

CONSTRUCTION CONTRACT

DATE: 12-2-11

PROJECT #: 11-061.1

FUNDING SOURCE: DGS 280-32

CONTRACT #: 1601

PHILADELPHIA REGIONAL PORT AUTHORITY

3460 N. Delaware Avenue, 2nd Floor

Philadelphia Pennsylvania 19134

Attn: Lisa U. Magee, Special Projects

(the "Authority"), a body corporate and politic and an independent agency of the Commonwealth of Pennsylvania,

And

JPC GROUP, INC.

1309 Harmony Street

Philadelphia, Pennsylvania 19146

Attn: Joseph Petrongolo, President

(the "Contractor"), a corporation incorporated under the laws of the Commonwealth of Pennsylvania.

Article I. Project Description: Mustin Field Housing Demolition at the Philadelphia Navy Yard. The description in this section of the work to be performed is for informational purposes only and in all respects is subject to the Contract Documents.

Article II. The Work: The work required to be performed by the Contractor under the Contract Documents is more specifically described in Exhibit "B" attached hereto and incorporated by reference.

Article III. Contract Amount: The payment from the Authority for the services provided by the Contractor for Items 1.1, 1.2, 1.3, 1.4, 1.5, 3.7, 5.1, 5.2, 6.1, 6.2, 6.3, 6.7, 6.8, 7.1, 7.2 & 7.3 identified in the bid set forth in Exhibit "B" and pursuant to the specifications, inclusive of all expenses, shall not exceed the sum of One Million Eight Hundred Twenty Nine Thousand Two Hundred and Ninety Five Dollars (\$1,829,295.00) for the term of the Contract. In addition the Contractor guarantees unit prices as set forth in Exhibit "B" for the term of the Contract and warranty period. Work pursuant to Items 1.6, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11, 2.12, 3.1, 3.2, 3.3, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 5.3, 6.4, 6.5, 6.6 and Alt 1-2 shall be authorized by Change Order on an as-needed basis.

Article IV. Term of Contract: This Contract shall have a term starting from the date of execution of this Contract by all parties and ending upon final completion of the Work. Liquidated damages as set forth in this Contract will accrue after two hundred forty (240) calendar days from the date of the notice to proceed if substantial completion has not occurred. The Contractor agrees time is of the essence.

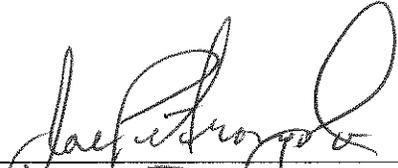
Article V. Terms and Conditions: The terms and conditions set forth in Exhibit "A" attached hereto are incorporated by reference and constitute part of the Contract.

Article VI. Contract Documents: The Contract Documents, attached as exhibits hereto, constitute a part of the Contract, and together with the Contract, constitute the entire agreement between the Authority and the Contractor. The Contract documents, except any modifications issued after execution, are enumerated in order of precedence as follows: the Bidding Documents, attached hereto as Exhibit "A", and any amendments thereto; the Proposal or Bid, attached hereto as Exhibit "B", and any amendments thereto; the performance bond, attached hereto as Exhibit "C", and any amendments thereto; and the payment bond, attached hereto as Exhibit "D", and any amendments thereto.

IN WITNESS WHEREOF, the parties hereto have caused this Contract to be duly executed as of the day and year first above written.

JPC GROUP, INC.

PHILADELPHIA REGIONAL
PORT AUTHORITY

By: 
Name: Joseph Petrucchio
Title: President

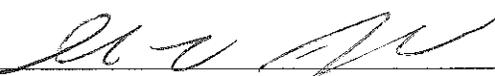
By: 
Name: James T. McDermott, Jr.
Title: Executive Director

Approved as to Legality and
Form:

Approved as to Fiscal Responsibility and
Budgetary Appropriateness:

PHILADELPHIA REGIONAL
PORT AUTHORITY

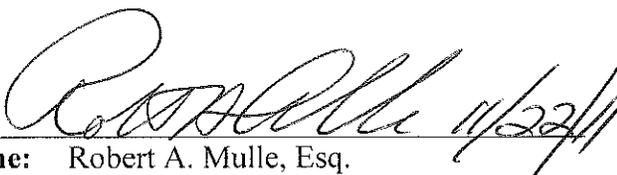
PHILADELPHIA REGIONAL
PORT AUTHORITY

By: 
Name: Gregory V. Iannarelli, Esq.
Title: Chief Counsel

By: 
Name: Edward G. Henderson
Title: Director of Finance & Capital Funding

OFFICE OF THE ATTORNEY
GENERAL

OFFICE OF THE BUDGET

By: 
Name: Robert A. Mulle, Esq.
Title: Chief Deputy Attorney General

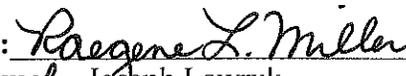
By: 
Name: for Joseph Lawruk
Title: Comptroller

EXHIBIT "A"

THE BIDDING DOCUMENTS

PROJECT NO. 11-061.1

PHILADELPHIA REGIONAL PORT AUTHORITY

BIDDING DOCUMENTS

FOR

MUSTIN FIELD HOUSING DEMOLITION

PHILADELPHIA NAVY YARD (PNY)

James T. McDermott, Jr.
Executive Director

Bids will be received in the office of the Philadelphia Regional Port Authority, 3460 N. Delaware Avenue, 2nd Floor, Philadelphia, PA 19134 until 2:00 P.M., Thursday, October 13, 2011, at which time they shall be opened publicly.

Mandatory pre-bid job site meeting will be held September 29, 2011, 10:00 A.M. at the Seaplane Hangar, intersection of Admiral Peary Way and Mustin Ave., Philadelphia, PA 19112.

BIDDERS MUST PROVIDE TO THE PROCUREMENT DEPARTMENT IN WRITING, THE NAME/S OF INDIVIDUALS THAT WILL BE ATTENDING PRE-BID MEETINGS. THIS INFORMATION IS NEEDED TWENTY-FOUR (24) HOURS PRIOR TO THE MEETING. FAX TO 215-426-6800, ATTN: PROCUREMENT DEPARTMENT.

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Mustin Housing As-Built Drawings

| | |
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| Arch Struct Set 1.pdf | 69 Sheets |
| Gas Site Plan.pdf | 1 Sheet |
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| Mustin Gas.pdf | 1 Page |
| Mustin Housing Basemap.dwg | 1 Sheet |
| Mustin Housing Utilities.pdf | 1 Sheet |
| Mustin Topo.pdf | 1 Sheet |
| Sanitary Lift Station Details.pdf | 1 Sheet |
| Sanitary Lift Station Details_1.pdf | 1 Sheet |
| Sanitary.pdf | 1 Sheet |
| Sewer & Water Details.pdf | 1 Sheet |
| Site Grading Plan.pdf | 1 Sheet |
| SouthPort Site Electric | 1 Sheet |
| Storm Sewer Details.pdf | 1 Sheet |
| Storm Sewer Plan S2A.pdf | 1 Sheet |
| Storm Sewer Plan S2B.pdf | 1 Sheet |
| Storm.pdf | 1 Sheet |
| Utilities-01.jpg | 1 Sheet |
| Utility Plan - Site1.pdf | 1 Sheet |
| Utility Plan - Site 2.pdf | 1 Sheet |
| Utility Profiles - Site 4.pdf | 1 Sheet |
| Utility Profiles - Site 3.pdf | 1 Sheet |
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| | |
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|--------------------|--------|

TAB 1

PROJECT NO. 11-061.1

BID

FOR

MUSTIN FIELD HOUSING DEMOLITION

PHILADELPHIA NAVY YARD (PNY)

_____, 2011

Philadelphia Regional Port Authority
3460 N. Delaware Avenue
2nd Floor
Philadelphia, Pennsylvania 19134

Dear Sir/Madam:

The undersigned, _____, having familiarized himself/herself/themselves/itself with the local conditions affecting the cost of the work and with the contract documents, including Instructions to Bidders, General Conditions, Bid Forms, Plans and Specifications, the Contractor Responsibility Certification Form, etc., hereby proposes to perform everything required to be performed and to provide and furnish all labor, material, necessary tools, equipment, and all utility and transportation services necessary to perform and complete in a workmanlike manner all of the work required to be performed under the above named contract, within two hundred forty (240) calendar days counting from the Notice to Proceed for the following prices:

MUSTIN FIELD HOUSING DEMOLITION

PRPA PROJECT NO. 11-061.1

| | Item | Quantity | Unit | Unit Price | Total |
|--|---|----------|------|------------|-------|
| 1.0 - General Items | | | | | |
| 1.1 | MOBILIZATION - Installation of temporary facilities, utilities, and infrastructure. - Kickoff meeting(s). - Notification and coordination with proper authorities and utility owners. - Additional items necessary to begin work. -Bonding and Insurance Total of above items not to exceed 5% of bid. | 1 | LS | | |
| 1.2 | Permitting and Misc. Fees. (excluding Demolition Permit, NPDES Permit, DEP/USACE Joint Permit, Eagle Disturbance Permit, which will be paid for by Owner.) | 1 | LS | | |
| 1.3 | Establish and Maintain E&S Controls per NPDES Permit and Contract Documents, does not include E & S final controls shown on drawing C4 through C8. | 1 | LS | | |
| 1.4 | Establish and maintain required site controls includes: fencing, signage and similar perimeter controls | 1 | LS | | |
| 1.5 | Utilities -Disconnect and abandon all utility lines entering site per contract documents -Terminate and install new fire hydrant per contract documents and City Fire Dept. regulations. | 1 | LS | | |
| 1.6 | Install wildlife control fencing (silt fence or equivalent) | 3,000 | LF | | |
| 2.0 - Remove and Dispose of Regulated Materials | | | | | |
| 2.1 | Mercury thermostats | 400 | EA | | |
| 2.2 | Light Ballasts | 1,000 | EA | | |
| 2.3 | Fluorescent Light Bulbs | 1,000 | EA | | |
| 2.4 | Less than one (1) Gallon containers of miscellaneous solvents, oil, paints, etc. | 150 | EA | | |
| 2.5 | Remove and Dispose of transformers and associated fluids (approx 80 gallons ea.) | 40 | EA | | |
| 2.6 | TEM Building AC System and Associated Regulated Materials Components | 1 | EA | | |
| 2.7 | Recover and Recycle Refrigerant from AC Units | 400 | EA | | |
| 2.8 | Water Coolers and Associated Refrigerant | 1 | EA | | |
| 2.9 | Automobile | 4 | EA | | |

| | Item | Quantity | Unit | Unit Price | Total |
|--|--|----------|------|------------|-------|
| 2.10 | Motorcycle | 1 | EA | | |
| 2.11 | Automobile/Motorcycle batteries | 100 | EA | | |
| 2.12 | Miscellaneous household batteries, not covered above | 100 | LB | | |
| 3.0 - Remove and Dispose of Asbestos Containing Materials (ACM) Floor Coverings | | | | | |
| | Contractor is to bid on 3.1 AND 3.2 AND 3.3 OR 3.4, but not all four. Contractor shall bid on preferred, removal, method and means. | | | | |
| 3.1 | Remove and dispose of vinyl tile/linoleum floor covering with mastic, on concrete, up to two layers of flooring material by CONVENTIONAL abatement means | 150,000 | SF | | |
| 3.2 | Remove and dispose of vinyl tile/linoleum floor covering with mastic, on concrete, single layer only, by CONVENTIONAL abatement means | 100,000 | SF | | |
| 3.3 | Remove and dispose of black mastic beneath floor tile on concrete by COVENTIONAL abatement means. Material is located in building 1011. | 5,500 | SF | | |
| | ----- OR ----- | | | | |
| 3.4 | Remove and dispose of vinyl tile/linoleum floor covering with mastic, on any surface by CONVENTIONAL abatement means. Remove balance of ACM floor covering material by EITHER Conventional Abatement means OR during building demolition as asbestos containing waste. | 1 | LS | | |
| | Contractor is to bid on 3.5 AND 3.6 OR 3.7 but not all three. Contractor shall bid on preferred, removal, method and means. | | | | |
| 3.5 | Remove and dispose of vinyl tile/linoleum floor covering with mastic, on plywood up to two layers of flooring material by CONVENTIONAL abatement means | 150,000 | SF | | |
| 3.6 | Remove and dispose of vinyl tile/linoleum floor covering with mastic, on plywood up to one layers of flooring material by CONVENTIONAL abatement means | 100,000 | SF | | |
| | ----- OR ----- | | | | |
| 3.7 | Remove and dispose of linoleum floor covering with mastic, on any surface by CONVENTIONAL abatement means. Remove balance of ACM floor covering material by EITHER Conventional Abatement means OR during building demolition as asbestos containing waste | 1 | LS | | |

| | Item | Quantity | Unit | Unit Price | Total |
|--|--|----------|------|------------|-------|
| 4.0 - Remove and Dispose of Asbestos Containing Materials (ACM) | | | | | |
| 4.1 | Sink w/ACM coating | 400 | EA | | |
| 4.2 | Tar pipe/conduit wrap | 450 | LF | | |
| 4.3 | Pipe insulation and insulation debris | 250 | LF | | |
| 4.4 | Window or Door - glazing | 250 | LF | | |
| 4.5 | Window and door frame caulking | 16,000 | LF | | |
| 4.6 | Roofing felt | 5,500 | SF | | |
| 4.7 | Sheetrock and joint compound wall assembly (7 Bldgs: 904, 2202, 2203, 2356, 2363, 2367, 2379) | 200,000 | SF | | |
| 5.0 - Site Demolition | | | | | |
| 5.1 | Building Demolition, remove and dispose of all structures and misc. appurtenances, crack all remaining concrete slabs, per Contract Documents | 1 | LS | | |
| 5.2 | Mill existing asphalt surfaces to the non-asphaltic level and demolish and stockpile all millings, curbs, and sidewalks. | 1 | LS | | |
| 5.3 | Remove and Backfill Concrete encased ductbank along Mustin Ave to its termination. Removal may not be limited to Mustin Ave., but will not require disruption of Kitty Hawk. | 6,000 | LF | | |
| 6.0 - Storm Water and Sanitary Systems | | | | | |
| 6.1 | Locate, survey and document extent of potentially active storm water at western end of site (see Contract Drawings). | 1 | LS | | |
| 6.2 | If western storm water is found to be active, maintain and protect from silt infiltration and damage. | 1 | LS | | |
| 6.3 | Locate, survey and document extent of potentially active storm water at eastern end of site (see Contract Drawings). | 1 | LS | | |
| 6.4 | If eastern storm water is found to be abandoned, demolish and backfill per contract specifications and drawings. (Assume asbestos and asphalt bonded corrugated metal pipe) | 1,400 | LF | | |

| | | | | | |
|-----|--|-------|----|--|--|
| 6.5 | Demolish, Remove, and Backfill all stormwater or sanitary piping 15" diameter and greater but less than 36" diameter. (Assume storm piping is asbestos and asphalt bonded corrugated metal pipe) | 4,795 | LF | | |
|-----|--|-------|----|--|--|

| | Item | Quantity | Unit | Unit Price | Total |
|--|--|----------|------|------------|-------|
| 6.6 | Demolish, Remove, and Backfill all stormwater or sanitary piping 36" diameter and greater. (Assume storm piping is asbestos and asphalt bonded corrugated metal pipe) | 3,525 | LF | | |
| 6.7 | Demolish and remove Lift Station | 1 | LS | | |
| 6.8 | Demolish and remove Ejector Station | 1 | LS | | |
| 7.0 - Final Site Work, Project Closeout | | | | | |
| 7.1 | Install final E & S controls including but not limited to final site grading (inclusive of all costs for soil import/export), drainage swales, and final site restoration, As specified and shown on drawings C4 through C8. | 1 | LS | | |
| 7.2 | Demobilization | 1 | LS | | |
| 7.3 | Lump Sum Fee due to nesting Eagle. This item covers the work stoppage from January 1 to August 1 as per the Joint Permit. This Price shall include all Costs for demobilization and remobilization, periodic observation and maintenance of E&S Controls, and periodic observation and Maintenance of General Site Controls and Security. With respect to Eagle related extension of contract time issues, no additional costs beyond this item will be granted. | 1 | LS | | |
| TOTAL AMOUNT BASE BID | | | | | |
| <p>Quantities shown are estimated quantities. Contractors are to bid the quantities shown, Quantities will be determined on site and may vary from the amount shown. The Contactor will be paid based on the unit price bid and the final On-Site verified quantity.</p> | | | | | |
| | | | | | |

| Item | Quantity | Unit | Unit Price | Total |
|--|---|------|------------|-------|
| <u>Alternate Bid Items</u> | | | | |
| Delete requirements for the following items: | | | | |
| ALT 1-1 | Delete requirements for tree removal, shrub removal, and grubbing across the entire project footprint. Instead the Contractor shall only remove any trees or shrubs necessary for completion per the specifications and drawings. | 1 | LS | |
| ALT 1-2 | If upon inspection by the Phila. Licensed asbestos inspector the storm sewers are found <u>NOT</u> to be asbestos and asphalt bonded RMP, the Contractor agrees to reduce the Contract Amount the following amount (refer to items 6.4, 6.5 and 6.6): | 1 | LS | |
| TOTAL DEDUCT AMOUNT OF BOTH (2) ALTERNATES | | | | |
| TOTAL BID AMOUNT (Base Bid less TWO Alternates) | | | | |

PERFORMANCE OF WORK BY CONTRACTOR

I, the undersigned Contractor, shall perform on the site and with my own organization at least 20 percent of the total amount of work to be performed under this contract.

I shall perform the following work: _____

Percentage of work to be performed by my organization _____ %
Estimate cost of work to be performed by my organization

\$ _____

It is understood that the right is reserved by the Philadelphia Regional Port Authority to reject any or all bids and to waive any informalities in the bids.

The undersigned will enter into and execute a contract based upon this proposal, without delay, upon notice of award of contract, and will not withdraw this bid, prior to sixty (60) days following the date of opening of bids.

If bid is by an individual or a partnership, form must be dated and signed here:

This _____ day of _____, 2011

Signature of Owner or Partner

Business Name of Bidder

Type or Print Name and Title

Address, Including Zip Code

Telephone Number

If bid is by a corporation, form must be dated and signed here by (a) President or Vice President and (b) Secretary, Assistant Secretary, Treasurer and (c) a corporate seal affixed. If this form is not so signed, a duly certified corporate resolution authorizing form of execution used must be attached to bid.

CORPORATE SEAL

This _____ day of _____, 2011

Corporate or Business Name of Bidder

Address Including Zip Code

Signature of President or
Vice President

Signature of Secretary,
Assistant Secretary
Treasurer, or
Assistant Treasurer

Type or Print Name and Title

Type or Print Name and Title

Telephone Number

**MINORITY BUSINESS AND
WOMEN BUSINESS ENTERPRISE
PARTICIPATION LEVELS**

THE PHILADELPHIA REGIONAL PORT AUTHORITY
MINORITY BUSINESS AND WOMEN BUSINESS ENTERPRISE
PARTICIPATION LEVELS

A. PARTICIPATION LEVELS

1. The Commonwealth of Pennsylvania has established the following Minority Business Enterprise ("MBE") and Women Business Enterprise ("WBE") minimum participation levels ("MPL's") for this project to be awarded by the Philadelphia Regional Port Authority (the "Authority"):

MBE: Ten Percent (10%)
WBE: Two Percent (2%)

These MPL's serve exclusively as a threshold in determining Bidder responsibility. A Bidder will not be rejected as non-responsive solely because it fails to reach the MPL'S. To determine the participation levels which have been reached, a Bidder may divide the amount of the commitments by the total amount of the Bidder's Bid.

2. MBE/WBE subcontractors and manufacturers will be credited toward the MPL's at 100%. Stocking suppliers are credited at 100%. Non-stocking suppliers which are commonly and ordinarily the custom in the industry and a part of the industry's trade practice are credited at 100%; non-stocking suppliers which are not commonly and ordinarily the custom in the industry nor a part of the industry's trade practice are not credited.

3. An enterprise, which is both an MBE and a WBE will only receive credit toward the MPL's as either an MBE or WBE. Bidders must indicate on the attached MBE/WBE Solicitation/Commitment Sheet whether the enterprise is being listed as either an MBE or a WBE.

4. A MBE/WBE, which is the prime Bidder will receive no credit toward meeting the MPL's for its own work effort on this project.

5. MBE/WBE subcontractors must perform at least seventy-five percent (75%) of the cost of the subcontract, not including the cost of materials, with its own employees..

B. RESPONSIVENESS

1. Bidders must submit information indicating MBE's and WBE's which have been solicited, quotes which have been received (solicited and unsolicited) and those MBE's and WBE's to which commitments have been made. Documentation of such solicitations, quotes, and commitments must be submitted concurrently with the Bid on the attached MBE/WBE Solicitation/Commitment Sheet. Failure to submit the

required information as shown on the form related to MBE/WBE solicitation, quotes, and commitment is sufficient cause for rejection of the Bid as non-responsive.

2. Mailing to large numbers of MBE's and WBE's which are intended to provide notice of a contractor's interest in Bidding a contract will not be deemed solicitation, but rather will be treated as informational notification only.

3. A Bidder should only solicit MBE/WBE subcontractors, manufacturers or suppliers whose work, material, or supplies are within the project scope and are related to project line items or portions thereof, and which the Bidder reasonably believe it will choose to subcontract with or purchase from.

4. Bidders failing to meet the MPL's must submit concurrently with the Bid submission an explanation of why the MPL's have not been met. This explanation must demonstrate that the Bidder has not engaged in discriminatory practices in the solicitation and commitment of subcontracts and supply contracts.

The Bidder must:

- (a) Indicate whether MBE's and WBE's were solicited for each type of work the Bidder expects to subcontract for and for all materials which the Bidder expects to procure and if not, the reason(s) why no such solicitation was made;
- (b) Indicate the reason why a MBE or WBE has not been committed to for a type of subcontract work or materials in any area where a quote was received from a MBE or WBE; and
- (c) In any case where no quotations are received nor commitments made to a MBE or WBE, indicate on the attached MBE/WBE Solicitation/Commitment Sheet that no quotes were received, and there is another reason for no commitments being made, the reason for the lack of commitments.

5. If the Bidder fails to submit such documents as required, the Bid submission will be considered non-responsive and the Bid will be rejected.

C. RESPONSIBILITY

1. The submittals of each Bidder are subject to review to determine whether the Bidder has discriminated in the selection of manufacturers, subcontractors and suppliers. After review of the attached MBE/WBE Solicitation and Commitment Sheet and other relevant information, the Authority's designated representative will make a recommendation concerning the most responsible Bidder to the Authority. If a Bidder

has met the MPL'S, the Authority's designated representative may presume that the Bidder has not discriminated, and that may be its recommendation to the Authority.

2. Documentation submitted by Bidder should meet the following standards for review:

- (a) The Bidder, whose action resulted in a limited or no commitment to MBE's and/or WBE'S, was not motivated by considerations of race or gender;
- (b) MBE'S and WBE's were not treated less favorably than other businesses in the contract solicitation and commitment process: and
- (c) Solicitation and commitment decisions were not based upon policies which disparately affect MBE's and WBE'S.

