

SCOPE OF WORK

Rubber Flooring Removal & Replacement

Mannington Regional Day School
Mannington Township, Salem County, NJ

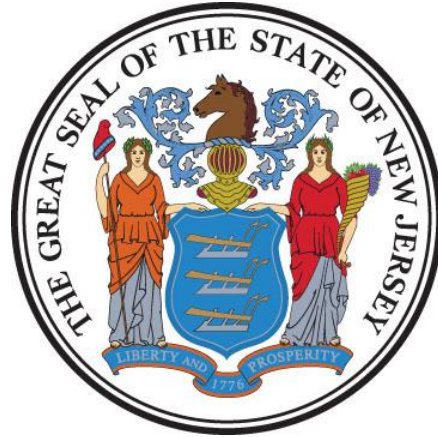
Project No. E0386-00

STATE OF NEW JERSEY

Honorable Philip D. Murphy, Governor
Honorable Sheila Y. Oliver, Lt. Governor

DEPARTMENT OF THE TREASURY

Elizabeth Maher Muoio, Treasurer



DIVISION OF PROPERTY MANAGEMENT AND CONSTRUCTION

Christopher Chianese, Director

Date: December 11, 2019

TABLE OF CONTENTS

SECTION	PAGE
I. OBJECTIVE	6
II. CONSULTANT QUALIFICATIONS	6
A. CONSULTANT & SUB-CONSULTANT PRE-QUALIFICATIONS.....	6
III. PROJECT BUDGET	6
A. CONSTRUCTION COST ESTIMATE (CCE)	6
B. CURRENT WORKING ESTIMATE (CWE)	6
C. CONSULTANT'S FEES	7
IV. PROJECT SCHEDULE	7
A. SCOPE OF WORK DESIGN & CONSTRUCTION SCHEDULE	7
B. CONSULTANT'S PROPOSED DESIGN & CONSTRUCTION SCHEDULE	8
C. CONSULTANT DESIGN SCHEDULE	8
D. BID DOCUMENT CONSTRUCTION SCHEDULE	8
E. CONTRACTOR CONSTRUCTION PROGRESS SCHEDULE	9
V. PROJECT SITE LOCATION & TEAM MEMBERS.....	9
A. PROJECT SITE ADDRESS	9
B. PROJECT TEAM MEMBER DIRECTORY	9
1. DPMC Representative:	10
2. Client Agency Representative:	10
VI. PROJECT DEFINITION	10
A. BACKGROUND	10
B. FUNCTIONAL DESCRIPTION OF THE BUILDING.....	10
1. Building Description:.....	10
VII. CONSULTANT DESIGN RESPONSIBILITIES.....	11
A. DESIGN REQUIREMENTS	11
1. Flooring:.....	11
2. Environmental:.....	11
3. Contractor Use of the Premises:	11
B. GENERAL DESIGN OVERVIEW	12
1. Design Detail:	12
2. Specification Format:.....	12
3. Submittal Schedule:	12

4.	Construction Cost Estimates:	13
C.	PROJECT COMMENCEMENT	13
1.	Project Directory:	13
2.	Site Access:	13
3.	Project Coordination:	14
4.	Existing Documentation:	14
5.	Scope of Work:	14
6.	Project Schedule:	15
D.	BUILDING & SITE INFORMATION	15
1.	Building Classification:	15
2.	Building Block & Lot Number:	15
3.	Building Site Plan:	15
4.	Site Location Map:	15
E.	DESIGN MEETINGS & PRESENTATIONS	16
1.	Design Meetings:	16
2.	Design Presentations:	16
F.	CONSTRUCTION BID DOCUMENT SUBMITTAL	16
VIII.	CONSULTANT CONSTRUCTION RESPONSIBILITIES	17
A.	GENERAL CONSTRUCTION ADMINISTRATION OVERVIEW	17
B.	PRE-BID MEETING	17
C.	POST BID REVIEW MEETING, RECOMMENDATION FOR AWARD	17
1.	Post Bid Review:	17
2.	Review Meeting:	18
3.	Substitutions:	18
4.	Schedule:	18
5.	Performance:	18
6.	Letter of Recommendation:	19
7.	Conformed Drawings:	19
D.	DIRECTOR'S HEARING	19
E.	CONSTRUCTION JOB MEETINGS, SCHEDULES, LOGS	20
1.	Meetings:	20
2.	Schedules:	20
3.	Submittal Log:	21
F.	CONSTRUCTION SITE ADMINISTRATION SERVICES	21
G.	SUB-CONSULTANT PARTICIPATION	22
H.	DRAWINGS	22
1.	Shop Drawings:	22
2.	As-Built & Record Set Drawings:	22
I.	CONSTRUCTION DEFICIENCY LIST	23
J.	INSPECTIONS: SUBSTANTIAL & FINAL COMPLETION	23
K.	CLOSE-OUT DOCUMENTS	23
L.	CLOSE-OUT ACTIVITY TIME	24

M.	TESTING, TRAINING, MANUALS AND ATTIC STOCK	24
1.	Testing:	24
2.	Training:	24
3.	Operation & Maintenance Manuals:	24
4.	Attic Stock:	25
N.	CHANGE ORDERS	25
1.	Consultant:	25
2.	Contractor:	26
3.	Recommendation for Approval:	26
4.	Code Review:	26
5.	Cost Estimate:	26
6.	Time Extension:	27
7.	Submission:	27
8.	Meetings:	27
9.	Consultant Fee:	27
IX.	PERMITS & APPROVALS.....	28
A.	NJ UNIFORM CONSTRUCTION CODE PERMIT	28
1.	Prior Approval Certification Letters:	28
2.	Multi-building or Multi-site Permits:	29
3.	Special Inspections:	29
B.	OTHER REGULATORY AGENCY PERMITS, CERTIFICATES AND APPROVALS	30
C.	STATE INSURANCE APPROVAL	30
D.	PUBLIC EMPLOYEES OCCUPATIONAL SAFETY & HEALTH PROGRAM.....	30
E.	PERMIT MEETINGS.....	31
F.	MANDATORY NOTIFICATIONS	31
G.	CONSULTANT FEE.....	31
X.	GENERAL REQUIREMENTS.....	31
A.	SCOPE CHANGES	31
B.	ERRORS AND OMISSIONS.....	31
C.	ENERGY INCENTIVE PROGRAM	32
XI.	ALLOWANCES	32
A.	PERMIT FEE ALLOWANCE	32
1.	Permits:	32
2.	Permit Costs:	32
3.	Applications:	32
4.	Consultant Fee:	33
XII.	SUBMITTAL REQUIREMENTS.....	33
A.	CONTRACT DELIVERABLES	33

PROJECT NAME: Rubber Flooring Removal & Replacement
PROJECT LOCATION: Mannington Regional Day School
PROJECT NO: E0386-00
DATE: December 11, 2019

B. CATALOG CUTS	33
C. PROJECT DOCUMENT BOOKLET	33
D. DESIGN DOCUMENT CHANGES	33
E. SINGLE-PRIME CONTRACT	34
XIII. SOW SIGNATURE APPROVAL SHEET	35
XIV. CONTRACT DELIVERABLES	36
XV. EXHIBITS.....	40
A. SAMPLE PROJECT SCHEDULE FORMAT	
B. PROJECT SITE LOCATION MAP	
C. AERIAL VIEW OF MANNINGTON	
D. PHOTOS	
E. FLOOR PLAN W/AREA AFFECTED BY WORK	
F. REPORTS	

I. OBJECTIVE

The objective of this project is to remove and replace approximately 3,000 square feet of rubber flooring in the Gymnasium, the OT/PT Classroom and the connecting Hallway at the Mannington Regional Day School (RDS).

