protected from vandalism and the elements. Flexible ductwork will be used and shall be placed at locations approved by the Owner and/or the Owner's Representative.

12.2.4 The Contractor has sole responsibility to arrange for the arrival and placement of the infra-red heat machine(s) within the facility. Additionally, the Contractor shall have at least one individual experienced in electrical work who can make whatever electrical connections to power the machines. It is not the Owner's responsibility to make any electrical connections. Any involvement by the Owner's personnel will result in backcharges to the Contractor.

12.2.5 The Contractor is responsible for the provision of charged and suitably rated fire extinguishers within the work area(s). The number necessary shall be determined in part by the size of the work area and the number of infra-red heat machines in use. The Owner and/or the Owner's Representative may require additional extinguishers at their sole discretion.

12.2.6 The Contractor shall take special care to ensure that the infra-red heat machine(s) are not left on one area of floor tile so as to burn the floor tile and cause excessive odor and smoke.

12.2.7 The floor tile will be carefully scraped up off the underlying flooring utilizing such methods as necessary. Special care should be taken so as to be sure that the floor tile is removed in whole pieces. Chipping the floor tile is strictly forbidden. The floor tile must remain in a non-friable state at all times.

12.2.8 As the floor tile is removed, the Contractor's personnel shall carefully place the tile into fiberboard barrels. Other types of materials for the barrels will be considered at the discretion of the Owner's Representative. However, barrels shall be required to hold the tile being removed. Exceptions to this policy will not be considered or allowed

12.2.9 Each barrel shall be labeled and disposed of in strict compliance with all applicable requirements as set forth in Section 16 et. seq. of these Technical Specifications. The Owner and/or the Owner's Representative shall make the decision in its/their sole discretion whether a requirement is applicable.

12.3 Non-friable asbestos-containing transite material may be removed at times utilizing, at a minimum, the following procedures. The circumstances under which such removal will be allowed and exactly which procedures shall be utilized shall be determined by and at the sole discretion of the Owner and/or the Owner's Representative.

12.3.1 The transite must remain in a non-friable state throughout the removal process. special care must be utilized when removing the material from either the underlying substrate or from whatever type of frame is holding the material.

12.3.2 The material should be wetted thoroughly. Special care should be taken with the edges and/or other protrusions through the material (i.e. screw holes, nail holes, etc.)as soon as they are exposed. The wetting process needs to be repeated as necessary to maintain the wetted condition and to prevent fibers from being released.

12.3.3 Polyethylene drop cloths should be utilized whenever possible to enable material to be more easily cleaned.

12.3.4 Any items removed from the transite material shall be disposed of as asbestos waste. Such items would include but not be limited to screws, nails and other such fasteners

12.3.5 The material shall be wrapped in 6-mil plastic and securely sealed with waterproofed duct tape. This wrapped "package" shall then be wrapped again and securely sealed.

12.3.6 Certain transite materials may be more economically wrapped by utilizing 6-mil polyethylene asbestos disposal bags. In such instances, the material shall be double-bagged with each bag being sealed individually with high quality duct tape.

12.3.7 Any polyethylene drop cloths or other plastic shall be wrapped and sealed as indicated in Section 12.3.6 of these Technical Specifications.

12.3.8 Should the removal of the transite material be conducted within the confines of a facility, critical barriers may have to be established over all vents, doors or other openings between the work area and other areas of the facility.

12.3.9 The Contractor shall ensure that its employees strictly comply with Sections 6, 7, and 8 of these Technical Specifications regarding worker protection, respiratory protection, and emergency planning. Should additional steps need to be taken so as to prevent the exposure to asbestos fibers for the facility, facility occupants or other workers at the site, the Contractor shall promptly comply with the requests of the Owner and/or the Owner's Representative. The decision to require any additional measures to be taken will be at the sole discretion of the Owner and/or the Owner's Representative.