3. Commitments to MBE's and WBE's made at the time of Bidding must be maintained throughout the term of the contract, unless a change in commitment to these enterprises is pre-approved by the Authority.

D. ACCESS TO INFORMATION

The Authority or its designated representative may obtain documents and information from any Bidder, contractor/subcontractor, supplier or manufacturer that may be required in order to ascertain Bidder or contractor responsibility. Failure to provide the requested information may result in the Bidder or contractor being declared not responsible.

E. MBE/WBE CERTIFICATION

1. Bidders will not be given credit for MBE/WBE manufacturers, subcontractors or suppliers which are not certified or which are not certifiable. In this context, "certifiable" means that the prospective MBE's and WBE's have evidenced to a Bidder/contractor a certification of MBE/WBE status from a federal, state, or local public body and that its application for certification has not been rejected.

2. Commonwealth certification of an entity as an MBE/WBE means only that the applicant for certification has submitted information which qualifies it as an MBE/WBE in terms of its ownership and control. Commonwealth certification does not address the ability of the MBE/WBE to perform the required services.

3. Under the Act of December 21, 1984, No 230, P.L. 210, 18 Pa.C.S.A. 4107.2, a person commits a felony of the third degree, if in the course of business, he engages in deception relating to MBE/WBE certification.

F. PROPOSAL AS PART OF CONTRACT

The Bid of the successful Bidder, including the completed MBE/WBE Solicitation/Commitment Sheet and accompanying documents regarding solicitation and commitments to MBE's and WBE's, will become part of the Bidder's contract with the Authority.

EXPLANATION OF COLUMN ITEMS

1. Provide your company name, federal employment identification number, your address and telephone number.
2. Provide the contract number and point, project name, county in which project is located, and total amount of the Bid in dollars.
3. Enter the subcontractor's company name, address, zip code, telephone number with area code, and contact person's name.
4. Indicate whether or not the enterprise is a certified MBE/or the material to be supplied.
5. Briefly describe the specific work to be performed and/or the material to be supplied.
6. Enter the total dollar amount of the quote received. If the quote is received in the form of unit prices, hourly rates, etc., a total dollar amount should be provided; however, a list of items quoted with the dollar amount quoted for each item will be acceptable. Failure to include a dollar amount is a certification by the Bidder that-- no quote was received.
7. Enter the total dollar (\$) amount of the commitment.
8. Indicate minimum participation levels achieved both for MBE or WBE. These percentages may be greater than the established minimum participation levels for this project.

Pay particular attention to Notes 9, 10, and 11.

9. You must complete and submit this sheet with your Bid. If you do not complete the sheet or submit it; your Bid will be rejected as non-responsive.
10. You must include both solicited and unsolicited quotes within the scope of the work. Failure to include an enterprise providing solicited or unsolicited quotes could cause your Bid to be non-responsive.
11. Ten days is a guide. However, adequate time must be provided for subcontractors and supplier to respond to Bids.

Key Notes:

Mandatory items - Failure to provide mandatory items may result in rejection of the Bid as non-responsive. These items appear in columns 3, 4, 5, 6 and 7. In addition, if the minimum participation levels for this project are not achieved, you must provide written explanation on this or a separate sheet explaining the failure to achieve the MPL for

either MBE, WBE or both. Failure to provide this explanation will result in rejection of the Bid as non-responsive.

If there are any question/comments concerning this form contact the Authority directly at (215) 426-2600.

Contractor Responsibility Certification

Instructions: General Contractors, Construction managers or other prime contractors seeking to perform work for the Philadelphia Regional Port Authority, and all subcontractors hired by any such entity, shall be required to execute a Contractor Responsibility Certification. Generally, this Certification requires submitting firm to verify that:

It has satisfactory record of past contract performance and past law compliance that demonstrates a solid history of both technical competency and business integrity sufficient to justify receiving a Port Authority contract; and

It currently possesses all qualifications, skills, resources and other required performance capabilities needed to successfully complete the prospective contract it is seeking to perform; and

It will comply with all relevant security requirements.

Certification Submission Requirements:

Firms must certify compliance with all itemized contractor responsibility standards set forth in the Contractor Responsibility Certification to be eligible to perform work for the Authority. This requires “no” answers to Items 1 through 6 and “yes” answers to Items 7 through 11 in the Certification.

Failure to submit or fully complete this Certification shall render the firm ineligible for the prospective contract.

Submission of false or misleading information or statements in connection with this Certification shall render the firm ineligible to perform work for the Authority and/or shall be considered a material breach of any contract entered and entitle the Authority to all applicable remedies available at law or in equity.

Information on Apprenticeship Training can be obtained from:

Ron Leonard, Apprenticeship and Training Representative
U.S. Department of Labor BAT
170 S. Independence Mall West, Suite 820 East
Philadelphia, Pa. 19106-3315
Telephone #215-861-4841

Contractor Responsibility Certification

Firm Name: _____

Firm Address: _____

Contact Name: _____

Telephone No.: _____

Fax No.: _____

Email Address: _____

Project Name: _____

Project Number: _____

The submitting firm is required to certify compliance with the following contractor responsibility standards by checking appropriate boxes.

1. Has the firm been suspended and/or debarred by any federal, state or local government agency or authority in the past three years?

Yes No

2. Has any officer, director, owner or managerial employee of the firm been convicted of a felony relating to construction, maintenance, service or repair contracting industries?

Yes No

3. Has the firm defaulted on any project in the past three years?

Yes No

4. Has the firm had any type of business, contracting or trade license revoked or suspended by any government agency or authority in the past three (3) years?

Yes No

5. Has the firm been found in violation of any other law relating to its contracting business, including, but not limited to antitrust laws, licensing laws, tax laws, wage or hour laws, environmental or safety* laws, by a final decision of a court or government agency authority in the past three (3) years?

Yes No

*For purposes of this question, violations of safety laws may be limited to serious or willful safety violations.

6. Has the firm been the subject of voluntary or involuntary bankruptcy proceedings at any time in the past three years?

Yes No

7. Does the firm currently possess all applicable business, contractor and/or trade licenses or other appropriate licenses or certifications required by applicable state or local law to engage in the services it seeks to perform?

Yes No

8. Does the firm have all technical qualifications and resources, including equipment, personnel and financial resources, to perform the referenced contract, or will it obtain same through the use of qualified, responsible subcontractors?

Yes No

9. Does the firm participate in an approved Apprenticeship Program which is currently registered with the U.S. Department of Labor or a state apprenticeship agency for each craft or trade in which it employs workers which has apprentices and trainees currently participating. The firm shall provide proof of meeting this qualification standard by submitting appropriate documentation as an attachment to this Certification.

Yes No

A "yes" answer to this question signifies that the firm will continue to participate in applicable apprenticeship programs for the full duration of the contract work.

The firm understands and agrees that if it is a general contractor, construction manager or other prime contract and it receives a Notice of Intent to Award Contract it shall provide the Authority with a Subcontractor List that identifies any subcontractors the firm will use in connection with the project and shall also furnish Contractor Responsibility Certifications for all identified subcontractors. The firm shall provide all required subcontractor information within 14 days of receiving Notice of Intent to Award Contract.

10. Does the Contractor understand and agree to comply with the Maritime Security ("MARSEC") regulations requiring contractors entering PRPA facilities to have knowledge of, thorough training or equivalent job experience, in the following, as appropriate:

- (a) Relevant Provisions of the Facility Security Plan;
- (b) The meaning and consequential requirements of the different MARSEC levels as they apply to them, including emergency procedures & contingency plans;
- (c) Recognition and detection of dangerous substances and devices;
- (d) Recognition of characteristics and behavior patterns of persons who are likely to threaten security; and
- (e) Techniques used to circumvent security.

33 C.F.R. 105.215

Note: Each marine terminal maintains its own Facility Security Plan and Facility Security Officer. Due to the sensitive security information contained in such plans, they are not available for review. The Facility Security Officer for the terminal will brief you on relevant provisions of the Security Plan and application of the different MARSEC levels. Sections (c) (d) & (e) listed above apply to your operations and their interaction with the Port as a result of working on Port Facilities.

Yes No

11. Does the contractor agree to comply with any and all access control requirements imposed upon the contractor to gain entry upon port property to perform the work if they are the successful contractor?

Note: By answering this question in the affirmative, Contractor is certifying that it will have sufficient workforce that possess Transportation Worker Identification Credentials to gain access and properly perform the work by the date of Notice to proceed with the work. Further, in the event Contractor fails to gain entry or cannot perform work due to noncompliance, the Authority reserves the right to provide escorts to be billed to the Contractor with no increase in cost under the contract or terminate the contract for failure to perform.

For pre-bid meetings: Contractors wishing to gain access to any PRPA facility will need valid photo identification in order to be permitted entry. In addition, at least 24 hours in advance of arriving onsite, a written list of personnel to be on site, including employees and subcontractors, must be provided to the Facility Security Officer.

Yes No

This certification has been completed by an authorized representative of the firm that the sufficient knowledge and information to address all matter addressed herein.

I certify that the foregoing representations regarding the past performance and present qualifications of the undersigned firm are true and correct.

Print and Sign Name

Title

Name of Firm

Date

Subscribed and Sworn to
before me this ___ day
of _____, 2011

Notary Public
My Commission Expires: _____

TAB 2

INSTRUCTIONS TO BIDDERS
FOR
PHILADELPHIA REGIONAL PORT AUTHORITY
CONTRACTS

(Revised as of September, 2007)

FOR USE ONLY WITH INVITATIONS TO BID.

INSTRUCTIONS TO BIDDERS

Section 1. Definitions.

The terms used herein shall have the same meanings as provided in the General Terms and Conditions attached as part of this project (the "General Conditions"). Reference herein to the terms "bidder" and "bidders" shall also include prospective bidders.

Section 2. Copies of the Contract Documents.

The Contract Documents are on file and may be inspected during business hours at the offices of the Authority, 3460 N. Delaware Avenue, 2nd Floor, Philadelphia, Pennsylvania 19134. One or more copies of the Contract Documents may be obtained upon application to the Authority or to the Professional by making a nonrefundable payment in the amount specified by the Authority for each set of Plans, Specifications, and bid forms requested.

Section 3. Examination of the Contract Documents and the Site.

(A) Bidders shall acquaint themselves with the Contract Documents. Bidders shall acquaint themselves with conditions affecting the Work and, in the case of construction contracts, including but without limitation, the condition of walls and foundations of overlying and adjacent structures, and the character of the paving and the soil. The bid shall be prepared with due regard to the provisions of the Contract Documents and to the conditions existing or to be anticipated at the Site. The bidder shall not at any time after seven (7) calendar days prior to the date fixed for the opening of bids, make any claims whatsoever alleging insufficient data or incorrectly assumed conditions, nor shall the bidder claim any misunderstanding with regard to the nature, conditions or character of the Work to be done under the Contract. If the bidder raises a claim mentioned in Section 3(A) after seven (7) calendar days prior to the date fixed for the opening of bids, the claim shall be deemed untimely. A failure to timely raise any claim mentioned in Section 3(A) constitutes an admission that the bidder conducted a complete review of all documents pertinent to the bid and possessed a thorough understanding of said documents seven (7) calendar days prior to the bid opening. All claims shall be submitted in writing to the Executive Director of the Authority. The bidder shall assume all risks resulting from any changes in the conditions which may occur during the progress of the Work, except as provided in Section H-5 of the General Conditions.

(B) The form of contract to be entered into and the form of accompanying bonds mentioned in the Specifications, are on file and may be obtained at the offices of the Authority, 3460 N. Delaware Avenue, 2nd Floor, Philadelphia, Pennsylvania 19134. Where borings, test piles, and existing underground and overhead structure locations are shown, they are solely for the information of the bidder; their correctness is not guaranteed by the Authority and in no event is such information to be considered part of the Contract. If this information is used by a bidder in preparing the bid, the bidder specifically assumes all risks resulting from conditions differing from the approximations shown. If bidders desire to obtain such data, the Authority will afford them the opportunity, at the bidders' own expense, to make borings or soundings, to drive test piles, or to dig test pits on the Site; provided, however, that the bidders shall restore the Site to the condition that existed prior to such excavation.

(C) Before making any such excavations, borings or soundings, driving test piles, digging test pits on the Site, or undertaking any other examination of the subsurface thereof, the bidder shall examine the records of the Committee of Highway Supervisors, 9th Floor, Municipal Services Building, 1401 John F. Kennedy Boulevard, Philadelphia, Pennsylvania 19106, for any City, Commonwealth, public utility or privately owned structures that may be so disturbed thereby, and the bidder shall notify the owners of such structures not less than forty-eight (48) hours in advance of such activity.

Section 4. Pre-Bid Conferences.

(A) In the event the Authority chooses to conduct a mandatory pre-bid conference, notice of the time and location of such conference will either be provided in the "Notice to Contractors", on the cover page of the Specifications, or mailed to each bidder at the address provided to the Authority by the bidders. The failure of a bidder to attend such a mandatory pre-bid conference shall result in the bidder's bid being rejected. Minutes taken at such a mandatory pre-bid conference will be maintained by the Authority and a copy of the minutes will be provided upon written request to the Authority.

(B) In the event the Authority chooses to conduct an optional pre-bid conference, notice of the time and location of such conference will either be provided in the "Notice to Contractors", on the cover page of the Specifications, or mailed to each bidder at the address provided to the Authority by the bidders. Minutes taken at such an optional pre-bid conference will be maintained by the Authority and a copy of the minutes will be provided upon written request to the Authority.

Section 5. Interpretation of the Plans and Specifications.

Every request for an interpretation of the Plans and/or Specifications shall be made in writing to the Professional. No oral interpretation will be made to the bidder as to the meaning of the Plans and/or Specifications, or any other Contract Documents, and information provided by any representative of the Authority shall not be relied upon by the bidder unless or until such information has been confirmed in writing. Any inquiry for an interpretation received five (5) or more calendar days prior to the date fixed for the opening of bids shall be given consideration. Every interpretation made to a bidder will be in the form of an addendum. All addenda issued shall be forwarded to the bidders at their respective addresses provided to the Authority by the bidder. All bidders shall be bound by the addenda, whether or not received by the bidders.

Section 6. Submission of Bids.

(A) Except as otherwise provided in the Contract Documents, all bids must be submitted on forms prepared by the Authority. All blank spaces in the bid shall be filled in correctly where indicated for each and every item for which a description is given, and the bidder must state the prices (which should be typed or written in ink, in words and numbers) for which the bidder proposes to do each part of the Work contemplated, and the total amount for all the parts included in any or all of the combinations of the Work. In case of any discrepancy, the written words shall be considered as being the bid price. The bidder shall submit with its bid a description of the Work the bidder will perform with the bidder's own organization, the percentage of the total Work this represents, the estimated cost thereof, and such other information as may be required by the Contract Documents.

(B) The bidder shall sign the bid correctly. If the bid is made by an individual, the complete post office address should be given in addition to the individual's signature. If made by a partnership, the complete post office address of each partner of the partnership (limited and/or general, as applicable) must be given. If made by a corporation, the bid must be signed by the President or a Vice President and the Secretary or Treasurer of the corporation; otherwise, the signing individual's authority to execute such papers shall accompany the bid.

(C) A bid which is incomplete or conditional or which contains additions or deductions not called for, or irregularities of any kind, including alterations or erasures, may be rejected by the Authority as an informal bid. Although the Authority reserves the right to waive technical defects or irregularities in a bid, a bid which is not accompanied by the security, as provided in Section 7 herein, may be rejected by the Authority.

Section 7. Security for Execution of the Contract.

(A) All bids shall be accompanied by a certified bank treasurer's or cashier's check (the "Check") drawn in favor of the "Philadelphia Regional Port Authority" in an amount based on **ten percent (10%) of the gross amount of the bid** unless a different specific amount is set forth in the Contract Documents. The gross amount of the bid shall be the sum of all items bid upon without reduction for "deduct" alternates. In the event alternative bids are made by the bidder, the gross amount of the bid shall be based upon the larger of the alternative bids. A bid bond from a surety company acceptable to the Authority is also acceptable.

(B) For purposes of estimating the amount of the Check, it will be assumed that the amount of labor, or the quantities of materials or supplies to be furnished, will be in accordance with the estimated quantities found opposite each item on the proposed form (if any) or in the Contract Documents; provided, however, that the Authority will not be bound by such estimates of the actual quantities of labor, materials or supplies required to be furnished under the Contract.

(C) When bids are opened and the lowest responsible and responsive bidder has been determined, the Authority shall return forthwith all Checks except those from the lowest responsible and responsive bidder and the next two lowest responsible and responsive bidders. Upon the complete execution of the Contract Documents, the Checks of the lowest responsible and responsive bidder and the next two lowest responsible and responsive bidders will be returned.

Section 8. Delivery of Bids.

It is the responsibility of the bidder to ensure that the bid is received by the Authority prior to the time scheduled for the opening of bids. No bid shall be considered if it arrives after the time set for the opening of bids. Each bid shall be sealed in an envelope. If forwarded by mail, the envelope shall be addressed to the address for receiving bids noted in the "Notice to Contractors", preferably by registered mail. If forwarded otherwise than by mail, the bid shall be delivered at the offices of the Authority noted in the "Notice to Contractors" prior to the time stated in the "Notice to Contractors". All bids shall be enclosed in a sealed envelope and marked plainly on the outside with the bid number, bid description, and bid opening date. If the bid envelope is to be enclosed in another envelope for the purpose of express-type delivery, the exterior envelope shall be clearly marked as a bid and the bid number, bid description, and bid opening date shall be shown on the envelope.

Section 9. Modification of Bids.

(A) Bids may be modified by written notice by a bidder or its authorized representative prior to the exact hour and date set for the opening of bids. If an authorized representative submits a modified bid on behalf of a bidder, written documentation substantiating that the authorized representative is authorized to make the modified bid and that the modified bid is submitted on the bidder's behalf must be provided with the modified bid. A modification of the bid shall also state that the modification is in compliance with Sections 1 through 8 of the Instructions to Bidders for Philadelphia Regional Port Authority Contracts.

(B) If the modified bid has an increase in the amount of the project that would require additional security, a check, as defined in Section 7(A), for the difference between the original security and the new security must accompany the modified bid. If a Check or bid bond is required pursuant to this Section 9 and is not enclosed with the modified bid, the modified bid shall be rejected and the original bid shall remain in force. Modified bids received after the exact hour and date specified for the opening of bids shall not be considered by the Authority.

Section 10. Withdrawal of Bids.

(A) A bidder may withdraw its bid and any security therefor after such have been received by the Authority, provided that the bidder makes a request therefor in writing and the request is received by the Authority prior to the time fixed for the opening of bids. The letter confirming the withdrawal must be executed by parties authorized to execute the bid. Where the request for withdrawal is made by facsimile, said withdrawal will not be effective until a confirmation letter is received by the Authority. If the letter confirming the withdrawal is mailed via the United States postal service, the letter must be registered or certified and it must be received by the Authority prior to the time fixed for the opening of bids in order for the withdrawal to be effective. If the letter confirming the withdrawal is sent via an express-type delivery, the letter must be received by the Authority prior to the time fixed for the opening of bids in order for the withdrawal to be effective. If the letter is otherwise delivered, it must be received by the Authority prior to the time fixed for the opening of bids.

(B) At the time of the opening of bids, the lowest responsible and responsive bidder on one contract may withdraw the bid or bids on subsequent contracts before such subsequent bids are read, if and only if, the representative of the bidder at the opening of bids has written authority executed by the persons who have executed the bid or bids to be withdrawn. Such written letter of authority shall be given to the representatives of the Authority prior to the time of the reading of the subsequent bids.

(C) Within ten (10) calendar days after the opening of bids, a bidder may withdraw its bid only when the bidder establishes by credible evidence that the reason for the

lower bid price was a clerical mistake as opposed to a judgment mistake and that the mistake was actually due to an unintentional arithmetical error or an unintentional omission of a substantial quantity of work, labor, material or services made directly in preparation of the bid. The request for a withdrawal in this instance must be received by the Authority with all supporting evidence.

(D) The Authority shall make a written determination whether the supporting evidence supports the bidder's reason for the bidder's request for withdrawal. If the Authority determines that the evidence provided does not support the bidder's request for withdrawal, the request for withdrawal shall be denied. If the Authority determines that the evidence provided does support the bidder's request for withdrawal, the request for withdrawal shall be granted and the security posted shall be returned after the Contract has been awarded except as provided below.

(E) No bid may be withdrawn after the bid opening if the withdrawal of the bid will result in awarding the Contract to another bid of the same bidder, or a partner, corporation, or business venture owned by or in which the bidder has a substantial interest. Regardless of when the bid is withdrawn, any bidder who withdrew a bid shall not supply any material or labor to or perform any subcontract or other work agreement for any person to whom a contract or subcontract is awarded in the performance of the Contract for which the withdrawn bid was submitted, without the prior written approval of the Authority.

(F) Any person may withdraw any bid filed and any security therefor and may refuse to enter into any contract with the Authority if the bid has not been accepted within sixty (60) calendar days of the date fixed for the opening of bids. However, if the award is delayed by the required approval of another governmental agency, the sale of bonds, the award of a grant or grants, or circumstances beyond the control of the Authority, the Authority, in its sole discretion, shall reject all bids or award the Contract to the lowest responsible and responsive bidder within one hundred and twenty (120) calendar days of the date fixed for the opening of bids. Thirty (30) calendar days extensions for the date of awarding the Contract may be made by the mutual written consent of the Authority and the lowest responsible and responsive bidder.

Section 11. Proof of Bidder's Responsibility.

(A) Bidders may be required to show that they are responsible and capable of performing the Work, that they have successfully completed contracts substantially equivalent in scope and comparable in magnitude, and that they have the necessary financial resources to perform the Work in a proper and satisfactory manner, in accordance with the Contract Documents, and within the time specified. If the bidder is a corporation incorporated in a state other than the Commonwealth, the bidder shall state whether it is registered to do business in the Commonwealth. If the bidder operates under an assumed or fictitious name in the Commonwealth, the bidder shall state whether such name has been registered in the Commonwealth. No contract will be awarded to a bidder who is a foreign corporation or operating under a fictitious or assumed name unless the bidder has complied or agreed to comply

with the proper registration under the laws of the Commonwealth. Should the information so required be refused or omitted to be given, or should it, in the judgment of the Authority, reveal that the bidder is not sufficiently equipped or qualified to enter into or perform the Contract, no bid from such bidder will be accepted or selected, and the Authority will notify the bidder to that effect.

(B) In the event the bidders are required to file an experience questionnaire and financial statement with the Authority, such shall be completed on the form provided by the Authority and returned as provided therein. Such a questionnaire and statement must be certified to be true and correct by an affidavit sworn to or affirmed before a notary public or other officer empowered to administer oaths or affirmations. Falsification of any information as requested may result in the rejection of the bid, forfeiture of the Check or bid bond, and/or cancellation of the Contract.