II. CONSULTANT QUALIFICATIONS

A. CONSULTANT & SUB-CONSULTANT PRE-QUALIFICATIONS

The Consultant shall be a firm pre-qualified with the Division of Property Management & Construction (DPMC) in the following discipline(s):

- **P001 Architecture**

The Consultant shall also have in-house capabilities or Sub-Consultants pre-qualified with DPMC in:

- **P011 Environmental Engineering**

As well as, **any and all** other Architectural, Engineering and Specialty Disciplines necessary to complete the project as described in this Scope of Work (SOW).

III. PROJECT BUDGET

A. CONSTRUCTION COST ESTIMATE (CCE)

The initial Construction Cost Estimate (CCE) for this project is \$486,000.

The Consultant shall review this Scope of Work and provide a narrative evaluation and analysis of the accuracy of the proposed project CCE in their technical proposal based on their professional experience and opinion.

B. CURRENT WORKING ESTIMATE (CWE)

The Current Working Estimate (CWE) for this project is \$712,770.

The CWE includes the construction cost estimate and all consulting, permitting and administrative fees.

The CWE is the Client Agency’s financial budget based on this project Scope of Work and shall not be exceeded during the design and construction phases of the project unless DPMC approves the change in Scope of Work through a Contract amendment.

C. CONSULTANT’S FEES

The construction cost estimate for this project *shall not* be used as a basis for the Consultant’s design and construction administration fees. The Consultant’s fees shall be based on the information contained in this Scope of Work document and the observations made and/or the additional information received during the pre-proposal meeting.

IV. PROJECT SCHEDULE

A. SCOPE OF WORK DESIGN & CONSTRUCTION SCHEDULE

The following schedule identifies the estimated design and construction phases for this project and the estimated durations.

<u>PROJECT PHASE</u>	<u>ESTIMATED DURATION (Calendar Days)</u>
1. Site Access Approvals & Schedule Design Kick-off Meeting	7
2. Field Investigations	14
3. Final Design Phase	100%
• <i>Project Team & DPMC Plan/Code Unit Review & Approval</i>	14
4. Final Design Re-Submission to Address Comments	7
• <i>Project Team & DPMC Plan/Code Unit Review & Approval</i>	14
5. Permit Application Phase	7
• <i>Issue Plan Release</i>	
6. Bid Phase	42
7. Award Phase	28
8. Construction Phase	60

B. CONSULTANT’S PROPOSED DESIGN & CONSTRUCTION SCHEDULE

The Consultant shall submit a project design and construction bar chart schedule with their technical proposal that is similar in format and detail to the schedule depicted in **Exhibit ‘A’**. The bar chart schedule developed by the Consultant shall reflect their recommended project phases, phase activities, activity durations.

The Consultant shall estimate the duration of the project Close-Out Phase based on the anticipated time required to complete each deliverable identified in Section XIV of this document entitled “Contract Deliverables - Project Close-Out Phase” and include this information in the bar chart schedule submitted.

A written narrative shall also be included with the technical proposal explaining the schedule submitted and the reasons why and how it can be completed in the time frame proposed by the Consultant.

This schedule and narrative will be reviewed by the Consultant Selection Committee as part of the evaluation process and will be assigned a score commensurate with clarity and comprehensiveness of the submission.

C. CONSULTANT DESIGN SCHEDULE

Based on the Notice to Proceed, Consultant shall update their approved schedule and shall distribute it at the design kickoff meeting. Note that this schedule shall be submitted in both paper format and on compact disk in a format compatible with *Microsoft Project*. This schedule will be binding for the Consultant’s activities and will include the start and completion dates for each design activity. The Consultant and Project Team members shall use this schedule to ensure that all design milestone dates are being met for the project. The Consultant shall update the schedule to reflect performance periodically (minimally at each design phase) for the Project Team review and approval. Any recommendations for deviations from the approved design schedule must be explained in detail as to the causes for the deviation(s) and impact to the schedule.

D. BID DOCUMENT CONSTRUCTION SCHEDULE

The Consultant shall include a construction schedule in Division 1 of the specification bid document. This schedule shall contain, at minimum, the major activities and their durations for each trade specified for the project. This schedule shall be in “bar chart” format and will be used by the Contractors as an aid in determining their bid price. It shall reflect special sequencing or phased construction requirements including, but not limited to: special hours for building access, weather restrictions, imposed constraints caused by Client Agency program schedules, security

needs, lead times for materials and equipment, anticipated delivery dates for critical items, utility interruption and shut-down constraints, and concurrent construction activities of other projects at the site and any other item identified by the Consultant during the design phases of the project.

E. CONTRACTOR CONSTRUCTION PROGRESS SCHEDULE

The Contractor shall be responsible for preparing a coordinated combined progress schedule with the Sub-Contractors after the award of the contract. This schedule shall meet all of the requirements identified in the Consultant's construction schedule. The construction schedule shall be completed in accordance with the latest edition of the Instructions to Bidders and General Conditions and Bulletins that may be issued on the project.

The Consultant must review and analyze this progress schedule and recommend approval/disapproval to the Project Team until a satisfactory version is approved by the Project Team. The Project Team must approve the baseline schedule prior to the start of construction and prior to the Contractor submitting invoices for payment.

The Consultant shall note in Division 1 of the specification that the State will not accept the progress schedule until it meets the project contract requirements and any delays to the start of the construction work will be against the Contractor until the date of acceptance by the State.

The construction progress schedule shall be reviewed, approved, and updated by the Contractor, Consultant, and Project Team members at each regularly scheduled construction job meeting and the Consultant shall note the date and trade(s) responsible for project delays (as applicable).

V. PROJECT SITE LOCATION & TEAM MEMBERS

A. PROJECT SITE ADDRESS

The location of the project site is:

Mannington Regional Day School
45 Cheney Road
Woodstown, NJ 08098

See **Exhibit 'B'** for the project site location map.

B. PROJECT TEAM MEMBER DIRECTORY

The following are the names, addresses, and phone numbers of the Project Team members.

1. DPMC Representative:

Name: Ronald Kraemer, Project Design Manager
Address: Division Property Management & Construction
20 West State Street, 3rd Floor
Trenton, NJ 08608-1206
Phone No: (609) 633-7186
E-Mail No: ronald.kraemer@treas.nj.gov

2. Client Agency Representative:

Name: Joseph Vitelli, Project Manager
Address: Department of Education
100 Riverview Plaza, PO Box 500
Trenton, NJ 08625
Phone No: (609) 575-2849
E-Mail No: Joseph.Vitelli@doe.nj.gov

VI. PROJECT DEFINITION

A. BACKGROUND

The Mannington Regional Day School is a special needs school for students with various disabilities.

It operates year round, including the summer. The existing-rubber flooring is worn and torn in high traffic areas and is releasing Mercury Vapor into the air. These areas are located in the hallway leading to the Boy's and Girl's Locker Rooms, the Gymnasium, especially under the basketball hoop, and along the doors, as well as in the Occupational/Physical Therapy Classroom. See **Exhibit 'E'** for the area affected by work.

The construction work for this project shall take place in the summer months when school is not in session.

B. FUNCTIONAL DESCRIPTION OF THE BUILDING

1. Building Description:

The Mannington Regional Day School is a one story building with a two level flat roof that is approximately 30,000 square feet in area. The Gymnasium, the locker's Hallway and the OT/PT

Classroom are constructed of concrete block walls (painted), suspended ceiling system and monolithic rubber flooring. There are tears in the flooring material releasing Mercury Vapor. See photos in **Exhibit ‘D’**.

