PROJECT MANUAL

DESCRIPTION: DEMOLITION OF FOURTEEN (14) BUILDINGS ALONG BROADWAY IN GARY, INDIANA

Gary, Indiana

CONTRACT: Buildings Demolition including Environmental Abatement and Site Restoration

GARY HOUSING AUTHORITY
578 BROADWAY
GARY, IN, 46402

ARCHITECT/ENGINEER: GLOBETROTTERS ENGINEERING CORP.
300 SOUTH WACKER DRIVE, SUITE 400
CHICAGO, IL 60606
GEC # 16060.008

ENVIRONMENTAL CONSULTANT: GSG-PROBE CONSULTING, INC.
2942 W. VAN BUREN STREET
CHICAGO, IL 60612

DATE: March 9, 2020
ISSUED FOR BIDS
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**APPENDIX**

| 1        | Demolition Drawings, Reference Photos, and Abatement Drawings | 14 Sheets |

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All drawings, size 22” x 34”, are included in the Project Manual at half-size (11” x 17”), as follows:

### 1 – DEMOLITION DRAWINGS:

- G-100  Cover Sheet
- D-100  Demolition Site Plan (North)
- D-200  Demolition Site Plan (South)
- U-100  Utilities Site Plan (North)
- U-200  Utilities Site Plan (South)
- C-100  New Site Plan (North)
- C-200  New Site Plan (South)

### 2 – REFERENCE PHOTOS DRAWINGS:

- REF-100  Reference Photos (Buildings #1 & #2)
- REF-200  Reference Photos (Buildings #3, #4 & #5)
- REF-300  Reference Photos (Buildings #6, #7 & #8)
- REF-400  Reference Photos (Buildings #9, #10 & #11)
- REF-500  Reference Photos (Buildings #12, #13, #14)

### 3 – ABATEMENT DRAWINGS (GSG-Probe Consulting, Inc.):

- ACM-1  Site Plan (North)
- ACM-2  Site Plan (South)

END 008600
PART 1 - GENERAL

1.1 PROJECT DESCRIPTION

A. PROJECT DESCRIPTION: The intent of this project is to demolish fourteen (14) selected commercial buildings with foundations (some with slabs on grade with no basements, and some with basements) along Broadway in Gary, Indiana. Following demolition, the scope of work also includes site restoration for potential future redevelopment. See the drawings for a more detailed description of the scope of work.

1. The Demolition Contractor (Contractor) is responsible to hire and pay for an environmental consultant pre-approved by the Gary Housing Authority to monitor the abatement and provide air sampling / monitoring during demolition.

2. The Contractor shall include a Cash Allowance of $25,000 in its base bid to be used for unforeseen conditions / costs as approved by the GHA which are beyond the work that is to be included in the project; any unused funds up to the full $25,000 shall be returned to the GHA.

   a. Labor (unless noted otherwise) for handling, unloading, installation, overhead, profit and other expenses contemplated for the stated allowance amount shall be included in the Contract Sum and not in the allowance.

   b. This amount shall include labor and materials necessary to complete work of an undetermined scope but which is anticipated due to the requirement that new work be modified to meet existing, indeterminable conditions.

   c. Nothing in this allowance shall be construed to relieve Contractor of the responsibility to review the site of the proposed work and verify existing conditions. No approvals will be granted to utilize this allowance amount to compensate for contractor’s lack of knowledge of conditions which are observable at the site.

B. INTENT OF WORK:

1. The Contractor and its associated Asbestos Abatement Sub-Contractor shall examine all Drawings and read all Contract Documents to avoid omissions and duplications and to ensure complete execution of all Contract Work.

2. The Contractor and its associated Asbestos Abatement Sub-Contractor shall provide all permits, labor, materials, equipment, tools, and machinery, apparatus, scaffolding, transportation, remediation of any special and hazardous waste found within the project site, and other facilities and service necessary for the proper execution and completion of their work.
C. SCOPE OF WORK: The scope of the Work includes, but is not limited to, the work described in the following paragraphs.

1. The Work to be performed under the contract shall include all work under the General provisions of the Contract, including General and Special Conditions per the Gary Housing Authority's front end documents, the Detailed Specifications of Division 1 and Division 2, all appendices, and as required or incidental to be performed and complete the Work indicated on the Drawings or specified in the specifications as summarized but not limited to the general scope described in the paragraphs below.

2. The Scope of Work under this contract also includes mobilization; securing of site fencing; security; procurement of all necessary federal, state, and local permits, approvals, and authorizations; all required notifications, including EPA and City; proper and legal abatement and disposal of all hazardous materials; removal and disposal of all trash and debris; site extermination prior to and during demolition; coordination of all utility terminations with utility firms and capping all utilities at the site lot line; structural demolition of buildings using mechanical means; removal and disposal of all structures including associated footings and related underground appurtenances; removal and disposal of all surface/attached sidewalks, pavements and other site features such as fencing and light poles associated with the referenced buildings; proper disposal of all demolition debris; filling of voids with compacted concrete demolition debris and soil as specified; termination, cutting, capping and removal of existing utilities; and filling, finish grading and restoration of the site and hydroseeding for new grass to two (2) inch growth. Maintain fencing until grass has grown 2" or until GHA agrees fencing may be removed. Also included are the removal of all trees, shrubs and other vegetation at the fourteen (14) building sites. Protect any adjacent property trees, shrubs and other vegetation next to the areas where buildings and concrete are shown to be removed. After all demolition work and site clearing has been completed any affected or barren areas shall be filled with compacted demolition debris and topsoil as specified.

3. Work also includes Environmental components, which must be pursued in strict compliance with applicable laws and regulations. See relevant Sections of the technical specifications and related drawings for scope of work and quantities.

   a. Abatement activities shall be performed to facilitate the demolition of the subject buildings and related appurtenances included in this contract. Abatement includes removal of ACM, Mercury containing thermostats, and all clean-up and disposal of generated special and hazardous wastes associated with the abatement. All abatement activities shall be conducted in accordance with all IDEM, ISDH, US EPA NESHAP, HUD and OSHA regulations.

   b. Environmental Project Management and Air Monitoring by the Contractor (EPM/AM) is to be included.

       1) The Contractor shall submit names of three (3) firms to the Gary Housing Authority to select from to perform all EPM/AM services for the Contractor for this project.
2) The Contractor shall be responsible for all personal air monitoring as required by governing regulations.

3) The Contractor’s air-monitoring is to be conducted by an independent air-sampling professional or company.

4) The air sampling professional retained by the Contractor shall collect worker personal air samples during all abatement activities until clearance air-samples indicate that acceptable airborne fiber concentration levels have been achieved.

5) The Contractor’s strategy for air-sampling shall be approved by the representative prior to commencement of the work.

4. The abatement work shall be performed in each of the vacant buildings to be demolished as indicated in these specifications and on the related drawings. The Asbestos Contractor shall be responsible for providing all temporary utilities to facilitate abatement including, but not limited to: Power, Lighting, Water, and Sewerage Services.

5. Contractor shall remove all furnishings, cabinetry, fixtures, trash, etc., to facilitate abatement of ACM.

D. ANTICIPATED SEQUENCE OF WORK:

1. Notice of Award
2. GHA Authorization to Proceed.
3. Contractor notifies CITY and EPA, obtains permits.
4. Pre-Construction meeting.
5. Contractor installs perimeter security fence.
6. Contractor notifies and coordinates termination, disconnection and capping of utilities and other services with utility companies and entities having jurisdiction.
7. Written notice of utility disconnection submitted to A/E and GHA.
8. Asbestos Abatement subcontractor provides temporary utilities.
10. Coordination of rodent extermination inspection with City of Gary.
11. Implementation of all safety and protective measures on site and near property lines and fences.
12. Contractor receives approval from City of Gary Official to proceed with structural demolition.
13. Structural demolition by ball and crane technique or other mechanical means.
15. Utility demolition/cutting/capping at buildings and at property lines, and removal of underground utilities.
16. Backfill and compaction of all voids.
17. Removal and proper disposal off-site of demolition debris.
18. Demolition of surface features.
19. Restoration of surface features to remain.
20. Final grading, drainage and seeding.
21. Removal of security fence upon two (2) inch grass growth and Final Acceptance.
TEMPORARY UTILITIES: The Contractor will be responsible for disconnection of all utilities. The contractor is responsible for all temporary power, lighting and water necessary for the execution of the Asbestos Abatement Work. Arrangements for temporary water and/or sanitary service to the site shall be coordinated with the City of Gary Water/Sewer Department(s). Temporary power and lighting shall be provided by the Contractor by means of generators unless other arrangements can be made in advance with the local utility company (NIPSCO).

1.2 SCHEDULE MILESTONES

A. Time of Completion: The Contractor shall complete all the work in accordance with the Contract within 120 days from the date of the Notice to Proceed to Final Completion, including hydroseeding.

B. Schedule Milestones

1. Upon receipt of a Notice to Proceed, Contractor shall promptly mobilize manpower and equipment to the site and commence work.

2. Substantial Completion is defined as follows: All demolition activities of the buildings are complete, including structural demolition, utility removals, removal of foundations in their entirety, site is graded to within reasonable lines comparable to approved grading plans, all site improvements are complete; all other work is complete except minor punch list items in accordance with scope of work outlined in paragraphs 1.1.0 above.

3. Punch List Completion is defined as follows: All site improvements and other work as identified in the punch-list walk-through, with the exception of minor items which will be discussed at the walk-through.
   a. Time of Completion: (21) workable calendar days from the date of transmittal of the punch list.

4. Final Inspection: Contractor shall notify Architect and GHA of completion and readiness for final inspection seven (7) days in advance of anticipated completion of the work.

1.3 CONTRACTS

A. The Project shall be under one (1) Contractor. The Contractor (sometimes referred to as the General Contractor) is to take full responsibility for its Abatement Subcontractor and the abatement scope of work.

1.4 SITE SECURITY

A. Site security by the Contractor shall commence upon mobilization of the Work and be maintained until Substantial Completion.

B. Contractor shall require reasonable proof of identification and signature of all visitors on the log. The premises shall be protected from entry of any unauthorized persons.
C. Contractor shall protect the work, stored materials and construction equipment from theft and vandalism.

1.5 CONTRACTORS' USE OF PREMISES

A. The Contractors shall limit their use of the premises to the Work indicated so as not to damage or disturb remaining property.

1. Confine operations at the site to the areas permitted inside the designated Contractor's fence line. Portions of the site beyond areas on which work is indicated are not to be disturbed.

2. The Contractors shall exercise care in limiting the noise generated by their operations. The Contractors shall confine construction operations creating noise in excess of 80dB, or as required by City Of Gary codes and ordinances, as measured at the Contractor's fence line.

3. Work shall be performed between the hours of 7:30 a.m. and 4:30 p.m. or as otherwise approved by the GHA in writing or required by the City of Gary.

4. Care shall also be taken to prevent the spread of dust and airborne debris. After demolition work is started on any building, the work on that building shall be continued to completion promptly and expeditiously. Upon completion of work, premises shall be left in a condition satisfactory to the GHA.

5. Keep existing alley and entrances serving adjacent or nearby buildings and parking areas clear and available at all times. Do not use these areas for Contractor parking or storage of materials.

6. Do not unreasonably encumber any part of the site with materials or equipment.

7. Lock automotive type vehicles, such as passenger cars and trucks and other mechanized or motorized construction equipment, when parked and unattended.

8. Maintain the area of the Work in a safe condition. Inspect the areas adjacent to the Work prior to start of demolition. The Contractor is responsible for repairing any damage caused by his operations at no additional cost to the GHA. Take all precautions necessary to protect remaining property and adjacent/nearby structures to remain during the progress of the Work.

9. Prior to the start of operations at the site, the Contractor shall record by color photographs or video the pre-existing site conditions and notify the GHA and the A/E of any existing damaged areas or discrepancies. Submit record of pre-existing site conditions to the GHA and A/E at the pre-construction meeting.

10. Prior to the start of any demolition or hazardous material removals, the Contractor shall install a continuous perimeter fence and lockable gate. Contractors shall confine all their Work on the site to the area within the Contractor's fence line.

11. Keep public areas outside the security fence free of any accumulation of waste material, rubbish or demolition debris.
12. Open fires will not be permitted within the building or on the premises.

13. Upon beginning Work at the site, use due diligence in completing Work.

B. Contractors' Use of the Existing Buildings and Site.

1. Maintain the area of the Work in a safe condition.

1.6 PERMITS AND REGULATIONS

A. The Contractors shall obtain and pay for all required demolition, environmental or construction related permits and exhibit them at the job site. Provide GHA and the A/E with copies of all permit applications, including requests for waivers or variances.

B. At the start of the Work, submit copies of all permits, receipts and certificates, including waivers and variances, issued for the Work to the GHA and the A/E.

C. All Work shall conform to the ordinances, codes and regulations of the City of Gary EPA, NESHAP, Lake County and State of Indiana.

D. Give all notices and comply with laws, ordinances, rules and regulations bearing on the conduct of the work. If the Contract Documents are at variance therewith, promptly notify the GHA and A/E in writing. The Contractor shall bear all costs arising thereof from Work performed contrary to such laws, ordinances, rules and regulations.

1.7 FIELD MEASUREMENTS

A. Field verify the accuracy of existing reference documents and contract documents with site conditions. Errors due to failure to verify such information shall be the responsibility of the Contractors and additional compensation will not be allowed.

1.8 PROTECTION OF THE PROPERTY

A. The Contractor shall repair any damage to the surrounding areas within the Contractor's fence line and shall repair any damage to properties outside the Contractor's fence line at his own expense.

1.9 ALTERATIONS AND COORDINATION

A. The Contractor shall coordinate its work with the work of its Asbestos Abatement Subcontractor.

B. The Contractor and its Asbestos Abatement Subcontractor are cautioned to read the entire Contract Documents; all items of work necessary for the project, whether or not individually listed in scope or referred to herein, are the Contractors' responsibility. Any work not specified in the Abatement scope shall be the responsibility of the General Contractor.

C. The Contract Documents do not mention each particular item required, but rather are a guide for type, quality, finish and operation required. It is the responsibility of the Contractors to thoroughly verify all field conditions, check the drawings and specifications, verify types and locations of all utilities on or adjacent to the site or which might be affected by the Work, and to furnish all required material, and equipment whether specifically mentioned or not. No
claims for extras will be allowed for any services that could have been or should have been foreseen by the Contractors and included in their proposals if required to furnish the Work.

1.10 MISCELLANEOUS PROVISIONS

A. Safety

1. The Contractors are hereby notified that they are required to comply with all applicable regulations for safety, including those of the Occupational Health and Safety Administration (OSHA). The Contractor and its Asbestos Abatement Subcontractor shall avoid hazards to persons and property, they shall take all precautions necessary to protect pedestrians and vehicular traffic during the progress of the Work, and their operations shall not interfere with the use of adjacent buildings or interrupt the free passage to and from such adjacent buildings.

B. Schedule

1. At the Pre-Construction conference, the Contractor shall submit a proposed rational schedule for all Demolition and Asbestos Abatement Work to the GHA and the A/E for approval. At a minimum, the schedule shall define the major items of the work, including start/finish and milestone dates, anticipated daily hours of work, and anticipated manpower and equipment. If the Contractor fails to submit a rational schedule, or said schedule does not meet the GHA's and A/E's approval, the GHA will withhold progress payments to the Contractor until the Contractor's schedule is approved.

2. No structural building demolition will be permitted until the Contractors have completed all hazardous material remediation to the satisfaction of the Asbestos/Environmental Project Manager and approval is received from the appropriate State, Local and/or Federal authorities.

C. Temporary Protection

1. The General Contractor shall furnish and maintain eight (8) feet high fencing (minimum six (6) feet post spacing) around the perimeter of each designated demolition site/parcel, and shall furnish and maintain protective barricades, planking, red flags, warning lights, signs, etc., whenever required to provide adequate protection and directions to community residents, pedestrians and vehicular traffic, and shall remove when no longer required for safety.

2. If the GHA deems the Contractor's temporary protection inadequate, the GHA may direct the Contractor to provide additional temporary protection and signage as necessary.