(C) The Authority is obligated by law to follow certain nondiscrimination and contract compliance plans, and is committed to according equality of opportunity in employment and contracting by the Authority and its contractors, subcontractors, vendors and suppliers. The bidder, by submitting a bid, agrees to conform to the provisions of the nondiscrimination clause contained in Section C-4 of the General Conditions. In addition, not later than the date fixed for the opening of bids, or an earlier date if so specified by the Authority, bidders are required to submit documentation showing Minority Business Enterprise and Women Business Enterprise participation levels.

(D) If required, in the sole judgment of the Authority, the bidder shall prove ownership of current assets over and above the current liabilities in an amount equal to:

at least 20% of the bid price if the bid price is under \$2,000,000;

\$400,000 plus 15% of the bid price in excess of \$2,000,000 if the bid price is over \$2,000,000 and does not exceed \$3,500,000;

\$625,000 plus 10% of the bid price in excess of \$3,500,000 if the bid price is over \$3,500,000 and does not exceed \$6,000,000;

\$875,000 plus 5% of the bid price in excess of \$6,000,000 if the bid price is over \$6,000,000.

No asset will be considered current unless there is a reasonable expectation that it will be realized within a period of twelve (12) months; nor will any liability be considered current that will not be liquidated within twelve (12) months.

(E) The foregoing will guide the Authority in determining the responsibility of the bidder, but additional information may be requested by the Authority whenever in its sole discretion such information is necessary to determine the responsibility of the bidder.

(F) In the event the bidder fails, refuses or neglects to submit any information required within the time period stated in any request therefore, or fails to qualify as a responsible bidder, the bidder's security for execution of the Contract may be forfeited to the use of the Authority, not as a penalty, but as liquidated damages. In addition, if a bidder is found not to be in compliance with the nondiscrimination clause contained in Section C-4 of the General Conditions, then the bidder may be required to comply with an affirmative action program established by the Authority in order for the bidder's bid to be considered.

Section 12. Comparison of Bids.

(A) Bids will be compared on the basis of the aggregate of all items in the bids, unless otherwise specified.

(B) In accordance with the Reciprocal Limitations Act (62 Pa. C.S.A. § 107 *et seq.*) which is incorporated herein by reference as if fully set forth herein, the Authority shall grant a preference to bidders offering goods produced in the Commonwealth, and to bidders organized and located in the Commonwealth, but only against and to the extent other states discriminate against the Commonwealth. The Authority, in its sole discretion, may waive the granting of such preference as provided in the Reciprocal Limitations Act.

(C) In accordance with 71 Pa. C.S.A. § 773.110, it is unlawful to use or furnish aluminum or steel products made in a foreign country which discriminates against the Commonwealth. In addition, all of the Work must comply with the Steel Products Procurement Act (73 Pa. C.S.A. § 1881 *et seq.*), which is incorporated herein by reference. As provided in the Steel Products Procurement Act, if any steel products are to be used or supplied in the performance of the Work, only steel products produced from steel made in the United States, as provided in that act, may be used, unless the Authority, in writing, determines that such steel products are not produced in the United States in sufficient quantities to meet the requirements of the Contract. The bidder shall provide the Authority with certification, which is acceptable to the Authority, to the effect that the bidder's compliance with the Specifications will not adversely effect the bidder's ability to comply with the above-referenced statutes.

Section 13. Collusive Bids Will Be Rejected.

The bids of any bidder or bidders who engage in collusive bidding shall be rejected. Any bidder who submits more than one bid in such manner as to make it appear that the bids submitted are on a competitive basis from different parties shall be considered a collusive bidder. The Authority may reject the bids of any collusive bidder upon bid openings. Nothing in this Section 13 shall prevent a bidder from superseding a bid by a subsequent bid delivered prior to the opening of bids which expressly revokes the previous bid.

Section 14. Award of the Contract.

The Contract will be awarded to the lowest responsible and responsive bidder; the Authority reserves the right, however, to reject any or all bids, in whole or in part, should it deem it in its best interest to do so. If the lowest responsible and responsive bidder withdraws the bid or refuses award of the Contract, the Authority shall have the right to award the Contract to the next lowest responsible and responsive bidder or to reject all bids and rebid the Contract.

Section 15. Execution of the Contract Documents.

(A) Within thirty (30) calendar days of the date that the Contract is awarded, the Contract shall be executed in not less than triplicate by the Authority and the successful bidder, and the Authority shall issue a notice to proceed unless the time shall be extended by the mutual consent of the Authority and the successful bidder. As the Authority is an independent agency of the Commonwealth, for the purposes and within the meaning of the Act of October 15, 1980 (P.L. 950, No. 164), known as the Commonwealth Attorneys Act, all Contracts must be approved as to form and legality by the Office of the Attorney General. If any Plans are needed for the Work, the Plans shall be signed by the Professional or any outside engineer designated by the Professional. Unless otherwise specifically provided in the Contract Documents, or by the Engineer, the bidder shall begin the Work within ten (10) Working Days from the date of notice to proceed.

(B) Any bidder not lawfully released from the submitted bid, who refuses to execute a contract in accordance with the submitted bid, or who refuses to furnish the required bonds and insurance, shall be liable to the Authority in the amount of the security deposited with the bid as liquidated damages; or where the damages are readily ascertainable, such bidder shall be liable for the actual loss or damage sustained by the Authority by the failure of such bidder to enter into the Contract and perform the Work.

(C) By executing the Contract, the bidder represents that the bidder has (i) examined the Contract Documents thoroughly, (ii) visited the Site to become familiar with local conditions that may in any manner affect the cost, progress or performance of the Work, (iii) become familiar with Federal, Commonwealth and City laws, ordinances, rules and regulations that may in any manner effect cost, progress or performance of the Work, (iv) studied and carefully correlated the bidder's observations with the Contract Documents, (v) received all information and documents necessary to allow the bidder to perform all of the Work required under the Contract Documents, and (vi) reviewed and acknowledged the requirements of the Philadelphia Regional Port Authority Act (55 Pa. C.S.A. § 697.1 *et seq.*). The bidder shall not at any time after the execution of the Contract make any claims whatsoever alleging insufficient data or incorrectly assumed conditions, nor shall the bidder claim any misunderstanding with regard to the nature, conditions, or character of the Work to be done under the Contract.

Section 16. Contract Surety.

(A) The bidder will be required at the time of the execution of the Contract to give security for the full and faithful performance of the Contract in accordance with the Contract Documents, in the form of a performance bond, with a surety company reasonably acceptable to the Authority as surety thereon, in a sum equal to one hundred percent (100%) of the Contract Sum. Such performance bond shall be solely for the protection of the Authority. The performance bond shall remain in effect for at least twelve (12) months following the date of final acceptance of the Work.

(B) In addition to the above-mentioned performance bond, the bidder will be required at the time of the execution of the Contract to provide a payment bond, in a sum equal to one hundred percent (100%) of the Contract Sum, with a surety company approved by the Authority as surety thereon. Such payment bond shall be solely for the protection of claimants supplying labor or materials to the bidder or to any subcontractors, in the performance of the Work. The payment bond shall remain in effect for at least twelve (12) months following the date of final acceptance of the Work.

(C) Any person, partnership, association, or corporation furnishing labor or materials in connection with the performance of the Contract shall have a right of action to recover the cost thereof from the bidder and the surety on the payment bond as though such person, partnership, association, or corporation had been named specifically as obligee in such bond; subject to the provisions of 62 Pa. C.S.A. § 903. It is hereby agreed that no third party rights arise against the Authority for any reason under this Section 16 and the bidder hereby agrees to so inform all subcontractors in writing as part of any such subcontract.

(D) The performance bond, the payment bond, and the maintenance bond referred to in Subsection 16(f) shall be executed by one or more surety companies legally authorized to do business in the Commonwealth, shall be payable to the Authority, and shall be filed with the Authority.

(E) The surety company which is designated by the lowest responsible and responsive bidder in accordance with this Section 17 for the faithful performance of the Contract and the prompt payment for materials and labor shall, with its contract bond, furnish the Authority a certificate showing that the amount of the bond is not in excess of ten percent (10%) of the surety company's capital and surplus. If the surety company is unable to furnish such a certificate to the Authority, then the surety company must furnish evidence that appropriate reinsurance or other security has been obtained in conformity with Section 661 of the Pennsylvania Insurance Company Law of 1921 (40 Pa. C.S.A. § 832). If the surety company has entered into an agreement for reinsurance under the foregoing section of the law, the bond shall be supported by a duplicate original of the reinsurance agreement which shall contain a "direct liability to insured" clause enabling the Authority to maintain an action against the surety

company jointly with the reinsurer and, upon recovering judgment against the surety company, to recover against the reinsurer for payment to the extent that the reinsurer is liable under the reinsurance agreement.

(F) In lieu of retainage to be held by the Authority during the period of guarantee discussed in Section P-1 of the General Conditions, the bidder may submit a maintenance bond acceptable to the Authority in the amount of the Contract Sum. The maintenance bond shall remain in effect at least until the expiration of the period of guarantee.

Section 17. Contract Interpretation.

(A) If the bidder in the course of the Work finds any conflict, error or discrepancy in or between the Contract Documents, such conflict, error or discrepancy shall be immediately referred to the Professional in writing, with a copy sent to the Authority, to be interpreted in accordance with the order of precedence established in Article VI of the Contract. The Professional's interpretation shall be reviewed for approval by the Authority. If approved, such interpretation shall be issued to the bidder in writing by the Professional within ten (10) calendar days after receipt of the bidder's written request.

(B) The Contract Documents are complementary, and what is required by any one of the Contract Documents shall be binding as if required by all. If any of the Contract Documents conflict, they shall be interpreted in accordance with the order of precedence established in Article VI of the Contract. Words which have well-known technical or trade meanings are used in the Contract Documents in accordance with such recognized meanings.

Section 18. Protests in Connection with the Solicitation or Award of a Contract:

(A) An actual or prospective bidder who is aggrieved in the connection with the solicitation or award of a contract must file a protest with the Executive Director of the Authority in writing within seven (7) calendar days after the bidder knows or should have known of the facts giving rise to the protest. Protests received after the seven (7) calendar days are deemed untimely and can be disregarded by the Authority.

(B) Upon receipt of a timely protest and until the time has elapsed for the bidder to file an action in Commonwealth Court, the Authority shall not proceed further with the solicitation or with the award of the Contract unless and until the Executive Director makes a written determination that the protest is clearly without merit or that award of the Contract without delay is necessary to protect substantial interests of the Commonwealth.

(C) If the protest is not resolved by mutual agreement, the Executive Director shall promptly, but in no event later than one hundred twenty (120) calendar days from the filing

of the protest, issue a decision in writing stating the reason for the action taken and notifying the bidder of their right to file an action in the Commonwealth Court within fourteen (14) calendar days from the receipt of the decision.

(D) No action may be commenced in Commonwealth Court in connection with the solicitation or award of a Contract unless the bidder has exhausted the remedies set forth in this Section 18.

TAB 3

SECTION 00830
STANDARD ENVIRONMENTAL CONDITIONS

PART 1 GENERAL

1.01 SUMMARY

- A. The Contractor and Subcontractors are bound to the conditions as stated in all parts of this Specification, and the conditions as outlined in this Section. If discrepancies occur, the most stringent shall apply.

1.02 DEFINITIONS

- A. Regulated Materials - For the purpose of this Section, includes lead and lead-containing materials, polychlorinated biphenyl (PCB) containing ballasts and fluorescent bulbs, mercury-containing items, and asbestos-containing materials (ACMs). Regulated materials also include paints, solvents, petroleum products, chlorofluorocarbons (CFCs), etc., and construction debris contaminated with any of these materials.

PART 2 SUBMITTALS

2.01 HAZARD ABATEMENT PLAN SUBMITTAL

In order to properly evaluate bids and the Contractor's interpretation of the Federal, State, and Local regulations, a Hazard Abatement Plan (HAP) shall be submitted with the bid. The HAP will address the following for each category of regulated material that requires abatement, removal, transportation, and disposal. The HAP shall be comprehensive, and organized in a manner such that each material has its own section and set of procedures, regardless of repetition. The Contractor shall:

- A. Specify how site control and regulatory compliance will be maintained for the duration of the project.
- B. Specify the type of engineering and work practice controls that will be used during the project.
- C. Specify type of material and methods that will be used to control access to the work site by unauthorized persons at all times. Access shall be controlled during and after all shifts.
- D. Specify how access to all abatement areas will be managed during the hazard abatement project for areas where construction/separation barriers will not be constructed (i.e. critical barriers, mini-enclosures, etc.).
- E. Specify where regulatory signage will be posted within the work area (and outside, if applicable).
- F. Specify type of signage including size, colors, and specific language.
- G. Identify areas where access to unauthorized persons cannot be managed during non-abatement hours. The Contractor will identify the procedures for phasing to ensure that abatement of areas can be completed within a shift with all evidences of asbestos abatement removed from abatement area at the conclusion of each shift.
- H. Specify coordination with other components of the project.

2.02 WORK PLAN AND SAFETY PLAN SUBMITTALS

The Contractor shall submit a detailed plan of the safety precautions and work procedures to be used in the removal, demolition, and disposal of regulated materials. These plans shall include, but not be limited to: personal protective equipment to be used; the location of control areas including clean and dirty areas, buffer zones, showers, storage areas (interior and exterior), and change rooms; removal method(s); interface of trades involved in the construction; sequencing of regulated material related work; disposal plan; type of wetting agent and sealer to be used; planned Occupational Safety and Health Administration (OSHA) air monitoring; and detailed descriptions of the methods to be employed in order to control pollution. These plans shall be submitted as part of the bid submittal documentation. Any proposed modifications to these plans after contractor selection shall be submitted for approval at least 5 business days prior to filing regulatory notification and/or the commencement of work, whichever is earlier. Failure to comply with approved Hazard Abatement Plan, Work Plan, or Safety Plan shall be considered a Breach of Contract.

2.03 PAST PERFORMANCE, EXPERIENCE, AND REGULATORY COMPLIANCE HISTORY

The Contractor shall provide a list of all regulatory citations, fines, penalties, and/or damages issued against the abatement Contractor and Subcontractors directly or issued to the owner/client for projects where the abatement Contractor and/or Subcontractors were working in any and all states (federal, state, and local) over the past five (5) years. The Contractor shall provide similar documentation for each of the hazard categories included in this scope. Specify if any regulatory citations, penalties, damages, and/or fines are currently pending for Contractor and Subcontractors.

PART 3 CONTRACTOR'S RESPONSIBILITIES

3.01 SUPERVISION

- A. Contractor shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with this specification and all regulations. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures for abatement work and compliance with all regulations. Contractor shall be responsible for ensuring that the finished Work complies accurately with the Contract Documents and all regulations.
- B. Contractor shall provide a full-time competent person, and a full-time general superintendent who are experienced in administration and supervision of abatement projects in the State, County, and City where work will be performed including work practices, protective measures for building and personnel, disposal procedures, etc. This person is the Contractor's representative responsible for compliance with all applicable federal, state, county, and local regulations, and shall have authority to act on behalf of Contractor. The Contractor's general superintendent will be on the Work Site at all times during the hazard abatement progress, and shall direct, manage, and supervise all work performed on site unless otherwise specified in the specifications or Contract. This person shall ensure that the public has no access to abatement areas during abatement and non-abatement hours. The Contractor's supervisor shall not be replaced without written notice to the PRPA Project Manager. All communication given to the competent person and/or general superintendent shall be as binding as if given to the Contractor.

3.02 PERMITS

Contractor shall obtain and pay for all permits and licenses needed to perform removal of regulated materials. Contractor shall pay government charges and inspection fees for the execution of the Work, which are applicable at the time of opening of Bids.

3.03 LAWS AND REGULATIONS

Contractor shall give notices and comply with all Laws and Regulations, including, but not limited to, the Federal, State, and Local regulations that are applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, the PRPA shall not be responsible for monitoring Contractor's compliance with any Laws and Regulations.

- A. The Contractor shall employ only methods of construction or erection, hoists, rigging forms, scaffolding, cribbing, tools, structures, etc., at the site of the work which conform to the requirements of the American National Standards Institute (ANSI), "Safety Code for Building Construction, Safety Codes for Hoists, Scaffolding and Demolition", the National Safety Council, and Local, State, and Federal Safety Laws and Building Codes.
- B. Regulatory compliance shall be maintained by the Contractor for subcontractor activities, including, but not limited to, employee activities of the Contractor and subcontractor. In the event of a regulatory interpretation difference between Contractor, subcontractor, and other parties, the interpretation of the Project Manager and Environmental Consultant shall take precedence, at no additional cost to the PRPA.
- C. If Contractor observes that the Specifications or Plans are at variance with any Laws or Regulations, Contractor shall give PRPA prompt written notice, with a copy to the Project Manager. If Contractor performs any Work knowing or having reason to know that it is contrary to such Laws or Regulations, and without such notice to PRPA, Contractor shall bear all costs arising there from; however, it shall be Contractor's primary responsibility to make certain that all work performed by the Contractor and subcontractors is in compliance with all Federal, State, and Local regulations.

- D. Any fine or penalty assessed by a regulatory agency is the responsibility of the Contractor. The Contractor is responsible for any delays related to regulatory agency actions due to violations, or enforcement actions of any kind.
- E. Waste shipment manifests and all related project documentation, including personnel air monitoring results, shall be provided periodically to the Project Manager as follows:
 - 1. Copy of waste shipment manifests shall be provided following receipt of the material by the shipper. Interim storage of abated materials on-site is prohibited for this project in its entirety.
 - 2. A copy of all OSHA/personnel monitoring results shall be forwarded to the Project Manager on a weekly basis. Contractor shall immediately modify work practices and engineering procedures, and re-evaluate personal protective equipment, in the event of elevated OSHA monitoring results. Samples identified by the laboratory as "too dirty to read," or "overloaded," are considered to have exceeded the OSHA Permissible Exposure Limit (PEL). Contractor shall immediately submit a revised Work Plan to the Project Manager and Environmental Consultant that represents work practices and engineering controls that will prevent future "overloaded" sample results on said project.
- F. Contractor shall designate a competent person at the site whose primary duty shall be the prevention of accidents and ensuring regulatory compliance.

3.04 FIRE PROTECTION

The Contractor shall conduct the Work with strict consideration to fire protection, and shall notify and comply with the requirements of the local fire department. Portable fire extinguishers shall be provided as required by OSHA and the City of Philadelphia Fire Department regulations. Storage of flammable materials shall be in areas designated by the Project Manager, and shall comply with all applicable NFPA (National Fire Protection Association) requirements.

Smoking at the project site is prohibited.

3.05 SAMPLES

Contractor shall provide chain-of-custody documentation for any samples collected at the project site.

3.06 LICENSING

The Contractor and all subcontractors performing abatement of regulated materials must have all proper licensing. This includes, but is not limited to, appropriate Supervisor and Worker licenses for each discipline. If a Contractor's company license, supervisor, worker, and any other licensing is required for work with a regulated material, at least one copy of licenses must be on-file with the City, with copies available for inspection at all times on-site.

3.07 REGULATORY COMPLIANCE

It shall be the responsibility of the Contractor to comply with all applicable regulations governing the removal, transportation, and disposal of regulated materials.

3.08 TESTING AND INSPECTIONS

A. CITY'S OR INSPECTOR'S STATUS DURING CONSTRUCTION

The PRPA, inspectors, testing agencies, and government agencies with jurisdictional interest will be provided access and support by the Contractor as needed, to the Work at reasonable times, for their observation, inspecting, and testing. Contractor shall provide proper and safe conditions for such access.

Contractor will have available any personal protective equipment required for entrance into work areas for use by authorized visitors.

B. INSPECTIONS

1. Contractor shall give PRPA timely notice of readiness of the Work for all required inspections, tests, or approvals.
2. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) to specifically be inspected, tested, or approved, Contractor shall assume full responsibility thereof, pay all costs in connection therewith, and furnish PRPA or other specified party the required certificates of inspection, testing, or approval except for third party air monitoring.
3. All inspections, tests, or approvals, other than those required by Law or Regulation, of any public body having jurisdiction shall be performed by organizations acceptable to PRPA.
4. If any Work (including the work of others) to be inspected, tested, or approved is covered without written concurrence of PRPA, it must, if requested by PRPA, be uncovered for observation. Such uncovering shall be at Contractor's expense unless Contractor has given PRPA timely notice of Contractor's intention to cover the same and PRPA has not acted with reasonable promptness in response to such notice.
5. Neither observation by PRPA nor inspections, tests, or approvals by others shall relieve Contractor from Contractor's obligation to perform the Work in accordance with the Contract Document and federal, state, and local regulations and Codes.

C. EXAMINATION OF SITE, QUANTITY OF WORK, AND TIME OF COMPLETION

The Contractor shall examine the site of the Work, the quantity and nature of the Work, and make its own determination of the effort required, and be satisfied that the Work can be completed as set forth in these Specifications and Contract Documents and in compliance with all applicable regulations, including allowance of appropriate time for monitoring, visual inspections, and air sampling clearance based on analytical analysis.

All trips for the purpose of site inspections shall be made by appointment through the PRPA.

D. NOTICE OF COMPLETION

The Contractor will certify that a competent person has completed an inspection in each work area where regulated materials have been removed. This certification will be submitted to the Project Manager.

END OF SECTION

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.01 DESCRIPTION

- A. The Contractor shall provide all labor, materials, equipment, facilities, services, employee training, testing, permits, and site meetings required and necessary to complete the scope of work in a timely and competent manner.
- B. All work shall be performed in accordance with these specifications as well as the regulations and standards issued by the Philadelphia Regional Port Authority (PRPA), U.S. Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA), National Institute for Occupational Safety and Health (NIOSH), National Emissions Standards for Hazardous Air Pollutants (NESHAPs), the State of Pennsylvania, the City of Philadelphia, and all other federal, state, or local regulatory authorities having jurisdiction.

1.02 LOCATION OF WORK

- A. The work of this Contract is located at the east end of the former Philadelphia Navy Base at the intersection of Admiral Peary Way and Mustin Avenue, Philadelphia, Pennsylvania. The entrance to the Philadelphia Naval Complex is located at 4000 South Broad Street, Philadelphia, Pennsylvania.

1.03 SCOPE OF WORK

- A. The scope of work includes, but is not limited to:
 - 1. Installation of Temporary facilities, including but not limited to, one field trailer with a meeting area, electric for such trailer, and maintenance of all of the above. Site perimeter fencing and perimeter controls as per the contract documents and drawings. Installation of all other site controls required by necessary permits and regulations.
 - 2. The owner will secure the following permits. The Erosion and Sedimentation permit has been applied for from PADEP. The Joint permit application from PADEP/USACE permit has been obtained. Both permits are in the final stages of regulatory review and are anticipated to be received prior to bid close. It is the Contractor's responsibility to sign onto these permits as the responsible party. In the event that the deduct for the underground utilities is selected, the Owner will be responsible for obtaining modifications to both the E&S and Joint Permit. It is expected that the issuance of the executed permit will not adversely affect the contractor's schedule. The Contractor will be responsible for all other required permits and fees necessary to complete the work per the contract specifications and drawings. Contractor should note that the Pennsylvania Department of Labor and Industry, and not the Philadelphia Department of Licensing and Inspections, has jurisdiction over this project.
 - 3. Provide, install, and maintain erosion and sedimentation control measures as indicated on the Contract Drawings.
 - 4. Cut and cap all utilities entering the project area, including storm and sanitary sewers, gas, water, steam, and electric.
 - 5. Remove and dispose of asbestos containing materials (ACMs) per the specifications and drawings as necessary to comply with the City of Philadelphia Asbestos Control Regulations, federal NESHAP regulations, EPA, OSHA, and other applicable federal, state, and local regulations.