In May 2019, the school procured the services of Garden State Environmental (GSE) to collect air samples and screen the air in the gymnasium and surrounding rooms for the presence of mercury vapor and other air quality parameters. Mercury concentrations measured in the Gymnasium and Hallway leading to the Gym and in the OT/PT Classroom were below thresholds specified by the New Jersey Department of Health. The replacement of the mercury containing flooring is still recommended. As a result, this project will safely remove and properly dispose of the rubberized flooring in the Gymnasium, OT/PT Classroom, Locker’s Hallway and replace it with a new flooring system.

The evaluation report, test results and recommendations by GSE are shown in **Exhibit ‘F’**.

VII. CONSULTANT DESIGN RESPONSIBILITIES

A. DESIGN REQUIREMENTS

1. Flooring:

The Consultant shall review the Indoor Air Quality Report by GSE and provide construction documents to safely remove and replace the rubber flooring system and associated cove base in the Gymnasium, the adjoining Locker’s Hallway and the OT/PT Classroom, at the Mannington Regional Day School. The new flooring system shall be environmentally safe and approved by the DPMC project team and facility staff prior to installation. Ensure the new flooring system slopes to the existing floor drain located in the OT/PT Classroom. The design of the new flooring shall include and restore the existing markings in the Gymnasium and in the OT/PT Classroom.

2. Environmental:

The Consultant shall provide a monitoring plan that addresses air monitoring during and after construction to ensure air quality is safe for reuse of the gymnasium, hallway and school. The plan should address existing air handling systems to prevent cross contamination.

3. Contractor Use of the Premises:

The Consultant shall develop a “Contractor’s Use of the Premises” with the DPMC Project Team members that will identify the rules and regulations that must be observed by the Contractors during the construction of the project. Construction shall take place in the summer of 2020 when school is not in session to minimize student impact.

B. GENERAL DESIGN OVERVIEW

1. Design Detail:

Section VII of this Scope of Work is intended as a guide for the Consultant to understand the overall basic design requirements of the project and is not intended to identify each specific design component related to code and construction items. The Consultant shall provide those details during the design phase of the project ensuring that they are in compliance with all applicable codes, regulating authorities, and the guidelines established in the DPMC Procedures for Architects and Engineers Manual.

The Consultant shall understand that construction documents submitted to DPMC shall go beyond the basic requirements set forth by the Uniform Construction Code N.J.A.C. 5:23-2.15(f). Drawings and specifications shall provide detail beyond that required to merely show the nature and character of the work to be performed. The construction documents shall provide sufficient information and detail to illustrate, describe and clearly delineate the design intent of the Consultant and enable all Contractors to uniformly bid the project.

The Consultant shall review and comply with the DPMC “Plan Review Instructions” which can be found on DPMC’s web site at:

http://www.state.nj.us/treasury/dpmc/lists_and_publications.shtml

The Consultant shall ensure that all of the design items described in this scope of work are addressed and included in the project drawings and specification sections where appropriate.

It shall be the Consultant’s responsibility to provide all of the design elements for this project. Under no circumstance may they delegate the responsibility of the design; or portions thereof, to the Contractor unless specifically allowed in this Scope of Work.

2. Specification Format:

The Consultant shall prepare the construction specifications in the Construction Specifications Institute (CSI) format entitled Master Format©, latest edition.

The project construction specifications shall include only those CSI Master Format© specification sections and divisions applicable to this specific project.

3. Submittal Schedule:

The Consultant shall include a submittal schedule in Division 1 of the specifications. The schedule (list of required submittals) shall identify the general conditions and/or specification section (number and name) and the type of submittal required (material data, product data, test

results, calculations, etc.). The submittal schedule is a compilation of the submittals required on the project and is provided as an aid to the contractor.

4. Construction Cost Estimates:

The Consultant shall include with each design submittal phase identified in Paragraph IV.A, including the Permit Application Phase and Bid Phase, a detailed construction cost estimate itemized and summarized by the divisions and sections of the Construction Specification Institute (CSI) Master Format© latest edition applicable to the project.

The detailed breakdown of each work item shall include labor, equipment, material and total costs.

The construction estimate shall include all alternate bid items and all unit price items itemized and summarized by the divisions and sections of the specifications.

All cost estimates shall be adjusted for regional location, site factors, construction phasing, premium time, building use group, location of work within the building, temporary swing space, security issues, and inflation factors based on the year in which the work is to be performed.

The cost estimate shall include descriptions of all allowances and contingencies noted in the estimate.

All cost estimates must be submitted on a DPMC-38 Project Cost Analysis form at each design phase of the project supported by the detailed construction cost estimate. The Project Manager will provide cost figures for those items which may be in addition to the CCE such as art inclusion, CM services, etc. and must be included as part of the CWE. This cost analysis must be submitted for all projects regardless of the Construction Cost Estimate amount.

C. PROJECT COMMENCEMENT

A pre-design meeting shall be scheduled with the Consultant and the Project Team members at the commencement of the project to obtain and/or coordinate the following information:

1. Project Directory:

Develop a project directory that identifies the name and phone number of key designated representatives who may be contacted during the design and construction phases of this project.

2. Site Access:

Develop procedures to access the project site and provide the names and phone numbers of approved escorts when needed. Obtain copies of special security and policy procedures that

must be followed during all work conducted at the facility and include this information in Division 1 of the specification.

3. Project Coordination:

Review and become familiar with any current and/or future projects at the site that may impact the design, construction, and scheduling requirements of this project. Incorporate all appropriate information and coordination requirements in Division 1 of the specification.

4. Existing Documentation:

Copies of the following documents will be provided to each Consulting firm at the pre-proposal meeting to assist in the bidding process.

- DBC Project No. E046-00, Regional Day School for the Handicapped, dated November 27, 1980, prepared by Architects II.
- DBC Project No. E0243-00, Roof Replacement and HVAC Upgrade, dated March 10, 1995, prepared by TDC Group.
- E0369-00 Roof & HVAC Replacement, dated July 11, 2017, prepared by Lammey & Giorgio Architects.

Review these documents and any additional information that may be provided at a later date such as reports, studies, surveys, equipment manuals, as-built drawings, etc. The State does not attest to the accuracy of the information provided and accepts no responsibility for the consequences of errors by the use of any information and material contained in the documentation provided. It shall be the responsibility of the Consultant to verify the contents and assume full responsibility for any determination or conclusion drawn from the material used. If the information provided is insufficient, the Consultant shall take the appropriate actions necessary to obtain the additional information required.

All original documentation shall be returned to the provider at the completion of the project.

5. Scope of Work:

Review the design and construction administration responsibilities and the submission requirements identified in this Scope of Work with the Project Team members. Items such as: contract deliverables, special sequencing or phased construction requirements, special hours for construction based on Client Agency programs or building occupancy, security needs, delivery dates of critical and long lead items, utility interruptions or shut down constraints for tie-ins, weather restrictions, and coordination with other project construction activities at the site shall be addressed.

This information and all general administrative information; including a narrative summary of the work for this project, *shall be included in Division 1* of the specification. The Consultant shall assure that there are no conflicts between the information contained in Division 1 of the specification and the DPMC General Conditions.

6. Project Schedule:

Review and update the project design and construction schedule with the Project Team members.

D. BUILDING & SITE INFORMATION

The following information shall be included in the project design documents.

1. Building Classification:

Provide the building Use Group Classification and Construction Type on the appropriate design drawing.

2. Building Block & Lot Number:

Provide the site Block and Lot Number on the appropriate design drawing.

3. Building Site Plan:

Only when the project scope involves site work, or when the design triggers code issues that require site information to show code compliance, shall a site plan be provided that is drawn in accordance with an accurate boundary line survey. The site plan shall include, but not be limited to, the following as may be applicable:

- The size and location of new and existing buildings and additions as well as other structures.
- The distance between buildings and structures and to lot lines.
- Established and new site grades and contours as well as building finished floor elevations.
- New and existing site utilities, site vehicular and pedestrian roads, walkways and parking areas.