D. GHA and A/E as Additional Insured on Certificates of Insurance

1. In addition to the requirements in Section 3 Insurance in GHA's front end documents, the Contractors shall list the Housing Authority of the City of Gary, and Globetrotters Engineering Corporation as additional insureds on their insurance certificates and provide copies to the above-mentioned parties.

E. Removal of Rubbish and Pest Control
1. Removal of Rubbish: At the completion of each day's work, or as directed, Contractors shall remove rubbish and unused materials from the site and "leave the grounds clean." If topsoil is stock-piled on site, it shall be covered with plastic, and the plastic secured from being blown away. Provide chutes to dispose of roofing and other debris/materials from building being stripped for demolition, directly into a dumpster.

2. The cleaning up of the premises shall include the removal and disposal of any rubbish, refuse and/or other trash lying within the parcel areas, whether or not such conditions have resulted from operations under this Contract.

3. Rodent and Pest Control: The Contractor shall retain the services of a licensed and insured extermination contractor to prevent rodent/vermin habitation and migration.

4. The extermination contractor will employ effective field sanitation methods, including, plugging of all potential rodent egress points in the building foundation. An extermination plan must be submitted for review and recommendations and approval at the Pre-Construction conference, before it will be approved. The plan should at the minimum include the name of the extermination firm, proof of personnel training and licensing with the State of Indiana, exterminating chemicals to be used and its MSDS, anticipated timelines and amounts of product for each treatment, interior and exterior of the building.

5. Contractor Refuse: Contractor is to supply refuse container for contractor trash, labeled "Contractor Refuse" and dispose of it per applicable ordinance.

F. Recycling of Materials

1. The Contractor is permitted and encouraged to recycle as much of the building components as he deems feasible.

2. The Owner has already salvaged all desired materials, equipment and furnishings from the property.

3. Special care shall be taken in dismantling primary utility service connections so that transformers, valve vaults, meters, etc., can be returned to the primary utility provider in a serviceable condition. Primary service equipment damaged by the Contractor's removal operations will be repaired by the Contractor to the satisfaction of the primary utility owner at no additional compensation.

G. Delivery and Storage

1. The Contractors shall protect all materials and equipment against deterioration and contamination. Contractors shall make all arrangements for delivery, receipt and storage of all material, equipment and supplies to be used in this Work. The GHA assumes no responsibility for theft or damage to Contractors' material or equipment.

H. Quality Control

1. The Contractors shall maintain on-the-job-site qualified supervisors acceptable to the GHA. They shall have a minimum of 5 years’ experience in the type of Work specified in the Contract Documents. The Contractor shall submit the
qualifications of his supervisory personnel and emergency contact phone numbers to the GHA at the time of the Pre-Construction conference.

2. Safety, workmanship, demolition means and methods are the total responsibility of the Contractor.

3. Contractors shall, in addition to specifications contained herein, comply with any manufacturers' or suppliers' specifications and recommendations for storing, handling, mixing and applying materials used in the Work.

I. Demolition Accessories

1. The Contractor shall furnish, install and provide all demolition related accessories such as scaffolding specialties, hoist and cranes, sidewalks and bridges, catwalks, lifting equipment, water hoses, temporary lighting or hanging stages, etc., for the proper execution and completion of the Work.

1.11 SUBMITTALS

A. After the Contract has been awarded, a Pre-Construction conference will be scheduled. The Contractor and all Subcontractors are required to attend.

B. At the Pre-Construction conference, the Contractor shall submit the following to the GHA and the A/E:

1. Copies of the Permit Applications, Certificates and Notifications.
   a. Full compliance is required with all applicable governmental agency requirements. The following subparagraphs (b. through f.) are intended to provide basic information to the Contractor regarding certain “Storm Water Run-off Control” regulations that are administered through the Indiana Department of Environmental Management. Contractor shall use this information, and the two appendices to this section of the specifications, as preliminary guidance in meeting IDEM’s requirements for this project. Contractor is fully responsible for all steps in IDEM’s process, and ultimately for securing IDEM’s approval and issuance of the associated permit.
   b. Contractor shall complete and submit the form entitled “RULE 5 – NOTICE OF INTENT (NOI)” in accordance with IDEM’s rules & regulations. A blank copy of this form is included as Appendix A to this Section-010100 of the project specifications.
   c. Contractor shall be responsible for all additional submittals required by IDEM and/or by any other applicable stormwater management agencies as necessary in order to obtain regulatory approval and to be issued the associated permit(s) for the work.
   d. Contractor shall complete and submit the form entitled “RULE 5 – NOTICE OF TERMINATION (NOT)” in accordance with IDEM’s rules & regulations. A blank copy of this form is included as Appendix B to this Section-010100 of the project specifications.
   e. Contractor shall be responsible for all follow-up pursuant to the entire IDEM “Rule 5 Storm Water Run-off Control Permit” processes in connection with this Project/Contract.
f. Contractor shall expeditiously submit copies of all documentation related to the IDEM Rule-5 process for this project to the Architect/Engineer and to the Owner Agency.

2. A List of Subcontractors for GHA approval.

3. Methodology of Demolition to be Used. For approval by GHA, subject also to approval by local Code authorities (Refer to Section 020600).

4. A Detailed Work Schedule.

5. A Detailed Schedule of Values (refer to Section 012973).

6. A Pre-Existing Site Conditions Record.

7. Site Security Plan (refer to Section 020600).

8. Site Extermination Plan (refer to Section 020600).

9. Traffic Plan. The Contractor shall illustrate anticipated truck traffic flow to and from site, taking into consideration protection of and minimal impact on the neighborhood. The Contractor is also required to notify the City of Gary and all public schools around the project site, with a copy to the GHA, of the potential impact the demolition activity may have and safety plan they intend to utilize, within two (2) weeks of mobilizing the site.

10. Street Cleaning Plan. The Contractor is responsible to ensure or coordinate with the City of Gary that the surrounding streets and alleys serving the neighborhood remain clean and dust free at the end of the day.

11. Fencing Plan with Site Features.

12. Dust andFlying Debris Control Plan (Refer to Section 020600).

13. Professional Qualifications of Key Personnel and Emergency Contact Telephone Numbers.

14. During construction, submit in a timely manner receipts and any other submittals requested in other sections of these specifications.

1.12 FIELD OFFICES:

A. Contractor shall provide temporary field office on site only as required by Contractor.

1.13 APPENDICES:

A. The four pages immediately following this Section-010100 contain two Appendices in connection with paragraph 1.11.B.1 above. Each Appendix consists of two pages.

- IDEM blank form entitled: RULE 5 – NOTICE OF INTENT (NOI)
- IDEM blank form entitled: RULE 5 – NOTICE OF TERMINATION (NOT)
Note: Submission of this Notice of Intent letter constitutes notice that the project site owner is applying for coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit Rule for Storm Water Discharges Associated with Construction Activity. Permitted project site owners are required to comply with all terms and conditions of the General Permit Rule 327 IAC 15-5 (Rule 5).

### NAME AND LOCATION OF PROJECT

<table>
<thead>
<tr>
<th>Name of Project:</th>
<th>County:</th>
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<tr>
<th>Brief Description of Project Location:</th>
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<tr>
<th>Project Location: Describe location in Latitude and Longitude (Degrees, Minutes, and Seconds or Decimal representation) and by legal description (Section, Township, and Range, Civil Township)</th>
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<tbody>
<tr>
<td>Latitude:</td>
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<td>Quarter:</td>
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Does □ all or □ part of this project lie within the jurisdictional boundaries of a Municipal Separate Storm Sewer System (MS4) as defined in 327 IAC 15-13?  
Yes  □  No  □  If yes, name the MS4(s):  

### SITE OWNER OF PROJECT AND CONTACT INFORMATION OF PROJECT

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<tr>
<th>Name of Company (If Applicable):</th>
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<tr>
<th>Name of Project Site Owner: (An Individual)</th>
<th>Title/Position:</th>
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<tr>
<th>Phone:</th>
<th>FAX:</th>
<th>E-Mail Address: (If Available)</th>
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Ownership Status (check one):

Governmental Agency:  □ Federal  □ State  □ Local  Non-Governmental:  □ Public  □ Private  □ Other: (Explain)  

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<tr>
<th>Contact Person:</th>
<th>Name of Company: (If Applicable)</th>
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Affiliation to Project Site Owner:  

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### PROJECT INFORMATION

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<th>Residential-Multi-Family</th>
<th>Commercial</th>
<th>Industrial</th>
<th>Other: (Explain)</th>
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Name of Receiving Water:  
(Note: If applicable, name of municipal operator of storm sewer and the ultimate receiving water. If a retention pond is present on the property, the name of the nearest possible receiving water receiving discharge must be provided).

<table>
<thead>
<tr>
<th>Project Acreage</th>
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<th>Total Acreage:</th>
<th>Proposed Land Disturbance: (in acres)</th>
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<table>
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<tr>
<th>Total Impervious Surface Area: (in square feet, estimated for completed project)</th>
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<th>Project Duration</th>
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<tr>
<th>Estimated Start Date:</th>
<th>Estimated End Date for all Land Disturbing Activity:</th>
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(Continued on Reverse Side)
CONSTRUCTION PLAN CERTIFICATION

By signing this Notice of Intent letter, I certify the following:
A. The storm water quality measures included in the Construction Plan comply with the requirements of 327 IAC 15-5-6.5, 327 IAC 15-5-7, and 327 IAC 15-5-7.5;
B. the storm water pollution prevention plan complies with all applicable federal, state, and local storm water requirements;
C. the measures required under 327 IAC 15-5-7 and 327 IAC 15-5-7.5 will be implemented in accordance with the storm water pollution prevention plan;
D. if the projected land disturbance is One (1) acre or more, the applicable Soil and Water Conservation District or other entity designated by the Department, has been sent a copy of the Construction Plan for review;
E. storm water quality measures beyond those specified in the storm water pollution prevention plan will be implemented during the life of the permit if necessary to comply with 327 IAC 15-5-7; and
F. implementation of storm water quality measures will be inspected by trained individuals.

In addition to this form, I have enclosed the following required information:

☐ Verification by the reviewing agency of acceptance of the Construction Plan.

☐ Proof of publication in a newspaper of general circulation in the affected area that notified the public that a construction activity is to commence, including all required elements contained in 327 IAC 15-5-5 (9). The Proof of Publication Must include company name and address, project name, address/location of the project, and the receiving stream to which storm water will be discharged. Following is a sample Proof of Publication:

“XERT Development Inc. (10 Willow Lane, Indianapolis, Indiana 46206) is submitting a Notice of Intent to the Indiana Department of Environmental Management of our intent to comply with the requirements of 327 IAC 15-5 to discharge storm water from construction activities associated with Water Garden Estates located at 24 Washout Lane, Indianapolis, Indiana 46206. Runoff from the project site will discharge to the White River. Questions or comments regarding this project should be directed to Walter Water of XERT Development Inc.”

☐ $100 check or money order payable to the Indiana Department of Environmental Management. A permit fee is required for all NOI submittals (initial and renewal). A fee is not required for amendments.

SITE OWNER OF PROJECT RESPONSIBILITY STATEMENT

By signing this Notice of Intent letter, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information or violating the provisions of 327 IAC 15-5, including the possibility of fine and imprisonment for knowing violations.

Printed Name of Project Owner: ________________________________

Signature of Project Owner: __________________________ Date (month, day, year): ________________

This Notice of Intent must be signed by an individual meeting the signatory requirements in 327 IAC 15-4-3(g).
All NOI submittals must include an original signature (FAX and photo copies are not acceptable).

Note: Within 48 hours of the initiation of construction activity, the project site owner must notify the appropriate plan review agency and IDEM, Office of Water Quality of the actual project start date if it varies from the date provided above.

Note: A permit issued under 327 IAC 15-5 is granted by the commissioner for a period of five (5) years from the date coverage commences. Once the five (5) year permit term duration is reached, a general permit issued under this rule will be considered expired, and as necessary for construction activity continuation, a new Notice of Intent letter (Renewal) is required to be submitted ninety (90) days prior to the termination of coverage. The submittal must include the NOI Letter, Proof of Publication, Fee, and verification that the plan for the project was approved (original verification of plan approval is acceptable provided the scope of the project has not changed from the original submittal).

Mail this form to: Indiana Department of Environmental Management
Storm Water Program, IGCN, Room 1255
100 North Senate Avenue
Indianapolis., IN 46204-2251

327 IAC 15-5-6 (a) also requires a copy of the completed Notice of Intent letter be submitted to the local Soil and Water Conservation District or other entity designated by the Department, where the land disturbing activity is to occur.

Questions regarding the development or implementation of the Construction Plan/Storm Water Pollution Prevention Plan should be directed to the local county Soil and Water Conservation District (SWCD). If you are unable to reach the SWCD or have other questions please direct those inquiries to the IDEM Storm Water Permit Coordinator at 317/233-1864 or 800/451-6027 ext.3-1864.
For information and forms visit http://www.in.gov/idem/4896.htm.
RULE 5 – NOTICE OF TERMINATION (NOT)

For questions regarding the requirements for project termination or completion of this form, contact:
Indiana Department of Environmental Management
Storm Water, Permits Coordinator
100 North Senate Avenue
MC 65-42, Room 1255
Indianapolis, Indiana 46204-2251
Telephone (317) 233-1864 or
(800) 451-6027 (within Indiana), ext. 31864

Note: Submission of this Notice of Termination letter is a certification by the project site owner that the project meets the terms and conditions of the General Permit Rule 327 IAC 15-5 (Rule 5, Storm Water Discharges Associated with Construction Activity) for termination of permit coverage under the National Pollutant Discharge Elimination System (NPDES).

<table>
<thead>
<tr>
<th>PROJECT NAME AND LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permit number</td>
</tr>
<tr>
<td>(Note: Permit numbers were assigned to projects beginning in November of 2003. Therefore, a permit number is only applicable for those projects that began or were renewed on or after November of 2003).</td>
</tr>
</tbody>
</table>

| Project name             |
| (Note: Provide the project name as it appears on the active “Notice of Intent”) |

<table>
<thead>
<tr>
<th>County</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Company name</th>
</tr>
</thead>
</table>

| Project site owner’s name (an individual) |

| Address (number and street) |

<table>
<thead>
<tr>
<th>City</th>
<th>State</th>
<th>ZIP code</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Telephone</th>
<th>FAX</th>
<th>E-mail address (if available)</th>
</tr>
</thead>
</table>

This “NOTICE OF TERMINATION” is being submitted for the following:

To be eligible for termination, specific criteria must be met. There are three options for which a project may be considered for termination. These options include:

- Option # 1 Certification for change of ownership;
- Option # 2 Certification for termination of construction activities (327 IAC 15-8); and,
- Option # 3 Notice of termination to obtain early release from compliance with 327 IAC 15-5 (327 IAC 15-8).

Select one of the three options that apply to “Permit Termination” by checking the appropriate box, complete all information associated with that option, include required attachments (where applicable), and complete the “Project Site Owner Responsibility Statement” on page 2 of this form.

☐ Option # 1 Certification for change of ownership

This option does not apply to the sale of individual lots within the permitted acreage; only the sale of the entire project site as originally permitted. The agency may accept termination for entire sections or phases of a project that are sold. To determine if a project is eligible, please contact the IDEM Storm Water Permits Coordinator.

By signing this “Notice of Termination”, I certify the following:

A. The project was sold; I am no longer the project site owner as was designated in my “Notice of Intent”. The new owner of the project site is:

<table>
<thead>
<tr>
<th>Company name (If applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project site owner’s name (An individual)</td>
</tr>
<tr>
<td>Address (number and street)</td>
</tr>
<tr>
<td>City</td>
</tr>
</tbody>
</table>

   | Telephone number | FAX | E-mail Address (If available) |

B. I have notified the new project site owner of his/her responsibilities to comply with 327 IAC 15-5 and the requirements associated with the rule including filing a new “Notice of Intent.”

☐ Option # 2 Certification for termination of construction activities

By signing this “Notice of Termination”, I certify the following:

A. All land disturbing activities, including construction on all building lots, have been completed and the entire site has been stabilized;
B. All temporary erosion and sediment control measures have been removed; and
C. No future land disturbing activities will occur at the project site.