12.3.10 Each "package", bag or other container with transite material within shall be labeled and disposed of in strict compliance with all applicable requirements as set forth in Section 16 et. seq. of these Technical Specifications. The Owner and/or the Owner's Representative shall make the decision in its/theirs sole discretion whether a particular requirement is applicable.

12.3.11 Any areas that may be exposed between the outside and inside of the facility or any areas within the facility shall be sealed by plywood or such other material so as to secure the building both from the elements and vandalism. The Contractor shall be responsible for the security of the area where the work was performed or is being performed.

13. Glove Bag Technique

13.1 A solution of amended water shall be prepared (according to manufacturer's instructions) for the air-less sprayer.

13.2 The glove bag should be fitted to the size of the pipe by cutting the top and the top sides of the glove bag. A polyethylene drop cloth shall be placed under the glove bag work area.

13.3 The following tools and supplies at a minimum shall be placed inside the glove bag in the tool pouch: utility knife, wire brush, rags, container with thick encapsulate (such as Childer's VIAC). Additional items or tools shall be placed inside dependent on the particular job.

13.4 The glove bag is then attached to the pipe by folding the open edges together (making a top seam above the pipe) and securely sealing them with duct tape, as well as sealing both cut sides around the pipe.

13.5 The bottom seam of the glove bag may be sealed with duct tape to prevent any leakage from a defective bag.

13.6 Insert the wand of the airless sprayer through the glove bag by making a small hole in a location that allows the wand to move freely in the bag, and tape the polyethylene tightly. (There may be a prefabricated hole, especially for the sprayer.)

13.7 Insert the nozzle of the HEPA vacuum through the appropriate opening (prefabricated hole) and tape the polyethylene tightly around the nozzle. The vacuum (turned on), in association with a flap, will be used throughout the duration of the glove bag removal project in order to establish proper negative pressure within the glove bag.

13.8 Place your arms into the glove bag appendages and thoroughly wet the pipe insulation.

13.9 Using the knife, cut through the asbestos at each end of the section to be removed. The section to be removed is then slit from end to end (keeping material wet while cutting).

13.10 The insulation is then lifted off the pipe and lowered carefully to the bottom of the glove bag.

13.11 Using the wire brush, towels and water, the pipe shall be thoroughly cleaned.

13.12 Wet the entire inside of the bag with specific attention to the polyethylene around the pipe and the arms and sockets.

13.13 Following a visual by the Owner's Consultant, the exposed end of the insulation remaining on the pipe shall be encapsulated, as well as the bare pipe.

13.14 Put all tools and supplies into wet cleaned arm socket by pulling socket inside out.

13.15 Tape the flap and collapse the bag by sucking all of the air out of the bag using the HEPA vacuum.

13.16 Tape the arm close to the tools (tape it in two locations with a one-inch space between the taped spots). Cut between the taped spots and put the enclosed tools into a bucket of water.

13.17 Remove the sprayer wand and seal the opening.

13.18 Remove the vacuum nozzle and seal the opening.

13.19 The glove bag should be squeezed tightly (as close to the top as possible) twisted, and sealed with duct tape.

13.20 Cut the bag off the pipe above the taped area and put the glove bag and drop cloth into an asbestos disposal bag, as well as the remaining portion of the bag on the pipe.

13.21 Clean the tools in the bucket of water and dispose of the water and glove bag remains in the asbestos disposal bag. The clean tools should be placed inside a polyethylene bag for future use.

UNACCEPTABLE PRACTICE USING THE GLOVE BAG TECHNIQUE

13.22 Glove bags shall not be slid down the length of the pipe. Only insulation within the dimensions of the glove bag may be removed.

13.23 The Owner's Consultant shall determine when the glove bag technique to be used is acceptable.

14. Post Abatement Clean-Up

14.1 After completion of all removal and stripping, all surfaces within the work area will be wire-brushed and/or wet-wiped to remove all visible residue.

14.2 All visible accumulations of asbestos-containing materials and asbestos-contaminated debris will be removed and containerized. Durable plastic shovels must be used in place of metal shovels in order to minimize damage to floor sheeting.