4. Site Location Map:

Provide a site location map on the drawing cover sheet that identifies the vehicular travel routes from major roadways to the project construction site and the approved access roads to the Contractor's worksite staging area.

E. DESIGN MEETINGS & PRESENTATIONS

1. Design Meetings:

Conduct the appropriate number of review meetings with the Project Team members during each design phase of the project so they may determine if the project meets their requirements, question any aspect of the contract deliverables, and make changes where appropriate. The Consultant shall describe the philosophy and process used in the development of the design criteria and the various alternatives considered to meet the project objectives. Selected studies, sketches, cost estimates, schedules, and other relevant information shall be presented to support the design solutions proposed. Special considerations shall also be addressed such as Contractor site access limitations, utility shutdowns and switchover coordination, phased construction and schedule requirements, security restrictions, available swing space, material and equipment delivery dates, etc.

It shall also be the responsibility of the Consultant to arrange and require all critical Sub-Consultants to be in attendance at the design review meetings.

Record the minutes of each design meeting and distribute within seven (7) calendar days to all attendees and those persons specified to be on the distribution list by the Project Manager.

2. Design Presentations:

The minimum number of design presentations required for each phase of this project is identified below for reference:

Final Design Phase:

Conduct One (1) working meeting halfway through phase with Project Team.

Conduct One (1) oral presentation with Project Team at phase completion.

F. CONSTRUCTION BID DOCUMENT SUBMITTAL

In addition to submitting construction bid documents as defined in Section XIV Contract Deliverables, Consultant shall submit both specifications and drawings on compact disk (CD) in *Adobe Portable Document Format (.pdf)*.

VIII. CONSULTANT CONSTRUCTION RESPONSIBILITIES

A. GENERAL CONSTRUCTION ADMINISTRATION OVERVIEW

This section of the Scope of Work is intended as a guide for the Consultant to understand their overall basic construction administration responsibilities for the project and does not attempt to identify each specific activity or deliverable required during this phase. The Consultant shall obtain that information from the current publication of the DPMC Procedures for Architects and Engineers Manual and any additional information provided during the Consultant Selection Process.

B. PRE-BID MEETING

The Consultant shall attend, chair, record and distribute minutes of the Contractor pre-bid meetings. When bidders ask questions that may affect the bid price of the project, the Consultant shall develop a Bulletin(s) to clarify the bid documents in the format described in the Procedures for Architects and Engineers Manual, Section 9.2 entitled "Bulletins." These Bulletins must be sent to DPMC at least seven (7) calendar days prior to the bid opening date. DPMC will then distribute the document to all bidders.

C. POST BID REVIEW MEETING, RECOMMENDATION FOR AWARD

The Consultant; in conjunction with the Project Manager, shall review the bid proposals submitted by the various Contractors to determine the low responsible bid for the project. The Consultant; in conjunction with the Project Manager and Project Team members, shall develop a post bid questionnaire based on the requirements below and schedule a post bid review meeting with the Contractor's representative to review the construction costs and schedule, staffing, and other pertinent information to ensure they understand the Scope of the Work and that their bid proposal is complete and inclusive of all requirements necessary to deliver the project in strict accordance with the plans and specifications.

1. Post Bid Review:

Review the project bid proposals including the alternates, unit prices, and allowances within seven (7) calendar days from the bid due date. Provide a bid tabulation matrix comparing all bids submitted and make a statement about the high, low, and average bids received. Include a comparison of the submitted bids to the approved current construction cost estimate. When applicable, provide an analysis with supporting data, detailing why the bids did not meet the construction cost estimate.

2. Review Meeting:

Arrange a meeting with the apparent low bid Contractor to discuss their bid proposal and other issues regarding the award of the contract. Remind the Contractor that this is a Lump Sum bid. Request the Contractor to confirm that their bid proposal does not contain errors. Review and confirm Alternate pricing and Unit pricing and document acceptance or rejection as appropriate.

Comment on all omissions, qualifications and unsolicited statements appearing in the proposals. Review any special circumstances of the project. Ensure the Contractor's signature appears on all post bid review documents.

3. Substitutions:

Inquire about any potential substitutions being contemplated by the Contractor and advise them of the State's guidelines for the approval of substitutions and the documentation required. Review the deadline and advise the Contractor that partial submissions are not acceptable. Submission after the deadline may be rejected by the State.

Equal substitutions that are proposed by the Contractor that are of lesser value must have a credit change order attached with the submittal (See Article 4.7.5 "Substitutions" of the General Conditions). The State has the right to reject the submission if there is no agreement on the proposed credit. Contractor will be responsible to submit a specified item.

4. Schedule:

Confirm that the Contractor is aware of the number of calendar days listed in the contract documents for the project duration and that the Contractor's bid includes compliance with the schedule duration and completion dates. Particular attention shall be given to special working conditions, long lead items and projected delivery dates, etc. Review project milestones (if applicable). This could give an indication of Contractor performance, but not allow a rejection of the bid.

Review the submittal timeframes per the Contract documents. Ask the Contractor to identify what products will take over twenty-eight (28) calendar days to deliver from the point of submittal approval.

If a CPM Schedule is required, review the provisions and have Contractor acknowledge the responsibility. Ask for the name of the CPM Scheduler and the "ballpark" costs.

5. Performance:

Investigate the past performance of Contractor by contacting Architects and owners (generally three of each) that were listed in their DPMC pre-qualification package or other references that

may have been provided. Inquire how the Contractor performed with workmanship, schedule, project management, change orders, cooperation, paper work, etc.

6. Letter of Recommendation:

The Consultant shall prepare a Letter of Recommendation for contract award to the Contractor submitting the lowest responsible bid within three (3) calendar days from the post bid review meeting. The document shall contain the project title, DPMC project number, bid due date and expiration date of the proposal. It shall include a detailed narrative describing each post bid meeting agenda item identified above and a recommendation to award the contract to the apparent low bid Contractor based on the information obtained during that meeting. Describe any acceptance or rejection of Alternate pricing and Unit pricing.

Comment on any discussion with the Contractor that provides a sense of their understanding of the project and any special difficulties that they see, and how they might approach those problems.

Attach all minutes of the Post bid meeting and any other relevant correspondence with the Letter of Recommendation and submit them to the Project Manager.

7. Conformed Drawings:

The Consultant shall prepare and distribute two (2) sets of drawings stamped “Conformed Drawings” to the Project Manager that reflect all Bulletins and/or required changes, additions, and deletions to the pertinent drawings within fourteen (14) calendar days of the construction contract award date.

Any changes made in Bulletins, meeting minutes, post bid review requirements shall also be reflected in the specification.

D. DIRECTOR’S HEARING

The Consultant must attend any Director’s hearing(s) if a Contractor submits a bid protest. The Consultant shall be present to interpret the intent of the design documents and answer any technical questions that may result from the meeting. In cases where the bid protest is upheld, the Consultant shall submit a new “Letter of Recommendation” for contract award. The hours required to attend the potential hearings and to document the findings shall be estimated by the Consultant and the costs will be included in the base bid of their fee proposal.

E. CONSTRUCTION JOB MEETINGS, SCHEDULES, LOGS

The Consultant shall conduct all of the construction job meetings, to be held bi-weekly for the duration of construction, in accordance with the procedures identified in the A/E manual and those listed below.

1. Meetings:

The Consultant and Sub-Consultant(s) shall attend the pre-construction meeting and all construction job meetings during the construction phase of the project. The Consultant shall chair the meeting, transcribe and distribute the job-meeting minutes for every job meeting to all attendees and to those persons specified to be on the distribution list by the Project Manager. The Agenda for the meeting shall include, but not be limited to the items identified in the Procedures for Architects and Engineers Manual, Section 10.3.1, entitled "Agenda."