(Continued on reverse side)
**Signature of project site owner**

**Date**

This "Notice of Termination" must be signed by an individual meeting the signatory requirements in 327 IAC 15-4-3(g).

**SUBMITTAL OF THE "NOTICE OF TERMINATION"**

Please submit the completed "Notice of Termination" to the Indiana Department of Environmental Management (IDEM). A copy of the "Notice of Termination" is required to also be submitted to the Soil and Water Conservation District (SWCD) or a Municipal Separate Storm Sewer System (MS4). The appropriate entity will typically be the agency that reviewed the construction/storm water pollution prevention plan associated with the project. The "Notice of Termination" shall be mailed to the IDEM at

Indiana Department of Environmental Management
Storm Water Permits Coordinator
100 North Senate Avenue
Mail Code 65-42, Room 1255
Indianapolis, IN 46204-2251

**Additional considerations**

It is not required by 327 IAC 15-5 that the termination is verified prior to submittal, however the SWCD or MS4, as the plan review agency, may elect to field verify project completion prior to the "Notice of Termination" submittal. Several MS4s require (by local ordinance) approval of all terminations prior to submitting the "Notice of Termination" to IDEM. Failure to submit this document to an MS4 that has adopted this provision may be a violation of the local MS4 ordinance.

If the agency participates, submit the completed Notice of Termination form to the SWCD or MS4. The request for termination will be reviewed for concurrence and either returned to the project site owner for submittal to IDEM or forwarded to IDEM on behalf of the project site owner.

**FOR AGENCY USE ONLY (FIELD VERIFICATION OF TERMINATION)**

The SWCD, an MS4 entity, or the Indiana Department of Environmental Management may inspect the project site to evaluate the adequacy of the remaining storm water quality measures and compliance with the Notice of Termination (NOT) requirements. If the inspecting entity finds that the project site owner has meet the requirements of 327 IAC 15-5-8, the entity may elect to sign off on the project. It is the responsibility of the project site owner to file the NOT with the Indiana Department of Environmental Management.

**Accepted** The site referenced above has been inspected and it has been determined that the request to terminate this project is compliant with the requirements of 327 IAC 15-5. This form must be submitted to the IDEM for final processing.

**Denied** The site referenced above has been inspected and it has been determined that the request to terminate this project is not compliant with the requirements of 327 IAC 15-5. Continue to implement the Storm Water Pollution Prevention Plan and take appropriate measures to minimize the discharge of pollutants.

<table>
<thead>
<tr>
<th>Signature</th>
<th>Printed name</th>
<th>Agency</th>
<th>Date (month, day, year)</th>
</tr>
</thead>
</table>

**PROJECT SITE OWNER RESPONSIBILITY STATEMENT**

By signing this "Notice of Termination" letter, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed name of project site owner __________________________

Signature of project site owner __________________________ Date __________

The appropriate local entity will typically be the agency that reviewed the construction/storm water pollution prevention plan asso
PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDE

A. Contractor shall:

1. Furnish and install all equipment, materials, labor, tools, miscellaneous items and incidentals for cutting and patching to restore items to their original condition.

2. Work may include, but is not limited to, cutting and patching at the following:
   a. Concrete sidewalks and curbs including adjacent public sidewalks, curbs, gutters, etc., which may be affected by the work.
   b. Existing utilities to be terminated, including water, gas, electricity, telephone, TV cable, and sewers.
   c. City streets.

3. Execute cutting (including excavating), filling or patching of work to:
   a. Install specified work.
   b. Remove samples of installed work specified for testing.
   c. Remove and replace defective work.

4. In addition, upon written instructions of A/E or GHA:
   a. Uncover work to provide for observation of covered work.
   b. Remove samples of installed materials for testing.
   c. Remove work to provide for alteration of existing work.

1.2 RELATED REQUIREMENTS

A. Specified elsewhere:

   1. 025200 - Concrete Curb, Gutter and Sidewalks
   2. 020600 - Building Demolition

1.3 SUBMITTALS

A. Procedural Proposal for Cutting and Patching: Where prior approval of cutting and
patching is required, submit proposed procedures for this work well in advance of the time work will be performed and request approval to proceed. Include the following information, as applicable, in the submittal:

1. Describe the nature of the work and how it is to be performed. Described anticipated results of the work in terms of changes to existing work, including structural, operational and visual changes, as well as other significant elements.

2. List products to be used and firms that will perform the work.

3. Give dates when work is expected to be performed and completed.

4. List utilities that will be disturbed or otherwise affected by the work, including those that will be relocated and those that will be out-of-service temporarily. Indicate how long the utility service will be disrupted.

5. Approval by the GHA to proceed with cutting and patching work does not waive the GHA's right to later require complete removal and replacement of work found to be performed in an unsatisfactory manner.

B. Prior to cutting and patching that is beyond the extent of the Base Bid Scope of Work, and that is done on instruction of A/E, submit cost estimate.

C. When conditions of work, or schedule, indicate change of materials or methods, submit recommendation to A/E, including:

1. Condition indicating change.

2. Recommendation for alternative materials or methods.


D. Submit written notice to A/E, designating time work will be uncovered, to provide for observations.

1.4 PAYMENT FOR COSTS

A. Costs caused by ill-timed or defective work, or work not conforming to contract documents, including costs for additional services of A/E: Party responsible for ill-timed, rejected or non-conforming work.

B. Unless done pursuant to a previously approved & issued change order, all work done by Contractor that is NOT within the contract scope as defined by the Drawings and Specifications will be considered to be unauthorized, and shall be at Contractor’s expense, with no obligation of reimbursement by the GHA.
PART 2 - PRODUCTS

2.1 MATERIALS

A. All procedures and materials used shall be in accordance with the Standard Specifications, latest edition, issued by the Indiana Department of Transportation. Materials for the new work shall match adjacent work as closely as possible. The Contractor shall submit the proposed materials for review prior to commencing work on that item.

B. Concrete for pavements, sidewalks and miscellaneous structures shall be INDOT Class A.

PART 3 - EXECUTION

3.1 INSPECTION

A. Inspect existing conditions or work, including elements subject to movement or damage during:

1. Cutting and patching.

2. Excavating and backfilling.

3. Cutting and capping of utilities.

B. Before cutting, examine the surfaces to be cut and patched, and the conditions under which the work is to be performed. If unsafe or otherwise unsatisfactory conditions are encountered, the corrective action must be taken before proceeding with the work.

3.2 PREPARATION

A. Protect other work during cutting and patching to prevent damage.

B. Where new work is exposed to view, removal of existing work shall be to the nearest construction joint, expansion joint or saw cut to neat lines.

C. Prior to cutting:

1. Provide shoring, bracing and support to maintain structural integrity of Project.

2. Provide protection for other portions of the project.
3. Provide protection from elements.

3.3 PERFORMANCE

A. Employ skilled workers to perform cutting, capping, plugging and patching work. Except as otherwise indicated or as approved by the GHA, proceed with cutting and patching at the earliest feasible time and complete work without delay.

B. Cut the work using methods that are least likely to damage work to be retained or adjoining work.

1. By-pass utility services such as pipe and conduit before cutting, where such utility services are shown or required to be removed, relocated or abandoned, as required.

2. Where paving, concrete surfaces, etc., abut surfaces such as pavement, sidewalks, etc., that are to remain, saw cut line of intersection to follow the line of the material to remain, leaving a clean, straight and true edge free of chips, cracks or other imperfections. Curbs should be poured with formwork to match the profile of adjacent curbs using a clean cut between old and new, and provide pre-formed joint filler between old and new surfaces.

3. All cuts at pavement, sidewalks, concrete or other surfaces will be cut with mechanical saws. Saw cuts will be straight and form regular shapes.

4. Control dust and debris.

C. Patch with seams which are durable and as invisible as possible. Comply with specified tolerances for the work.

1. Where feasible, inspect and test patched or capped/plugged areas to demonstrate integrity of work.

3.4 CLEANING

A. Thoroughly clean areas where work is performed or used as access to work at the end of each work day.

END OF 010450
PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDE

A. The Contractor's Schedules of Value is discussed in this section.

1.02 RELATED REQUIREMENTS

A. The Contractor shall prepare a Schedule of Values as detailed below for the Gary Housing Authority and the A/E's use in reviewing interim requests for payment to the Contractor.

B. The Contractors shall submit their Schedule of Values to the Gary Housing Authority and A/E for approval at the Pre-Construction conference.

C. The Gary Housing Authority and the A/E will not approve any Contractor's requests for interim payments until the Schedule of Values has been approved.

1.03 PREPARATION

A. Itemize as separate line item cost for each of the following:

2. General Conditions (to be paid per percent of work completed).
3. Breakdown of demolition work as follows:
   a. Permits
   b. Mobilization
   c. Fencing
   d. Trashing
   e. Environmental Abatement
   f. Rodent Abatement
   g. Building Demolition
   h. Site Feature Removal
   i. Utility Removal and backfill
   j. Backfilling
   k. Site Improvements
   l. Grading and Topsoil
   m. Hydro-Seeding
   n. Punch List
   o. Demobilization

1.04 REVIEW AND RESUBMITTALS

A. If after review by the Gary Housing Authority the Schedule of Values does not conform to these requirements, the Contractor shall revise and resubmit the Schedule of Values in accordance with the comments received.
PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDE

A. The General Contractor shall employ and pay for an independent testing laboratory to perform specified services.

1.2 RELATED REQUIREMENTS

A. Specified elsewhere:

1. 022000 - Earthwork

1.3 QUALIFICATION OF LABORATORY


1.4 LABORATORY DUTIES - LIMITS OF AUTHORITY

A. Cooperate with A/E and General Contractor; provide qualified personnel promptly on notice.

B. Acquaint A/E's personnel with testing procedures and with all special conditions encountered at the site.

C. Perform specified inspections, sampling and testing of materials and construction methods:

1. Comply with specified standards, ASTM, other recognized authorities.

2. Ascertain compliance with contract requirements.

3. Obtain written acknowledgment of each inspection, sampling and test made from the General Contractor, whose work is being tested or from his superintendent.

D. Promptly notify A/E and General Contractor of irregularities or deficiencies of work which are observed during performance of services.

E. Promptly submit 3 copies of reports of inspections and tests to A/E and General Contractor, including:

1. Date issued.
2. Project title and number.
3. Testing laboratory name and address.
4. Name and signature of inspector.
5. Date of inspection and testing.
6. Record of temperature and weather.
7. Date of test.
8. Identification of product and specification section.
9. Location of project
10. Type of inspection or test.

F. Perform additional services order by General Contractor.

G. Laboratory is not authorized to:

1. Release, revoke, alter or enlarge on, contract requirements.
2. Approve or accept any portion of work.
3. Perform any duties of the Contractor.

END OF 014100
PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDE

A. This Section outlines the Contractor's Work relating to structural building demolition and selected site demolition, cutting and capping of utilities.

1.2 RELATED REQUIREMENTS

A. Specified elsewhere:

   1. 028213 - Asbestos Abatement – Prior to Demolition
   2. 028613 – Hazardous and Universal Waste Management

1.3 DESCRIPTION OF THE WORK:

A. This Section requires the Contractor to provide all permits, labor, materials, equipment, tools, machinery, apparatus, scaffolding, transportation, and other facilities and services necessary for the removal and proper disposal, off-site, of the following:

   1. Demolition and removal of all above grade structures, foundation walls, stairs, footings, structures and slabs in their entirety.

   2. Clear and grub site in areas designated to be removed on the drawings.

   3. All sidewalks, bollards, ramps, stairs, patios, fences, light fixtures, concrete pads and foundations within each demolition site/parcel’s boundaries as indicated on the drawings. If areas outside of the demolition boundaries are necessary to be disturbed (to include streets, sidewalk, landscaping, etc.) in order to terminate underground utilities, these surfaces must be replaced to match existing conditions.

   4. All utilities, including but not limited to electric, telephone, cable TV, water, sewer, and gas lines shall be cut and capped at the property line, as shown and if not shown on the drawings, except those utilities specifically designated on the drawings to remain.

   5. Dust Control, site safety, site security and maintenance.

   6. Any incidental and/or collateral work necessary to complete the demolition work.

B. Required Coordination by the Contractor:

   1. Temporary closure of, or restrictions on, in-use existing sidewalks, parking areas and streets shall be coordinated with the City of Gary and any agencies having jurisdiction prior to beginning work affecting these items.

   2. The Contractor shall protect sidewalks, streets, buildings, all trees and landscaping adjacent to the demolition site, other private property and appurtenances from
3. It shall be the responsibility of the Contractor to coordinate with service utilities and the GHA the termination and/or temporary shut-off of utility services, such as, but not limited to, domestic water, fire water, sanitary sewer, storm sewer, electricity, telephone, alarm, gas and central heating hot water to minimize or prevent effects to other site buildings during the demolition or service relocation work.

4. It shall be the responsibility of the Contractor to prevent any damage to City of Gary facilities or installations of any municipal or public utility, or tunnel system. The Contractor's demolition methods shall be selected in cognizance of the importance of these systems.

5. It shall be the responsibility of the Contractor to coordinate his Street Cleaning Plan with the City of Gary, and to ensure that the main thoroughfare(s) serving the community remain(s) as clean and dust-free as possible during the day and remains clean and dust-free at the end of the day.

6. The Contractor shall be responsible for maintaining site drainage and runoff restrictions in conformance with the requirements and ordinances of all governmental entities having jurisdiction over the site or the Work.

C. Site Security. It shall be the responsibility of the Contractor to secure the site and all personnel, materials and equipment at the site during all the Work. The Contractor recognizes that during the Work, conditions may arise on the project site that would be unsafe for the general public. The Contractor shall employ adequate means and methods to prevent access by unauthorized persons. The use of guard dogs or other non-human mammals for patrolling the work area is prohibited. The contractor shall submit his Site Security Plan at the Pre-Construction conference. At a minimum, the Site Security Plan shall:

1. Verify there are no unauthorized persons located in the building and site area prior to any work commencing. Conduct routine security patrols to detect unauthorized persons in the building and site area during the progress of the work.

2. Identify the specific demolition perimeter, including location of all gates, point of vehicle access, and location of the contractors' construction trailers and/or related support equipment. The contractor shall be responsible to secure the site from authorized access by providing, at a minimum a perimeter fence with locking gate. The fencing shall be, at a minimum, eight (8) feet high, (or at a maximum height allowed by code, whichever is greater) 10-gauge, 2-inch mesh chain link. The secured demolition area may be smaller than the maximum limits of the Contractors' work area.

D. Safety Precautions. The Contractor shall avoid hazards to persons and property, and his operations shall not interfere with the use of adjacent neighborhood buildings or interrupt the free passage to and from such buildings. Care shall also be taken to prevent the spread of dust and airborne debris. After demolition work has started on each building, the work shall be continued to completion promptly and expeditiously. Upon completion of work at
each building, premises shall be left in a condition satisfactory to the GHA. The cleaning up of the premises shall include the removal and disposal of any rubbish, refuse and/or other trash lying within the property, whether or not such conditions have resulted from operations under this contract.

E. Rodent and Pest Control

1. Within one (1) working day of Notice of Award, the Contractor shall advise the City of Gary in writing and transmitted by certified mail, courier, or overnight express, of the GHA's and Contractor's intent to demolish the buildings and request a meeting to coordinate the Contractor's rodent control and vermin abatement activities with the appropriate City Official.

2. The project site may contain rodents, vermin, and other pests. The Contractor shall employ a licensed and insured extermination contractor to prevent the migration of these pests to adjacent sites during the Work.

3. The extermination contractor will employ effective field sanitation methods, including, plugging of all potential rodent egress points in the building foundation. An extermination plan must be submitted for review and recommendations and approval at the Pre-Construction conference, before it will be approved. The plan should at the minimum include the name of the extermination firm, proof of personnel training and licensing with the State of Indiana, exterminating chemicals to be used and its MSDS, anticipated timelines and amounts of product for each treatment, interior and exterior of the building.

4. The Contractor shall obtain the approval of the appropriate City of Gary Official prior to commencing structural demolition.