14.3 Tools will be decontaminated by removing any gross amounts of asbestos from them in the work area. Following this, they will be wiped off in the dirty room and then sprayed down with water in the shower area. All hand tools will then be sealed in plastic bags. Workers will wear protective equipment throughout this process. (Where space allows, a separate equipment room will be built inside the enclosure. This will eliminate the accumulation of gross asbestos on tools and equipment and will facilitate decontamination of these items.) No tools or equipment will be allowed to leave the work area without being decontaminated.

14.4 Following the cleanup of visible accumulations, the polyethylene sheeting will be removed from the walls and ceiling, and the interior layer will be removed from floors. At this point any asbestos that has fallen behind the polyethylene will be cleaned up. However, all barriers to doors, windows, and other critical barriers to clean areas will be left in place until final air checks are completed.

14.5 Following clean up of visible accumulations of asbestos waste, the entire area will be wet-wiped. During setting/drying periods no entry, activity, or ventilation into the work area will be allowed. However, the HEPA air filtration devices will continue to operate.

14.6 All removed polyethylene, tape, cleaning material, and contaminated clothing will be placed in 6-mil polyethylene bags or polyethylene lined drums, sealed and labeled as described above for disposal as asbestos waste material.

14.7 Only clear drying encapsulants and amended solutions may be used.

14.8 Prior to final clearance sampling, all items will be removed from the dirty room.

15. Acceptance Criteria for Area Re-Occupancy

15.1 The Contractor will clean all work site surfaces in a proper manner with appropriate equipment in accordance with Item 13 of these specifications.

15.2 After completion of the cleaning operations, the following activities shall be performed:

15.2.1 A complete visual inspection to insure dust free conditions. The Contractor shall tour and inspect the entire work area, including but not limited to: ventilation openings, doorways, windows, and other openings; he/she shall look for debris from any sources, residue on surfaces, or any other matter. If any debris or residue is found, repeat the final cleaning until visual inspection is passed. It shall be the right of the Owner's Consultant(s) to accompany the Contractor during the inspection and determine if additional cleaning is necessary.

15.2.2 A clear drying encapsulant will be used to seal all surfaces of the work area. Non-clear drying encapsulants can only be used upon approval by the Owner and/or Owner's Consultant.

15.3 Air samples will be collected following completion of all cleaning operations as specified in 14.1 - 14.7, following encapsulation as specified in 15.2.2, and after the work area is completely dry.

15.4 Post-abatement air samples collected from an area in which less than or equal to 160 square feet, or 260 linear feet of ACBM have been removed, enclosed or encapsulated, may be analyzed using Phase Contrast Microscopy (PCM). If more than 160 square feet, or 260 linear feet of ACBM are removed, or encapsulated the post-abatement air samples collected must be analyzed by Transmission Electron Microscopy (TEM).

15.4.1 Transmission Electron Microscopy (TEM) Clearance
When the work site has become completely dry, the Owner's Consultant shall collect at least ten post-abatement air samples according to 40 CFR, Part 763 (AHERA Regulations). At least five samples shall be taken in the abatement site; and five samples shall be taken at locations representative of air entering the abatement site. A minimum of 1,200 liters per air sample and a maximum of 1,800 liters per air sample shall be collected using aggressive sampling techniques. If the post-abatement test reveals fiber levels in excess of 0.01 fibers/cc, and/or if the Z-Test analysis in accordance with AHERA does not pass, the cleaning and measurement operations specified in Sections 13 and 14 of these specifications will be repeated until the area is in compliance. Performing the Z-Test analysis is solely at the discretion of the Owner's Consultant.

15.4.2 Phase Contrast Microscopy (PCM) Clearance
When the work site has become completely dry, the Owner's Consultant shall collect at least five post-abatement air samples according to 40 CFR, Part 763 (AHERA Regulations). Five samples shall be taken in the abatement site. A minimum of 2,000 liters per air sample shall be collected using aggressive sampling techniques. If the post-abatement test reveals fiber levels in excess of 0.01 fibers/cc, the cleaning and measurement operations specified in Sections 13 and 14 of these specifications will be repeated until the area is in compliance.