In addition, the Consultant is responsible for the preparation and distribution of minutes within three (3) calendar days of the meeting. The format to be used for the minutes shall comply with those identified in the "Procedures for Architects and Engineers Manual," Section 10.3.4, entitled, "Format of Minutes." All meeting minutes are to have an "action" column indicating the party that is responsible for the action indicated and a deadline to accomplish the assigned task. These tasks must be reviewed at each job progress meeting until it is completed and the completion date of each task shall be noted in the minutes of the meeting following the task completion.

2. Schedules:

The Consultant; with the input from the Client Agency Representative and Project Manager, shall review and recommend approval of the project construction schedule prepared by the Contractor. The schedule shall identify all necessary start and completion dates of construction, construction activities, submittal process activities, material deliveries and other milestones required to give a complete review of the project.

The Consultant shall record any schedule delays, the party responsible for the delay, the schedule activity affected, and the original and new date for reference.

The Consultant shall ensure that the Contractor provides a two (2) week "look ahead" construction schedule based upon the current monthly updated schedule as approved at the bi-weekly job meetings and that identifies the daily planned activities for that period. This Contractor requirement must also be included in Division 1 of the specification for reference.

3. Submittal Log:

Based on the Submittal Schedule in Division 1 of the specifications, the Consultant shall develop and implement a submittal log that includes all of the required project submittals as identified in the general conditions and technical specifications. The submittal log shall be provided to the contractor at the pre-construction meeting. The dates of submission shall be determined and approved by all affected parties during the pre-construction meeting.

Examples of the submissions to be reviewed and approved by the Consultant and Sub-Consultant (if required) include: project schedule, schedule of values, shop drawings, equipment and material catalog cuts, spec sheets, product data sheets, MSDS material safety data sheets, specification procedures, color charts, material samples, mock-ups, etc. The submittal review process must be conducted at each job progress meeting and shall include the Consultant, Sub-Consultant, Contractor, Project Manager, and designated representatives of the Client Agency.

The Consultant shall provide an updated submittal log at each job meeting that highlights the status of all required submissions.

F. CONSTRUCTION SITE ADMINISTRATION SERVICES

The Consultant and Sub-Consultant(s) shall provide construction site administration services during the duration of the project. The Consultant and Sub-Consultant(s) do not necessarily have to be on site concurrently if there are no critical activities taking place that require the Sub-Consultant's participation.

The services required shall include, but not be limited to; field observations sufficient to verify the quality and progress of construction work, conformance and compliance with the contract documents, and to attend/chair meetings as may be required by the Project Manager to resolve special issues.

Consultant and Sub-Consultant(s) shall conduct weekly site inspection/field observation visits. Site inspection/field observation visits may be conducted in conjunction with regularly scheduled bi-weekly construction job meetings, depending on the progress of work, for weeks that construction job meetings are scheduled. The Consultant and their Sub-Consultant(s) shall submit a field observation report for each site inspection to the Project Manager within three (3) calendar days of the site visit. Also, they shall conduct inspections during major construction activities including, but not limited to the following examples: concrete pours, steel and truss installations, code inspections, final testing of systems, achievement of each major milestone required on the construction schedule, and requests from the Project Manager. The assignment of a full time on-site Sub-Consultant does not relieve the Consultant of their site visit obligation.

The Consultant shall refer to Section XIV. Contract Deliverables of this Scope of Work subsection entitled “Construction Phase” to determine the extent of services and deliverables required during this phase of the project.

G. SUB-CONSULTANT PARTICIPATION

It is the responsibility of the Consultant to ensure that they have provided adequate hours and/or time allotted in their technical proposal so that their Sub-Consultants may participate in all appropriate phases and activities of this project or whenever requested by the Project Manager. This includes the pre-proposal site visit and the various design meetings and construction job meetings, site visits, and closeout activities described in this Scope of Work. Field observation reports and/or meeting minutes are required to be submitted to the Project Manager within three (3) calendar days of the site visit or meeting. All costs associated with such services shall be included in the base bid of the Consultant’s fee proposal.

H. DRAWINGS

1. Shop Drawings:

Each Contractor shall review the specifications and determine the numbers and nature of each shop drawing submittal. Five (5) sets of the documents shall be submitted with reference made to the appropriate section of the specification. The Consultant shall review the Contractor’s shop drawing submissions for conformity with the construction documents within seven (7) calendar days of receipt. The Consultant shall return each shop drawing submittal stamped with the appropriate action, i.e. “Approved”, “Approved as Noted”, “Approved as Noted Resubmit for Records”, “Rejected”, etc.

2. As-Built & Record Set Drawings:

The Contractor(s) shall keep the contract drawings up-to-date at all times during construction and upon completion of the project, submit their AS-BUILT drawings to the Consultant with the Contractor(s) certification as to the accuracy of the information prior to final payment. All AS-BUILT drawings submitted shall be entitled AS BUILT above the title block and dated.

The Consultant shall review the Contractor(s)’ AS-BUILT drawings at each job progress meeting to ensure that they are up-to-date. Any deficiencies shall be noted in the progress meeting minutes.

The Consultant shall acknowledge acceptance of the AS-BUILT drawings by signing a transmittal indicating they have reviewed them and that they reflect the AS-BUILT conditions as they exist.

Upon receipt of the AS-BUILT drawings from the Contractor(s), the Consultant shall obtain the original reproducible drawings from DPMC and transfer the AS-BUILT conditions to the original full sized signed reproducible drawings to reflect RECORD conditions within fourteen (14) calendar days of receipt of the AS-BUILT information.

The Consultant shall note the following statement on the original RECORD-SET drawings. “The AS-BUILT information added to this drawing(s) has been supplied by the Contractor(s). The Architect/Engineer does not assume the responsibility for its accuracy other than conformity with the design concept and general adequacy of the AS-BUILT information to the best of the Architect’s/Engineer’s knowledge.”

Upon completion, The Consultant shall deliver the RECORD-SET original reproducible drawings to DPMC who will acknowledge their receipt in writing. This hard copy set of drawings and two (2) sets of current release AUTO CAD discs shall be submitted to DPMC. The discs shall contain all AS-BUILT drawings in both “.dwg” (native file format for AUTO CAD) and “.pdf” (*Adobe* portable document format) file formats.

I. CONSTRUCTION DEFICIENCY LIST

The Consultant shall prepare, maintain and continuously distribute an on-going deficiency list to the Contractor, Project Manager, and Client Agency Representative during the construction phase of the project. This list shall be separate correspondence from the field observation reports and shall not be considered as a punch list.

J. INSPECTIONS: SUBSTANTIAL & FINAL COMPLETION

The Consultant and their Sub-Consultant(s) accompanied by the Project Manager, Code Inspection Group, Client Agency Representative and Contractor shall conduct site inspections to determine the dates of substantial and final completion. The Project Manager will issue the only recognized official notice of substantial completion. The Consultant shall prepare and distribute the coordinated punch list, written warranties and other related DPMC forms and documents, supplied by the Contractor, to the Project Manager for review and certification of final contract acceptance.

If applicable, the punch list shall include a list of attic stock and spare parts.

K. CLOSE-OUT DOCUMENTS

The Consultant shall review all project close-out documents as submitted by the Contractors to ensure that they comply with the requirements listed in the “Procedure for Architects and Engineers’ Manual.” The Consultant shall forward the package to the Project Manager within fourteen (14) calendar days from the date the Certificate of Occupancy/Certificate of Approval is

issued. The Consultant shall also submit a letter certifying that the project was completed in accordance with the contract documents, etc.