F. Removal of Rubbish

1. At the completion of each day's work, or as directed, Contractors shall remove rubbish and unused materials from the site and "leave the grounds clean." If topsoil is stock-piled on site, it shall be covered with plastic, and the plastic secured from being blown away. Provide chutes to dispose of roofing and other debris/materials from building being stripped for demolition, directly into a dumpster.

2. The cleaning up of the premises shall include the removal and disposal of any rubbish, refuse and/or other trash lying within the parcel areas, whether or not such conditions have resulted from operations under this Contract.

3. Contractor Refuse: Contractor is to supply refuse container for contractor trash, labeled "Contractor Refuse" and dispose of it daily.

G. Flagmen. Contractor must have personnel in place to act as Flagmen in emergency situations to stop the flow of traffic.

H. Dust and Flying Debris Control. The Contractor shall continually exercise due diligence to minimize the spread of dust and airborne debris during the Work, including off-hours. The means and methods used shall include, but not be limited to: constantly spraying the demolition debris with water from a minimum of two (2) 2-inch fire hoses during the work day and evening hours if suspect debris may cause air-borne dust. The Contractor shall
thoroughly wet all floors of the existing section of the building being demolished with water using two (2) inch fire hoses prior to commencement of demolition at the affected portion of the building, providing necessary screens, protective fencing, netting, etc. Each of these preventive measures must be implemented downwind of demolition activities to minimize the spread of wind-blown dust, and all wrecking ball activities must cease when wind gust exceed 45 miles per hour.

Each hose shall be capable of providing a minimum of 20 gallons per minute. The Contractor will provide and use appropriately sized booster pumps to ensure adequate water pressure at all building levels.

1. Contractor will provide the A/E with a Dust Control Plan, which will describe in detail the measures proposed for minimizing the release of excessive dusts at the site during demolition activities.

2. Contractor is responsible for conforming to all laws, ordinances, promulgated rules, restrictions etc., of all Local, State and Federal authorities having jurisdiction over the work.

3. Flagmen. Contractor needs to have personnel in place to act as flagmen in emergency situations to stop traffic.

1.4 WORK BY OTHERS

A. GHA has removed all items it wishes to salvage prior to Project commencing.

1.5 PERFORMANCE REQUIREMENTS

A. Contractor to coordinate demolition work with his Asbestos Abatement subcontractor. Building demolition will not be permitted to begin until abatement work is completed, and City of Gary Rodent Control approval is received. If concealed asbestos is discovered during demolition, immediately halt demolition work and notify A/E and GHA.

1.6 CONDITION OF PREMISES

A. Visit site to verify conditions. Accept premises as found. Confine operation to premises of structure being removed.

B. The condition of buildings and their contents is beyond the GHA's care and control, and the GHA disclaims any responsibility. Therefore, no representation is made by the GHA that the conditions or quantities of materials will remain as that which was reviewed or contemplated by the Contractors, during the bidding period, prior to the award of contract or during the course of the work. The GHA disclaims any responsibilities for any such changes.

C. Each bidder shall place his own evaluation on working conditions, quantities of materials (salvage or debris), methods of construction used in the structures to be demolished, and other work related to this contract. No actual variations from these evaluations will be considered as cause or grounds for claims for additional payments, or extensions of time for completion of all work.

1.7 NOTIFICATION
A. Within one (1) working day of Authorization to proceed, Contractor will advise the City of Gary in writing and transmitted by certified mail, courier, or overnight express, of GHA and Contractor's intent to demolish the buildings.

B. Notify utility companies and local authorities owning conduit, wire, utilities or pipes running to buildings. Notify proper officials as required by law or ordinances. Provide A/E and GHA with copies of the notifications/ correspondence within five (5) days of mailing them.

C. Contractor shall fully coordinate his rodent control and vermin abatement activities with the appropriate City of Gary Official.

D. Promptly have all buried utility lines located and staked. Check with NIPSCO regarding location of their utilities in the area. Submit a location request for each subject site/parcel to "Indiana-811," and provide all required follow-up. Contractor is responsible for verification and coordination of all utility information. Contractor is responsible for cutting and capping of all utilities shown and not shown on the drawings.

E. Prior to structural demolition, notify A/E and GHA in writing that all utilities are shut off.

F. Notify the City of Gary and/or Indiana Department of Transportation prior to any excavation in any street or public sidewalk.

1.8 METHOD OF DEMOLITION

A. Conventional mechanical methods shall be used for structural demolition. All bids submitted must be on the basis of these specifications. No conditional bids will be considered in determining the lowest responsible bidder.

B. Use of explosives or explosiveness in wrecking operation is not permitted. Take special precaution against fires. The contractor will not be permitted to burn, at anytime, any paper, wood, or other combustible refuse.

C. All equipment and miscellaneous items remaining within the buildings contracted to be demolished shall become property of the Contractor. Salvaged material shall be removed and cleared off the site.

D. Maintain and protect services and utilities that must remain in operation. Protect and maintain drains, sewers, and pipes that are to remain. Provide necessary protective measures at City storm sewers within or adjacent to the demolition boundaries to prevent introduction of silt into the system or clogging. GHA will accept no claims for additional costs for correction, cleaning or repair of City storm sewers as a result of situation resulting from the contractor's work.

E. Finish grading the site after completion of demolition with appropriate contours to drain to existing catch basins. Adjust rim heights of catch basins as required to coordinate with the approved grading plan and/or as directed by the GHA, to match adjacent finished areas. The Contractor will uniformly grade the site to provide negative drainage and avoid ponding. The contractor may re-use existing drain pipe(s) and catch basin(s) if applicable, or install new drain pipe(s) and catch basin(s) and connect the same to existing drain(s) and catch basin(s) to allow site drainage into City sewer system.
F. If during the work the Contractor discovers any items that may have artistic, archeological or historical significance, the Contractor shall immediately stop work in these areas to allow evaluation of the discovery. Any items of artistic, archeological or historical significance shall remain the property of the GHA.

PART 2 - PRODUCTS

(Not applicable)

PART 3 - EXECUTION

3.1 CAPPING OF UTILITIES

A. Notify utility companies to seal, cap and close valves of their utilities beyond the property lines.

B. Cut and cap utility lines at the property line once utility companies have sealed, capped and closed valves beyond the property lines.

C. Notify utility companies owning wires attached to buildings to remove same. No removal operations shall be started until such wires are removed.

D. Seal and cap storm and sanitary sewer from buildings requiring demolition as shown on the Drawings.

E. Contractor shall furnish written evidence to the A/E that all utilities have been properly disconnected and capped. The documentation shall include the date, location and method of disconnection and capping.

F. The Contractor shall notify utility companies to remove all meters and other equipment which is the property of utility company.

3.2 DEMOLITION

A. Removal of Material and Equipment

1. Salvaged and demolished materials shall be removed promptly from site as demolition work progresses.

2. No stock piling of flammable materials is allowed. Flammable debris must be cleared prior to the end of each working day. No stock piling of demolition debris is allowed if the height of pile exceeds 15'. Do not create hazardous or objectionable conditions, such as ice, flooding, and pollution, when using water.

B. Use of Chutes, if applicable:

1. Where used or required, erect and use dust chutes for removal of materials or debris from windows or other openings of buildings.

2. When a protected or enclosed space for dropping of materials cannot be provided, or when so ordered by the GHA to eliminate airborne dust and debris, fully
enclosed inclined chutes shall be used for removal of material and debris. Materials are not to be thrown from the top of the building, unless water is to be used to control dust.

C. General Demolition Procedure:

1. Structural demolition shall be by conventional mechanical means and methods.

2. Demolish walls in small sections. Bracing and shoring, or other safety requirements, shall be provided where potentially necessary to avoid collapse of structure.

3. Protect adjacent properties from damage and from dust debris.

4. Foundation walls, perimeter building walls, footings, posts, piers, other structural elements and floor slabs shall be removed to 1'-0" below grade.

5. Building foundations and areas where underground utilities were removed may be partially filled with crushed concrete from the building demolition (free of all metals, wood, brick and other foreign debris), three (3) inch diameter maximum size to 6" below grade with topsoil, compacted to 90% density. As a substitute/alternative to the crushed concrete fill, Contractor may, at his option and at no change in the Contract amount, furnish and utilize compacted aggregate, No. 73.

6. Remove slabs on grade, walks, pavement, steps and retaining walls to their entire depth and fill with topsoil.

7. Sprinkling: Constantly sprinkle rubbish and debris with water to reduce generation of airborne dust. Other approved methods shall be used if sprinkling is precluded by cold weather.

3.3 EXCAVATION

A. Debris, vegetation, rubbish and other non-compatible material shall be removed from site.

B. Removed or excavated topsoil may be stored on site; however it must be covered with tarp or plastic sheeting to prevent air-borne dust in accordance with Section 022000.

C. Excavate to depth required to remove walls, foundations, slabs, etc. Excavated earth meeting requirements of soil material specified for soil fill material may be used.

3.4 WARRANTY

A. All work shall be warranted against settlement greater than one (1) inch for a period of 12 months from date of Substantial Completion.

B. Repairs and replacement required because of defective work by Contractor shall be at Contractor's expense.

END OF 020600

Demolition of 14 Buildings Along Broadway
Gary Housing Authority
GEC #16060.008 020600 - 7 Building Demolition
PART I - GENERAL

1.1 REQUIREMENTS INCLUDE

A. This Section includes the following:
   1. Protection of existing trees and other vegetation designated to remain.
   2. Removal of trees and other vegetation affected by demolition.
   3. Topsoil stripping.
   5. Removing above-grade improvements.
   6. Removing below-grade improvements. All rims of remaining manhole and catch basin must be adjusted to proper grade elevation if necessary.
   7. Placing topsoil.
   8. Hydro-seeding and other landscaping and watering to ensure germination and growth.

1.2 RELATED REQUIREMENTS

A. Specified elsewhere:
   1. 020600 - Building Demolition
   2. 022000 - Earthwork
   3. 025200 - Concrete Curb, Gutter and Sidewalks

1.3 PROJECT CONDITIONS

A. Traffic: Conduct site clearing operations to ensure minimum interference with roads, streets, alleys, walks, and adjacent occupied neighborhood. Do not close or obstruct streets, alleys or walks without permission and/or permits required from authorities having jurisdiction.

B. Protection of Existing Items: Provide temporary protection necessary to prevent damage to existing improvements indicated to remain in place.
   1. Protect all items to remain in place within the project site and on adjoining properties.
   2. Restore damaged items to their original condition, as acceptable to GHA or the authority having jurisdiction over the item.
3. If the A/E or the GHA deem the contractor's temporary protection inadequate, the GHA may direct the contractor to provide additional temporary protection or as required by City Codes and standards at no additional compensation.

C. Protection of Existing Trees and Vegetation: To the extent possible, Contractor will protect existing trees located within the property and other vegetation as identified or understood to remain in place, against unnecessary cutting, breaking or skinning of roots, skinning or bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within drip line of the tree, excess foot or vehicular traffic, or parking of vehicles within drip line. Provide temporary guards to protect trees and vegetation to be left standing.

1. Provide protection for roots over 1-1/2 inch diameter that is cut during demolition operations. Coat cut faces with emulsified asphalt, or other acceptable coating, formulated for use on damaged plant tissues. Temporarily cover exposed roots with wet burlap to prevent roots from drying out; cover with earth as soon as possible.

2. Repair or replace trees and vegetation indicated to remain that are damaged by demolition operations, in a manner acceptable to the GHA.

D. Salvageable Improvements: If applicable, carefully remove items indicated to be salvaged, and store on GHA's premises where indicated or directed.

E. Trees encountered in the demolition area shall be carefully protected from damage during the course of demolition and shall remain. Trees that impede the demolition process may be removed, with prior approval by GHA representative. Replacement costs of unauthorized damaged trees will be deducted from final payment. Cost of replacement or value lost shall be $100 per caliper inch for trees and will be deducted from the contractor's pay request.

F. Trees and shrubs at buildings shall be removed. Removal shall include removal of stumps and roots over three (3) inch diameter to a depth of two (2) feet below grade.

PART 2 - PRODUCTS

2.1 SEEDING

A. Seeding Mixtures: Where designated on the drawings or as understood, provide hydro-seeding mixtures in accordance with INDOT Standard Specifications.

1. For general restoration of grass areas, use INDOT seed mixtures in conformance with the applicable portions of Article 621.06 of the INDOT Standard Specifications. All seed is to be free of weeds.

2. Seeding: Upon completion of grading of topsoil, contractor will hydro-seed and/or seed site with the seed mixes specified herein and water as required until grass achieves a height of two (2) inch. Contractor will leave all temporary site protective fencing in place until grass has achieved a two (2) inch growth.

3. Water: Water required to germinate and to maintain the health of vegetation shall be potable.
PART 3 - EXECUTION

3.1 SITE CLEARING

A. General: Remove trees, shrubs, grass and other vegetation, improvements or obstructions as required to permit demolition activities. Remove similar items elsewhere on site or premises as specifically indicated. "Removal" includes digging out and off-site disposing of stumps and roots.

1. Cut minor roots and branches of trees indicated to remain in a clean and careful manner, where such roots and branches obstruct installation of new construction.

B. Topsoil: Topsoil is friable clay loam surface soil found in depths of six (6) inches or less. The topsoil must be placed per INDOT Standard Specification and reasonably free of subsoil, clay lumps, stones, and other objects must be furnished and placed per INDOT Specification, and without weeds, roots and other objectionable material.

1. Strip topsoil to whatever depths encountered in a manner to prevent intermingling with underlying subsoil or other objectionable material.
   a. Remove heavy growths of grass from areas before stripping.
   b. Where existing trees are indicated to remain, leave existing topsoil in place within drip lines to prevent damage to root system.

2. Stockpile topsoil in storage piles in areas indicated or directed. Construct storage piles to provide free drainage of surface water. Cover storage piles, if required, to prevent wind erosion.

3. Dispose of unsuitable or excess topsoil same as specified for disposal of waste material.

4. Upon completion of demolition, place topsoil in a layer, not less than six (6) inches, to final finished grades over all areas to receive vegetation. If quantity of salvaged topsoil from the site is insufficient to provide six (6) inch coverage, additional topsoil as defined in paragraph B above and meeting the EPA's TACO Tier 1 residential standards, shall be imported as necessary.

C. Clearing and Grubbing: Clear all fourteen (14) sites of trees, shrubs and other vegetation.

1. Completely remove stumps, roots and other debris protruding through ground surface to a minimum depth of two (2) feet below finished grade.

2. Use only hand methods for grubbing inside drip line of trees indicated to remain.

3. Fill depressions caused by clearing and grubbing operations with satisfactory soil materials unless further excavation or earthwork is indicated.
   a. Place fill material in horizontal layers not exceeding six (6) inches loose depth, and thoroughly compact to a density equal to adjacent original ground.

3.2 DISPOSAL OF WASTE MATERIALS
A. Burning is not permitted on GHA's property.

B. Remove and legally dispose of all waste materials and unsuitable or excess materials from GHA's property.

END OF 021100
PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDE

A. This Section describes the requirements for the General Contractor's excavation and backfilling required for the demolition and removal of at and/or below grade structures and appurtenances; construction of fills; borrow excavations; preparation of subgrade for paved areas; general site grading to required final elevations; disposal of all excess or unsuitable materials obtained from excavations; management of all storm water and control of runoff during the Work; and any bailing, pumping, draining or any other incidental or collateral materials or labor necessary to perform the Work.

1.2 RELATED REQUIREMENTS

A. Specified elsewhere:
   1. 020600 - Building Demolition.
   2. 021100 - Site Clearing and Restoration
   3. 025200 - Concrete Curb, Gutter and Sidewalks

1.3 DEFINITIONS

A. Earth Excavation consists of the removal of soil materials by hand or machine methods without the use of special equipment, and also, the proper disposal of the excavated materials. Boulders, previously broken concrete and/or other rock-like materials up to one-half cubic yard in volume encountered during excavation shall be classified as earth excavation.

B. Unauthorized Excavation consists of the removal of soil materials beyond the indicated dimensions or subgrade elevations without the specific direction of GHA. Unauthorized excavation, including backfilling the unauthorized excavated area or other remedial work as directed by the GHA will not be authorized for payment and shall be corrected at the contractor's expense.