6. Remove, load, haul, and legally dispose of or recycle all regulated, hazardous, and Universal Wastes, including light bulbs (mercury vapor, fluorescent, etc.), batteries (lead Acid, Alkaline, Lithium Ion, etc.), fluorescent light ballasts, mercury switches, cleaning products, solvents, and other hazardous wastes within the project premises.
 7. Recover, store, transport, and legally recycle/dispose the regulated refrigerants, such as Chlorofluorocarbons (CFCs) and Hydrobromofluorocarbons (HBFCs) from air conditioning and other chiller equipment that is located on site.
 8. Provide clearing and grubbing to remove, load, and recycle the trees (including roots), shrubbery, and brush from the project footprint incidental to execution of work described in the specifications and drawings.
 9. Remove the following structures to the top of the concrete slab:
 - 94 – Multi-dwelling housing units (total of approximately 350 dwellings)
 - 25 – Garage/Car Port structures
 - 1 – Community Center
 - 2 – Utility Support Buildings
 10. Demolish and remove utility infrastructure as shown on Contract Drawing C-2 including, but not limited to a utility pole(s), transformers, lift stations, pump stations, and other improvements at the site.
 11. Crack or otherwise break the existing concrete on-grade slabs sufficiently to allow water infiltration/percolation.
 12. Segregate, and separately load, haul, and legally recycle/dispose of all Construction and Demolition (C&D) debris, metallic debris, and organic matter resulting from clearing and grubbing activities, excluding any clean brick, block, concrete, asphalt, or other materials that constitute “clean fill”. Maintain data for materials re-cycled, re-used, and disposed. At the completion of the project, all manifests and records related to disposal, recycling, and reuse shall be provided to the Owner.
 13. Remove and stockpile in the location designated on the Contract Drawings all existing asphalt pavement, including roadways, parking lots, and walkways.
 14. Remove all curbs and sidewalks, stockpile per specifications and drawings.
 15. If removed, stockpile in the location designated on the Contract Drawings all brick, masonry block, and concrete rubble resulting from the demolition work described herein.
 16. Excavate and remove underground piping and utility ductbank, within the project footprint as indicated on the Bid Form and the Contract Drawings.
 17. Grade the project area to meet surrounding grade elevations as indicated on the Contract Drawings and stabilize site as required by the Erosion and Sedimentation Control Plan.
- B. Contractor shall be responsible for removal and proper disposal of standing water that restricts access to a work area. Such removal must be conducted prior to beginning activities in the work area. Contractor is responsible for all sampling, analysis, permit applications and fees required to obtain the permits necessary for disposal, as well as the actual cost associated with disposal of this water.
- C. In order to accomplish the tasks described above, the Contractor will be required to provide services and perform other work to support the removal and disposal of the building materials, asbestos, and other wastes. The Contractor is responsible to provide all electrical power, water and sewer, fencing, security measures, mechanical, electrical and plumbing equipment, supplies, and appurtenances to accomplish the work in

accordance with these specifications and applicable regulations.

1.04 WORK SEQUENCE AND SCHEDULE

- A. Work will not commence prior to the Contractor receiving a Notice to Proceed from the PRPA. Contractor shall submit all required Contract documentation, certificates of insurance, work plans and forms, and secure work permits.
- B. Time for completion shall be 8 calendar months (nominal), 240 days. This time for completion assumes that all work is allowed to be completed continuously and uninterrupted by issues which the eagle returning to its nest for breeding could bring. Should the eagle return, and the work is stopped, the balance of the remaining contract time will be shifted to an appropriate time when the nesting activities has ceased. The professional responsible for eagle monitoring will establish this date if necessary. A unit cost is provided for on the bid sheets for delay costs that the eagle nesting could create.
- C. Contractor shall submit a work sequence schedule for approval. Work days will be Monday through Friday. Each work day is not to exceed 10 hours, unless previously arranged and approved in writing by the PRPA.
- D. A former Bald Eagle nest has been observed on the property. Professionals have been observing the nest to confirm that the nest is no longer in use by eagles, and will continue to do so throughout the execution of the work described herein. Additionally, the Contractor is required to follow any and all current regulations, including but not limited to, the US Fish and Wildlife Regulations and PA Game Commission Regulations, as they pertain to Bald Eagles, Migratory Birds, and any related issues.

1.05 CONTRACTOR'S USE OF PREMISES

- A. All Work under the Contract shall be located within the project limits as shown on the Contract Drawings. The Contractor shall confine apparatus, storage of materials and supplies, and the operations of workers to the limits of these defined project limits.
- B. Access to and from the site Naval Complex shall be via the League Island Boulevard entrance as shown on the Traffic Plan in the Contract Drawings. Upon commencing work, the Contractor will be responsible for the security of the entire site as it existed prior to the commencement of work. The Contractor shall install, replace, and/or repair the security fencing around the site to prevent unauthorized access. The Contractor shall provide locks and chains for the gate(s) that will be used for egress to the site. Duplicated keys for all locks used at the site shall be provided to the PRPA and the Philadelphia Naval Complex Security Force. The Contractor shall maintain fencing and other security measures as needed for the duration of the project.
- C. Storage of construction equipment materials, material stockpiles, and supplies shall be restricted to approved areas, per the Erosion and Sediment Control Plan, which are within the project limits shown on the Contract Drawings. The Contractor shall be fully responsible for the protection and safekeeping of equipment and materials stored on and off the premises.
- D. The Contractor's use of the premises, whether for temporary storage of materials and supplies, placement of construction equipment, erection of temporary facilities, or any other construction related reasons shall not reduce or affect the safety of access for personnel and materials into and out of existing buildings or work places, nor shall such use of premises limit vehicular or pedestrian traffic within roads and other areas within the Naval Complex.

1.06 SAFETY PRECAUTIONS

- A. In addition to provisions contained in these specifications, all other reasonable precautions shall be taken to ensure safe working conditions at the site for the protection of persons and property. These precautions shall include maintaining operational emergency/fire exits from the buildings.
- B. The Contractor shall designate a responsible member of their organization at the site whose primary duty shall be the prevention of accidents. This responsible person shall have the authority to take immediate action to correct unsafe or hazardous conditions and to enforce safety precautions and programs.
- C. Local medical emergency personnel, including hospital emergency room staff and ambulance crews, shall be notified prior to beginning work of the possibility of having to handle or treat contaminated or injured

workmen. This notice shall include advice on proper decontamination procedures.

- D. During the process of the Work, the Contractor shall maintain adequate facilities for the protection and safety of all persons and property. The Contractor shall comply with all local, State, and Federal laws, ordinances, rules, and regulations pertaining to the kind, use, and loading of all apparatus and equipment, and all other work and operations required in the safe prosecution of the Contract.

1.07 WORK TO CONFORM WITH CONTRACT DOCUMENTS

- A. All work done without having been agreed to by the PRPA OR PRPA'S AUTHORIZED REPRESENTATIVE or performed during the absence of the PRPA OR PRPA'S AUTHORIZED REPRESENTATIVE will not be estimated or paid for except when such work is authorized by the PRPA in writing.

PART 2 PRODUCTS

2.01 Not used.

PART 3 EXECUTION

3.01 Not used.

END OF SECTION

SECTION 02050

DEMOLITION

PART 1 GENERAL

1.01 Summary

- A. This section includes activities and specifications pertaining to the demolition of above ground structures, roadway milling, foundation and slab demolition, and select above and below grade utility demolition and removal.
- B. Alternative Procedures: The procedures described in this Specification Section shall be utilized for the project. If the specified procedures cannot be utilized, a request shall be made in writing to the Philadelphia Regional Port Authority (PRPA), or authorized representative, providing details of the problems encountered and recommending alternative procedures.
 - 1. Approval of any requested alternative procedures must be received from PRPA prior to implementation by the Contractor.

1.02 References

A. Related Sections

- 1. PRPA General Conditions
- 2. 02091 Groundwater Management
- 3. 02225 Sitework
- 4. 02226 Excavation, Backfill, and Compaction
- 5. 02750 Stormwater Pollution Prevention

B. Related Documents

- 1. The Erosion and Sediment Control Plan, Notes, Drawings, and Details.
- 2. Pennsylvania Erosion and Sediment Control Program Manual (April 2000).
- 3. Title 29 Code of Federal Regulations Section 1926, Standards for Construction Industry.

1.03 Submittals

- A. Unless noted otherwise, submit eight (8) hard copies and an electronic copy readable by commonly available software.
- B. Required Items:
 - 1. Environmental subcontractor's qualifications.
 - 2. Preconstruction, Construction, and Site Finish photographs taken by the Contractor.
 - 3. Stormwater Pollution Prevention Plan (SPPP).
 - 4. Site Specific Health and Safety Plan (HASP).
 - 5. Work Plan which includes methodology, coordination, and compliance with all Federal, State, and local laws, regulations, and ordinances.
 - 6. Copies of permits and plans submitted to utility companies and agencies.
 - 7. Schedule (digital format at discretion of Owner)
 - a. Baseline.
 - b. Monthly updates.
 - c. Recovery if requested.

8. Salvage, recycle, and re-use plan (if applicable).
9. Landfill receipts (originals).
10. Daily logs containing:
 - a. Equipment (type and activities used).
 - b. Labor (personnel and hours).
 - c. Activities (narrative of work performed and progress achieved).
11. Survey of post demolition conditions shall be provided at the cost of the Contractor by a licensed surveyor. The intent of this survey is to memorialize post-demolition, remaining conditions regarding foundations, other underground structures, and any known underground utilities.
12. Satisfactory Soils / Imported fill (if required).

1.04 Permits, Fees, and Licenses

- A. Contractor shall obtain and pay for all permits (including a state L & I building demolition permit), fees, licenses, and other charges as required by city, county, or state, and/or utility companies' regulations. Any and all costs associated with this demolition and site clearing shall be included in the base bid amount.
- B. The City or governing agency may elect to issue permits without charging fees to the Contractor. A line item for fees associated with permits is provided in the bid sheets. Bidders shall provide this deduct amount on the bid sheets.
- C. Proof of all required licenses shall be submitted to the PRPA Project Manager or designated representative.

1.05 Quality Control

- A. Conform to all applicable provisions set forth in PRPA General Conditions.

1.06 Inspection

- A. Verify that demolition and removal procedures are followed.
- B. Verify that personal and property protective measures are followed.
- C. Verify that dust control is properly carried out.
- D. Verify that disposal of trash is performed in a legal manner.
- E. Verify that damages incurred during the demolition process are properly repaired.
- F. Verify that all applicable OSHA and local regulations are followed.

PART 2 PRODUCTS

2.01 Materials

- A. Materials needed or required for temporary protection in the form of barricades, fences, enclosures, etc., may be "used" construction materials of sound condition and reasonably clean. However, the condition of same materials shall meet or exceed the requirements of governing agencies or approving bodies as may be involved with the work.
- B. Equipment, machinery and apparatus, motorized or otherwise, used to perform the demolition work may be used as chosen at the Contractor's discretion, but which will perform the work within the limits of the Contract requirements safely, effectively, and efficiently.
- C. Satisfactory soils shall comply with Section 02226 – Excavation, Backfill, and Compaction.
 1. No material shall be used which shall be in conflict with the discharge permit and/or Erosion and Sediment Control Plan, or PADEP Clean Fill regulations.

PART 3 EXECUTION

3.01 Examination

- A. Verify that structure to be demolished is unoccupied. It is stressed that this item be conducted on a daily basis.
- B. Prior to performance of the actual work, carefully inspect the entire site and structures and locate, and verify with the Project Manager, those structures and objects designated to be demolished and removed and those structures and objects to be preserved.
- C. Locate existing exposed and buried active utilities and determine the requirements for their protection, removal, or disposition with respect to the demolition work and Contract Documents.
- D. Perform periodic engineering, documentation, and safety surveys of the entire contract area to document compliance with the project work plans and specifications, and record findings.

3.02 Field Conditions

- A. Individual buildings under contract for demolition shall be vacated prior to demolition.
- B. Buildings within the project boundary shall be vacated prior to demolition.
- C. Owner assumes no responsibility for changes to buildings or site between inspection for bidding and commencement of work.
- D. Environmental Hazards are expected to be encountered.
 - 1. 1) Remediation of any and all hazards will be in accordance with all Federal, State, and Local law, regulations, statutes, and ordinances. 2) The presence of Lead is assumed in buildings and soils. 3) Material to be utilized in backfill operations may be stockpiled, within parameters of the Erosion and Sediment Control Plan. 4) Freon and Fluorocarbon refrigerants may exist, Contractor shall properly remove, as part of the demolition activities and pricing, if not included on the bid sheet.
 - 2. Short duration stockpiling of waste will be allowed, provided no "blowing trash" is included in stockpiles and it is protected from erosion.
- E. Dust Control: To prevent unnecessary spread of dust during performance of demolition work, thoroughly moisten surfaces and debris as required to prevent dust being a nuisance to the public, neighbors, and other concurrent work on the site. Contractor shall be responsible for securing a supply of water in accordance with applicable regulations. The Delaware River or a temporary water service through the Philadelphia Water Department (PWD) are both acceptable sources. All applicable permits must be obtained by the Contractor prior to commencing the work.
 - 1. If contractors wish to utilize fire hydrants, they must obtain hydrant use permits from the Philadelphia Water Department. The cost for these permits shall be included in the contractor's bid. The price structure shall be as stated in the Water Department Regulations.
 - 2. PWD specified control measures, such as a hydrant wrench, flow regulator, or backflow preventer, need to be registered to a specific individual within the company. The contractor shall be responsible for acquiring, registering, and implementing these controls.
 - 3. Unauthorized use of fire hydrants will not be permitted.
 - 4. With the removal of existing structures, associated debris may need to be sprayed with water to control dust. Dust from these activities shall be controlled in a manner as to not impede worker safety or create a nuisance to project neighbors and is at the discretion of the Project Engineer.

3.03 Pre-Demolition Activities

- A. Refer to the PRPA General Conditions.
- B. The Site Specific Health and Safety Plan shall be completed and approved by the Owner or Owner's Representative prior to any work on site.
- C. Existing utility temporary connection and terminations coordination plans, permits, and approvals will be required. It is the responsibility of the contractor to arrange for required meetings, to make appropriate

applications, and to receive the needed permits. No demolition activities may begin within the project area until the utilities entering the area are de-energized, disconnected, and capped as required.

- D. Temporary concrete barriers and construction fencing is required. Concrete barriers and fencing shall be installed in a manner to control vehicular and pedestrian access to the site. At the completion of work, all temporary barriers and fencing must be removed from the site by the Contractor unless otherwise directed by the Owner. Permanent barriers and fencing shall be left in place by the Contractor unless otherwise directed by the Owner. After the Contractor's work has been substantially completed and accepted by the Owner, responsibility for maintenance of site security shall become the Owner's.
- E. Temporary facilities and utilities shall be installed in a manner as specified by PRPA General Conditions.
- F. Contractor responsibility includes the installation and maintenance of erosion and sediment control measures in accordance with the requirements of the Erosion and Sediment Control Plan as provided in the Contract Drawings. At the completion of work, the contractor shall grade and stabilize the site and remove all E&S controls as specified in the Plan.

3.04 Environmental Remediation

- A. See Section 2071 Asbestos Removal
- B. See Section 2080 Removal and Disposal of Hazardous Materials, Hazardous Wastes, and Universal Wastes

3.05 Demolition

- A. Verify all environmental hazards have been remediated prior to demolition.
- B. Contact and verify responses from the PA One Call System for utility location. Although PA One Call must be contacted, One Call locators are not likely to mark out a private site. Utility locations are to be determined from a combination of the project drawings, historical information, and Contractor-provided utility locators.
- C. Verify all utilities entering the project area have been de-energized and/or properly abandoned/removed.
- D. Demolition procedures shall comply with any and all laws, regulations, ordinances, best management practices, and the work plan submitted to the Project Manager.
- E. Demolition methods may not pose a threat to the general public, the environment, erosion controls, and utilities.
- F. Conduct operations with minimum interference to public or private accesses related to the Navy Yard Complex, neighboring personnel and tenants, and other contractors. Maintain and secure site entrances at all times.
- G. Demolition activities shall include the removal of all above ground structures and appurtenances located within the project area. Demolition also is to include the perforation of all foundation slabs, termination and abandonment (as directed by the Contract Drawings) of all utility lines, and removal of the stormwater system and appurtenances as directed on the Contract Drawings. Abandoned piping shall be crimped, plugged or capped to prevent ingress of soils, sediments etc. into piping features that remain.
- H. Should any demolition activities affect or infringe upon the activities of adjacent property owners, written permission to conduct said activities shall be obtained from said property owner.
- I. Work will progress in a top down, piecewise, and controlled fashion.
- J. No torch cutting will be permitted unless all combustible materials in the vicinity have been removed and object is rendered in a safe and stable position.
- K. No burning of building, or building elements, will be allowed.
- L. Continuously spray demolition areas with water to minimize dust. Provide hoses and water connections for this purpose.
- M. Unless noted otherwise all demolition materials shall become property of the contractor and will be removed from site.
- N. Contractor shall furnish all labor, material, and equipment necessary to remove the designated building(s),

structure(s), and site improvements in their entirety from within the project limits. The means and methods of performing demolition operations are the sole responsibility of the Contractor. The plan for such shall be submitted to the Project Manager.

- O. Provide clearing and grubbing to remove, load, and recycle the trees (including roots), shrubbery, and brush from the project footprint.
 - P. Provide safe and unfettered access by and for all contractors, employees, Owner's, representatives, regulatory agencies, visitors, inspections, and activities related to the work outlined in the Contract Documents. Determination of unfettered and safe access will be left to the discretion of the Owner and within common practices.
 - Q. Demolition areas shall be restored in accordance with Section 02226 – Excavation, Backfill, and Compaction, and the final grades as established in the Contract Drawings.
 - R. Substructures
 - 1. Concrete slabs and foundation materials shall be broken up into 24" nominal maximum size. Building footings shall remain in place. Subsequent pieces may be left in place or reused on site with prior approval by the Owner or Owner's Representative.
 - 2. Foundation materials found to be containing hazardous materials shall be replaced in accordance with Section 02226.
 - S. Asphalt
 - 1. All asphalt materials shall be milled and stockpiled in the stockpile staging area.
 - 2. Asphalt materials may be reused on site in accordance with Section 02226.
 - T. Structure Debris
 - 1. Debris shall be removed from the site in an appropriate manner complying with all regulations.
 - 2. All debris, equipment, and machinery associated with or housed within the structures shall become the property of the Contractor.
 - 3. Means and methods of debris removal shall be at the discretion of the Contractor and subject to approval by the Project Manager upon submittal of the Demolition Plan.
 - U. Utilities
 - 1. All utilities are to be terminated per the utility owners' specifications.
 - 2. All utilities must be abandoned in place or removed as indicated on the Contract Drawings.
 - 3. Open excavations shall be backfilled in accordance with Section 02226.
 - V. Backfilling
 - 1. Perform backfilling in the area of demolished structures in accordance with Section 02226 – Excavation, Backfill, and Compaction.
- 3.06 Perimeter Housekeeping
- A. Active adjacent footways and cartways shall be swept daily by power equipment with appropriate dust controls, to minimize migration of soils from work areas. First sweep shall occur near mid-shift. Second sweep shall be as close to the end of shift as possible, or after major hauling activities have ceased for the day.
- 3.07 Salvage
- A. All salvaged items that are identified by the Owner shall remain the property of the Owner and shall be delivered to a location as directed by the Project Manager. All other debris shall become property of the contractor.
- 3.08 No Sale shall be conducted on site, or storage of materials will be permitted on site, unless noted.

END OF SECTION

SECTION 02071
ASBESTOS REMOVAL

PART 1 GENERAL

1.01 SCOPE

This specification covers the removal, transportation, and offsite disposal of asbestos-containing materials (ACMs) that may be present in the buildings included in the scope of work for this contract. All materials removed will be disposed of in accordance with Federal, State, and local regulations. Regulatory compliance is recognized as the minimum standard, and the Contractor, subcontractor, and all parties involved in any asbestos-related activities, shall follow all requirements included in this specification that may exceed minimum regulatory standards. In the event of any difference of interpretation regarding regulations, contract, or these specifications by any parties involved in the performance of this project including, but not limited to, the Contractors, subcontractors, transporters, landfills, and/or laboratories the PRPA Project Manager's decision shall be final and binding.

1.02 DESCRIPTION OF WORK

A. The Work specified herein shall include the lawful, proper removal, and offsite disposal of ACM by persons knowledgeable, qualified, and trained in the removal, treatment, handling, and disposal of asbestos-containing material, and the subsequent cleaning of the affected environment. All work performed under this contract shall be performed in a manner that is compliant with the letter and intent of applicable Federal, State, and local regulations and mandated work practices.

B. The Contractor shall supply all labor, materials, equipment, services, insurance, and incidentals that are necessary or required to perform the Work in accordance with the applicable governmental regulations and these Specifications and Contract Documents.

C. The Contractor is hereby notified that both Friable and Non-Friable ACM may be present.

D. All ACM determined to be friable by the attending Asbestos Project Inspector (API) or identified as such in the Asbestos Investigation Report (AIR) shall be removed in accordance with all laws and regulations, prior to the demolition of the property.

E. All materials indicated as either Category 1 or Category 2, Non-Friable shall be removed as non-friable in accordance with all laws and regulations, prior to demolition of the property. No additional payment shall be made for non-friable items deemed to be in acceptable condition by the Certified Asbestos Investigator on the site other than the unit price for the demolition and disposal of that property.

F. Non-friable ACM shall be removed in a way that does not render it friable. There shall be no grinding, chipping, or pulverizing as defined by the National Emissions Standards for Hazardous Air Pollutants (NESHAPS).

1.03 TERMINOLOGY

The following terms used in these Specifications are defined as listed below:

A. Abatement - Procedures to control fiber release from asbestos-containing materials; includes securing the Work area, accessing the area (including selective demolition, etc.), removing the material, cleaning the area, and disposal of the material.

B. Air Filtration Equipment - A portable local filtration system equipped with high efficiency particulate air (HEPA) filtration and capable of maintaining a constant flow to filter and trap. Filters contamination out of the air within the work area and then exhausts the filtered air to uncontaminated, unoccupied areas. This equipment is also used to establish a reduced pressure within the work area relative to the surrounding areas.