L. CLOSE-OUT ACTIVITY TIME

The Consultant shall provide all activities and deliverables associated with the “Close-Out Phase” of this project as part of their Lump Sum base bid. The Consultant and/or Sub-Consultant(s) may not use this time for additional job meetings or extended administrative services during the Construction Phase of the project.

M. TESTING, TRAINING, MANUALS AND ATTIC STOCK

The Consultant shall ensure that all equipment testing, training sessions and equipment manuals required for this project comply with the requirements identified below.

1. Testing:

All equipment and product testing conducted during the course of construction is the responsibility of the Contractor. However, the Consultant shall ensure the testing procedures comply with manufacturers recommendations. The Consultant shall review the final test reports and provide a written recommendation of the acceptance/rejection of the material, products or equipment tested within seven (7) calendar days of receipt of the report.

2. Training:

The Consultant shall include in the specification that the Contractor shall schedule and coordinate all equipment training with the Project Manager and Client Agency representatives. It shall state that the Contractor shall submit the Operation and Maintenance (O&M) manuals, training plan contents, and training durations to the Consultant, Project Manager and Client Agency Representative for review and approval prior to the training session.

The Consultant shall ensure that the training session is video recorded by the Contractor. A copy of the recording shall be transmitted to the Project Manager on compact disk who will forward the material to the Client Agency for future reference.

All costs associated with the training sessions shall be borne by the Contractor installing the equipment. A signed letter shall be prepared stating when the training was completed and must be accompanied with the training session sign-in sheet as part of the project close-out package.

3. Operation & Maintenance Manuals:

The Consultant shall coordinate and review the preparation and issuance of the equipment manuals provided by the Contractor(s) ensuring that they contain the operating procedures,

maintenance procedures and frequency, cut sheets, parts lists, warranties, guarantees, and detailed drawings for all equipment installed at the facility.

A troubleshooting guide shall be included that lists problems that may arise, possible causes with solutions, and criteria for deciding when equipment shall be repaired and when it must be replaced.

Include a list of the manufacturer's recommended spare parts for all equipment being supplied for this project.

A list of names, addresses and telephone numbers of the Contractors involved in the installations and firms capable of performing services for each mechanical item shall be included. The content of the manuals shall be reviewed and approved by the Project Manager and Client Agency Representative.

The Consultant shall include in the specification that the Contractor must provide a minimum of ten (10) "throwaway" copies of the manual for use at the training seminar and seven (7) hardbound copies as part of the project close-out package.

4. Attic Stock:

The Consultant shall determine and recommend whether "attic stock" should be included for all aspects of the project. If required, the Consultant shall specify attic stock items to be included in the project.

Prior to project close-out, the Consultant must prepare a comprehensive listing of all items for delivery by the Contractor to the Owner and in accordance with the appropriate specification/plan section. Items shall include, but not be limited to training sessions, O&M manuals, as-built drawings, itemized attic stock requirements, and manufacturer guarantees/warranties.

N. CHANGE ORDERS

The Consultant shall review and process all change orders in accordance with the contract documents and procedures described below.

1. Consultant:

The Consultant shall prepare a detailed request for Change Order including a detailed description of the change(s) along with appropriate drawings, specifications, and related documentation and submit the information to the Contractor for the change order request submission. This will require the use of the current DPMC 9b form.

2. Contractor:

The Contractor shall submit a DPMC 9b Change Order Request form to the Project Manager within seven (7) calendar days after receiving the Change Order from the Consultant. The document shall identify the changed work in a manner that will allow a clear understanding of the necessity for the change. Copies of the original design drawings, sketches, etc. and specification pages shall be highlighted to clarify and show entitlement to the Change Order.

Copies shall be provided of job minutes or correspondence with all relative information highlighted to show the origin of the Change Order. Supplementary drawings from the Consultant shall be included if applicable that indicate the manner to be used to complete the changed work. A detailed breakdown of all costs associated with the change, i.e. material, labor, equipment, overhead, Sub-Contractor work, profit and bond, and certification of increased bond shall be provided.

If the Change Order will impact the time of the project, the Contractor shall include a request for an extension of time. This request shall include a copy of the original approved project schedule and a proposed revised schedule that reflects the impact on the project completion date. Documentation to account for the added time requested shall be included to support entitlement of the request such as additional work, weather, other Contractors, etc. This documentation shall contain dates, weather data and all other relative information.

3. Recommendation for Approval:

The Consultant shall evaluate the reason for the change in work and provide a detailed written recommendation for approval or disapproval of the Change Order Request including backup documentation of costs in CSI format and all other considerations to substantiate that decision.

4. Code Review:

The Consultant shall determine if the Change Order request will require Code review and shall submit six (6) sets of signed and sealed modified drawings and specifications to the DPMC Plan & Code Review Unit for approval, if required. The Consultant must also determine and produce a permit amendment request if required.

5. Cost Estimate:

The Consultant shall provide a detailed cost estimate of the proposed Change Order Request, as submitted by the Contractor, in CSI format (latest edition) for all appropriate divisions and sub-divisions using a recognized estimating formula. The estimate shall then be compared with that of the Contractor's estimate. If any line item in the Consultant's estimate is lower than the corresponding line item in the Contractor's estimate, the Consultant in conjunction with the Project Manager is to contact the Contractor by telephone and negotiate the cost differences. The

Consultant shall document the negotiated agreement on the Change Order Request form. If the Contractor's total dollar value changes based on the negotiations, the Consultant shall identify the changes on the Change Order Request form accordingly.

When recommending approval or disapproval of the change order, the Consultant shall be required to prepare and process a Change Order package that contains at a minimum the following documents:

- DPMC 9b Change Order Request
- DPMC 10 Consultant's Evaluation of Contractor's Change Order Request
- Consultant's Independent Detailed Cost Estimate
- Notes of Negotiations

6. Time Extension:

When a Change Order Request is submitted with both cost and time factors, the Consultant's independent cost estimate is to take into consideration time factors associated with the changed work. The Consultant is to compare their time element with that of the Contractor's time request and if there is a significant difference, the Consultant in conjunction with the Project Manager is to contact the Contractor by telephone and negotiate the difference.

When a Change Order Request is submitted for time only, the Consultant is to do an independent evaluation of the time extension request using a recognized scheduling formula.

Requests for extension of contract time must be done in accordance with the General Conditions Article 10.1 "Changes in the Work".

7. Submission:

The Consultant shall complete all of the DPMC Change Order Request forms provided and submit a completed package to the Project Manager with all appropriate backup documentation within seven (7) calendar days from receipt of the Contractor's change order request. The Consultant shall resubmit the package at no cost to the State if the change order package contents are deemed insufficient by the Project Manager.

8. Meetings:

The Consultant shall attend and actively participate at all administrative hearings or settlement conferences as may be called by Project Manager in connection with such Change Orders and provide minutes of those meetings to the Project Manager for distribution.

9. Consultant Fee:

All costs associated with the potential Contractor Change Order Requests shall be anticipated by the Consultant and included in the base bid of their fee proposal.

If the Client Agency Representative requests a scope change; and it is approved by the Project Manager, the Consultant may be entitled to be reimbursed through an amendment and in accordance with the requirements stated in paragraph 10.01 of this Scope of Work.

IX. PERMITS & APPROVALS

A. NJ UNIFORM CONSTRUCTION CODE PERMIT

The project construction documents must comply with the latest adopted edition of the NJ Uniform Construction Code (NJUCC).

The latest NJUCC Adopted Codes and Standards can be found at:

<http://www.state.nj.us/dca/divisions/codes/codreg/>

The Consultant shall complete the NJUCC permit application and all applicable technical sub-code sections with all technical site data required. The Agent section of the application and certification section of the building sub-code section shall be signed. These documents shall be forwarded to the DPMC Project Manager.