   1. If unauthorized excavation occurs under structural items, such as footings, mat foundation slabs, retaining wall footings, etc., the contractor may be authorized to fill such areas with select, compacted fill or may extend the indicated bottom elevation of the footing or base to excavation bottom, without altering the required top elevation, as acceptable to the GHA.

   2. In locations other than those above, unauthorized excavations shall be backfilled and compacted as specified for authorized excavations of same classification, unless directed otherwise by GHA.
C. Subgrade: The undisturbed earth or the compacted soil layer immediately below granular subbase, drainage fill, or topsoil materials.

D. Structure: Building, foundations, slabs, tanks, curbs, or other man-made stationary features occurring above or below ground surface.

1.4 SUBMITTALS

A. Test Reports: The contractor shall submit the following reports directly to the GHA from the testing services:

1. Test reports on borrow material and all materials brought on-site.

2. Verification of suitability of each footing subgrade material, in accordance with specified requirements.

3. Field reports; in-place soil density tests.

4. One optimum moisture-maximum density curve for each type of soil encountered.

5. Report of actual unconfined compressive strength and/or results of bearing tests of each stratum tested.

1.5 QUALITY ASSURANCE

A. Codes and Standards: Perform excavation work in compliance with applicable requirements of authorities having jurisdiction.

1. Testing and Inspection Service: The Contractor shall employ and pay for a qualified independent geotechnical testing and inspection laboratory to perform soil testing and inspection service during earthwork operations. Backfill material shall be compacted to 95% density.

2. Testing Laboratory Qualifications: To qualify for acceptance, the geo-technical testing laboratory must demonstrate to Owner's satisfaction, based on evaluation of laboratory-submitted criteria conforming to ASTM E699, that it has the experience and capability to conduct required field and laboratory geotechnical testing without delaying the progress of the Work.

B. Clean Fill: No new fill materials will be incorporated into the work without the approval of the A/E. Any new fill materials must meet TACO Tier 1 Residential Standards.

1.6 PROJECT CONDITIONS

A. Existing Utilities: Locate existing underground utilities in areas of excavation work. If utilities are indicated to remain in place, provide adequate means of support and protection during earthwork operations.

1. Should uncharted, or materially incorrectly charted, piping or other utilities be encountered during excavation, consult utility owner and concurrently notify GHA immediately for directions. Cooperate with the GHA and utility companies in...
keeping respective services and facilities operational. Repair damaged utilities to satisfaction of utility owner and GHA.

2. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies for shutoff of services if lines are active and provide written notice of same to the A/E and GHA.

B. Use of Explosives: Use of explosives for work specified in this section is not permitted.

C. Protection of Persons and Property: Barricade open excavations occurring as part of this work and post with warning lights.

1. Operate warning lights as recommended by authorities having jurisdiction.

2. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

3. Perform excavation by hand within drip line of large trees to remain. Protect root systems from damage or dry rot to the greatest extent possible. Maintain moist condition for root system and cover exposed roots with moistened burlap.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. Satisfactory soil materials are defined as those complying with ASTM D2487 soil classification groups GW, GP, GM, SM, SW and SP.

B. Unsatisfactory soil materials are defined as those complying with ASTM D2487 soil classification groups GBC, SC, ML, MH, CI, CH, 01, OH and PT.

C. Subbase Material: Naturally or artificially graded mixture conforming to INDOT Standard Specifications, with a gradation of No. 73.

D. Drainage Fill: Washed, evenly graded mixture of crushed stone, or crushed or uncrushed gravel conforming to INDOT Standard Specifications, with a gradation of No. 73.

E. Backfill and Fill Materials: Satisfactory soil materials free of clay, rock or gravel larger than two (2) inches in any dimension, debris, waste, frozen materials, vegetation and other deleterious matter. Backfill materials may be placed below the topping and not more than three (3) feet below the proposed finished grade.

F. Topping Materials: The material used for the top six (6) inches topping must consist of stone-free black dirt and satisfy applicable INDOT Standard Specifications.

G. Select Fill Material shall be used to fill all excavations from the bottom of the excavation to three (3) feet below the proposed finished grade. Select fill material shall conform to INDOT Standard Specifications, with a gradation of No. 73.
H. Bedding Materials shall be used to provide a suitable base for laying pipe. The bedding materials shall be crushed stone or crushed gravel conforming to INDOT Standard Specifications, with a gradation of No. 5.

I. Demolished materials consisting of stone, concrete block and face brick which are free of metal and reinforcing steel may be used with the backfill materials providing the demolished materials are crushed to a maximum size of three (3) inches and mixed with the backfill materials to have a gradation from coarse to fine and eliminate voids.

PART 3 - EXECUTION

3.1 STORAGE OF EXCAVATED MATERIALS.

A. Stockpile excavated materials acceptable for backfill and fill. Place, grade, and shape stockpiles for proper drainage.

   1. Locate and retain soil materials away from edge of excavations.

   2. Dispose of excess excavated soil material and materials not acceptable for use as backfill or fill.

3.2 BACKFILL AND FILL

A. General: Place soil material in layers to required elevations using materials specified in Part 2 of this Section.

B. Backfill excavations as promptly as work permits, but not until completion of the following:

   1. Verification of removal of all items to be demolished and removed.

   2. Acceptance of any repairs or required construction below finish grade specified elsewhere herein.

   3. Inspection, testing, approval and recording locations of underground utilities have been performed and recorded.

   4. Removal of any concrete formwork (if applicable).

   5. Removal of shoring and bracing, and backfilling of voids with satisfactory materials. Cut off temporary sheet piling driven below bottom of structures and remove in manner to prevent settlement of the structure or utilities, or leave in place if required.

   6. Removal of trash and debris from excavation.

C. Fill all areas to within three (3) feet of finished grade with Select Fill. Fill all areas less than three (3) feet from finish grade with Backfill Material.

D. Select fill shall be placed and shall be compacted to a minimum of 90 percent maximum density in accordance with ASTM D1557, Method D, at optimum moisture content.
E. Backfill material shall be placed in eight (8) inch uniform layers and compacted to a minimum of 90 percent maximum density in accordance with ASTM D1557, Method D, at optimum moisture content.

F. Field density tests for determining the compaction of fill in place will be made by a testing laboratory in accordance with standard recognized procedures for making such tests.

3.3 PLACEMENT AND COMPACTION

A. Ground Surface Preparation: Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface prior to placement of fills. Plow strip or break up sloped surfaces steeper than 1 vertical to 4 horizontal so that fill material will bond with existing surface.

   1. When existing ground surface has a density less than 90% compaction, break up ground surface, pulverize, moisture-condition to optimum moisture content, and compact to required depth and percentage of maximum density.

B. Do not place fill material on surfaces that are muddy, frozen, or contain frost or ice.

C. Place and fill materials evenly adjacent to structures, piping, or conduit to required elevations. Prevent wedging action of backfill against structures or displacement of piping or conduit by carrying material uniformly around structure, piping, or conduit to approximately same elevation in each lift.

D. Control soil and fill compaction, providing minimum 90% percent density compaction.

3.4 GRADING

A. Contractor will provide a finish-grading plan to the GHA and A/E for approval.

B. General: Uniformly grade areas within limits of grading under this section, including adjacent transition areas to provide negative drainage and avoid ponding. Smooth finished surface within specified tolerances, compact with uniform levels or slopes between points where elevations are indicated or between such points and existing grades.

C. Grading Outside Building Lines: Grade areas adjacent to building lines to drain away from structures and to prevent ponding. Finish surfaces free from irregular surface changes and as follows:

   1. Lawn or Unpaved Areas: Finish areas to receive topsoil to within not more than .10 foot above or below required subgrade elevations.

   2. Walks: Shape surface of areas under walks to line, grade and cross section, with finish surface not more than 0.10 foot above or below required subgrade elevations.

   3. Pavements: Shape surface of areas under pavement to line, grade and cross section, with finish surface not more than two (2) inch above or below required subgrade elevation.
D. Compaction: After grading, compact subgrade surfaces to the depth and indicated percentage of maximum or relative density for each area classification.

E. Keep property and area adjacent to building clean and free from accumulation of rubbish.

3.5 PAVEMENT SUBBASE COURSE

A. General: Subbase course consists of placing subbase material, in layers of specified thickness, over subgrade surface to support a pavement base course.

B. Grade Control: During construction, maintain lines and grades including crown and cross-slope of subbase course.

C. Shoulders: Place shoulders along edges of subbase course to prevent lateral movement. Construct shoulders of acceptable soil materials, placed in such quantity to compact to thickness of each subbase course layer. Compact and roll at least a 12-inch width of shoulder simultaneous with the compaction and rolling of each layer of subbase course.

D. Placing: Place subbase course material on prepared subgrade in layers of uniform thickness, conforming to indicate cross-section and thickness. Maintain optimum moisture content for compacting subbase material during placement operations.

1. When a compacted subbase course is indicated to be six (6) inches thick or less, place material in a single layer. When indicated to be more than six (6) inches thick, place material in equal layers, except no single layer more than six (6) inches or less than three (3) inches in thickness when compacted.

3.6 FIELD QUALITY CONTROL

A. Quality Control Testing During Construction: Allow testing service to inspect and approve each subgrade and fill layer before further backfill is performed.

1. Field density tests may be performed by the nuclear method in accordance with ASTM D 2922, providing that calibration curves are periodically checked and adjusted to correlate to tests performed using ASTM D 1556. In conjunction with each density calibration check, check the calibration curves furnished with the moisture gages in accordance with ASTM D 3017.

   a. If field tests are performed using nuclear methods, make calibration checks of both density and moisture gages at beginning of work, on each different type of material encountered, and at intervals as specified or directed by GHA.

3.7 EROSION CONTROL

A. Provide erosion control methods in accordance with requirements of authorities having jurisdiction.

B. Contractor will provide adequate protection of existing site and adjacent City storm sewers (whether or not they are within the demolition boundaries) to protect such sewers from siltation. Contractor will be solely liable for rodding and flushing of sewers to remove dirt,
silt, demolition debris etc. resulting from its work. The Owner will not accept any claims for additional costs for such rodding or flushing.

3.8 MAINTENANCE

A. Protection of Graded Areas: Protect newly graded areas from traffic and erosion. Keep free of trash and debris.

B. Repair and re-establish grades in settled, eroded and rutted areas to specified tolerances.

C. Reconditioning Compacted Areas: Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape, and compact to required density prior to further construction.

D. Settling: Where settling is measurable or observable at excavated areas during general project warranty period, remove surface (pavement, lawn or other finish), add backfill material, compact, and replace surface treatment. Restore appearance, quality, and condition of surface or finish to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.9 DISPOSAL OF EXCESS AND WASTE MATERIALS

A. Removal from GHA's Property: Remove demolition debris, waste materials, including unacceptable excavated material, trash, and debris, and legally dispose of it off GHA's property at the dump sites appropriate for the material.
DIVISION 2 - SITEWORK
Section 025200 - Concrete Curb, Gutter and Sidewalks

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDE

A. The Contractor's Work under this Section includes all layout, saw-cutting existing adjacent curbs, gutters, sidewalks and adjacent related construction to accommodate new work, furnishing and placing or replacing of combination concrete curb and gutter and sidewalks, including all of the materials, labor, equipment, tools and other items necessary to construct the combination concrete curb and gutter and sidewalks at the locations shown on the Drawings.

1.2 RELATED REQUIREMENTS

A. Specified elsewhere:
   1. 020600 - Building Demolition
   2. 022000 - Earthwork
   3. 021100 - Site Clearing and Restoration

PART 2 - PRODUCTS

2.1 PRODUCTS

A. Supply all materials and equipment in accordance with INDOT Standard Specifications. Color and surface texture of new concrete shall match existing adjacent surfaces to the extent possible.

   1. Concrete for new curb, gutter and sidewalks shall be INDOT Class A.

PART 3 - EXECUTION

A. Perform all Work in accordance with INDOT Standard Specifications. Protective coat is not required.

B. Where paving, concrete surfaces etc., abut surfaces such as pavements, sidewalks, curbs, etc. that are to remain, saw cut line of intersection to follow the line of the material to remain, leaving a clean, straight and true edge free of chips, cracks or other imperfections. Curbs should be poured with formwork to match the profile of adjacent curbs using a clean cut between old and new. Provide pre-formed joint filler between old and new services.

C. Protect all poured concrete from vandalism until it is cured.

D. Remove forms and backfill against all affected work, providing a smooth, uniform transition to the existing grade which is free from trip hazards.

END OF 025200
SECTION 02 82 13
ASBESTOS ABATEMENT - PRIOR TO DEMOLITION

PART 1 - GENERAL

1.1 INTRODUCTION

A. Asbestos abatement work prior to demolition is required to follow Indiana Department of Environmental Management (IDEM) NESHAP rules. This specification is intended to provide for the removal of friable and Category I and II non-friable asbestos-containing materials prior to a structural demolition. Abatement of these items is specified in this Section.

B. Refer to Table I at the end of this specification section for types of asbestos containing material.

1.2 DEFINITIONS

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

B. Air Cell: Insulation normally used on pipes and duct work that is comprised of corrugated cardboard which is frequently comprised of asbestos combined with Cellulose or refractory binders.

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

D. Amended Water: Water to which a surfactant has been added.

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

F. Asbestos containing Material (ACM): Any material containing more than 1% by volume of asbestos of any type or mixture of types.

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

H. Authorized Visitor: The Owner, the AOR, testing lab personnel, or a representative of any Federal, State, and Local regulatory or other agency having authority over the project.

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

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

K. Ceiling Concentration: The concentration of an airborne substance that shall not be exceeded.
L. Certified Industrial Hygienist (C.I.H.): An industrial hygienist certified by the American Board of Industrial Hygiene.

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

N. Disposal Bag: 6 mil thick leak-tight plastic bags used for transporting asbestos waste from work area and to disposal site. Each is labeled as follow:

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

CAUTION
Contains Asbestos Fibers
Avoid Opening or Breaking Container
Breathing Asbestos Is Hazardous To Your Health

NOTE: DOT (Department of Transportation) labels must also appear on each bag.

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

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

Q. Penetrating Encapsulant: an encapsulant that is absorbed by the asbestos matrix without leaving a surface layer.


S. Encapsulation: Treatment of asbestos containing materials with an encapsulant.

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

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

V. Friable Asbestos Material: Material that contains more than 1% asbestos by volume, and that can be crumbled, pulverized, or reduced to powder by hand pressure when dry, or other such previously non-friable material that is subject to mechanical disruption.

W. Glovebag: A manufactured device consisting of plastic with a thickness of 6 mil or more, 2 inward• projecting longsleeve rubber gloves, one inward-protecting waterwand sleeve, an internal tool pouch, and an attached, labeled receptacle for asbestos waste. The glovebag is constructed and installed in such a manner that it surrounds the object or area from which the asbestos containing material is to be removed, and contains all asbestos fibers released during the removal process.
X. HEPA Filter: A High Efficiency Particulate Air (HEPA) filter capable of trapping and retaining 99.97% of asbestos fibers greater than 0.3 microns in length.

Y. HEPA Filter Vacuum Collection Equipment (or vacuum cleaner): High efficiency particulate air filtered vacuum collection equipment \( \text{th} \) a filter system capable of collecting and retaining asbestos fibers. Filters shall be of 99.97% efficiency for retaining fibers of 0.3 microns or larger.

Z. High-Efficiency Filter: A filter which removes from air 99.97% or more of monodisperse dioctyl phthalate (DOP) particles having a mean particle diameter of 0.3 micrometer.

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

BB. Negative Pressure Ventilation System: A local exhaust system, utilizing HEPA filtration capable of maintaining a negative pressure inside the work area and a constant air flow from adjacent areas into the work area and exhausting that air outside the work area.

CC. Negative Pressure: Air pressure lower than surrounding areas, generally caused by exhausting air from a sealed space (work area).

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

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

FF. REGULATED ASBESTOS CONTAINING MATERIAL (RACM): (a) friable asbestos material, (b) Category 1 non-friable ACM that has become friable, (c) Category 1 non-friable ACM that will be or has been subjected to sanding, grinding or cutting, or abrading, or (d) Category 2 non-friable that high probability of becoming or has become crumbled, pulverized, or reduced to a powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

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

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

II. Time Weighted Average (TWA): The average concentration of a contaminant within the air during a specific time period.