15.5 After the work area is found to be in compliance, all entrances and exits are unsealed, and the polyethylene sheeting, tape and any other trash and debris shall be placed in double sealed polyethylene bags (6-mil minimum) or barrels lined with one polyethylene bag (6-mil minimum), and properly labeled and disposed of.

16. Disposal of Asbestos Material and Related Debris

16.1 All asbestos materials and miscellaneous debris in properly labeled polyethylene bags (double bagged) or other containers will be transported to the predesignated disposal site in accordance with the guidelines of the U.S. Environmental Protection Agency and the Department of Environmental Quality. Asbestos disposal forms will be completed to document proper disposal of asbestos waste. (These must be submitted before final payment will be made.)

16.2 All containers bagged or wrapped materials with asbestos-containing materials shall be labeled with the name and address at which the waste was generated, prior to materials being transported off the facility site.

16.3 Workers unloading the polyethylene bags and machinery operators will wear respirators when handling material at the disposal site.

16.4 All pertinent DOT rules and regulations will be followed when transporting asbestos.

16.5 All containers or wrapped materials shall be posted with Class 9 hazardous waste signs.

16.6 All asbestos-containing materials shall be transported in covered vehicles.

16.7 All dumpsters, trucks or other containers used to transport asbestos contained materials shall be properly labeled during the loading and unloading of waste.

17. Submittals Prior To Contractor Release & Final Payment

17.1 Damages: The Contractor shall promptly repair any and all damages caused to facilities at no cost to the Owner.

17.2 The following must be submitted prior to final payment:

17.2.1 Copies of Disposal receipts of all asbestos contaminated material, plus copies of all transport manifests, trip tickets, or other disposal documentation.

17.2.2 All documentation requested in Submittals to Owner's Representative, Section 4.1.

III. WORK/CONDUCT REQUIREMENTS

18. Supervision, Personnel and Misconduct

18.1 A "competent person" as defined in 29 CFR 1926.1101 must be on-site at all times throughout the duration of the project(s). This competent person, as designated prior to the start of said project(s) must remain the same throughout the duration of the project(s).

18.2 The Owner's Consultant IS NOT THE CONTRACTOR'S OUT-MAN. The Contractor must provide one out-man for each enclosure (unless the decontamination chambers are within "talking" distance of each other). The out-man must always remain within talking distance of the enclosure they are assigned to.

18.3 A Foreman with competent-person training must remain within the enclosure at all times during the project.

18.4 Contractors employees are subject to immediate dismissal if any of the following, but not limited to the following, occurs:

18.4.1 Failure to follow proper abatement procedures, including but not limited to respiratory protection and the throwing of asbestos disposal bags outside of the enclosure.

18.4.2 Physical threats and violence to the Owner's Consultant or any other person.

18.4.3 Property damage or theft.

18.4.4 Reckless driving on Owner's property.

18.4.5 Discourteous and ill-mannered statements made to the Owner, Owner's employees or Owner's Consultant.

18.4.6 Consumption of alcohol on Owner's premises.

19. Site Security/Site Cleanliness

19.1 The work area is restricted to only authorized, trained and protected personnel. These personnel may include the Contractor's employees, employees of subcontractors, Owner's employees and Representatives, state and local inspectors, and any other designated individuals. The list of employees who will participate in the project as defined in 2.1.2 of these specifications will be the only employees allowed to enter the work area. Additional employees assigned to this project **must** be cleared through the Owner or the Owner's Consultant. Documentation of all training, medical, and other pertinent requirements are needed before the employees participation.

19.1.1 An employee shall not remain on the Owner's premises if he/she is prohibited from participating in the project as a result of insufficient paperwork or if the Owner's Consultant determines the employee, in any manner, is detrimental to the safe completion of the project.

19.1.2 The Contractor shall record the names and social security numbers of all people on a sign-in sheet who enter the work site, and maintain this record for thirty years.