The Consultant may obtain copies of all NJUCC permit applications at the following website:

<http://www.state.nj.us/dca/divisions/codes/forms/>

All other required project permits shall be obtained and paid for by the Consultant in accordance with the procedures described in Paragraph IX.B.

1. Prior Approval Certification Letters:

The issuance of a construction permit for this project may be contingent upon acquiring various “prior approvals” as defined by N.J.A.C. 5:23-1.4. It is the Consultant’s responsibility to determine which prior approvals, if any, are required. The Consultant shall submit a general certification letter to the DPMC Plan & Code Review Unit Manager during the Permit Phase of this project that certifies all required prior approvals have been obtained.

In addition to the general certification letter discussed above, the following specific prior approval certification letters, where applicable, shall be submitted by the Consultant to the

DPMC Plan & Code Review Unit Manager: Soil Erosion & Sediment Control, Water & Sewer Treatment Works Approval, Coastal Areas Facilities Review, Compliance of Underground Storage Tank Systems with N.J.A.C. 7:14B, Pinelands Commission, Highlands Council, Well Construction and Maintenance; Sealing of Abandoned Wells with N.J.A.C. 7:9D, Certification that all utilities have been disconnected from structures to be demolished, Board of Health Approval for Potable Water Wells, Health Department Approval for Septic Systems. It shall be noted that in accordance with N.J.A.C. 5:23-2.15(a) 5, a permit cannot be issued until the letter(s) of certification is received.

2. Multi-building or Multi-site Permits:

A project that involves many buildings and/or sites requires that a separate permit shall be issued for each building or site. The Consultant must determine the construction cost estimate for *each* building and/or site location and submit that amount where indicated on the permit application.

3. Special Inspections:

In accordance with the requirements of the New Jersey Uniform Construction Code N.J.A.C. 5:23-2.20(b), Bulletin 03-5 and Chapter 17 of the International Building Code, the Consultant shall be responsible for the coordination of all special inspections during the construction phase of the project.

Bulletin 03-5 can be found at:

http://www.state.nj.us/dca/divisions/codes/publications/pdf_bulletins/b_03_5.pdf

a. Definition:

Special inspections are defined as an independent verification by a certified Special Inspector for **Class I buildings and smoke control systems in any class building**. The special inspector is to be independent from the Contractor and responsible to the Consultant so that there is no possible conflict of interest.

Special inspectors shall be certified in accordance with the requirements in the New Jersey Uniform Construction Code.

b. Responsibilities:

The Consultant shall submit with the permit application, a list of special inspections and the agencies or special inspectors that will be responsible to carry out the inspections required for the project. The list shall be a separate document, on letterhead, signed and sealed.

B. OTHER REGULATORY AGENCY PERMITS, CERTIFICATES AND APPROVALS

The Consultant shall identify and obtain all other State Regulatory Agency permits, certificates, and approvals that will govern and affect the work described in this Scope of Work. An itemized list of these permits, certificates, and approvals shall be included with the Consultant's Technical Proposal and the total amount of the application fees should be entered in the Fee Proposal line item entitled, **"Permit Fee Allowance."**

The Consultant may refer to the Division of Property Management and Construction "Procedures for Architects and Engineers Manual", Section 6.4.8, which presents a compendium of State permits, certificates, and approvals that may be required for this project.

The Consultant shall determine the appropriate phase of the project to submit the permit application(s) in order to meet the approved project milestone dates.

Where reference to an established industry standard is made, it shall be understood to mean the most recent edition of the standard unless otherwise noted. If an industry standard is found to be revoked, or should the standard have undergone substantial change or revision from the time that the Scope of Work was developed, the Consultant shall comply with the most recent edition of the standard.

C. STATE INSURANCE APPROVAL

The Consultant shall respond in writing to the FM Global Insurance Underwriter plan review comments through the DPMC Plan & Code Review Unit Manager as applicable. The Consultant shall review all the comments and, with agreement of the Project Team, modify the documents while adhering to the project's SOW requirements, State code requirements, schedule, budget, and Consultant fee.

D. PUBLIC EMPLOYEES OCCUPATIONAL SAFETY & HEALTH PROGRAM

A paragraph shall be included in the design documents, if applicable to this project that states: The Contractor shall comply with all the requirements stipulated in the Public Employees Occupational Safety & Health Program (PEOSHA) document, paragraph 12:100-13.5 entitled "Air quality during renovation and remodeling". The Contractor shall submit a plan demonstrating the measures to be utilized to confine the dust, debris, and air contaminants in the renovation or construction area of the project site to the Project Team prior to the start of construction.

The link to the document is:

<http://www.nj.gov/health/workplacehealthandsafety/peosh/peosh-health-standards/iaq.shtml>

E. PERMIT MEETINGS

The Consultant shall attend and chair all meetings with Permitting Agencies necessary to explain and obtain the required permits.

F. MANDATORY NOTIFICATIONS

The Consultant shall include language in Division 1 of the specification that states the Contractor shall assure compliance with the New Jersey “One Call” Program (1-800-272-1000) if any excavation is to occur at the project site.

The One Call Program is known as the “New Jersey Underground Facility Protection Act”, refer to N.J.A.C. 14:2.

G. CONSULTANT FEE

The Consultant shall determine the efforts required to complete and submit all permit applications, obtain and prepare supporting documentation, attend meetings, etc., and include the total cost in the base bid of their fee proposal under the “Permit Phase”.

X. GENERAL REQUIREMENTS

A. SCOPE CHANGES

The Consultant must request any changes to this Scope of Work in writing. An approved DPMC 9c Consultant Amendment Request form reflecting authorized scope changes must be received by the Consultant prior to undertaking any additional work. The DPMC 9c form must be approved and signed by the Director of DPMC and written authorization issued from the Project Manager prior to any work being performed by the Consultant. Any work performed without the executed DPMC 9c form is done at the Consultant’s own financial risk.

B. ERRORS AND OMISSIONS

The errors and omissions curve and the corresponding sections of the “Procedures for Architects and Engineers Manual” are eliminated. All claims for errors and omissions will be pursued by the State on an individual basis. The State will review each error or omission with the Consultant and determine the actual amount of damages, if any, resulting from each negligent act, error or omission.

C. ENERGY INCENTIVE PROGRAM

The Consultant shall review the programs described on the “New Jersey’s Clean Energy Program” website at: <http://www.njcleanenergy.com> to determine if any proposed upgrades to the mechanical and/or electrical equipment and systems for this project qualify for “New Jersey Clean Energy Program” rebates and incentives such as Smart Start, Pay4Performance, Direct Install or any other incentives.

The Consultant shall be responsible to complete the appropriate registration forms and applications, provide any applicable worksheets, manufacturer’s specification sheets, calculations, attend meetings, and participate in all activities with designated representatives of the programs and utility companies to obtain the entitled financial incentives and rebates for this project. All costs associated with this work shall be estimated by the Consultant and the amount included in the base bid of their fee proposal.

XI. ALLOWANCES

A. PERMIT FEE ALLOWANCE

The Consultant shall obtain and pay for all of the project permits in accordance with the guidelines identified below.

1. Permits:

The Consultant shall determine the various permits, certificates, and approvals required to complete this project.

2. Permit Costs:

The Consultant shall estimate the application fee costs for all of the required project permits, certificates, and approvals (excluding the NJ Uniform Construction Code permit) and include that amount in their fee proposal line item entitled “**Permit Fee Allowance**”, refer to Paragraph IX.A. A breakdown of each permit and application fee shall be attached to the fee proposal for reference.