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

KK. Wet Cleaning: The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning utensils which have been dampened with amended water or diluted removal encapsulant and afterwards thoroughly decontaminated or disposed of as asbestos contaminated waste (also referred to as wet wiping).
1.3 SCOPE OF WORK

A. Removal of all ACM in, on or around the building as indicated in Table I. The ACM quantitative estimations listed have been provided for the convenience of the Contractor. The quantities of the estimated amounts of ACM are provided as an approximate amount and should not be relied upon by the Contractor as accurate. The Contractor is responsible for field verification of conditions. The submission of a bid proposal shall be an admission that the Contractor has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements and accuracy of the specifications and estimated amounts of ACM.

1.4 WORK INCLUDED

A. The work includes all labor, equipment, materials, and supplies necessary to perform the scope of work in the documents by the procedures described herein. The contractor, by submitting a bid for the work, represents itself as knowledgeable and expert in the performance of the work, and includes all things usually and customarily necessary to provide a complete and finished job, whether specifically mentioned or not. Related work may be shown in other related documents, prepared by others, if applicable, and as listed below:

1. Division 02 Section “Building Demolition.”
2. Division 02 Section “Hazardous and Universal Waste Management.”

B. Removal of friable and non-friable asbestos-containing materials listed in the Documents, including isolating the work areas, protection of adjacent areas, cleanup, proper packaging and disposal of wastes, and all other steps necessary to complete the scope of work.

C. Compliance with all applicable laws, regulations, standards, and these specifications. In the case of a conflict, the contractor shall comply with the most stringent.

D. All licenses, accreditations, permits, fees, notifications, reports, or other documents required by law, regulation, this specification, or the Documents.

E. Provide project closeout documentation to the Environmental Project Manager (EPM) within thirty (30) days after final clearance. This documentation shall include, but is not limited to submittals requirements specified elsewhere in this Section.

1.5 LAWS, REGULATIONS AND STANDARDS

A. The following laws, regulations, and standards are incorporated by reference:

2. 29 CFR 1926: US OSHA Construction Standards
3. 29 CFR 1926.1101: US OSHA Asbestos Construction Standards
5. 40 CFR 763 Subpart E, US EPA Asbestos Model Accreditation Plan (MAP): Appendix C - Interim Final Rule
6. 326 IAC Article 14, Indiana Department of Environmental Management (IDEM)
7. 329 IAC Article 10 Rule 8.2, IDEM Office of Land Quality Waste Requirements
8. 326 IAC Article 18 Rule 1, IDEM Licensing Requirements

1.6 ASSESSMENT, MONITORING, TESTING AND ANALYSIS

A. The Contractor shall hire an environmental consultant (EC) to perform inspection, testing and design services prior to start of work, and monitoring during the project and upon completion.

1. Prior to the start of the work
   a. The EC shall identify suspect materials and confirm their asbestos content by testing.
   b. The EC will design the project and address any design changes as requested.

2. During the work, the EC shall:
   a. Observe the work with sufficient frequency to ensure contractor compliance with the specifications.
   b. Assure that all personnel and visitors have the proper current medical screening; respirator fit test, and training for their respective duties prior to entering a regulated area.
   c. Collect air samples in and around the work area, as needed, to verify exposure conditions.
   d. The EC may stop the work if airborne asbestos concentrations at the work area perimeter exceed 0.01 f/cc. Contractor shall be responsible for taking corrective action to reduce exposure levels and prevent recurrence, and cleaning adjacent areas that become contaminated by the asbestos abatement activities.

3. Upon completion of the work, the EC shall:
   a. Visually inspect for visible debris. Contractor shall be required to re-clean the area or potions of areas until no visible debris remains.
   b. Conduct final clearance testing as required.
   c. Prepare the project report.

B. The Contractor shall provide OSHA compliance air monitoring to determine exposures to its employees in accordance with OSHA 29 CFR 1926.1101. Frequency of testing shall comply with OSHA requirements for the anticipated and actual exposure levels.

1. A written Exposure Assessment may be provided prior to the start of the work to determine the requirements for respiratory protection and frequency of OSHA monitoring for each type of activity. The contractor should note that a Negative Exposure Assessment (NEA) may be possible for many tasks.

2. Analysis may be performed on site.

C. Credentials required for testing and analysis of PCM air samples:

1. Accreditation by AIHA or AAR; or
2. Participation in the Proficiency Analytical Testing (PAT) program.
3. Certification of individual qualification to read samples on site when on site analysis is conducted.

D. It is the responsibility of the General Contractor (GC) and Abatement Contractor (AC) to ensure any area where work is scheduled to be performed has been inspected for asbestos and will not initiate work in the said area until they have received testing results confirming or denying the presence of ACM. The GC and AC will assume all materials are ACM unless an asbestos survey of that material has been conducted by an IDEM licensed asbestos inspector.

1.7 SUBMITTALS BY THE CONTRACTOR:

A. All submittals shall be forwarded to the AOR prior to the Pre-Construction Meeting.
B. Proposed Work Schedule (including number of shifts, hours per shifts per day, and days per week)
C. Copy of Indiana Asbestos Contractor License
D. Certificate of environmental liability insurance
E. Health and Safety Plan (HASP)
F. Detailed Work Plan. This plan shall include containment details, emergency egress, decontamination unit locations, waste load out details including dumpster locations, pressure differential exhaust unit design and configuration and access means to each floor. This work plan shall include a written plan and detailed mark up of drawings.
G. Landfill approved for disposal
H. Waste transporter contact information
I. Medical surveillance records of all employees scheduled to work on this project
J. Copies of Certifications and Licenses in accordance with applicable State requirements of all employees scheduled to work on this project
K. Safety Data Sheets of all chemicals intended for use on site
L. Copy of the NESHAP/ IDEM Notification
M. Close-Out Submittals:

1. Upon successful completion of all portions of the project, the Contractor is to remove all in place equipment and supplies relative to the project, including pressure differential equipment, decontamination facilities, temporary lighting, critical barriers, emergency exits and construction barriers. The Contractor, AOR, and Owner shall physically inspect all areas of the work area to determine proper completion. Any damage noted will be compared to the AOR pre-existing damage written records. Any damage determined to the Contractor's responsibility will be repaired or replaced by the Contractor, at the discretion of the Owner. At no additional cost to the Owner.
2. The Contractor shall provide close out paperwork including but not limited to, the following items:
a. Daily project logs
b. Visitations; authorized and unauthorized
c. Personnel, by name, entering and leaving the work area
d. Special or unusual events, i.e. Barrier breaching, Equipment failures
e. OSHA Personal air monitoring tests and test results
f. Waste manifest receipts

PART 2 - PRODUCTS

2.1 TOOLS AND EQUIPMENT

A. All tools and equipment shall at least conform to minimum industry standards and IDEM regulations.

B. Equipment:

1. Negative Air Machines shall provide HEPA filtration and conform to ANSI Z9.2 fabrication criteria.
2. Respirators shall be NIOSH approved for use with lead, asbestos, or other contaminants anticipated in the work.
3. Contractor is fully responsible for complying with OSHA rules for other safety equipment, such as hard hats, safety harnesses, eye protection, gloves, footwear, and any other safety devices used on the site.
4. Pressure differential manometer with readable tape shall be provided by the contractor including calibration documentation.

C. Tools:

1. Shovels and scoops shall be rubber or plastic, suitable for use in plasticized containment. Metal shovels are not permitted.
2. Scrapers, brushes, utility knives and other hand tools shall be of good quality and suitable for the intended uses. The contractor shall keep an ample supply on hand for the completion of the work.
3. Power tools such as, but not limited to saws, pneumatic chisels, brushes, sanders, and needle guns shall be equipped with shrouds and HEPA-filtered local exhaust systems to capture released particles.

2.2 MATERIALS

A. All materials shall at least conform to minimum industry standards and IDEM regulations.

B. Abatement materials

1. Fire-retardant, poly sheeting for all applications shall be 6 mil nominal thickness for critical seals, floors, ceilings and drop cloths, and 4 mil for walls.
2. Tape shall be 2” or 3” duct tape or other waterproof tape suitable for joining poly seams and attaching poly sheeting to surfaces.
3. Spray adhesives shall be non-flammable and free of methylene chloride solvents.
4. Disposal bags shall be 6 mil.
5. Disposable suits, hoods, and foot coverings shall be TYVEK or similar.
6. Solvents shall be compatible with any primers, mastics, adhesives, paints, coatings, or other surfacing materials to be installed following their use.

PART 3 - EXECUTION

3.1 EMPLOYEE TRAINING, QUALIFICATION AND MEDICAL SCREENING

A. Supervisors and Workers shall be trained, accredited, and licensed in accordance with IDEM rules.

1. Contractor shall keep copies of licenses, initial training course certificate, and most recent annual refresher training certificate at the jobsite at all times for all contractor personnel.
2. A supervisor (competent person) shall be present at the worksite at all times when work under this Section is being conducted.
3. Current fit testing documentation will be present at the worksite for each supervisor and worker.

B. Medical Screening. All contractor personnel shall have a current medical examination in accordance with OSHA requirements. Copies of the Physician’s Written Opinions shall be kept on site.

3.2 PERMISSIBLE EXPOSURE LIMITS

A. The OSHA permissible exposure limit (PEL) for worker exposure to airborne asbestos is 0.1 f/cc as an 8-hour time-weighted average (TWA).

B. The OSHA short term excursion limit for worker exposure to airborne asbestos is 1.0 f/cc for a 30 minute sample.

C. The permissible level of airborne fibers in areas adjacent to the work area is 0.01 f/cc or background levels, whichever is higher, as determined by PCM.

1. Work will immediately cease in any work area where airborne fiber concentrations exceed this level.

2. The source of the outside contamination will be determined, and corrective measures (e.g. wet cleaning, changes in work practices, negative pressure containment) will be implemented to prevent recurrence.

3. The AC will be responsible for cleanup of contamination in adjacent areas caused by the asbestos abatement activities at no additional cost to the owner.

3.3 EXPOSURE ASSESSMENT AND MONITORING

C. The Contractor shall make a written assessment of the potential airborne asbestos fiber exposures for this project. Assessments shall conform with OSHA requirements and may be based upon:

1. Initial monitoring of representative workers who the contractor believes are exposed to the greatest airborne concentrations of asbestos, or
2. Past monitoring (within the past 12 months) or objective data for conditions closely resembling the processes, type of material, control methods, work practices and environmental conditions to be used for this project, or

D. The contractor shall perform personal monitoring in accordance with the following requirements:

1. Initially, to establish an exposure assessment when past monitoring or objective data are not available for an initial determination.
2. Periodically if the exposures are, or are expected to be, below the PEL.
3. Daily, if exposures are above the PEL.
4. Whenever there has been a change of equipment, process, control, personnel, or a new task has been initiated that may affect employee exposures, the exposure assessment shall be updated, and monitoring shall be re-instituted if exposures are unknown or are expected to exceed the PEL.

3.4 RESPIRATORY PROTECTION

E. Respiratory protection shall be worn in accordance with all applicable regulations referenced in Laws, Regulations and Standards specified elsewhere in this Section.

F. The AC must have a respiratory protection program in compliance with all applicable laws, regulations and standards specified elsewhere in this Section.

3.5 HYGIENE PRACTICES

G. Eating, drinking, smoking, chewing gum or tobacco, and applying of cosmetics are not allowed in the work area.

H. All persons entering the work area are required to wear appropriate PPE, and follow the entry and exit procedures posted in the Personnel Decontamination Enclosure System.

I. Personal Protection Equipment (PPE) is required when airborne exposures are, or are expected to be above the PEL, or as needed to protect the safety of personnel and visitors. PPE may include:

1. Full body disposable suits, headgear, and footwear.
2. Gloves.
3. Hardhats.
4. Non-disposable footwear and clothing shall remain in the work area and shall be disposed of as contaminated waste when the job is completed.
5. Authorized visitors shall be provided with suitable PPE when PPE is required in the work area. The Environmental Consultant (EC) shall assure that visitors have proper and current medical screening and fit test, and awareness training or other appropriate training.

J. A Personnel Decontamination Facility is required when worker exposures are expected to exceed the PEL. The decontamination unit may be remotely located if not feasible to locate adjacent to the work area.

1. When a remote decon unit is used, personnel shall use a double-suiting procedure for traveling between the work area and the decon. Persons shall HEPA-vacuum the exterior of their disposable suits at the entry to the work area, put on a clean suit over the existing
suit, and proceed to the decon unit for shower decontamination and change into street clothes.

K. When exposures are below the PEL, protective disposable suits are recommended, but not required. To exit, persons shall HEPA-vacuum down clothing at the work area entry, and leave the work area. When disposable suits are used, they shall be HEPA-vacuumed, stripped off, and deposited in an asbestos disposal bag. Personnel may then leave the work area.

3.6 PROHIBITED ACTIVITIES

L. Dry removal or dry sweeping, except:

1. During freezing weather. In this case, temperature and weather conditions must be recorded at the start, during, and at the end of the shift.
2. On roofs with 3:1 slope or greater. In this case, roofing shall be removed in an intact condition, as much as possible.
3. For roofing areas of less than 25 square feet.
4. When equipment damage or other hazard exists. In this case, written permission from EPA is required prior to performing dry removal.

M. Use of compressed air for cleaning.

N. Use of high speed power tools not equipped with a HEPA-filtered local exhaust or water spray system.

O. Eating, drinking, smoking, chewing gum, or applying cosmetics in the work area.

P. Removing respirators or other PPE in the work area.

Q. Contractor shall not salvage or recycle building materials unrelated to abatement scope of work.

3.7 WORK AREA ISOLATION AND PREPARATION

A. General Preparation.

1. Post:

a. Caution signs meeting the specifications of OSHA 29 CFR 1926.1101 (k)(6) at any location and approaches to a location where airborne concentrations of asbestos may exceed ambient background levels.

b. Decontamination and work procedures in equipment rooms and clean rooms.


d. OSHA Asbestos Construction Standards (29 CFR 1926.1101) in the clean room.

e. Entry and Exit Log

f. List of telephone numbers in the clean room for:

1) local hospital and/or local emergency squad.
2) school security office (if applicable).
3) Owner representative reachable 24 hours per day.
4) contractor's headquarters.
5) architects or consultants directly involved in the project.
2. Secure the work area from entry by unauthorized persons.

B. Interior Preparation.

1. Shut down and lock out electric power to all work areas. Provide temporary power from an outside source with ground-fault circuit interrupter (GFCI) at the source.
2. Shut down and isolate heating, cooling, and ventilating air systems. Remove HVAC filters, package and dispose as asbestos waste. (Need to discuss filter removal and disposal in light of replacement costs and clarify that this applies when work happens in a mechanical system and not in classrooms).
3. Pre-clean movable objects with HEPA vacuums or wet cleaning and remove from the work area to a location designated by the AOR.
4. Pre-clean fixed items which must remain in the work area with HEPA vacuums or wet cleaning where friable ACM is involved.
5. Wrap all fixed objects and equipment which will remain in the work area with a minimum of one layer of six mil poly.
6. Remove carpeting as ACM during removal.
7. Pre-clean the work area with HEPA vacuums or wet cleaning.
8. Seal off all windows, corridors, doorways, skylights, ducts, grilles, diffusers, and other penetrations or openings in walls, ceilings and floors with 6-mil poly and tape.
9. Cover floors with one layer of fire-retardant 6-mil poly with seams staggered and taped, and extending 12” up walls. Cover walls with one layer of 4-mil poly, with each wall poly overlapping each floor poly layers by 12”. Floors and walls need not be covered where scope of work requires removal of the flooring material and wall boards.
10. Asbestos materials shall not be disturbed during the preparation phase.
11. Maintain emergency and fire exits.
12. Install a three chamber Worker Decontamination Enclosure System, consisting of clean room, shower room, and dirty room separated by airlocks at least 3’ wide, all with curtained doorways, of sufficient size to serve the size of the crew, and with all features required by IDEM rules. The Contractor is responsible for high efficiency filtration of shower and other project waste water down to 1.0 micrometers (um) prior to discharge into the sanitary sewer system. The AOR reserves the right to require additional water filtration if the Contractors' system proves inadequate.

a. Where a remote decon unit is used (i.e. non-friable ACM and TSI glovebag operations), the AC shall:

1) set up the decon unit within the work area barriers.
2) establish a negative pressure of at least 0.02” water column (wc) between the dirty room and adjacent spaces, including the clean room.
3) provide at least 4 air changes per hour within the decon unit.
4) use a double suiting procedure where the workers proceed to the work area exit, HEPA-vacuum gross debris from their persons using a “buddy system” put on a clean suit (either over their dirty suit or after removing the dirty suit), assure that their footwear are free of ACM contamination, and follow a designated path to the remote decon unit.
5) once in the decon unit, follow normal decontamination procedures.