C. Air Lock (Curtained or Flapped doorway) - A device to allow ingress and egress from one space to another, usually within a decontamination unit, while permitting minimal air movement between the areas. Typically constructed by installing three overlapping sheets of plastic over an existing or temporarily framed doorway, securing each along the top of the doorway, then securing the vertical edge of one sheet along one vertical side of the doorway, and securing the vertical edges of the other sheets on alternating sides of the doorway.

- D. Air Monitoring - The process of measuring the concentration of airborne fibers present in an area over a period of time.
- E. Amended Water - Water containing a wetting agent or surfactant with a surface tension of twenty-nine (29) dynes per square centimeter when tested in accordance with ASTM D1331.
- F. Area Sampling - Sampling the air in a given space to determine the airborne fiber concentration, although not necessarily collected in the breathing zone of an employee; is generally considered to approximate the concentration of asbestos in the theoretical zone.
- G. Asbestos -The term asbestos includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, actinolite, and any of these materials that have been chemically treated or altered. Materials are considered to contain asbestos if the asbestos content is greater than 1% by weight.
- H. Asbestos Control Area - An area where asbestos abatement operations are performed that is isolated by physical boundaries, which assist in the prevention of the uncontrolled release of asbestos dust, fibers, or debris. Two examples of an asbestos control area are: a full containment and a "glovebag".
- I. Authorized Person or Visitor - PRPA's Project Manager, or their authorized representative, or any representative of a regulatory agency having jurisdiction over the Project.
- J. Background Concentration - The concentration of airborne fibers in an area prior to any asbestos abatement activity under usual conditions.
- K. Clean Room - An uncontaminated area or room that is part of the Personnel Decontamination Unit with provisions for storage of worker's street clothes and protective equipment.
- L. Curtained Doorway - A device to allow ingress and egress from one room to another while permitting minimal movement between the rooms, typically constructed by placing two overlapping sheets of plastic over an existing or temporarily framed doorway, securing each along the top of the doorway, securing the vertical edge of each sheet along alternating sides of the doorway.
- M. Decontamination Enclosure System (Decontamination Unit or Decon) - A series of 3 connected rooms, with curtained doorways at the entry to the work area, the entry to the decon area, and between each adjacent room, for the decontamination of workers and of materials and equipment.
- N. Equipment Decontamination Enclosure - That portion of a decontamination unit, or a separately constructed decontamination unit, specifically designed for controlled transfer of materials and equipment, minimally consisting of a washroom and a holding area with an air lock between these rooms and a curtained doorway at the entrance and adjacent to the work area.
- O. Equipment Room - A contaminated area or room that is part of the worker decontamination unit, which is closest to, but separate from the work area, with provisions for storage of contaminated clothing and equipment.
- P. Fibers - This expression refers to fibers having an aspect ratio of at least 3:1 and longer than 5 micrometers as determined by the National Institute for Occupational Safety and Health (NIOSH) Method 7400. Method 7400 will be the primary method utilized during this project for monitoring purposes.
- Q. Fixed Object - A unit of equipment or furniture in the Work area that cannot be removed from the Work area.
- R. Friable Asbestos Material - Any material containing more than one percent (1%) asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy (PLM), that, when dry, can be crumbled, pulverized, or reduced to powder either by hand pressure or mechanical forces reasonably expected to act on the material. If the asbestos content is less than ten percent (10%) as determined by a method other than point counting by PLM, verify the asbestos content by point counting using PLM.
- S. Glovebag - A product that when properly installed on a section of insulated piping creates a sealed compartment with attached inner gloves used for the handling of asbestos-containing materials. Properly installed and used, glove bags provide a small work area enclosure typically used for small-scale asbestos stripping operations. Information on glove-bag installation equipment used and supplied, and work practices is contained in the Occupational Safety and Health Administration's (OSHA's) final rule on occupational exposure to asbestos (Appendix G to 29 CFR 1926.1101). The use of glovebags is specifically limited by certain provisions of the Philadelphia Asbestos Control Regulations (ACR).

T. Glovebag Technique - A method with limited applications for removing small amounts of friable asbestos-containing material from short piping runs, valves, joints, elbows, and other non-planer surfaces in a regulated but non-contained work area. All workers who are permitted to use the glovebag technique must be highly trained, experienced, and skilled in this method.

U. HEPA Filter - A high efficiency particulate air (HEPA) filter capable of trapping and retaining 99.97 percent of particles greater than 0.3 micrometers in mass median aerodynamic equivalent diameter.

V. HEPA Vacuum Equipment - Vacuuming equipment with a HEPA filter system.

W. Holding Area - The chamber or room of the Equipment Decontamination Unit that has been specifically designed and constructed for temporary storage of properly packaged ACM, prior to disposal. The holding area must be lined with plastic sheeting to form a water-tight chamber to capture any residual water that may be released from damaged waste containers.

X. Log Book - A notebook or other book containing essential project data, daily project information, and a daily project diary. This book is kept on the project site at all times.

Y. Mini-Enclosure - A method with limited applications for removing small amounts of friable asbestos-containing material.

Z. Movable Object - A unit of equipment or furniture in the Work area that can be removed from the Work area.

AA. Negative Pressure Enclosure (NPE) System - A system, specified by the OSHA Construction Standards for Asbestos in 29 CRR 1926.1101, which when properly constructed and used, provides effective containment of airborne fibers during abatement operations. Required for any Class 1 asbestos abatement where more than 10 square feet or 25 linear feet of ACM will be removed, unless alternative methods have been approved.

BB. Personal Exposure Monitoring - Air sampling to be conducted in accordance with OSHA requirements to determine asbestos fiber concentrations within the breathing zone for a specific employee, performed in accordance with 29 CFR 1926.1101.

CC. Regulated Area - A Work Area in which workers are currently performing asbestos abatement activities.

DD. Shower Room - The room or chamber between the clean room and the equipment room in the worker decontamination unit with hot and cold or warm running water and suitably arranged for complete showering of employees during decontamination. The shower room is separated from the clean room and equipment room by curtained doorways.

EE. Surfactant - A chemical wetting agent added to water to improve penetration.

FF. Time Weighted Average (TWA) - The TWA is an 8-hour time weighted average airborne concentration of asbestos fibers as determined by the method prescribed 29 CFR 1926.1101(f)(2), including analysis of all samples in accordance with 29 CFR 1926.1101, Appendix A.

GG. Washroom - A room between the Work area and the holding area in the equipment decontamination area.

HH. Wet Cleaning - The process of eliminating residual asbestos-contamination from building surfaces and objects by using cloths, mops, or other cleaning tools that have been dampened with water, and by afterwards disposing of these cleaning tools as asbestos-contaminated waste.

II. Wetting Agent - A surfactant or other solution which, when prepared in accordance with manufacturer's directions, has a surface tension of at least twenty-nine (29) dynes per square centimeter as tested in accordance with ASTM D 1331 and is used to wet ACMs prior to and during asbestos abatement operations.

JJ. Work Area - Designated rooms, spaces, or areas of the Project in which asbestos abatement actions are to be undertaken or which may become contaminated as a result of such abatement actions. A contained work area is a work area which has been sealed, plasticized, and equipped with a decontamination enclosure system. A non-contained work area is an isolated or controlled-access work area which has not been plasticized nor equipped with a decontamination enclosure system.

KK. Worker Decontamination Facility - That portion of a decontamination unit designed for controlled passage of workers, other personnel, and authorized visitors, typically consisting of a clean room, a shower room, and an equipment room.

1.04 APPLICABLE DOCUMENTS

The current issue of each document shall govern. Where conflict among requirements, regulations, Codes, or these Specifications exists, the more stringent requirements shall apply.

A. Title 29, Code of Federal Regulations, Sections 1910.1001, 1910.134, and 1926.1101, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor.

B. Title 40, Code of Federal Regulations, Part 61, Subparts A and M, National Emission Standards for Hazardous Air Pollutants, U.S. Environmental Protection Agency (EPA).

C. All State, County, and City Codes and Ordinances as applicable.

1.05 PERSONAL PROTECTION AND SAFETY

A. The Contractor alone shall be responsible for the safety, efficiency, and adequacy of its containment, decon, equipment, supplies, methods, etc. and for any damages which may result from its operations, improper construction practices, or maintenance. The Contractor shall erect and properly maintain at all times as required by the conditions and progress of the Work, proper safeguards for the protection of workers and the public. "DO NOT ENTER" signs will be placed immediately outside the environmental construction area. OSHA required warning signs will be posted within the construction area attached to the exterior perimeter of the asbestos containment or regulated area.

B. During the removal operations, the Contractor may be placing its workers in a potentially hazardous electrical environment. Care and special consideration must be exercised by the Contractor to avoid electrical shock to its employees. The requirements as set forth in the latest edition of the National Electrical Code shall be adhered to at all times. Particular emphasis shall be placed on the requirements listed in Article 210 – BRANCH CIRCUITS, Article 225 – OUTSIDE BRANCH CIRCUITS AND FEEDERS, Article 250 – GROUNDING, Article 300 – WIRING METHODS, and Article 305 – TEMPORARY WIRING, whenever and wherever power is utilized. All electrical circuits that enter a regulated area shall be equipped with Ground Fault Circuit Interrupters. The Contractor shall comply with all federal, state and local regulatory requirements.

C. The Contractor shall be responsible for mandatory personnel monitoring of workers in accordance with 29 CFR 1926.1101. Results shall be posted on the abatement site daily with a copy of results provided to the industrial hygienist designated by the PRPA Project Manager within twenty-four (24) hours after completion of sample collection.

D. The Contractor shall be responsible to confirm that the Contractors' written hazard communication program complies with all applicable regulations, including 29 CFR 1910.1200(e).

E. Respiratory Protection Requirements:

1. All respiratory protection programs shall be established in accordance with the respiratory protection requirements of 29 CFR 1910.134, 29 CFR 1910.1001, and 29 CFR 1926.1101. Contractor is responsible for compliance with all regulations.
2. All respirators used shall be selected from those approved by the Mine Safety and Health Administration (MSHA), Department of Labor, Department of Health and Human Services, and/or the National Institute of Occupational Safety and Health (NIOSH) for use in atmospheres containing asbestos fibers.
3. Work activities associated with the actual removal of asbestos-containing materials as well as post-removal activities prior to acceptable final clearance shall be conducted while wearing an appropriate respirator. The initial classes and type of respiratory protective equipment acceptable for this project shall be determined by historical air monitoring data provided by Contractor for previous similar projects and regulatory requirements that apply to the specific job site. The class and type of respiratory protection shall be adjusted during the project as indicated by personnel and area sampling results. No additional compensation or time shall be allowed to the Contractor as a result of required changes in respiratory protection.

F. Worker Protective Clothing:

1. Provide workers and authorized visitors with sufficient sets of fire retardant full body impervious protective clothing. Such clothing shall consist of full body coveralls and headgear. Provide eye protection and hard hats as required by applicable safety regulations. Disposable gloves shall be used to protect hands.
2. Reusable type protective clothing and footwear shall be left in the Contaminated Equipment Room until the end of the asbestos abatement work, at which time such items shall be disposed of as asbestos waste, or packaged in airtight containers for transportation off-site with the Contractor's other contaminated items.
3. Disposable type protective clothing, headgear, and footwear may be provided. The requirements provided in this contract and regulations are minimum standards. The Contractor is responsible for protection of individuals working on the asbestos abatement project and ensuring their safety.

G. Provide and post, in the Equipment Room and the Clean Room, the decontamination and work procedures to be followed by workers and authorized visitors as described in these Specifications.

H. Worker Protection Procedures:

1. Each worker and authorized visitor shall, upon entering the job site: Remove street-clothes in the Clean Change Room and put on a respirator and clean protective clothing before entering the Equipment Room or the Work Area. A locker will be provided for each worker and supervisor and the industrial hygienist to store street clothes in a clean/dry environment.
2. All workers and authorized visitors shall, each time they leave the Work Area: Remove gross contamination from clothing before leaving the Work Area; proceed to the Equipment Room and remove all clothing except respirators; still wearing the respirator proceed to the showers; clean the outside of the respirator with soap and water while showering; remove the respirator; thoroughly shampoo and wash.
3. Following showering and drying off, each worker and authorized visitor shall proceed directly to the Clean Change Room and dress in clean clothes at the end of each day's work, or before eating, smoking, or drinking. Before reentering the Work Area from the Clean Change Room, each worker and authorized visitor shall put on a clean respirator and shall dress in clean protective clothing.
4. Contaminated work footwear shall be stored in the Equipment Room when not in use in the Work area. Upon completion of asbestos abatement, dispose of footwear as contaminated waste.
5. Workers removing waste containers from the Equipment Decontamination Enclosure shall enter the holding area from outside wearing a respirator and dressed in clean disposable coveralls. No workers shall use this system as a means to leave or enter the washroom or the Work area.
6. Workers shall not eat, drink, smoke, or chew gum or tobacco while in the Work area.
7. Workers shall be fully protected with respirators and protective clothing from the time of first disturbance of asbestos-containing or contaminated materials prior to commencing actual asbestos abatement and until final cleanup is completed and final air clearance achieved.

I. Equipment Removal Procedures: Clean surfaces of contaminated containers and equipment thoroughly by wet sponging or wiping before moving such items into the equipment decontamination enclosure system washroom for final cleaning and removal to uncontaminated areas. Ensure that personnel do not leave work areas through the equipment decontamination enclosure.

J. During all work activities, the Work Area environment must be evaluated by the Contractor. The Contractor shall take precautions to protect its workers from any harsh environmental conditions as well as the asbestos fibers and other hazards. If evacuation of the Work area is required for contaminated personnel due to an emergency, all reasonable effort shall be made to minimize the spread of contamination without increasing the risk to persons or property.

K. Post safety-warning signs that follow the "Sample Format Warning Sign" shown below and are printed in accordance with 29 CFR 1926.1101(k)(6):

DANGER ASBESTOS
CANCER AND LUNG DISEASE HAZARD

AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

L. The Contractor shall provide a means of communication for the workers inside the Work Area without requiring personnel to enter or leave the Work Area.

M. Adequate shower facilities shall be provided by the Contractor. The shower facilities shall be supplied with hot and cold water, which will be adjustable in the shower. An employee leaving the Work Area shall follow all necessary decontamination procedures or as described herein.

N. Personnel of other trades not engaged in the removal and demolition of asbestos shall not be exposed at any time to airborne concentrations of asbestos. The Contractor shall maintain control of access to the regulated area at ALL TIMES. No non-asbestos trades shall enter the regulated area.

O. If an asbestos spill occurs outside of the asbestos control area, stop work immediately, correct the condition to the satisfaction of the PRPA Project Manager's Representative, including clearance sampling, prior to resumption of work.

P. The Contractor shall post a list of telephone numbers for local hospitals and/or emergency squad, local fire department, the local police station, a representative of the Contractor who may be reached 24 hours a day, the Contractor's headquarters, and any other professional consultants directly involved with the project in the facility.

1.06 ASBESTOS ABATEMENT PERSONNEL: It is the intent of these Specifications that all phases of the Work shall be executed by skilled craftsmen experienced, or receiving training by experienced personnel, in each respective environmental discipline. All workers and supervisors onsite to work with ACM shall have AHERA/EPA and State approved worker training and shall be appropriately licensed and knowledgeable of all EPA, OSHA, NIOSH, State and Local requirements and guidelines pertaining to their work.

A. The Contractor shall have a certified abatement supervisor present at all times while asbestos abatement work is in progress. The supervisor shall be thoroughly familiar and experienced with asbestos removal and related work and shall be familiar with and shall enforce the use of all safety procedures and equipment. He/she shall be trained in the proper use of all personal protection and safety equipment. It shall be a requirement of this project that one or more of the Contractor's licensed Asbestos Abatement Supervisor(s) is inside the Work area at all times while work is in progress.

B. All workers shall have sufficient skill and experience to perform properly and safely the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.

C. Pursuant to federal regulation, the Contractor shall ensure that all abatement planning, work area configuration, and other project design consideration are reviewed and approved by a trained and certified Asbestos Project Designer licensed in the state of Pennsylvania.

1.07 SUBMITTALS

A. PRE-ABATEMENT

1. Before the Start of Work: Submit three (3) copies of the following to PRPA for review. Facsimile copies of submittals will not be accepted. In scheduling, allow at least ten (10) working days for review by the PRPA Project Manager following receipt of the Submittals. Work shall not begin until a letter is returned to Contractor indicating that the submittals are approved for unrestricted use or final-but-restricted use. **No Worker or Supervisor is permitted on the project site unless submittals for each individual has been received and approved. No faxed submittals will be accepted and no field/site review will be provided.
2. Permits - Submit a copy of all required permits per the City of Philadelphia Asbestos Control Regulations (ACR) and other governing agencies and regulations.
3. Submit, to the Project Manager, a written Work Plan. The Work Plan shall address at a minimum:
 - a. Description of removal methods used for each type of material in the facility (i.e. carpet, floor tile, mastic, sprayed-on or troweled-on surfacing materials, and thermal system insulation) as well as methods proposed for loading and hauling contaminated materials and construction wastes. Any deviations from the

requirements of the Philadelphia ACR will require an approved Alternative Removal Method which shall be included in this submission.

- b. Storage and security provisions for contaminated materials and construction wastes.
 - c. Waste identification methods (e.g., labeling, marking containers).
 - d. Provisions for ensuring separation of incompatible materials.
 - e. Location of waste staging and temporary storage areas.
 - f. Provisions for minimizing off-site contamination associated with temporary storage of contaminated materials on-site.
 - g. Names and addresses of all waste disposal and/or recycling facilities for each particular waste stream.
 - h. Copies of licenses and permits required by local, state, and federal regulations for all transporters and disposal facilities.
 - i. Special safety precautions required.
 - j. A description of the exhaust method that will be utilized when performing asbestos abatement of properties adjacent to occupied properties or where persons that are not asbestos trained and equipped with personal protective equipment may be exposed to the asbestos abatement exhaust from the regulated area.
- 4. Ten (10) day (or most stringent) Federal, State, County, and Local notifications. Notifications required by City of Philadelphia Department of Public Health, Air Management Services (AMS).
 - 5. State and County, if applicable, certificate to engage in asbestos project as per regulatory requirements.
 - 6. Copies of permits and Contractor's licensure for Commonwealth of Pennsylvania and City of Philadelphia.
 - 7. Current Company and worker/supervisor training certificates and licensure for Commonwealth of Pennsylvania and City of Philadelphia. Contractor shall be found in breach of contract if invalid, expired, suspended, or revoked licenses are used during contract performance by company, workers, and/or supervisor.
 - 8. Medical examination and fit-testing documentation.
 - 9. Respiratory and medical monitoring program.
 - 10. Confirmation that written hazard communication program complies with all applicable Regulations, including inventory of any chemicals or other materials that will be used on site, and Material Safety Data Sheets for any chemicals or other materials that will be used on site.
 - 11. Name, address, and telephone number of laboratory performing contractor required sampling or analysis (including laboratory certification information).
 - 12. Exposure assessment documentation and report representing similar project size, scope, and type of material in occupied building for work practices and engineering controls intended for use on this project that was performed within the last twelve (12) months.
 - 13. A detailed project schedule.
 - 14. Decontamination unit information (i.e. personnel decontamination unit shop drawing, equipment decontamination unit shop drawing, shower plan shop drawing, shower walls product data, shower head and controls product data, filters product data, filters shop drawing, hose bib product data, elastomeric membrane product data, lumber product data on fire resistance treatment, signs-samples, and fire-proof poly product data).
 - 15. Manufacturer data and/or MSDS must be submitted for the following:
 - a. Local exhaust and vacuum equipment.
 - b. Wetting Agent.
 - c. Pressure differential monitoring system.

d. Chemicals.

e. Respirators.

16. Show compliance with ANSI Z9.2 for vacuums, ventilation equipment, and other equipment required to contain airborne asbestos fibers by providing manufacturer's certification.
17. The Contractor shall provide maintenance records, the actual filtration capacity, manufactured data, and manometer readings for the air filtration devices to be used on-site.

B. IN-PROGRESS SUBMITTALS

1. The Contractor shall be responsible for all OSHA required personal exposure monitoring and shall maintain monitoring results at site. Results of monitoring shall be available at the site within twenty-four (24) hours after collection of samples, and shall be provided on a weekly basis to the PRPA Project Manager.
2. Provide log of all filter changes, and manometer readings for air filtration exhaust machines used to establish negative pressure differential within work areas.
3. WASTE SHIPMENT MANIFESTS – Waste shipment manifests shall be provided monthly, or upon request, for all waste that has been removed offsite for disposal at an approved landfill. Unless otherwise specified, temporary storage on-site of asbestos waste collected in the performance of this Scope of Work (including all materials removed from containment area) is prohibited.
4. Contractor shall submit monthly project updates indicating the progress of the work and a revised schedule for the remaining work.

C. PROJECT CLOSE-OUT SUBMITTALS

1. Post abatement documentation shall include:
 - a. Notification of Demolition/Renovation (Including all amended notices for Federal, State, and Local agencies) – Contractor shall provide notifications and ensure that work adheres to all Federal, State, and Local Regulations.
 - b. Abatement Contractor License – Contractor shall provide a copy of the current contractor license(s) required for the work.
 - c. Job Sign In/Sign Out Forms – Contractor shall document all personnel and visitors to the site.
 - d. OSHA Monitoring Results – Contractors shall provide all personal monitoring results for the project. In addition, contractor shall provide laboratory generated certificate of analysis and the name, address, and telephone number for the laboratory(s) that performed sample analysis for the project.
 - e. Waste Shipment Manifests and Certificates of Disposal – Fully executed original manifests and certificates of disposal shall be provided to the PRPA PROJECT MANAGER within 20 calendar days after waste has left the site. Interim storage is prohibited.
 - f. Material Safety Data Sheets (MSDS) – Contractors shall provide MSDS for all chemicals used at the site during the abatement work.

PART 2 MATERIALS AND EQUIPMENT

2.01 MATERIALS

A. Deliver all materials in the original package, container, or bundle bearing the name of the manufacturer and the brand name. Store all materials subject to damage off the ground, away from wet or damp surfaces, and under cover sufficient to prevent damage or contamination. Damaged or deteriorated materials shall not be used and shall be removed from the premises. Material that becomes contaminated with asbestos shall be disposed of in accordance with applicable regulations.

B. Polyethylene sheeting: Provide flame resistant polyethylene film that conforms to requirements set forth by the National Fire Protection Association Standard 701, Small Scale Fire Tests for Flame-Resistant Textiles and Films. Provide largest size possible to minimize seams, 6.0 mil thick, frosted or black as indicated.

C. Tape capable of sealing joints of adjacent sheets of polyethylene and for attachment of polyethylene sheets to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including use of amended water.

D. Surfactant: Shall consist of 50 percent polyoxyethylene ether and 50 percent of polyoxyethylene ester, or equivalent, and shall be mixed with water to provide a concentration of one ounce surfactant to 5 gallons of water.

E. Impermeable Containers: Suitable to receive and retain any asbestos-containing or contaminated materials until disposal at an approved site, labeled in accordance with OSHA Regulation 29 CFR 1910.1001. Containers must be both air and watertight and must be resistant to damage and rupture. Plastic bags shall be a minimum of 6 mils thick.