19.2 Entry into the work area by unauthorized individuals shall be strictly prohibited.

19.3 Access to the work area shall be through a single worker decontamination system. All other means of access (doors, windows, hallways, etc.) shall be blocked or locked so as to prevent entry to or exit from the work area. The only exceptions for this rule are the waste pass-out airlock which shall be sealed except during the removal of containerized asbestos waste from the work area, and emergency exits in case of fire or accident. Emergency exits shall not be locked from the inside; instead, they shall be sealed with polyethylene sheeting and tape until needed.

19.4 The Contractor shall designate one worker to remain outside each enclosure throughout the duration of the project in order to regulate ingress and egress to the work areas as well as to provide needed supplies and equipment. The worker outside the enclosure will be within hearing range at all times. At least one person, at all times, inside the enclosure must have had "competent person" training.

19.5 All areas occupied or used in any way by the Contractor (all employees), outside the enclosure(s) but within the building shall be kept in an acceptable condition and thoroughly cleaned at the end of each day, to the satisfaction of the Owner's Consultant. If at any time, food containers or debris is found not properly disposed of, eating on premises shall be terminated.

19.6 The Contractor is responsible for maintaining areas outside the building in a condition acceptable to the Owner or the Owner's Consultant. This includes but is not limited to: sanitation, supplies and equipment, and employee driving and substance abuse.

20. Stop Work Orders

20.1 If at any time, the Owner or the Owner's Consultant decide that work practices are in violation of the contract specifications or endangering workers, he/she or they will immediately notify the Contractor's on-site Representative of such and operations are to cease until corrective action is taken.

20.2 The Contractor shall cooperate fully with the Owner and Owner's Consultant.

IV. AIR MONITORING

21. Sampling Requirements

21.1 The Owner's Consultant shall conduct all air sampling for the Owner throughout all phases of the contract.

21.2 All non-post-abatement air samples shall be analyzed using the NIOSH 7400 Method. All post-abatement air samples collected in situations involving removal, repair, enclosure, or encapsulation of more than 160 square feet or 260 linear feet of ACBM shall be analyzed under the "Mandatory Transmission Electron Microscopy Method" defined in 40 CFR, Part 763 (AHERA rules). Post abatement air samples collected in situations involving removal, repair, enclosure, or encapsulation of less than 160 square feet or 260 linear feet of ACBM shall be analyzed using the NIOSH 7400 Method, at the discretion of the Owner and/or the Owner's Consultant.

22. Sampling Types

22.1 Throughout the abatement and cleaning operations, air sampling will be conducted to ensure that the Contractor is complying with all codes, regulations, and ordinances. The following are representative sampling which may take place at the discretion of the Owner and the Owner's Consultant.

22.1.1 Baseline - Collected in various/numerous locations prior to abatement to determine ambient interior fiber levels.

22.1.2 Contiguous - Collected in various/numerous locations outside of the work area in order to detect elevated fiber levels during abatement.

22.1.3 Work Area - Collected in various locations inside the work area to insure compliance with proper procedures and specifications.

22.1.4 Personal - Collected in the breathing zone of the asbestos abatement personnel according to 1926.1101, Appendix A, as amended, of the OSHA regulations. These samples will be placed on employees who are exposed to representative concentrations of airborne asbestos fibers. Personal sampling will ensure that the workmen performing the asbestos abatement projects are not exposed to asbestos contamination exceeding STEL (short term excursion limit) requirements and levels which exceed their respirator protection or otherwise endanger their health. Personal air samples will be collected on individuals as designated by the Owner's Consultant.

22.1.5 Post Abatement - Collected inside and/or outside the work area after the project is completed and the area has been cleaned and dried. This will determine if the job has been done correctly and whether the cleanup process must be repeated. Quantities are determined by all applicable regulations.

22.1.6 Field Blanks - Field blanks are collected to ensure that contamination of cassettes has not occurred. Each set of samples collected will include ten percent (10%) blanks or a minimum of two blanks.