13. Install an Equipment Decontamination Enclosure System, consisting of a washing station and a holding area, with curtained doorways and a lockable door.
14. Maintain a negative pressure of at least 0.02” water column (wc) between each contained area and adjacent spaces 24 hours a day using negative air machines vented to the outside, from the start of abatement work to final clearance. Backup negative air machines shall be available onsite in case of machine failure.

15. Once operational, the system shall be inspected daily with smoke tubes by the contractor. Damages and defects shall be repaired immediately upon discovery.

3.8 ABATEMENT PROCEDURES

A. General Removal Requirements:

1. Asbestos materials shall be wetted and kept wet during removal.

2. The Contractor is responsible for removal of all drywalls and all layers of floor tiles and scraping the asbestos containing mastic from all floors of the building.

3. All asbestos containing flooring may be removed by physical methods (spudding) using amended water down to a visually clean surface. The Contractor shall wet asbestos flooring materials sufficiently to reduce the release of fibers. In removal areas where shelving, cabinetry or other permanent obstructions are over flooring, the Contractor shall remove all permanent structures to access flooring beneath. Removed asbestos containing flooring will be immediately disposed of. No removed floor tile will be allowed to sit containerized between shifts.

4. Completely remove mastic using an approved mastic removal solvent. The chemical solvents manufacturer's recommendations shall be strictly adhered to.

5. Sanding of asbestos containing flooring and or mastic is strictly prohibited

6. ACM shall be bagged or containerized as it is removed. Wastes shall not be dropped or thrown to the ground. Unless the material is carried or passed to the ground by hand, it shall be lowered via covered, dust-tight chute, crane, hoist, or other means that prevent the wastes from being dropped or thrown.

7. Appropriate OSHA fall protection shall be provided when appropriate:

   a. Scaffolding more than one section high shall be equipped with handrails and midrails designed to provide fall protection, or full-body safety harnesses shall be worn and tied off to a secure anchor point.

   b. Workers in manlifts shall wear full body harnesses and tie to the tie-off point provided on the manlift basket whenever the basket is elevated from ground level.

   c. Personal fall protection consisting of full body harnesses, lanyards, and OSHA-compliant lifelines, anchorage, and deceleration devices shall be provided whenever personnel are within 6 feet of an opening, hole, or edge where there is a risk of falling 6 feet or more.

3.9 CLEANING AND DECONTAMINATION

A. All visible accumulations of ACM, debris, tools, and unnecessary equipment shall be removed from the work area.

B. Protective poly shall be folded in on itself, rolled up, placed in asbestos disposal bags, and disposed as asbestos waste.

C. Surfaces which have been exposed to friable ACM or its dust shall be HEPA vacuumed.

D. Dry sweeping of surfaces that have been exposed to friable ACM or its dust is not permitted.
3.10 FINAL CLEARANCE

A. Cleaning may be discontinued when there is no visible debris and area air monitoring results verify that exposures are below the PEL.

B. Final (aggressive) clearance sampling will be conducted by the EC. Each sample result, as determined by Phase Contract Microscopy, shall be less than or equal to 0.01 f/cc. If the sampling results indicate a concentration of airborne fibers in excess of this clearance criteria, the contractor shall re-clean the contained and/or regulated area. The contractor shall not be released until the contained and/or regulated work area meets the clearance criteria.

3.11 WASTE DISPOSAL AND EQUIPMENT LOAD-OUT

A. Category I and II non-friable waste may be adequately wetted and loaded in bulk into lined receptacles, such as dumpsters or trailers. Receptacles shall be closeable and lockable to provide security and to prevent air emissions. It is the abatement contractor's responsibility to determine and provide for more stringent manifesting or packaging requirements that may be imposed by transporters or landfills.

B. Packaged friable asbestos wastes:

1. Asbestos-containing wastes, including removed ACM and debris, poly, critical barrier materials, suits, respirator filters, vacuum HEPA filters, water filters, and other asbestos-containing items shall be properly packaged for disposal.
2. Use 6 mil plastic bags with a gooseneck seal, drums, or other type of sealed container.
3. Wrap large or irregular items in 6 mil poly sheeting and seal with tape.
4. Sharp, jagged, or other items that may puncture poly shall be packaged in rigid impermeable containers such as drums or boxes, or wrapped in burlap or other protective covering before sealing in bags or poly sheeting.
5. Label containers for friable ACM waste:
   a. OSHA warning label.
   b. DOT performance-oriented hazardous material label.
   c. Name and address of generator and abatement location.

C. Removing items from the work area:

1. Packaged asbestos wastes shall be HEPA-vacuumed before removing from the work area.

D. Storage of packaged asbestos wastes shall be in a completely enclosed dumpster, or other suitable container that can be secured. The secured area shall be kept locked at all times to prevent unauthorized access.

E. Shipment of items from the project:

1. Decontaminated tools and equipment may be shipped by normal carrier to warehouse, another jobsite, or other destination.
2. For asbestos wastes:
   a. Line shipping container with 6 mil poly prior to loading packaged friable asbestos wastes.
b. Post NESHAP placards during loading of friable asbestos wastes.
c. Execute the NESHAP-required Waste Shipment Record (WSR) to be signed by the generator, transporter, and landfill. All WSRs shall be returned to the EC within 30 days of shipment.
d. Only landfills approved and permitted by Indiana for accepting asbestos wastes may be used for disposal.

END OF SECTION
# APPENDIX A

## Table I – Assumed Asbestos Containing Material (ACM)

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Material Location</th>
<th>Estimated Quantity*</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>561 - 67 Broadway Street, Gary, IN</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Floor Tile and Mastic</td>
<td>Throughout</td>
<td>6,632 SF</td>
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<td>Pipe Insulation &amp; Associated Fittings</td>
<td>Throughout</td>
<td>1,250 LF</td>
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<tr>
<td>Boiler / Tank Insulation</td>
<td>Throughout</td>
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</tr>
<tr>
<td>Duct Insulation</td>
<td>Basement</td>
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</tr>
<tr>
<td>Window / Door Caulk</td>
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<td>250 LF</td>
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<td>Pipe Insulation &amp; Associated Fittings</td>
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<td>Duct Insulation</td>
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<td>Window / Door Caulk</td>
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<td>Floor Tile and Mastic</td>
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<td>Black Mastic Over Wood Floor</td>
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<tr>
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</table>
Table I – Assumed Asbestos Containing Material (ACM) (continued)

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Material Location</th>
<th>Estimated Quantity*</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>632 - 38 Broadway Street, Gary, IN</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floor Tile and Mastic</td>
<td>Throughout</td>
<td>4,586 SF</td>
<td></td>
</tr>
<tr>
<td>Pipe Insulation &amp; Associated Fittings</td>
<td>Throughout</td>
<td>1,075 LF</td>
<td></td>
</tr>
<tr>
<td>Boiler / Tank Insulation</td>
<td>Throughout</td>
<td>450 SF</td>
<td></td>
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<tr>
<td>Window / Door Caulk</td>
<td>Throughout</td>
<td>580 LF</td>
<td></td>
</tr>
<tr>
<td><strong>668 - 77 Broadway Street, Gary, IN</strong></td>
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<td></td>
<td></td>
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<tr>
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<tr>
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<td>850 LF</td>
<td></td>
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<tr>
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<td>Throughout</td>
<td>350 SF</td>
<td></td>
</tr>
<tr>
<td>Window / Door Caulk</td>
<td>Throughout</td>
<td>250 LF</td>
<td></td>
</tr>
<tr>
<td><strong>676 - 78 Broadway Street, Gary, IN</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floor Tile and Mastic</td>
<td>Throughout</td>
<td>3,932 SF</td>
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<td>Pipe Insulation &amp; Associated Fittings</td>
<td>Throughout</td>
<td>925 LF</td>
<td></td>
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<tr>
<td>Boiler / Tank Insulation</td>
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<td></td>
</tr>
<tr>
<td>Window / Door Caulk</td>
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<td>450 LF</td>
<td></td>
</tr>
<tr>
<td><strong>680 - 82 Broadway Street, Gary, IN</strong></td>
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<tr>
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<td>5,866 SF</td>
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<tr>
<td>Pipe Insulation &amp; Associated Fittings</td>
<td>Throughout</td>
<td>975 LF</td>
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<tr>
<td>Boiler / Tank Insulation</td>
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<td>400 SF</td>
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<td>Window / Door Caulk</td>
<td>Throughout</td>
<td>150 LF</td>
<td></td>
</tr>
<tr>
<td><strong>688 - 92 Broadway Street, Gary, IN</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pipe Insulation &amp; Associated Fittings</td>
<td>Throughout</td>
<td>200 LF</td>
<td></td>
</tr>
<tr>
<td><strong>728 - 730 Broadway Street, Gary, IN</strong></td>
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<tr>
<td>Floor Tile and Mastic</td>
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<td>1,250 SF</td>
<td></td>
</tr>
<tr>
<td>Pipe Insulation &amp; Associated Fittings</td>
<td>Throughout</td>
<td>500 LF</td>
<td></td>
</tr>
<tr>
<td>Boiler / Tank Insulation</td>
<td>Throughout</td>
<td>250 SF</td>
<td></td>
</tr>
<tr>
<td><strong>744 - 750 Broadway Street, Gary, IN</strong></td>
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</tr>
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<td>Throughout</td>
<td>8,532 SF</td>
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<td>Pipe Insulation &amp; Associated Fittings</td>
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<td>1,150 LF</td>
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</tr>
<tr>
<td>Boiler / Tank Insulation</td>
<td>Throughout</td>
<td>500 SF</td>
<td></td>
</tr>
<tr>
<td>Window / Door Caulk</td>
<td>Throughout</td>
<td>600 LF</td>
<td></td>
</tr>
</tbody>
</table>

- Most buildings were not accessible during this limited survey. No samples were collected to confirm the presence of asbestos. Quantities are estimates only. Other suspect ACM materials may be present in the building. Contractor must treat and dispose all suspect materials as ACM. Contractor must field verify actual quantities of all ACM prior to bidding.
- Most building may not be structurally safe for abatement work. Contractor shall notify appropriate regulatory agencies and receive approval of the work plan for demolition of such buildings without conducting ACM abatement. In such cases, the Contractor shall treat and dispose the demolition debris as ACM unless it is approved by the regulatory agencies otherwise.
SECTION 028613
HAZARDOUS AND UNIVERSAL WASTE MANAGEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Related Documents: All terms and conditions of the Contract apply to this Section.

B. Refer to Tables I (attached herewith) for types of hazardous and universal waste.

C. Description of Work:

1. This Section describes the segregation, packaging, labeling, transport, and disposal and/or recycling of waste materials generated by demolition/renovation activities and the subsequent shipment of properly packaged and labeled waste materials to open, permitted and Owner-approved disposal sites.

2. The Contractor’s Work includes work area preparation, sampling and analysis, on-site handling, supervision of all Work, preparation of reports, and protection of on-site persons, utilities, and property, and payment of all transport and disposal/recycling fees.

1.3 REFERENCES

A. General Applicability of Codes and Regulations:

1. Except to the extent that more explicit or more stringent requirements are written directly into the Contract Documents, all applicable codes and regulations have the same force and effect (and are made a part of the Contract Documents by reference) as if copied directly into the Contract Documents, or as if published copies are bound herewith.

B. Contractor Responsibility

1. The Contractor shall assume full responsibility and liability for the compliance with all applicable federal, state, and local regulations pertaining to hazardous, special and universal waste management and disposal/recycling.

2. Notice shall be provided to the Owner a minimum of 2 working days prior to the removal of any hazardous, special or universal waste and/or recycled hazardous, special or universal waste from the site.

3. Notice will be provided to the Owner within 4 hours of any environmental problems, complaints, fines, citations or issues by any government body or regulatory agency pertaining to hazardous, special or universal waste management and disposal. Written confirmation will be provided to the Owner within 48 hours of the incident that indicates that all problems and issues have been satisfactory addressed.
C. Federal Requirements:

1. Federal requirements which govern the management, hauling and disposal of hazardous, special and universal waste/recycled material include but are not limited to the following:

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


   b. EPA: U. S. Environmental Protection Agency (EPA), including but not limited to the following:

      2) Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution In Commerce, and Use Prohibitions, Title 40, Parts 761, of the Code of Federal Regulations.
      4) Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Title 42, Section 103.

   c. LABOR: Occupational Safety and Health Administration, including but not limited to:


D. State Requirements: Abide by all state requirements which govern the management, hauling and disposal of hazardous, special and universal waste/recycled material. In Indiana, this includes, but is not limited to the following:

1. 326 IAC Article 14, Indiana Department of Environmental Management (IDEM)
2. 329 IAC Article 10 Rule 8.2, IDEM Office of Land Quality Waste Requirements
3. 326.IAC Article 18 Rule 1, IDEM Licensing Requirements
E. Local Requirements: Abide by all local requirements as outlines within the Municipal Code of the City of Gary which governs the management, hauling, and disposal of hazardous, special and universal waste/recycled material.

1.4 DEFINITIONS

A. Capacitor: A device for accumulating and holding a charge of electricity and consisting of conducting surfaces separated by dielectric fluid.

B. Chemical Waste Landfill: an open and approved landfill, permitted under 35 IAC Subtitle G Part 814 at which protection against risk of injury to health or the environment from migration of PCBs to land, water or the atmosphere is provided from PCBs and PCB items deposited therein by locating, engineering, and operating the landfill as specified in 40 CFR 1761.75.

C. Disposal: Intentionally or accidentally to discard, throw away or otherwise complete or terminate the useful life of PCBs and PCB items. Disposal includes spills, leaks, and other uncontrolled discharges of PCBs as well as actions related to containing, transporting, destroying, degrading, decontaminating, or confining PCBs and PCB items.

D. CFR: The Code of Federal Regulations is the basic component of the Federal Register publication system. The CFR is a codification of the regulations of the various Federal Agencies.

E. Component: All removables parts/materials which make up ballasts, bulbs, batteries, and other electrical equipment, a percentage of which can be recycled.

F. Container: Any portable device, in which material is sorted, transported, treated, disposed of, or otherwise handled.

G. Disposal Facility: A facility or part of a facility at which hazardous waste is intentionally placed into or on any land or water, and at which waste will remain after closure.

H. EPA Identification: The unique number assigned by the EPA to each generator or transporter of hazardous waste, and each treatment, storage or disposal facility.

I. Fluorescent light ballast: A device that electrically controls fluorescent light fixtures and that includes a capacitor containing 0.1 kg or less of dielectric.

J. Leak - or leaking: Any instance in which PCB Article, PCB Container, or PCB Equipment has any PCBs on any portion of its external surface.

K. Facility: All contiguous land, structures, other appurtenances, and improvements on the land, used for treating, storing or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units, e.g. one or more landfills, surface impoundments, or a combination of them.

L. On-site: Within the boundaries of a contiguous property unit.

M. Landfill: an open and permitted disposal facility or part of a facility where hazardous and special wastes are placed in or on land and which is not a land treatment facility, a surface impoundment, or a combination of them.
N. Manifest: The shipping document, EPA form 7710-53, used for identifying the quantity, composition, origin, routing, and destination of hazardous waste during its transportation from the point of generation to the point of treatment, storage or disposal.

O. Polychlorinated Biphenyls (PCBs): Any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contains such substance.

P. PCB Article Container: Any package, can, bottle, bag, barrel, drum, tank, or other device that contains PCB Articles or PCB Equipment, and whose surface(s) has not been in direct contact with PCBs.