F. Warning labels and signs: As required by OSHA Regulation 29 CFR 1910.1001.

G. Other Material: Provide all other materials, such as lumber, nails, and hardware, which may be required to construct and dismantle the decontamination area and the barriers that isolate the Work Area.

2.02 TOOLS AND EQUIPMENT

A. Provide suitable tools and equipment for asbestos removal.

B. All tools and equipment shall be in serviceable condition and properly maintained free of defects or hazardous conditions.

C. Air filtration equipment: High efficiency particulate air (HEPA) filtration systems shall be equipped with filtration equipment in compliance with ANSI Z9.2-79, local exhaust ventilation or equal. No air movement system or air filtering equipment shall discharge unfiltered air outside the Work Area. A reduced pressure shall be established and maintained in the Work Area continuously (24 hours a day) from the start of work in the area until the area has been decontaminated and acceptable post-abatement clearance testing has been achieved.

PART 3 EXECUTION

3.01 WORK AREA PREPARATION

A. All Work Area preparation shall be performed in compliance with 29 CFR 1926.1101 and Title 6, Health Code of the Philadelphia Code, Chapters 6-600, Asbestos Projects, adopted June 26, 1986, revised, March 4, 1993.

B. The Contractor shall review with the API the planned work area configuration and method of isolation for each work area not less than 2 days prior to starting work area preparation. The API will perform background testing in accordance with the ACR prior to the Contractor beginning work area preparation.

The use of containment (glove) bags shall be permitted only upon the approval of the Project Manager and may be halted by same at any time. Glove bag abatement techniques will not be approved for areas where extensive ACM debris and or existing contamination are present.

Glovebag procedures shall be conducted by two person teams in strict accordance with the explicit requirements of the OSHA Construction Standard for Asbestos and Philadelphia ACR.

C. During work area preparation, the Contractor shall take all necessary precautions to ensure that ACM is not disturbed or damaged unless proper controls are in place. All required engineering controls and monitoring systems, including pressure differential monitoring devices, shall be provided and installed by the contractor prior to beginning abatement.

D. Following preparation of the work area but before removal activities begin, the Contractor shall request that the API inspect the work area to verify that preparations are complete and that all appropriate controls are in place. Abatement/Removal activities shall not begin until the API has acknowledged in writing that preparations are satisfactory.

3.02 METHOD OF ASBESTOS REMOVAL

A. Following isolation, protection, and authorization to proceed, the work shall proceed in the following sequence:

The asbestos material shall be sprayed with water containing a wetting agent to enhance penetration (amended water). A fine, low-pressure spray of this solution shall be applied to prevent fiber disturbance preceding removal. Saturate the material sufficiently to prevent emission of airborne fibers in excess of the exposure limits prescribed in

the OSHA regulations without causing excess dripping. The wetted or amended water shall be sprayed on as many times and as often as necessary to ensure that the asbestos material is adequately wetted throughout (especially that asbestos nearest the substrate) to prevent dust emission as specified in the OSHA regulations.

Removal of the asbestos material shall be done in small sections by two person teams.

The wet material which has been removed shall be immediately packed and sealed into leak tight containers in accordance with Pennsylvania Department of Environmental Protection and EPA regulations.

B. After completion of this removal phase (stripping), all surfaces from which asbestos has been removed shall be scrubbed using nylon or bristle brushes and wet sponges or cleaned by an equivalent method to remove all visible asbestos-containing material. During this work, the surfaces being cleaned shall be kept wet using amended water. All disposable equipment shall be packaged for disposal. Containers shall be washed with amended water and shall have all exterior particulate matter removed prior to removal from the contaminated area.

C. Prior to the application of any sealant material and after all asbestos material has been removed, the API will perform a pre-sealant inspection. The Contractor shall notify the API twenty-four (24) hours prior to the time the work will be ready for inspection.

D. Following approval of the work area by the API, all exposed surfaces of the work area shall be sprayed or painted with a bridging sealant and allowed to dry fully.

E. Final cleanup of work area may commence.

Encapsulated plastic sheeting shall be removed leaving all critical barriers in place. All exposed surfaces shall be cleaned using wet cleaning and HEPA vacuuming techniques until the area is free of visible dust, debris, or other evidence of contamination.

Clearance sampling shall be conducted in accordance with the City of Philadelphia ACR.

The sequence of wet and dry cleanup shall be repeated in twenty-four (24) hour intervals until the Certified Asbestos Project Inspector has determined that no residue is visible and, based on aggressive air monitoring conducted after all surfaces have dried, the airborne asbestos levels do not exceed the demolition clearance standard.

Critical barriers shall remain in place until the post-abatement clearance criteria has been achieved.

F. Clearance Samples

All clearance samples shall be collected and analyzed either by phase contrast microscopy (PCM) or transmission electron microscopy (TEM).

Clearance samples shall be collected after the asbestos abatement contractor has completed all asbestos abatement and clean-up activities and an independent, Certified Asbestos Project Inspector (hired by the Owner) has certified that the work area has passed the visual inspection set forth in Section VI.C.8. of the ACR.

G. Project Completion - In order to be considered a complete demolition project (i.e. no re-occupancy), each work area must pass a final inspection by meeting the conditions outlined below:

1. An asbestos project work area shall not be permitted to be open for use until the Environmental Sub-Consultant has certified, in writing, that the following conditions have been met:
 - a. The asbestos project inspector has certified that, based on a visual inspection, the area contains no visible dust or debris;
 - b. The asbestos project inspector certifies that, based on the results of the aggressive air monitoring procedures listed in Section VI.D.4.c.(1)(e) of the ACR, the airborne asbestos level in the work area does not exceed the limited use standard set forth in Section VI.D.4.c.(1)(f) of the ACR;
 - c. The Environmental Sub-Consultant, based on a visual inspection, has determined that the area contains no visible dust or debris;
 - d. The Environmental Sub-Consultant has determined that the air monitoring required to establish that the limited use standard has been met has been performed in accordance with applicable regulations and procedures;

- e. The asbestos contractor or supervisor has submitted an amended permit application for any project changes and evidence of the final, total cost of the asbestos abatement portion of the project, and has paid any incremental permit fee due.
- 2. For outdoor projects:
 - a. The asbestos project inspector has certified that, based on a visual inspection, the area contains no visible dust or debris;
 - b. The asbestos project inspector has certified that project samples taken on the final day of the project do not exceed the limits set forth in Section VI.D.4.b.(1)(d) of the ACR. If these limits are exceeded, the project inspector shall make an evaluation of the cause, recommend remedial action, and direct a re-test. This process shall continue until these limits have been met;
 - c. The Environmental Sub-Consultant, based upon a visual inspection, has determined that the area contains no visible dust or debris;
 - d. The Environmental Sub-Consultant has determined that the air monitoring required to establish that the final day's project samples meet appropriate limits has been performed in accordance with applicable regulations and procedures; and
 - e. The asbestos contractor or supervisor has submitted an amended permit application for any project changes and evidence of the final, total cost of the asbestos abatement portion of the project, and has paid any incremental permit fee due.

H. Inspections: The asbestos contractor or supervisor shall make a request to the Owner's Environmental Consultant at least seventy-two (72) hours prior to the time when pre-inspections and final inspections are required.

3.03 DISPOSAL OF ACM AND ASBESTOS-CONTAMINATED WASTE

- A. As the Work progresses, remove sealed and labeled containers of asbestos waste and transport for disposal at an authorized disposal site in accordance with the requirements of Federal and State regulations.
- B. Bags of asbestos materials shall be placed in a mechanically fastened drum or a second clean bag, which is then transported in an enclosed vehicle or dumpster. Appropriate labels or signs shall be affixed to the outside of each container used to package and transport asbestos containing waste.
- C. Federal, State, and Local permits shall be obtained for the transportation of asbestos materials, and all procedures shall be followed as they pertain to transportation of asbestos materials.
- D. The transport vehicle shall be lined with 6 mil plastic prior to loading asbestos waste. The vehicle shall be used for the sole purpose of transporting asbestos waste. No other contract materials or supplies shall be stored or transported in the vehicle unless it has been decontaminated.
- E. The contractor shall prepare a waste shipment manifest documenting each load of waste that is removed from the project. A copy of the manifest, signed by the receiving waste disposal facility, and a certificate of disposal prepared by the receiving facility documenting proper disposal of the waste shall be provided to the PRPA Project Manager within 20 days of the shipment leaving the site.

END OF SECTION

SECTION 02080
**REMOVAL AND DISPOSAL OF HAZARDOUS MATERIALS, HAZARDOUS WASTES,
AND UNIVERSAL WASTES**

PART 1 GENERAL

1.01 SUMMARY

- A. The work specified in this Section consists of accessing, removing, and disposing of hazardous materials, hazardous wastes, and universal wastes identified during the demolition phase of work.
- B. The Contractor shall furnish all labor, materials, equipment, and additional related items required for the proper evaluation and disposition of materials.
- C. The Contractor shall ensure all hazardous materials, hazardous wastes, and universal wastes are managed in compliance with all applicable federal, state, and local regulations. If there is a circumstance that arises in which procedures described herein cannot be utilized, a request shall be made in writing to the PRPA Project Manager or assigned delegate for an acceptable alternative.
- D. The work specified in this Section shall be performed in agreement with:
1. PRPA's General Conditions.
 2. Section 02130 Offsite Transportation and Disposal.

1.02 REFERENCES

A. Code of Federal Regulations (CFR)

1. Title 29, CFR 1910, Occupational Safety and Health Administration (OSHA) Standards for General Industry.
2. Title 29, CFR 1926, OSHA Standards for Construction Industry.
3. Title 40, CFR, Protection of the Environment.
4. Title 49, CFR 171-179, Pipeline and Hazardous Materials Safety Administration.

B. Toxic Substances Control Act (TSCA) of 1976.

C. Pennsylvania Department of Environmental Protection (PADEP)

1. Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2).
2. Title 25, Environmental Resources Rules and Regulations, Chapters 287 to 299, Residual Waste Management.

D. Research & Special Programs Administration (RSPA).

1.03 DEFINITIONS

A. Hazardous Material - A substance or material capable of posing an unreasonable risk to health, safety, and property when in use or transported in commerce, and has been designated as hazardous under Section 5103 of Federal hazardous materials transportation law (49 U.S.C. 5103), but does not meet the criteria of waste.

1. Examples of Hazardous Materials include, but are not limited to: unopened common household chemicals; unpacked batteries; unused paint thinners.
2. Hazardous Materials may not be subject to disposal regulations, if reclaimed as determined by the Project Manager or assigned delegate. Additionally, Hazardous Materials may be discarded, becoming a Hazardous Waste. Once a Hazardous Material has been deemed a Hazardous Waste, it must remain a Hazardous Waste.

B. Hazardous Waste - A discarded material, previously deemed a Hazardous Material or Solid Waste, meeting the characteristics of a Hazardous Material. Also any mixture, material, residue, dust emission, spillage, etc. generated via the treatment, storage, or disposal of the Hazardous Waste is considered Hazardous Waste. Once a material is deemed Hazardous Waste, it remains a Hazardous Waste.

1. Examples of Hazardous Wastes are, but are not limited to: paints containing hazardous substances, such as lead; refrigerants; used solvents; window-sized air conditioners containing freon; miscellaneous chemicals; polychlorinated biphenyl (PCB) – containing fluids.

C. Universal Wastes include: batteries, pesticides, thermostats, lamps, and other wastes meeting the standards outlined in 40 CFR 273.

1. Batteries are defined as: A device consisting of one or more electrically connected electrochemical cells that is designed to receive, store, and deliver electric energy. The electrochemical cells contain an anode, cathode, and an electrolyte, plus connections. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed.
2. Pesticides are defined as: Any substance intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or desiccant.
3. Mercury thermostats are defined as: A temperature control device that contains metallic mercury in an ampule attached to a bimetal sensing element, and mercury-containing ampules that have been removed from these temperature control devices in compliance with federal requirements.
4. Lamps are defined as: The bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infra-red regions of the electromagnetic spectrum.
5. Mercury-containing device: A product or component of a product (excluding batteries) which contains elemental mercury that is necessary for operation of the device.

1.04 SUBMITTALS

A. The Contractor shall submit the following for approval of the Project Manager or designated delegate:

1. A Health and Safety Plan (HASP) that specifically ensures the health and safety of the workers in the area of the encountered hazards during demolition activities. The HASP shall be in accordance OSHA guidelines. Also included in the HASP should be contingencies for emergency response situations, a personal protective equipment (PPE) program, and a project organizational structure including health and safety officer and chain of command.
2. A Statement of Qualifications that the Contractor meets the Qualifications as detailed in Paragraph 1.05 below.
3. Shipping papers/manifests shall be completed in accordance with Titles 40 and 49 of the CFR, and the Commonwealth of Pennsylvania (PA) State regulations (for PA Residual Waste), as applicable.
4. A summary of activities performed, testing results, and copies of paperwork/manifests in accordance with Paragraph 3.04 herein.
5. Individual detailed logs of Hazardous Materials, Hazardous Wastes, and Universal Wastes removed from the site. The log shall include locations, types of hazardous materials/wastes, and amounts found. The Hazardous Materials/Wastes Logs shall also detail the personnel handling and disposing of hazardous materials/wastes, and final destination of materials and dates disposed.

1.05 QUALIFICATIONS

A. The Contractor and Subcontractors handling and disposing of Hazardous Materials and Hazardous Wastes shall have a proficiency in the following:

1. Development, implementation, and enforcement of a site Health and Safety Plan (HASP).
2. Instrument monitoring at contaminated material sites.
3. Personal protective equipment (PPE) selection, decontamination, and limitations.

4. Handling and removal of contaminated solids and liquids.
5. Removal of PCB-containing equipment (i.e., lighting ballasts).

PART 2 PRODUCTS

2.01 EQUIPMENT AND MATERIALS

A. Equipment, machinery, and apparatus, motorized or otherwise, used to perform the work of this Section may be as chosen at the Contractor's discretion, but must be capable of performing the work within the limits of the appropriate requirements.

B. Other Materials: Provide other materials, such as PPE, which may be required to safely manage and remove hazardous materials and wastes as necessary. Heavy gauge plastic sheeting shall be used to cover the ground when staging drums or other containers for disposal.

PART 3 EXECUTION

3.01 GENERAL PERSONNEL PREPARATION

A. Personnel working inside buildings and in the general vicinity of contaminated materials and lighting ballasts shall have documented training in, and be thoroughly familiar with, the safety precautions, procedures, and equipment required for controlling the potential hazards associated with this work. Personnel shall be properly trained as required for specific hazards associated with all tasks as detailed in 29 CFR 1910. Personnel shall use proper protection and safety equipment during work in and around Hazardous Materials, Hazardous Wastes, and Universal Wastes as detailed in 29 CFR 1910 and the Contract clauses.

B. The Contractor shall disconnect the electrical systems in areas related to the Hazardous Waste ballasts (or ensure that this has been previously completed).

3.02 UNIVERSAL WASTES DETERMINATION

A. Fluorescent and Mercury Light Bulbs/Lamps

1. If the light bulb or tube is not broken, carefully remove the bulb from the light fixture keeping it intact and place in a designated container for disposal.
2. If the light bulb or tube breaks or is broken, carefully remove the remaining portions of the bulb from the light fixture. Clean up all broken pieces of the bulb from the ground and surrounding surfaces. Place all in a designated container for disposal.

B. Mercury Thermostats

1. Remove and dispose of the thermostats with the mercury ampules intact. If an ampule is broken, clean up any spills or leaks from the broken ampule. Appropriate PPE shall be used in the event of a spill or leak. Place all thermostats and clean-up debris in a designated container for disposal.

C. PCB Ballasts

1. Inspect fixture to determine if the ballast is leaking. If the ballast is leaking, appropriate PPE shall be used to remove the ballast from the fixture.
2. Segregate the ballasts labeled "Non-PCB" or "Does Not Contain PCBs". Ballasts that are not labeled indicating no PCBs will be assumed to contain PCBs and will be treated as such.
3. Segregate leaking PCB ballasts from ballasts that are intact and place each in appropriately labeled containers for disposal.

D. Refrigerants

1. Drain refrigerant from all air conditioning units, refrigerators, or other coolant-containing equipment. Clean up any spills or leaks that occur during the draining of this equipment. Appropriate PPE shall be used in the event of a spill or leak. Place all refrigerant in designated container(s) for recycling or disposal, per applicable regulations.

E. Household Cleaners, Solvents, Gasoline, and Other Products

1. Remove and dispose of household cleaners, solvents, gasoline, and other products identified onsite in accordance with all applicable regulations. Clean up any spills that result from transferring these materials. Appropriate PPE shall be used in the event of a spill or leak. Place all materials in designated containers for disposal.

F. Containers for Disposal of Universal Wastes and PCB Ballasts

1. All containers to be used for universal wastes and PCB ballasts shall meet the requirements of 40 CFR 262.34.
2. Each type of waste shall be placed in separate containers and labeled accordingly.

G. Labeling

1. Each container of universal waste shall be appropriately labeled indicating the contents as follows:
 - a. Batteries: "Universal Waste – Batteries", "Waste Batteries", or "Used Batteries"
 - b. Lamps: "Universal Waste – Lamps", "Waste Lamps", or "Used Lamps"
 - c. Thermostats (or Mercury Containing Device): "Universal Waste – Mercury Thermostats", "Waste Mercury Thermostats", or "Used Mercury Thermostats".
2. Each container of PCB ballasts shall be appropriately labeled indicating its contents as required by 49 CFR Part 172.
3. Other wastes shall be labeled properly according to the applicable guidelines.

3.03 MATERIALS REMOVAL AND STORAGE

A. All solid state Hazardous Wastes shall be stored prior to disposal in the proper manner per PADEP requirements (Title 25 PA Chapter 245).

1. When storage areas are necessary, they shall be maintained using proper workplace safety regulations. Additionally, public safety should also be managed to restrict access to Hazardous Wastes as necessary. Upon receipt and delivery of analytical results to the Project Manager, the materials may be removed from the site for proper disposal in accordance with the findings of the laboratory analysis.
2. When materials are solid state, the Contractor shall temporarily store items as required until disposal as described in Paragraph 3.04.
 - a. EXEMPTION: Provided it meets the requirements outlined in 40 CFR 261.7, Residues of Hazardous Wastes in Empty Containers, a Hazardous Waste is not subject to Hazardous Waste regulations, if it remains in either:
 - (i) an empty container.
 - (ii) an inner liner removed from an empty container.

B. Hazardous Wastes in liquid states which are subject to sampling, testing, and disposal include fluids contained within structures and equipment to be demolished and/or removed, surface water/groundwater collected during or impacted by the actual remediation portions of this work, and any decontamination fluids generated. The Contractor shall properly containerize all such fluids and test, handle, and dispose of these fluids as stated in Paragraph 3.04.

C. Universal Wastes will be removed and containerized for offsite disposal, in accordance with TSCA, 40 CFR Part 273, and 25 PA Code Chapter 266.

1. All universal wastes shall be disposed of in a destination facility or by a handler appropriately licensed for universal wastes.
2. All leaking PCB ballasts shall be disposed of at a TSCA-permitted incinerator or landfill.
3. All non-leaking PCB ballasts shall be disposed of at an appropriately permitted recycling facility.

D. Drums shall be disposed offsite and over-packed as required. Drums shall be placed on and covered with plastic sheeting as specified in Paragraph 2.01. Drum contents shall be sampled and tested and disposed of as stated in Paragraph 3.04.

E. Materials shall only be temporarily stored at the location(s) designated by the Project Manager.

3.04 SAMPLING, TESTING, AND DISPOSAL OF WASTES

A. After materials exhibiting potential or known contamination have been accumulated, the materials shall be sampled in accordance with State regulations and guidance as needed. Sample frequency, sample preservation, and analytical procedures shall conform to PADEP requirements and guidance. The Wastes shall also meet the characterization requirements of the proposed disposal site.

B. The Contractor shall arrange for testing of all suspect transformers identified inside demolition area. The Contractor shall submit results of this testing to the Project Manager. The Project Manager and Contractor will then mutually agree on the method of disposal for these materials.

C. For materials and fluids earmarked for offsite disposal (including drums), a disposal characterization analytical program shall also be implemented by the Contractor. The extent of the analytical requirements for disposal will be the responsibility of the Contractor based upon disposal facility requirements. Copies of all test results shall be provided to the Project Manager. The Contractor will also provide a listing of the disposal facility's analytical requirements.

D. Disposal of both hazardous and universal wastes as determined by sampling and analysis (Paragraph 3.03) shall be in accordance with all local, PA State (Title 25), and Federal solid and hazardous waste laws and regulations, as well as the Toxic Substances Control Act (TSCA) (for lighting ballasts, as appropriate), and conditions specified herein. These services shall include all necessary personnel, labor, transportation, packaging, detailed analyses (if required for disposal, manifesting, or completing waste profile sheets), equipment, and reports. Lighting ballasts, if PCB containing, must be disposed of in accordance with TSCA guidelines. If an alternate disposal option is proposed, then written justification must be provided to the Project Manager for review and approval. Materials not meeting recycling or incineration requirements shall be designated for offsite disposal at a permitted landfill approved, in advance of disposal, by the Project Manager. Copies of all test results shall be furnished to the Project Manager.

E. The Contractor shall be responsible for transport of all materials and preparation/signing of manifests/paperwork as required by DOT, EPA, TSCA, and the Commonwealth of Pennsylvania to document delivery and acceptance at the disposal facility. Copies of all such documents shall be provided to the Project Manager.

F. The Contractor shall retain the rights to salvage value of wastes, given the requirements of 40 CFR 266, 40 CFR 761, and the applicable State requirements are met.

G. Disposal of wastes shall be performed in accordance with Section 02130.

3.05 SPILLS

A. Immediate containment actions shall be taken as necessary to minimize effect of any spill or leak caused during the contaminated materials handling or lighting ballast removal activities. Cleanup shall be in accordance with applicable Federal, State, and local laws and regulations at no additional cost to the Project Manager.

B. If a spill of contaminated materials or hazardous substances (e.g., decontamination solvents) occurs on the site, the Contractor shall immediately notify the Project Manager and the National Response Center (NRC) if necessary and shall also comply with applicable PA State reporting requirements. A written follow-up report shall be submitted for onsite and offsite spills to the Project Manager not later than seven (7) calendar days after the initial report.

END OF SECTION

SECTION 02091
GROUNDWATER MANAGEMENT

PART 1 GENERAL

1.01 Summary

- A. **Section Includes:** The work specified in this Section consists of the removal of subsurface water from any excavations at the site. These subsurface waters may include: 1) municipal water from a leaking source, or 2) sewer water from a leaking source, or 3) local groundwater, or 4) contaminated water, or 5) surface runoff. All associated laboratory analytical work must be performed by a Pennsylvania-certified laboratory. All work performed under this Contract will be in full compliance with Federal, State and Local regulations which mandate work practices and licensing of personnel.
- B. **Alternative Procedures:** The procedures described in this Specification Section shall be utilized for the project. If the specified procedures cannot be utilized, a request shall be made in writing to the Philadelphia Regional Port Authority (PRPA), or authorized representative, providing details of the problems encountered and recommending alternative procedures. Implementation of alternative procedure(s) shall not be permitted without prior written approval by the Owner or the Owner's designated representative.

1.02 References

A. Related Sections

1. Section 02050: Demolition
2. Section 02130: Offsite Transportation and Disposal
3. Section 02226: Excavation, Backfill, and Compaction

B. Related Documents

1. Pennsylvania Department of Environmental Protection (PADEP):
 - a. Pennsylvania Code Title 25 Environmental Protection, Chapter 250.
 - b. Pennsylvania Department of Environmental Protection (PADEP), Land Recycling Program (Act 2).
 - c. Pennsylvania Code Title 25 Environmental Protection, Chapter 245 (Act 32).
 - d. Pennsylvania Land Recycling and Environmental Remediation Standards Act.
2. Occupational Safety and Health Administration (OSHA):
 - a. Title 29 Code of Federal Regulations Section 1910.120 Hazardous Wastes Site Worker Operations.
 - b. Title 29 Code of Federal Regulations Section 1926, Standards for Construction Industry.
3. United States Geological Survey (USGS):
 - a. USGS Water Supply Paper #2346. "Geohydrology and Ground-Water Resources of Philadelphia, PA", 1991, by Gary Paulachok in cooperation with the City's Water Department.

1.03 Definitions

- A. **Aquifer:** A geologic formation, group of formations, or a part of a formation capable of yielding sufficient groundwater for monitoring purposes.
- B. **Contaminant:** A compound, mixture, solution, or substance that enters the environment as a result of human action. Common contaminants and their allowable concentrations are listed in the Tables given in Pennsylvania Code Title 25 Chapter 250. See Regulated Substance.
- C. **Contractor:** The individual or business with which the PRPA arranges to perform the specified work.
- D. **Decontamination:** The procedure of washing equipment with a laboratory grade detergent and rinsing with

potable or distilled water.

- E. Environmental Consultant: Those professionals that manage the environmental actions at the site.
- F. EPA: The U.S. Environmental Protection Agency.
- G. Free product: A regulated substance that is present as a nonaqueous phase liquid; that is, not dissolved in water.
- H. Groundwater: Water beneath the subsurface that exists in a zone of saturation.
- I. Health and Safety Plan: A printed document that outlines general procedures to prevent personal injury and courses of action in the event of an injury.
- J. Owner: The Philadelphia Regional Port Authority (PRPA), or its authorized representative.
- K. PADEP: Pennsylvania Department of Environmental Protection.
- L. Project Manager: On Site Manager representing the Owner and responsible for day-to-day decision making.
- M. Regulated Substance: An element, compound, mixture, solution, or substance that when released to the environment, may present substantial danger to the public health welfare and environment. Regulated substances as related to water and soil media are listed in the Tables given in Pennsylvania Code Title 25 Chapter 250.
- N. Water: This Section of the Technical Specifications addresses subsurface waters:
 - 1. Contaminated Water: If the water exhibits petroleum product it is assumed to be contaminated. If the water results exceed the water quality standards of the Statewide Health Standards given in Pa. Code Title 25 Chapter 250 through laboratory analysis, then the water is assumed to be contaminated.
 - 2. Groundwater: This is naturally occurring, subsurface water. If the noted subsurface water does not exhibit olfactory response or concentrations of fecal coliform, nitrates, chlorine, or fluorine through laboratory analysis, then the water is assumed to be groundwater. Such waters may be at shallow depths in various parts of the County of Philadelphia.
 - 3. Municipal Water: Water leaking from a city water utility should not have an odor but will exhibit concentrations of chlorine and fluorine upon laboratory analysis of a collected sample
 - 4. Sewer Water: Water leaking from a sanitary sewer line will, in general, have an odor and exhibit concentrations of fecal coliform and nitrates upon laboratory analysis of a collected sample.
- O. Work Area: A designated room, space, or area in which water pumping actions are to be undertaken or which may become wet as a result of such activity.

1.04 Submittals

- A. Submit proof to the Project Manager that the required permits have been obtained, and arrangements for transport and disposal of contaminated materials, supplies, etc. have been made.
- B. Submit all final testing results from certified laboratory if necessary.
- C. Submit material and equipment specifications for all pumps, filter material, tanks, and all ancillary equipment used for dewatering.

1.05 Quality Assurance

- A. Regulatory Requirements: Perform the work of this Section in accordance with applicable Federal, State, and local regulations, standards, and codes governing environmental sampling procedures.
- B. The most recent edition of relevant regulations, standards, documents or codes shall be in effect. Where conflict among the requirements of this Section exists, the most stringent requirements shall be utilized.
- C. Make copies of the referenced standards, regulations, codes and other applicable documents available at the worksite.
- D. Confirmatory sampling of contaminated soil or groundwater shall be performed using decontaminated equipment and laboratory-provided bottleware in accordance with PADEP Act 2. Sampling personnel shall

wear sterile gloves during sampling activities, such as Latex or nitrile gloves, and other appropriate personal protective equipment in accordance with the Contractor's approved Health and Safety Plan.

- E. Local Ordinances: Local ordinances, regulations or rules pertaining to management of water in the City of Philadelphia, shall also apply to the work of this Specification Section.

1.06 Delivery, Storage, and Handling

- A. Upon collection, during transport and through laboratory delivery, all environmental samples shall be kept refrigerated at four degrees Celsius.
- B. Store materials away from conditions that may result in damage to other materials or work areas.

1.07 Site Conditions

- A. Worker Safety: The applicable OSHA standards are the minimum for worker protection. The Contractor shall ensure proper measures are implemented to ensure the safety of its personnel. The PRPA Project Manager and Environmental Consultant assume no responsibility or liability for worker safety or the adequacy of Contractor's efforts to comply with standards.
- B. Prior to commencement of work, the workers shall be instructed, and shall be knowledgeable, in the areas described previously.
- C. Authorized Visitor Safety: The Contractor will provide authorized visitors with suitable personal protective equipment, as appropriate.

PART 2 PRODUCTS

2.01 Equipment and Materials

- A. Equipment, machinery, and apparatus, motorized or otherwise, used to perform the work of this Section may be chosen at the Contractor's discretion, but will perform the work within the limits of the appropriate requirements as set forth in the Erosion and Sediment Control Plan.
- B. Filter Bags shall conform to the specifications set forth in the Erosion and Sediment Control Plan.
- C. Other Materials: Provide other materials, sediment control, pipe, sheeting, lumber, nails and hardware, which may be required to construct and dismantle the sedimentation or decontamination area and barriers that isolate the work area.

PART 3 EXECUTION

3.01 Preparation

- A. The Contractor will verify the following with the Owner prior to discharge of any water from the site:
 - 1. Contractor and/or supporting vendor equipment staging area.
 - 2. Logistical factors to minimize interference with operations and facilitate Contractor activities.
 - 3. Security and life safety measures.
- B. Verify that all onsite workers are familiar with and have access to a copy of the Health and Safety Plan for this part of the project.
- C. Do not begin pumping uncontaminated water until:
 - 1. Arrangements have been made for the proper discharge of the water.
 - 2. Proper tools and equipment are on hand and in proper working order.
 - 3. Preparatory steps have been taken and applicable notices posted and permits obtained.
- D. Do not discharge any contaminated water (i.e., water exhibiting evidence of contamination such as a sheen, odors, exceedance of Act 2 Statewide Health Standards, etc.) from the site until:
 - 1. Water has been adequately characterized.
 - 2. Arrangements have been made for the proper, documented, transport, and disposal of the contaminated water.

3. Proper tools and equipment are on hand and in proper working order.
4. Preparatory steps have been taken and applicable notices posted and permits obtained.

3.02 Water Removal

- A. The pumping of water from the excavation(s) shall be performed in accordance with the Work Plan that has been submitted to the Project Manager. Water removal activities shall follow Best Management Practices and the Erosion and Sediment Control Plan.
- B. The Contractor shall not allow water to damage property or equipment. The Contractor shall not allow the pumped water to create an ice hazard. The Contractor shall not allow water to pond or lay stagnant for an extended period of time as determined by the Project Manager.

3.03 Restoration

- A. Once the pumping or remedial activity is complete, the pumping/remedial equipment will be properly stored away. At the end of the workday, site enclosures of the Work Area such as gates, fencing and doors, will be restored to their original position and locked where appropriate.

3.04 Disposal Procedures

- A. Disposal of contaminated waters shall only occur following PADEP-accepted disposal and/or treatment methods.
- B. Offsite transport and disposal of contaminated waters shall occur only at an appropriately certified transport and disposal facility(s). See Specification 02130.

END OF SECTION

SECTION 02130

OFF-SITE TRANSPORTATION AND DISPOSAL OF WASTE MATERIALS

PART 1 GENERAL

1.01 SUMMARY

- A. The Contractor shall furnish all labor, materials, equipment, and related items required for the proper transportation and disposition of waste materials.
- B. The Contractor will determine the proper waste characterization of all waste and then select recycling or disposal methods to ensure that waste materials are recycled or disposed according to procedures that are compliant with applicable regulations.
- C. All waste materials will be transported directly (with no intermediate stops) to a facility properly permitted by the state in which the facility is located. All wastes will be transported to the applicable facility in an expeditious manner.
- D. It is the intent of these specifications to allow for the proper and legal disposition of waste materials. Primacy shall be given to salvage, recycling, and reuse of materials to the extent allowed by applicable laws.
- E. Related Sections:
 1. Section 02071: Asbestos Removal
 2. Section 02050: Demolition
 3. Section 02080: Removal and Disposal of Hazardous Materials, Hazardous Wastes, and Universal Wastes

1.02 REGULATORY REQUIREMENTS

- A. The Contractor shall comply with all Federal, State, and local regulations applicable to waste management, including PADEP, PennDOT, U.S. DOT, OSHA, EPA, RCRA, and TSCA regulations.
 1. All waste materials shall be recycled, processed, or disposed at a properly permitted facility in accordance with Pennsylvania Solid Waste Regulations.
 2. Processing onsite of uncontaminated rock, stone, gravel, brick, block, and concrete from demolition activities for prompt re-use shall be deemed to have a permit-by-rule if the requirements of 25 PA Code 271.103(g) Municipal Waste Management are met. The permit-by-rule requirements limit off-site waste processing to 50 tons/day.
 3. All vehicles and containers transporting waste must be in compliance with Federal and State Departments of Transportation requirements.
 4. All storage of waste prior to removal from the project area shall comply with the requirements of 25 PA Code 299 (Residual Waste Management), et.al. Storage of waste outside of the project area is prohibited.

1.03 QUALIFICATIONS

- A. The Contractor and its subcontractors must have demonstrated experience with transportation of waste materials and have sufficient vehicles and containers to perform the work.
- B. All receiving facilities must have valid permits to accept the types and quantities of waste materials from the Pennsylvania Department of Environmental Protection's Bureau of Waste Management, or if the facility(ies) is (are) in another state(s), the applicable state permit(s).
- C. The compliance history of the hauler and receiving facility(ies) shall not have any outstanding fines or penalties or have action against the hauler or receiving facility that resulted in a criminal felony conviction within the preceding five (5) years.
- D. Transporter shall have at least five (5) years experience in the waste hauling (long haul) experience and sufficient drivers, tractors, trailers, and other vehicles to perform the work. The transporter shall have no outstanding fines or penalties with applicable state transportation or law enforcement agencies. Continued violations (more than one per month over two or more consecutive months) of applicable transportation and

waste handling laws and regulations (including but not limited to vehicle safety and litter blowing) may result in termination of the transporter. If applicable, Contractor shall provide an alternate means of transportation at no additional cost to the PRPA.

1.04 SUBMITTALS

- A. Submit to the PRPA Project Manager a written Waste Disposal and Waste Handling Plan for disposal and waste handling operations, describing classes of materials to be handled, with storage, disposition, and receiving facility requirements for each material classification. Describe sampling/testing program for each material classification. Identify all waste handling contractors, including suppliers of containers, transporters, and receiving facilities. Provide statement(s) of qualifications of all transporters and receiving facilities documenting compliance with applicable state laws and regulations. Include Preparedness, Prevention, and Contingency (PPC) Plan prepared in accordance with PADEP's "Guidelines for the Development and Implementation of Environmental Emergency Response Plans".
- B. Provide to the PRPA Project Manager a copy of the valid state-issued permit from all proposed receiving facilities.
- C. Provide to the PRPA Project Manager a written guarantee of capacity for waste materials from the receiving facility for quantities of material to be delivered to the receiving facility. The written guarantee shall include both maximum daily and maximum total amounts of waste to be received by the facility, and restrictions, if any, regarding the types of waste to be received and the hours of acceptance of the wastes.
- D. Provide to the PRPA Project Manager a written sampling/testing program required by the receiving facility(ies) and applicable state laws and regulations, including frequency and types of samples for each applicable waste type.
- E. Provide to the PRPA Project Manager copies of all laboratory test data, including quality control and quality assurance information required by the receiving facility(ies) or applicable state laws and regulations, within one week of receipt by the Contractor or within two weeks of completion of the analytical report, whichever is earlier.
- F. Submit weekly to the PRPA Project Manager copies of manifests or other records of sale or bills of lading indicating truck number, weight of waste, whether the waste contains any hazardous or regulated material, time and date of scale transaction at receiving facility (prepared or signed by weighmaster of receiving facility) for all wastes. Accompany the manifests with summary tables. Tables shall include daily totals of waste quantities for each waste type at each receiving facility, and should identify samples of waste taken for laboratory analyses of waste loads.
- G. Submit weekly to the PRPA Project Manager copies of each daily operations record kept by each transporting vehicle pursuant to the requirements of 25 PA Code 299.
- H. Submit to PADEP (Mr. Mohamad Mazid of the Waste Management Program) written notification of waste processing activities in accordance with 25 PA Code 271.103(g). Project No. APS ID No. 718653 must be referenced. Applicable only if the project qualifies for a permit-by-rule as described in paragraph 1.02A herein.

1.05 PROJECT RECORD DOCUMENTATION

- A. Contractor shall prepare a Security Plan in accordance with the U.S. Department of Transportation requirements for handling and transportation of hazardous materials/wastes (49 CFR Part 172).
- B. Waste Log shall be maintained by the Contractor. The waste log shall record origin (address and date) of waste for each vehicle load, origin of samples taken for analyses, receiving facility for each vehicle load, and weight of load as received by the receiving facility. Maintain log in good, legible order and keep available for inspection by the Project Manager at all times. Upon completion of project, provide to PRPA Project Manager.
- C. Each collection vehicle shall maintain daily operational record for each day waste is transported in accordance with 25 PA Code 299.
- D. A separate log shall be maintained for salvaged materials similar to the waste log described in paragraph B, recording the origin (address and date) of waste for each vehicle load, origin of samples taken for analyses,

receiving facility for each vehicle load, and weight of load as received by the receiving facility. Maintain log in good, legible order and keep available for inspection by the PRPA Project Manager at all times. Upon completion of project, provide to PRPA Project Manager.

PART 2 PRODUCTS

2.01 EQUIPMENT

- A. The Contractor shall provide equipment, personnel, and facilities necessary to load materials for transport and complete transportation to the appropriate disposal facility.
- B. All containers used to store materials on site shall comply with the provisions of 25 PA Code 299 including, but not limited to, the following provisions:
 - 1. Containers shall be watertight, leak proof, insect proof, and rodent proof.
 - 2. Containers shall be equipped with a watertight fitting lid or cover or otherwise sealed.
 - 3. Containers shall be clearly labeled as the specific type of waste being contained.
- C. Transportation vehicles shall be clearly identified for the applicable type of waste materials and vehicles shall be in compliance with applicable state department of transportation regulations.
- D. Open top trailers shall be covered with secured tarpaulins or other suitable covers to prevent litter or waste from escaping the trailers.

PART 3 EXECUTION

3.01 SELECTION OF WASTE DISPOSITION METHOD(S)

- A. A Waste Disposal and Waste Handling Plan shall be prepared by the Contractor and include material disposition by type. All disposition and sampling arrangements shall be performed and coordinated by the Contractor and in accordance with the plan as submitted to the PRPA Project Manager. This will include waste characterization and approval as well as any permits required. Contractors shall be responsible for testing and analyzing material, debris, and/or soil to determine the proper disposal method. Provide PRPA with documentation of the results.
- B. The Contractor may dispose of non-hazardous and non-recyclable solid waste at a properly permitted municipal or construction/demolition waste transfer station, processing facility, or landfill (municipal waste or construction/demolition waste) with a valid permit and sufficient capacity to receive waste. Preference shall be given to facilities that salvage materials, process or beneficially use waste materials as allowed by law. Facility shall provide dedicated capacity for incoming wastes. The solid waste must comply with the facility operator's permit and applicable regulatory requirements. Hazardous waste, as identified by 40 CFR 261 must be disposed as required by local, State, or Federal regulations. The method of disposal must be approved by the PRPA Project Manager.
 - 1. Waste materials that may be beneficially reused must have applicable beneficial use approvals from the applicable state and the Contractor shall provide copy of the applicable permit or approval to PRPA. Include any regulatory quality control and quality assurance testing programs and corresponding acceptance/rejection criteria, if any, in the Waste Disposal and Waste Handling Plan.
 - 2. For waste materials that may be disposed, reused, or processed pursuant to permit by rule, general permits, or permit exemptions, provide documentation from the applicable regulating agency to the satisfaction of the Project Manager that the proposed disposal method, reuse, or process is in accordance with applicable state laws and regulations. Include any regulatory quality control and quality assurance testing programs and corresponding acceptance/rejection criteria, if any, in the Waste Disposal and Waste Handling Plan.

3.02 LOADING AND HAULING

- A. The Contractor shall inspect haul vehicles for soil adhesion to wheels and under carriage. If applicable, these soils shall be removed and properly handled by the Contractor before leaving the Site.
- B. No transport vehicles shall be allowed to leave the Site if leaking or spilling materials.
- C. The Contractor shall ensure tarpaulin covers are provided for transport vehicles, which shall cover waste

materials during transport. Do not overfill vehicles.

- D. All transport vehicles shall be in strict conformance with all the applicable Federal, State, and local laws.
- E. The Contractor is responsible for any and all actions and costs necessary to remedy waste spilled in loading or transit.
- F. All transport vehicles shall be clean before filling with waste material.
- G. Transportation vehicles must have appropriate placarding in accordance with DOT requirements.

END OF SECTION

SECTION 02225
SITework

PART 1 GENERAL

1.01 Summary

- A. Section Includes: The work specified in this Section consists of the terminating and de-energizing existing utilities, demolition of above ground structures, in place demolition of concrete foundations and surfaces, milling and removal of roadway surfaces, removal of stormwater systems, abandonment or removal of below ground structures, and site grading. All work performed under this contract will be in full compliance with Federal, State, and Local regulations which mandate work practices and licensing of personnel.
- B. Alternative Procedures: The procedures described in this Specification Section shall be utilized for the project. If the specified procedures cannot be utilized, a request shall be made in writing to the Philadelphia Regional Port Authority (PRPA), or authorized representative, providing details of the problems encountered and recommending alternative procedures. Alternative procedure(s) shall be approved in writing by the PRPA prior to implementation.

1.02 References

A. Related Sections

- 1. PRPA General Conditions
- 2. Section 02050: Demolition
- 3. Section 02091: Groundwater Management
- 4. Section 02226: Excavation, Backfill, and Compaction
- 5. Section 02750: Stormwater Pollution Prevention

B. Related Documents

- 1. American Association of State Highway and Transportation Officials, AASHTO M 140, Emulsified Asphalt.
- 2. American Society for Testing and Materials, ASTM C 602, Specification for Agricultural Liming Materials.
- 3. Pennsylvania Department of Environmental Protection, Erosion and Sediment Pollution Control Program Manual (April 2000).
- 4. OSHA Requirements of 29 CFR 1926.
- 5. Pennsylvania Department of Transportation Publications, 408 Specifications.

1.03 Site Conditions

- A. Classification of Excavated Materials: No consideration shall be given to the nature of materials encountered in excavating or grading operations. Therefore, as unclassified excavation, no additional payment will be made for difficulties occurring in excavating and handling of materials.
- B. The Contractor is advised that any earth moving activities shall be managed in accordance with PADEP's Management of Fill Policy. Initial excavation activities shall be performed using standard Level D work practices (general work uniform including modifications as required) with appropriate air monitoring.
- C. Excess Materials: No right of property in materials is granted the Contractor of excavated materials prior to backfilling. Surplus materials from excavation and grading activities will be placed on site in a controlled manner and to promote positive drainage.
- D. Asphalt material must be stockpiled in the designated asphalt pile stockpile area, lined and covered as specified in the Erosion and Sediment Control Plan (E&S Plan). Asphalt material may be reused on site by the demolition contractor as fill in a localized and rigorously documented location only. Pre-approval by the PRPA Project Manager must be obtained in writing prior to placement of asphalt material.
- E. Broken concrete slabs, footings, and masonry may be managed on site as fill.

1.04 Site Boundaries

- A. The project is located in Philadelphia County and bounded to the north by Kitty Hawk Avenue (former runway), the South by the Delaware River, the East by an undeveloped former dredge disposal area, and the West by the Naval Yard Complex former sea plane hangar area. Mustin Avenue (sometimes referenced as Mustin Street) bisects the project area. The project area is currently enclosed on the north, east, and south by an eight foot tall chain link fence. Entrance roads are currently blocked by a combination of concrete barriers and chain link fence gates.

1.05 Restrictions and Conservation Measures

- A. According to the Pennsylvania Game Commission (PGC), no demolition activities shall occur during the bald eagle nesting period of January 1 to August 1. All demolition activities shall occur during the period of August 2 to December 31. This seasonal restriction may be removed by the PGC if the PGC is provided with documentation that the bald eagle nest in question is not being used during the 2011 nesting season.

PART 2 PRODUCTS

- 2.01 All equipment, PPE, oversight, drawings, and personnel necessary to perform the work described in paragraph 1.01 above shall conform and be consistent with industry standards and safe operating procedures.
- 2.02 Materials used shall conform with the specifications set forth by the Demolition Plan, E&S Plan, and by utility owners.

PART 3 EXECUTION

3.01 Preventative Sitework

A. Removal of Obstructions

1. The Contractor is not entitled to claims for damage or extra compensation due to the presence of underground utilities or delay in the removal or rearrangement of same. Additional precautions concerning obstructions as follows:
 - a. Do not interfere with persons, firms, corporations, or utilities employing protective measures, removing, changing, or replacing their property or structures, but allow said persons, firms, corporations, or utilities to take such measures as they may consider necessary or advisable under the circumstances, which shall not relieve the responsibilities of the Contract.
 - b. If Contractor encounters any unanticipated gas, sewer, water, electrical, steam, stormwater, or other utility line they must stop related work and notify the Project Manager immediately. The Project Manager will notify the Owner immediately.
 - c. A compact disk has been provided with the project bid package that includes historical drawings showing approximate utility locations, both existing and former, associated with the construction of the housing area. The Contractor shall confirm that they have all available and necessary drawings and information prior to site mobilization and work. Cushman and Wakefield have made available their record room documents to supplement such review.