Q. PCB Container: Any package, can bottle, bag, barrel, drum, tank, or other device that contains PCBs or PCB Articles and whose surface(s) has been in direct contact with PCBs.

R. PCB Item: Any PCB Article, PCB Article Container, PCB Container, or PCB Equipment, that deliberately or unintentionally contains or has as a part of it any PCB or PCBs.

S. Recover Refrigerant: To remove refrigerant in any condition from an appliance without necessarily testing or processing it in any way.

T. Recycle Refrigerant: To extract refrigerant from an appliance and clean refrigerant for reuse without meeting all of the requirements for reclamation. In general, recycled refrigerant is refrigerant that is cleaned using oil separation and single or multiple passes through devices such as replaceable-core filter-driers, which reduce moisture, acidity, and particulate matter.

U. Reclaim Refrigerant: To reprocess refrigerant to at least the purity specified in Air-Conditioning and Refrigeration Institute (ARI) Standard 700-1988, “Specification for Fluorocarbon refrigerants”, and to verify this purity using the analytical methodology prescribed in the standard. In general reclamation involves the use of processes or procedures available only at the processing or manufacturing facility.

V. Storage: The holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, destroyed, disposed of or stored elsewhere.

W. Toxic Characteristic Leaching Procedure (TCLP): A laboratory test method to determine the mobility of both organic and inorganic compounds present in liquid, solid, and multiphasic wastes performed in accordance with test methods required under 40 CFR Part 261 and 268.

X. Transporter: Any person engaged in the off-site transportation of special waste and/or hazardous waste within the United States, by air, rail, highway or water, if such transportation requires a manifest under 40 CFR Part 262.

1.5 QUALITY ASSURANCE

A. Work outlined in this Section must be performed by a qualified Contractor, with a minimum of 10 years’ experience, who is thoroughly familiar with working with regulated waste materials of similar size and scope, the Contractor must be familiar with and capable of complying with all federal, state, and local regulatory requirements pertaining to waste handling.
B. Medical Examinations: The Contractor shall provide workers with a comprehensive medical examination as required by 29 CFR 1910.134 and 29 CFR 1926.62. The examination will not be required if adequate records show that employees have been examined as required within the last year. The Contractor shall institute a medical surveillance program for all employees who are or may be exposed above the action level for more than 30 days per year.

1.6 SUBMITTALS

A. Before start of any hazardous waste removal Work, the Contractor must submit a Hazardous Waste Management Plan to the Owner fifteen (15) days prior to the start of Work.

B. During the work, the Contractor must submit the following to the Owner, with ten (10) days of activity, off-site removal, or completion of work if duration is less:

1. TCLP test results, as required to characterize waste paint chip debris for segregation and packaging purposes prior to transport from the site.
2. Submit copies of all executed manifests and disposal site receipts and waste quantities within ten (10) days to the Owner.
3. Receipts for all recycled materials accepted at authorized recycling facilities. The receipts will include the number of components recycled as well as the amount of materials recycled and/or disposed.
4. Documents for the removal, handling, recycling or disposal of CFC Refrigerant/Reclamation.
5. Daily Reports – list names of active workers for each day, work starting and stopping times, visitors to the site, and description of Work accomplished.

C. Submittal Review

1. Review of submittals or any comments made do not relieve the Contractor from compliance with the requirements of the contract specifications and drawings. The purpose of this check is to review for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents.
2. The Contractor must not begin any Work applicable to this section until all required submittals have been reviewed and accepted by the Owner.

1.7 HAZARDOUS WASTE PLAN REQUIREMENTS

A. The Contractor must prepare a Hazardous Waste Plan designating appropriate procedures and equipment for performing the Work. The Hazardous Waste Plan must address the proper management/handling and disposal/recycling of wastes generated during Work activities. The Contractor’s Hazardous Waste Plan for this project must include as a minimum the items listed below:

1. List of Hazardous Waste Equipment
   a. A description of the proposed equipment to be used during the removal, handling, temporary storage and transport of hazardous materials related to the Work.
2. Hazardous Material Handling
   a. procedures including a description of the method of transportation and storage of each type of hazardous material, for movement on and off site. Contractor shall provide a description of procedures for on-site characterization of chemicals for consolidation prior to disposal/recycling. The plan will include the following documentation for each transporter:
   b. copy of state and local special waste and/or hazardous waste hauler licenses for each transporter must be provided in the Plan.
   c. U.S. EPA Identification Number of waste hauler.
   d. Current list of all transporting vehicles to be used including:
      1) Vehicles make, model and year.
      2) Serial number for each vehicle.
      3) Vehicle license number.
      4) Number of axels.
      5) Weight capacity of vehicle.
   e. A list of all licensed qualified truck drivers. Drivers should be able to provide their driver’s license upon request.
   f. Instances where rail haulers are being used, copies of all applicable permits and licenses for the load on/off site location(s) and/or transfer location(s) will be provided.

3. Contractor shall provide the following documentation for each disposal/recycling facility:
   a. Name and address of waste disposal facility where hazardous waste materials are to be disposed including:
      1) Contact person and telephone number.
      2) Copy of state license and permit.
      3) Disposal facility permits.
   b. A signed statement from an authorized representative of the recycling or disposal facility stating the percentage of recycled materials for each of the components including the estimated percentage pertaining to each component which has no recycling value.

4. Safety Precautions –Personnel
   a. List safety equipment and clothing to be used per OSHA regulations.
   b. A description of emergency procedures to be followed in case of physical contact, ingestion, inhalation, etc.

5. Emergency Spills
   a. A description of methods to be used for containment.
   b. A description of methods to be used for collection and disposal.
   c. A description of methods and materials to be used to restore areas harmed by emergency spills.
6. Lead-containing Paint Management
   a. A description of the work procedures that will be utilized to minimize the
generation of airborne lead into the environment.

7. In addition, the Plan will provide:
   c. Copy of forms and permits required by federal, state, and local agencies.
   d. Sample of disposal label(s) to be used.

PART 2 - PRODUCTS

2.1 EQUIPMENT/MATERIALS

   A. Disposal Bags: Provide 6 mil (0.15 mm) thick leak-tight polyethylene bags.

   B. DOT Hazardous Waste Disposal Drums: Provide DOT 17-H Open -Top Drums (55-gallon) in
   accordance with DOT title 49 CFR Parts 173, 177, 178, and 179.

   C. Fiberboard Drums, cylindrical containers manufactured from sturdy fiberboard will be utilized
   for storage transportation of electrical equipment.

   D. PCB containing ballasts shall be place in 55-gallon drums with vermiculite packing. The drums
   will be sealed and labeled as containing hazardous PCB waste. The label shall also include the
   name and address of the parcel. However, if ballasts are damaged, they shall be stored prior to
   disposal in accordance with 40 CFR 761.65.

   E. DOT Hazardous Waste Labels: in accordance with DOT regulations Title 49 CFR parts 173,
   177, 178, and 179.

   F. Corrugated “Gaylord” Boxes with the use of a liner will be used to store and transport bulk
   materials which will be kept on pallets during storage and transportation.

   G. Materials to be used to restore areas harmed by emergency spills.

   H. Safety equipment and associated clothing to be used.

   I. Hazardous material manifests and other related forms required by state and local agencies.

   J. Utilize equipment to recover refrigerant that is appropriate for the following:

       1. Type of system encountered
       2. Refrigerant type
       3. Achieving IDEM-mandated vacuum levels
PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS

A. The Contractor shall train each employee performing Work prior to the time of initial job assignment in accordance with applicable regulations.

B. Respiratory Protection Program:

1. The Contractor shall furnish each employee required to wear a negative pressure respirator or other appropriate type with a respirator fit test at the time of initial fitting and at least every 6 months thereafter if required by 29 CFR 1910.1025.


D. Post warning signs at entry points to hazardous Work area, as necessary.

E. Segregate, package, label, transport and dispose of Hazardous Waste in accordance with DOT, EPA, state, and local regulations.

F. Scheduling/Sequencing of the demolition and/or abatement is to be coordinated by the Contractor.

G. Extreme care shall be used to prevent leakage of chemicals, liquid wastes, refrigerant, etc. during removal processes.

H. Do not mix potentially hazardous waste streams or different refrigerants in the same recovery vessel. Where feasible, separate each type of hazardous waste from other types of hazardous wastes and construction waste.

I. All electrical circuits shall be de-energized and locked out prior to removal of ballasts. Contractor shall provide temporary lighting as needed.

J. The Contractor shall identify the location and Commissionership of all on-site transformers. The contents from each transformer shall be characterized for PCB content by the Contractor for proper disposal.

K. Contractor shall determine location and type of each radiological waste. Contractor shall make all arrangements from the proper decommissioning of equipment and disposal of related materials.

3.2 HAZARDOUS WASTE DESIGNATION

A. Where not otherwise designated by the Owner as hazardous waste, characterize applicable suspect waste products by conducting representative TCLP testing and referencing 40 CFR Part 261.
B. Work shall include characterization and proper disposal of any soot contained within boilers, incinerators, or stacks; maintenance fluids within heating/cooling equipment; hazardous chemicals; storage tanks; or lead content of paint present.

C. Fluids from transformers, electrical equipment, etc. shall be characterized for PCB content per 40 CFR Part 761.

D. TCLP test analysis will be performed in accordance with EPA Method 1311.

3.3 HAZARDOUS WASTE

A. The following waste products are designated by the Owner as non-salvageable and as Hazardous Waste Types:

1. Waste Type A: PCB waste.
   a. PCB-containing ballasts from fluorescent light fixtures.
   b. PCB-containing electrical transformers.

2. Waste Type B: Mercury-containing waste.
   a. Thermostats with mercury switches. Individually bagged mercury-containing thermostats.
   b. Fluorescent and mercury-vapor lamps/bulbs.

3. Waste Type C: Chemical Wastes.
   a. Cleaning chemicals such as bleach, ammonia, carpet cleaner, etc.
   b. Unused medicine.
   c. Building maintenance chemicals such as paint, adhesives, glazing compound, caulk compound, roofing materials, concrete binder, resurfacing compounds, etc.
   d. Equipment maintenance chemicals such as lubricants, solvents, and oils.
   e. Fuels, such as gasoline and diesel fuel.

4. Waste Type D: Refrigerants and CFCs
   a. Refrigerators and freezers.
   b. Air Conditioning units.

5. Waste Type E: Lead-containing waste.
   a. Lead paint (liquid or containerized paint wastes).
   b. Lead-contaminated wastes (paint chips, loose debris, etc.).

3.4 HAZARDOUS WASTE PACKAGING AND LABELING

A. Package each segregated Hazardous Waste Type in containers for offsite removal and disposal/recycle. IMPORTANT: Do Not Mix Waste Streams.
1. Waste Types A, and B as applicable.
   b. Fill to capacity only with waste.
   c. Install gasket on lid, apply lock ring, and seal.
   d. Apply Hazardous Waste Label to drum side.
   e. Enter required DOT shipping data per applicable regulations.
   f. Adjacent to each label, enter the date indicating when waste was first placed in each drum.

2. Waste Type C – Chemical Wastes
   a. Package other wastes as applicable in accordance with Hazardous Wastes Resource Conservation and Recovery Act (RCRA), Title 40, Parts 260-299 of the Code of Federal Regulations. Overpack drums shall be required as necessary to complete Work.

3. Waste Type D – Refrigerants and CFCs
   a. Reference Section 3.8 for details.

4. Waste Type E – Lead-containing Wastes
   b. Comply with land disposal restriction notification requirements as required by 40 CFR 268.
   c. Non-hazardous waste may be disposed of as demolition debris (general refuse).
   d. Submit results of TCLP testing to the Owner prior to disposal.

B. Sealed and Labeled Containers: maintain all containers in a continuously sealed condition after they have been sealed.
   1. Do not reopen sealed containers
   2. Do not place additional waste in sealed containers.

3.5 TEMPORARY STORAGE

A. Partially filled containers of hazardous waste may be stored at the Work site for intermittent packaging provided that the following conditions are met:
   1. Each container is properly labeled when it is first placed in service, including the date;
   2. Each container remains closed at all times except when compatible waste types are added;
   3. Each Work site must be secured and/or attended at all times; and
   4. When moved from site to site, each container remains within the geographic boundaries of the facility without moving nor crossing public access highways; and
5. **UNDER NO CIRCUMSTANCES WILL THE ACCUMULATED WASTE REMAIN ON SITE BEYOND NINETY (90) DAYS FROM THE DAY THAT ACCUMULATION IN THE CONTAINER WAS INITIATED.**

3.6 **REMOVAL OF HAZARDOUS WASTES**

A. Immediately seal containers of hazardous waste as each the container is filled. Remove containers of hazardous waste from the Work site within forty-eight (48) hours of being filled.

B. Transporting filled containers from the Work site to an approved disposal site or recycling center utilizing licensed hauler.

C. All fluorescent light ballasts shall be removed. Those labeled “NO PCBs” shall be packaged separately from those which indicate PCB or do not indicate PCB condition.

D. Subject to the Owner’s approval, the Contractor shall arrange with the electric utility provider for the removal of transformers which are owned by the utility provider from the site.

E. Subject to the Owner’s approval, the contractor shall remove and dispose of all transformers which are not owned by the electric utility provider.

F. Continuously maintain custody of all hazardous material generated at the Work site including security, short-term storage, transportation and disposition until custody is transferred to an approved disposal site or recycling center.

G. Do not remove, or cause to be removed, hazardous waste from the Property without a legally executed Uniform Hazardous Waste manifest.

H. At completion of hauling and disposal of each load, submit copy of waste manifest, chain of custody form, and landfill receipt to the Owner.

3.7 **RECYCLING AND RECOVERY**

A. Turn over waste which contains materials for which recovery and/or recycling is possible to an approved recycling center. Materials subject to recycling include, but are not limited to:

   1. Fluorescent light tubes.
   2. Non-PCB-containing oils.
   3. Maintenance chemicals.

3.8 **STORAGE & TRANSPORTATION OF REFRIGERANTS / CFCs**

A. Use proper storage vessel when recovering refrigerants.

   1. INDOT containers meeting the ARI standard.
   2. Container working pressure rating must comply with INDOT requirements (49 CFR).

      b. For Refrigerant CFC-11 (Low-Pressure Refrigerants): Drums of steel construction and designated as 17C or 17E.
3. Open top and plastic drums shall not be used.
4. Previously filled, disposable cylinders shall not be used to store or transport recovered refrigerants.

B. All recovery vessels shall be visually inspected by the Contractor prior to filling. The Contractor shall inspect and provide the following upon request:

1. Verification of proper INDOT specification.
2. Pressure rating verification.
3. Current hydrostatic test date.
4. Cylinder shall be free of surface dents and imperfections.

C. Provide required labeling for recovery vessel.

D. Return all refrigerant to reclamation facilities to be reprocessed to ARI 700 1988 Standards or dispose in an approved facility.

E. The Contractor shall provide the Owner with required documents for CFC Refrigerant/Reclamation within ten (10) days.

3.9 REMOVAL OF NON-HAZARDOUS WASTE MATERIAL

A. Transport and legally dispose of non-hazardous waste products, materials, residues and refuse.

B. Non-hazardous waste products, materials, residues and refuse include, but are not necessarily limited to:

1. Materials which are determined to be non-hazardous wastes through objective sampling in accordance with EPA Document SW-846 and laboratory analysis in accordance with EPA Method 1311.
2. emptied hazardous material containers: containers holding a material with constituents listed on the MSDS as hazardous.
   a. When a container is emptied of its hazardous contents by pouring or scraping so that less than one inch of material remains in the bottom of the container, the container is considered “empty” and is not in itself a hazardous waste.
   b. Emptied hazardous material containers may be disposed of as construction debris waste (i.e. non-hazardous).
3. Personal protective clothing and safety equipment with de minimis or trace contamination.

C. Keep premises in a clean and orderly condition during performance of all Work.

D. Place non-hazardous construction debris wastes in secure containers for local landfill disposal on a daily basis.
PART 4 - MEASUREMENT AND PAYMENT

4.1 BASE CONTRACT PRICE – All work specified in this Section shall be included in the Base Contract Price, except as noted below.

END OF SECTION 028613