B. Environmental Requirements

1. Historical drawings show that storm sewers may be asbestos bonded and asphalt coated. Any subsurface pipe utilities encountered will, upon initial excavation, be inspected by a Philadelphia licensed asbestos project inspector. If utility is suspected to have an asbestos component, it shall be assumed to contain asbestos and shall be handled accordingly. For bid purposes, the contractor shall assume that all storm sewers are asbestos bonded.
2. Dewatering: Keep excavations free from water during the performance of the work. Provide and operate pumps of sufficient capacity for dewatering the excavations. Provide for the disposal of the water removed from excavations in such manner as not to cause injury to the public health, to public or private property, or waterways, to the work of others, to the portion of the work completed or in progress, nor to cause an impediment to the use of streets, roads, and highways. Additional requirements and procedures for dewatering and management of groundwater are contained in Section 02091 of this specification.

3. When it is necessary to haul soft or wet soil material over roadways, use suitably tight vehicles to prevent spillage. Clear away spillage of materials on roadways caused by hauling. See Sections 02130 and 02080.

C. Temporary Protective Construction

1. Excavation Covers: Cover open excavation when work therein is suspended or left unattended, such as at the end of a work day. For such covers, use materials of sufficient strength and weight to prevent their removal by unauthorized persons. Covers shall be marked as "OPEN HOLE" and be suitable to support the weight of human pedestrian traffic.
2. Excavation Supports: Where excavations are in the vicinity of buildings or structures, which by their construction or position might exert detrimental pressure on the excavation, the Project Manager reserves the right to require that such excavations be supported, protected, or sloped differently than standards or regulations.
3. Abandoned piping shall have openings crimped, capped or plugged to stop soils and sediment infiltration.

3.02 Sitework

- A. Disconnect all utility lines entering the site and cap at locations indicated by the utility owner. Ensure that all utility lines in or affected by the project area are appropriately de-energized.
- B. Install erosion and sediment control measures and install site infrastructure as indicated on the E&S Plan.
- C. Provide clearing and grubbing to remove, load, and recycle the trees (including roots), shrubbery, and brush, as incidental to contract work.
- D. Demolish all above ground structures including housing units, community buildings, car ports, play centers, garages, ancillary structures, and utility structures. As-built structural drawings are provided in the Mustin Housing Sewer As-Built and Utility Plan prepared for the Department of the Navy, Naval Facilities Engineering Command, Northern Division (Mustin Housing As-Built).
- E. Demolish all surfacing materials including sidewalks, driveways, roadways, courtyards, carports, foundation pads, foundation walls, and footers. All concrete, brick, and masonry material may be broken into pieces with less than 24" nominal diameter and left in place. Asphalt material must be stockpiled for future use or disposal. Brick may be used as fill for the basements of buildings only. Any excess must be removed from the site and properly disposed. Foundations and slabs must be broken up before being backfilled.
- F. Remove all stormwater piping and related structures (see 3.01B above). Backfill per Section 02226 – Excavation, Backfill, and Compaction. Below ground structures constructed of concrete, brick, or masonry units may be broken up as specified above and left in place. Structures and equipment made from other materials must be removed. As-built drawings for the stormwater system to be removed are provided in the Mustin Housing As-Built.
- G. Remove utility duct bank entering the project area along Mustin Avenue from the limit of disturbance to duct bank termination. The utility ductbank is concrete encased and is required to be removed.
- H. Construct drainage swale and construct final grades. Ensure that no significant ponding or erosion will occur on site. Areas shall be restored as per Section 02226 – Excavation, Backfill, and Compaction.
- I. Should any structure or piping be encountered that is not shown on the drawings or Mustin Housing As-Built, Contractor shall notify the Project Manager immediately (see 3.01A above).
- J. If a utility owned by the City of Philadelphia [Philadelphia Water Department (PWD)] is indicated to remain and is damaged or removed during construction, replace in accordance with PWD's requirements and specifications with no additional compensation unless otherwise directed that repair or replacement is not necessary.

3.03 Completion of Work

- A. Prior to final demobilization, the Contractor will complete the task items listed in the Sequence of Work and Sequence of Demolition as shown on the Contract Drawings, or as otherwise directed by the Owner.

END OF SECTION

SECTION 02226
EXCAVATION, BACKFILL, AND COMPACTION

PART 1 GENERAL

1.01 Summary

- A. **Section Includes:** The work specified in this Section consists of the excavation and backfilling activities associated with the demolition at Mustin Field. All work performed under this contract will be in full compliance with Federal, State, and Local regulations which mandate work practices and licensing of personnel.
- B. **Alternative Procedures:** The procedures described in this Specification Section shall be utilized for the project. If the specified procedures cannot be utilized, a request shall be made in writing to the Philadelphia Regional Port Authority (PRPA), or authorized representative, providing details of the problems encountered and recommending alternative procedures. Alternative procedure(s) shall be approved in writing by the PRPA prior to implementation.

1.02 References

A. Related Sections

1. PRPA General Conditions
2. Section 02050: Demolition
3. Section 02225: Sitework
4. Section 02750: Stormwater Pollution Prevention
5. Section 02071: Asbestos Removal
6. Section 02091: Groundwater Management

B. Related Documents

1. OSHA Requirements of 29 CFR 1926.
2. Mustin Housing Sewer As-Built and Utility Plan prepared for the Department of the Navy, Naval Facilities Engineering Command, Northern Division (Mustin Housing As-Built).
3. Solid Waste Management Act, 35 P.S. §§ 6018.101.
4. Land Recycling and Environmental Remediation Standards Act, 35 P.S. §§ 6026.101.
5. 25 Pa. Code Chapters 287 to 299.
6. 25 Pa. Code Chapters 271 to 285.

C. Definitions

1. **Backfill:** Soil or approved materials used to fill an excavation or site grading taken from an on-site source.
2. **Borrow:** Satisfactory soil imported from off-site for use as fill or backfill. All Borrow sources must be pre-approved by the Owner or engineer. Approval shall be contingent upon, among other characteristics, the Contractor's demonstration that any proposed borrow materials comply with Pennsylvania's Clean Fill standards.
3. **Excavation:** Removal of at grade or below grade obstructions, foundations, building components, and as well as native and non-native soil and fill as required to accomplished to scope and intent of the contract.
4. **Bulk Excavation:** Excavations more than 10 feet (3 m) in width and pits more than 30 feet (9 m) in either length or width.
5. **Unauthorized Excavation:** Excavation below structure elevations or beyond indicated dimensions without direction. Unauthorized excavation shall be without additional compensation.

6. Fill: Soil or approved materials used to fill an excavation or site grading taken from an off-site source.
7. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

1.03 Submittals

A. Proposed fill material analytical results.

1. Classification as clean fill per 25 Pa. Code §§ 287.1, 271.1.
2. Proper environmental due diligence per 35 P.S. § 6027.103.
3. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated:
4. Gradation (ASTM 422 Sieve and Hydrometer) curve for each on-site recycled, or borrow soil material proposed for fill.
5. Classification according to ASTM D 2487 of each on-site, recycled, or borrow soil material proposed for fill.
6. Laboratory compaction curve according to ASTM D 1557 or ASTM D 4353/4354 as appropriate for each proposed fill material.
7. Organics content per ASTM D2974.

1.04 Quality Assurance

- A. Geotechnical Testing Agency Qualifications: The Contractor will engage an independent testing agency qualified according to ASTM E 329 to conduct soil materials testing, as documented according to ASTM D 3740 and ASTM E 548 and perform field quality control inspections and tests, if necessary. Inspection and testing shall be supervised by the Owner's Representative. Geotechnical Testing Agency must be approved by the PRPA Project Manager.

PART 2 PROJECT CONDITIONS

2.01 Existing Utilities

- A. Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Owner and then only after arranging to provide temporary utility services according to requirements indicated.
- B. Notify Owner not less than two days in advance of proposed utility interruptions.
- C. Do not proceed with utility interruptions without Owner's written permission.
- D. Contact utility-locator service for area where Project is located before excavating.

2.02 Demolition of Utilities

- A. Demolish and completely remove from project area existing stormwater system (16-inch diameter pipe or larger), appurtenances, and concrete duct banks.
- B. Abandon in place 8-inch sanitary sewer and cap as indicated on the Contract Drawings. Remove any improvements. Abandon in place any sanitary sewer with a diameter less than 16 inches.
- C. For utilities no longer in service, coordinate with utility companies to de-energize and appropriately cap services.
- D. Historical drawings show that storm sewers may be asbestos bonded and asphalt coated. Any subsurface pipe utilities encountered will, upon initial excavation, be inspected by a Philadelphia licensed asbestos project inspector retained by the Owner. For bid purposes, the Contractor shall assume that all storm sewers are asbestos bonded. The Contractor's proposed bid price shall include removal and disposal of all such storm sewer pipe (16 inches in diameter and larger) as part of the contract work.
- E. Attempt to locate potentially active and abandoned storm sewers as indicated on the Contract Drawings. Active storm sewers conveying upland/offsite drainage through the property shall be protected by the Contractor (see Contract Drawings). Abandoned storm sewers that are located shall be removed in compliance with the Contract Documents.

- F. All utilities and storm water systems left in place shall be surveyed to memorialize their location.

PART 3 PRODUCTS

3.01 Soil Materials

- A. General: Provide fill when sufficient satisfactory soil and controlled backfill materials are not available from excavations.
- B. Satisfactory Soils: ASTM D 2487 soil classification groups GW, GP, GM, SW, SP, and SM, or a combination of these group symbols; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter. All material shall not contain more than 20% finer than No. 200 Sieve and have a plasticity index not more than 8. PennDOT Coarse Aggregate No. 2A or Select Granular Material (2RC) are acceptable. Recycled crushed asphalt, concrete, and masonry materials that are uniformly graded, have a maximum size of 6 inches, containing not more than 15% larger than 3 inches and not more than 20% passing the #200 sieve with a plasticity index not more than 10 are also acceptable.
- C. Unsatisfactory Soils: ASTM D 2487 soil classification groups GC, SC, ML, MH, CL, CH, OL, OH, and PT, or a combination of these group symbols.
- D. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
- E. Backfill and fill may classify as satisfactory soil materials.
- F. Load bearing fill may classify as a satisfactory soil materials.

PART 4 EXECUTION

4.01 Preparation

- A. Protect structures, utilities, sidewalks, pavements, and other facilities not identified for demolition from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by demolition operations.
- B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties, roadways, waterways, and walkways.

4.02 Dewatering

- A. Prevent surface water and ground water from entering excavations, from ponding, and from flooding Project site and surrounding area.
- B. Protect excavation bottoms from softening, undermining, washout, and damage by rain or water accumulation.
- C. Reroute surface water runoff away from excavated areas.
- D. Do not allow water to accumulate in excavations.
- E. Do not use excavated trenches as temporary drainage ditches.
- F. Conduct dewatering activities as per Section 02091 and the E&S Plan.

4.03 Explosives

- A. Do not use explosives during any site operations.

4.04 General Excavation

- A. Perform excavations as necessary to remove existing structures and accomplish site grading.
- B. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
- C. Where existing foundations to remain are encountered, demolish in place as specified in Section 02050. Slabs shall be broken up (as specified in Section 02050) and footings shall remain in place.

4.05 Unclassified Excavation

- A. Unclassified excavations include unauthorized excavations, excavations for sump pits or temporary drainage, removal of natural obstructions, obstructions from land filling operations, over excavation of structures.
- B. No Contract Sum or Contract Time will be authorized for unclassified excavations.

4.06 Surface Preparation

- A. Preparation: Grade site ground surface to drain and prevent ponding. Meet proposed final grades to the nearest 2”.
- B. Ground surface (final grade) shall be free of steep grade changes, trip hazards, protrusions, unstable surfaces, or other hazards to foot or vehicular traffic as determined by the Project Engineer.
- C. Reconstruct surface grades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Project Engineer.
- D. Place and compact fill material in layers to required elevations as indicated by the E&S Plan.

4.07 Storage of Soil Materials

- A. Stockpile borrow materials and satisfactory excavated soil materials in locations approved by the Project Manager. Stockpile soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
- B. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.
- C. Asphalt material shall be stockpiled in the area designated on the Contract Drawings and covered daily. Other materials may be stockpiled in this area but must be kept separate from the asphalt material.

4.08 Backfill

- A. Place and compact backfill or fill in excavations promptly, but not before completing the following:
 - 1. Surveying locations and directions of encountered and removed underground utilities and appurtenances for record documents.
 - 2. Removing trash and debris.
 - 3. Removing temporary shoring and bracing, and sheeting.
 - 4. Place backfill materials in layers not more than 12 inches in loose depth for material compacted by heavy compaction equipment, and not more than 6 inches in loose depth for material compacted by hand-operated tampers.
- B. Compact soil to not less than the following percentages:
 - 1. Compact each layer of fill material at 92 percent of maximum dry unit weight according to ASTM D 1557. If using granular fill material with insufficient fines to produce a normal density curve, compact each layer of fill material to 85 percent of maximum according to ASTM D4353/4354 or Army Corp of Engineers Modified Providence Vibrated Density Test.
 - 2. The percentage of maximum dry density attained in the field shall not be the only criteria to be used for assessing fill compaction. Observation by the Owner or Owner's Representative of the behavior of the fill under the loads of construction equipment and soil probing may also be used as a gauge for soil density only after the approval of the Owner or Owner's Representative. If compaction testing cannot be performed because of the material gradation, or testing results indicate that the percentage of compaction is being achieved, but the soil mass is observably mobile or pumping under equipment loading, placement of additional fill shall not be continued until the movement is stabilized.

4.09 Moisture Control

- A. Uniformly moisten or aerate surface and each subsequent fill or backfill layer before compaction to within 2 percent of optimum moisture content. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice. Remove and replace, or scarify and air-dry, otherwise satisfactory soil material that

exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

4.10 Grading

- A. General: Uniformly grade areas to a smooth surface, free from irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
- B. Provide a smooth transition between adjacent existing grades and new grades.
- C. Cut out soft spots, fill low spots, and trim high spots to provide positive drainage and eliminate standing water.

4.11 Field Quality Control

- A. Testing Agency: The Contractor shall engage a qualified independent Geotechnical Engineering Testing agency to perform field quality-control testing and inspection, as necessary, including all Special Testing Requirements required by the Project Engineer.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.
- C. Testing agency shall provide full-time observation of fill placement and observe the behavior of the fill under construction equipment loading to identify areas of unacceptable fill placement, or as requested by the Project Engineer.
- D. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. If using granular fill material with insufficient fines to produce a normal density curve, test according to ASTM D4353/4354, Army Corp of Engineers Modified Providence Vibrated Density Test or by visual inspection.
- E. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil, to depth required, then recompact and retest until specified compaction is obtained.

4.12 Protection

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Prior to final turnover of project area to PRPA, repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
- C. Scarify or remove and replace soil material to depth as directed by Project Engineer; reshape and recompact.
- D. Where settling occurs before final turnover of project area to PRPA, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
- E. Restore appearance, quality, and condition of finished surfacing to match adjacent surfaces, and eliminate evidence of restoration to the greatest extent possible.

4.13 Disposal of Surplus and Waste Materials

- A. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off of the Owner's property.

END OF SECTION

SECTION 02750
STORMWATER POLLUTION PREVENTION

PART 1 GENERAL

1.01 Description

- A. This item shall consist of implementing a stormwater pollution prevention program such as installing and removal of silt fence, providing stabilized construction entrances and storm drain inlet protection, straw bale barriers, dust control, and other erosion control measures during construction, as noted on the contract plans and in the approved SPPP, all in accordance with the Commonwealth of Pennsylvania Erosion and Sediment Pollution Control Program Manual, and for preventing contamination of stormwater from construction activities. Stormwater pollution prevention measures shall be applied as necessary to prevent pollution of stormwater and runoff from all construction/demolition related activities including, but not limited to, earthwork, temporary fuel storage, fueling operations, equipment maintenance, demolition debris, hazardous material and waste handling, truck/wheel washing, etc.
- B. Alternative Procedures: The procedures described in this Specification Section shall be utilized for the project. If the specified procedures cannot be utilized, a request shall be made in writing to the Philadelphia Regional Port Authority (PRPA), or authorized representative, providing details of the problems encountered and recommending alternative procedures. Alternative procedure(s) shall be approved in writing by the PRPA prior to implementation.

1.02 References

A. Related Sections

1. PRPA General Conditions
2. 02050: Demolition
3. 02091: Groundwater Management
4. 02225: Sitework
5. 02226: Excavation, Backfill, and Compaction

B. Related Documents

1. Stormwater Pollution Prevention Plan (SPPP) as prepared by the Contractor.
 - a. The Erosion and Sediment Control Plan, Notes, Drawings, and Details shall be referenced as part of the SPPP of this Contract.
2. Pennsylvania Erosion and Sediment Control Program Manual (April 2000).

1.03 Submittals

A. Erosion and Sediment Control Checklists

1. Inspections of all structural and nonstructural pollution control measures at least once a week and within 24 hours of precipitation events of 0.5 inches or greater.
2. Checklist from the approved project Erosion and Sediment Control Plan shall be used; or alternate checklist may be used, subject to approval by the Owner or the Owner's Designated Representative.

B. Contractor Identification and Certification - Clearly identify the contractor(s) or subcontractor(s) responsible for implementation of each control measure.

C. Shop drawings, manufacturers' data, test reports, and material certifications for:

1. Filter fabric fence
2. Sediment filter bags and pumping apparatus
3. Inlet Protection

4. Straw Bale Sediment Trap

5. Erosion blankets

D. Stormwater Pollution Prevention Plan (SPPP).

PART 2 PRODUCTS

2.01 Geotextile Fabric (silt fence)

A. PennDOT Pub. 408 section 735; Type B fabric. The physical properties of the geotextile for silt fence and filter fabric shall be as follows:

1. Weight 3.0 oz/yd² ASTM D3776; Thickness 15 mils by ASTM D1777; Grab Tensile Strength 120 Pounds by ASTM D1682; Grab Elongation 15 % by ASTM D1682; Mullen Burst 200 min psi by ASTM D751; Trapezoidal Tear 50 min Pounds by ASTM D1117.
2. Ultra-Violet Stability >90 % Strength by ASTM G26 (after 500 hours/ Retained & D1682 Carbon Arc exposure).
3. Permeability-k 0.01 cm/sec by PA. Test #314 with Apparent Opening Size 50-100 (U.S. Sieve No. Equivalent).

2.02 Sediment Filter Bag

A. Non-woven fabric.

B. Double-stitched J-type seams.

C. Capable of trapping particles larger than 150 µm.

2.03 Erosion Blanket

A. Excelsior[®] Curlex Type I (or approved equal)

PART 3 EXECUTION

3.01 General

- A. Erosion and sedimentation control measures must be in place prior to any earthwork activities. Drawings provide specific details for each phase of construction.
- B. Place erosion and sediment control devices as shown on Erosion and Sediment Control Plans and as required by the SPPP.
- C. The approved Commonwealth of Pennsylvania Department of Environmental Protection NPDES Permit must be on display in the Contractor's field office prior to beginning any earthwork activities.
- D. The Contractor shall exercise every reasonable precaution, including temporary and permanent measures, throughout the duration of the project to control erosion and prevent or minimize pollution of rivers, streams, lakes, and other receiving waters. Siltation control measures shall be applied to erodible material exposed by any activity associated with construction, including but not limited to, local material sources, stockpiles, disposal areas, haul roads, and ditches.
- E. Temporary measures shall be coordinated with contract work to the extent practicable to ensure economical, effective, and continuous erosion and siltation control and pollution prevention. Permanent pollution control measures and facilities shall be installed as the work progresses.
- F. The Contractor shall inspect erosion and siltation control devices and measures for deficiencies on a weekly basis, immediately after each rainfall, and at least daily during prolonged rainfall. Deficiencies shall be corrected immediately. Failure on the part of the Contractor to maintain erosion and siltation control devices in a functioning condition may result in the Project Manager notifying the Contractor in writing of specific deficiencies. If the Contractor fails to correct or take appropriate actions to remedy the specified deficiencies within 24 hours after receipt of such notification, the Project Manager may require the Contractor to discontinue work in other areas and concentrate efforts toward rectifying the specified deficiencies or the Project Manager may proceed to remedy specified deficiencies and deduct the entire cost of such work from

monies due the Contractor.

3.02 Silt Fence

- A. Silt fence shall be installed at the locations and to the limits shown on the approved SPPP plans and as directed by the Project Manager, in accordance with PennDOT Pub. 408 Section 865.3. The Contractor shall maintain the alignment and condition of the silt fence, as necessary, throughout its use on the project.
- B. Upon completion and/or as directed, the Contractor shall remove the silt fence from the project. If required by construction operations, silt fence shall be temporarily relocated as necessary. If permanent changes are required, Contractor shall obtain approval from PADEP.

3.03 Dust Control

- A. The Contractor shall employ construction methods and means that will keep airborne dust to the minimum. They shall provide for the laying of water on the project, and on roads, streets, aprons, and other areas immediately adjacent to the project limits, wherever traffic, or buildings that are occupied or in use, are affected by such dust caused by its hauling or other operations.
- B. The materials and methods used for water laying shall be subject to the approval of the Project Manager.
- C. The cost of carrying out the foregoing provisions shall be included in the lump sum bid for the contract.
- D. The Contractor shall provide for prompt and proper removal from existing aprons and roadways of all dirt and other materials that have been spilled, washed, tracked or otherwise deposited thereon by its hauling and other operations.

3.04 Sediment Filter Bag (as indicated on Erosion and Sediment Control Plans)

- A. Bags shall be placed in an area readily accessible by machinery or other means for future removal.
- B. Bags shall be replaced once half full with sediment or as directed by the Manufacturer. An adequate supply of spare bags shall be kept on site and readily available for replacing units that have reached their capacity.
- C. Bags shall be located in a well vegetated area with a slope of less than 5%.
- D. The pump discharge hose shall be inserted into the bag as specified by the manufacturer.
- E. The pumping rate shall not exceed 750 gallons per minute or as specified by the Manufacturer.
- F. Pump intakes shall be floating and screened.

3.05 Erosion Control Blanket (as indicated on Erosion and Sediment Control Plans)

- A. Erosion control blankets shall be installed as per the Manufacturer's specifications and as shown on the Erosion and Sediment Control Plans.
- B. Trenching of edges and pinning shall be performed as per the Manufacturer's specifications.
- C. Erosion control blankets shall be inspected during the normal E&S inspections.

3.06 Contractor's Quality Assurance

- A. The Contractor shall inspect and maintain all pollution prevention, erosion and sediment control measures in accordance with the approved SPPP. At a minimum, all erosion and sediment control measures shall be inspected weekly, with daily inspections during and after precipitation events.
- B. The results of SPPP inspections shall be documented as part of the Contractor's Quality Control (CQC) reporting procedures. The Contractor will ensure that all controls are maintained in effective working condition.

END OF SECTION