NOTE: The NJ Uniform Construction Code permit is excluded since it will be paid for by the State.

3. Applications:

The Consultant shall complete and submit all permit applications to the appropriate permitting authorities and the costs shall be paid from the Consultant's permit fee allowance. A copy of the application(s) and the original permit(s) obtained by the Consultant shall be given to the DPMC Project Manager for distribution during construction.

4. Consultant Fee:

The Consultant shall determine what is required to complete and submit the permit applications, obtain supporting documentation, attend meetings, etc., and include the total cost in the base bid of their fee proposal under the "Permit Phase" column.

Any funds remaining in the permit allowance will be returned to the State at the close of the project.

XII. SUBMITTAL REQUIREMENTS

A. CONTRACT DELIVERABLES

All submissions shall include the Contract Deliverables identified in Section XIV of this Scope of Work and described in the DPMC Procedures for Architects and Engineers Manual.

B. CATALOG CUTS

The Consultant shall provide catalog cuts as required by the DPMC Plan & Code Review Unit during the design document review submissions. Examples of catalog cuts include, but are not limited to mechanical equipment, hardware devices, plumbing fixtures, fire suppression and alarm components, specialized building materials, electrical devices, etc.

C. PROJECT DOCUMENT BOOKLET

The Consultant shall submit all of the required Contract Deliverables to the Project Manager at the completion of each phase of the project. All reports, meeting minutes, plan review comments, project schedule, cost estimate in CSI format (latest edition), correspondence, calculations, and other appropriate items identified on the Submission Checklist form provided in the A/E Manual shall be presented in an 8½" x 11" bound "booklet" format.

D. DESIGN DOCUMENT CHANGES

Any corrections, additions, or omissions made to the submitted drawings and specifications at the Permit Phase of the project must be submitted to DPMC Plan & Code Review Unit as a

complete document. Corrected pages or drawings may not be submitted separately unless the Consultant inserts the changed page or drawing in the original documents. No Addendums or Bulletins will be accepted as a substitution to the original specification page or drawing.

E. SINGLE-PRIME CONTRACT

All references to “separate contracts” in the Procedures for Architects and Engineers Manual, Chapter 8, shall be deleted since this project will be advertised as a “Single Bid” (Lump Sum All Trades) contract. The single prime Contractor will be responsible for all work identified in the drawings and specifications.

The drawings shall have the required prefix designations and the specification sections shall have the color codes as specified for each trade in the DPMC Procedure for Architects and Engineers Manual.

The Consultant must still develop the Construction Cost Estimate (CCE) for each trade and the amount shall be included on the DPMC-38 Project Cost Analysis form where indicated. This document shall be submitted at each design phase of the project and updated immediately prior to the advertisement to bid.


PROJECT NAME: Rubber Flooring Removal & Replacement
PROJECT LOCATION: Mannington Regional Day School
PROJECT NO: E0386-00
DATE: December 11, 2019


XIII. SOW SIGNATURE APPROVAL SHEET

This Scope of Work shall not be considered a valid document unless all signatures appear in each designated area below.

The Client Agency approval signature on this page indicates that they have reviewed the design criteria and construction schedule described in this project Scope of Work and verifies that the work will not conflict with the existing or future construction activities of other projects at the site.

SOW PREPARED BY:  12/11/2019
DOAA ABOUELELA, PROJECT MANAGER DATE
DPMC PROJECT PLANNING & INITIATION

SOW APPROVED BY:  12/11/2019
JAMES WRIGHT, MANAGER DATE
DPMC PROJECT PLANNING & INITIATION

SOW APPROVED BY:  12/11/2019
JOSEPH VITELLI, PROJECT MANAGER DATE
DEPARTMENT OF EDUCATION

SOW APPROVED BY:  12/12/19
RONALD KRAEMER, PROJECT MANAGER DATE
DPMC PROJECT MANAGEMENT GROUP

SOW APPROVED BY:  12/12/19
RICHARD FLODMAND, DEPUTY DIRECTOR DATE
DIV PROPERTY MGT & CONSTRUCTION

XIV. CONTRACT DELIVERABLES

The following is a listing of Contract Deliverables that are required at the completion of each phase of this project. The Consultant shall refer to the DPMC publication entitled, "Procedures for Architects and Engineers," Volumes I and II, 2nd Edition, dated January, 1991 to obtain a more detailed description of the deliverables required for each item listed below.

The numbering system used in this "Contract Deliverables" section of the scope of work corresponds to the numbering system used in the "Procedures for Architects and Engineers" manual and some may have been deleted if they do not apply to this project.

FINAL DESIGN PHASE 100% Complete Construction Documents

This Final Design Phase may require more than one submission based on the technical quality and code conformance of the design documents.

8.1 Schedule (Update Bar Chart Schedule)

8.2 Meeting & Minutes (Minutes within seven (7) calendar days of meeting)

8.3 Correspondence

8.4 Submission Requirements

8.4.1 A/E Statement of Site Visit

8.4.2 Space Analysis

8.4.3 Special Features Description, special structural features, etc.

8.4.8 Regulatory Agency Approvals (Include itemized list specific to this project)

8.4.10 Drawings: 6 sets

8.4.11 Specifications: 6 sets

8.4.12 Current Working Estimate in CSI Format & Cost Analysis 38 Form

8.4.13 Bar Chart of Design and Construction Schedule

8.4.14 Oral Presentation of this Submission to Project Team

8.4.15 Plan Review/SOW Compliance Statement

8.4.16 This Submission Checklist

8.4.17 Deliverables Submission in Booklet Form: 6 sets

8.5 Approvals

8.5.1 Respond to Submission Comments

PERMIT APPLICATION PHASE

This Permit Application Phase should not include any additional design issues. Design documents shall be 100% complete at the Final Design Phase.

8.6 Permit Application Submission Requirements

- 8.6.1 - 8.6.7: If all of the deliverables of these sections have been previously submitted to DPMC and approved, there are no further deliverables due at this time
- 8.6.8 Regulatory Agency Approvals
 - (a) UCC Permit Application & Technical Sub-codes completed by A/E
- 8.6.10 Signed and Sealed Drawings: 6 sets
- 8.6.11 Signed and Sealed Specifications: 6 sets
- 8.6.12 Current Working Estimate/Cost Analysis
- 8.6.13 Bar Chart Schedule
- 8.6.14 Project Presentation (N/A this Project)
- 8.6.15 Plan Review/SOW Compliance Statement
- 8.6.16 Submission Checklist

8.7 Approvals

8.8 Submission Forms

- Figure 8.4.12 Current Working Estimate/Cost Analysis
- Figure 8.4.16 Submission Checklist (Final Review Phase)
- Figure 8.6.12-b Bid Proposal Form (Form DPMC -3)
- Figure 8.6.12-c Notice of Advertising (Form DPMC -31)
- Figure 8.6.16 Submission Checklist (Permit Phase)
- Figure 8.7 Bid Clearance Form (Form DPMC -601)

BIDDING AND CONTRACT AWARD

9.0 Bidding Phase Requirements

- 9.01 Original Drawings signed & sealed by A/E and drawings on compact disk (CD) in *Adobe Portable Document Format (.pdf)*
- 9.02 One Unbound Specification Color Coded per A/E Manual Section 8.4.11 and specifications on compact disk (CD) in *Adobe Portable Document Format (.pdf)*
- 9.03 Bid Documents Checklist
- 9.04 Bid Proposal Form
- 9.05 Notice for Advertising

9.1 Chair Pre-Bid Conference/Mandatory Site Visit

9.2 Prepare Bulletins

9.3 Attend Bid Opening

9.4 Recommendation for Contract Award

9.4.1 Prepare Letter(s) of Recommendation for Award & Cost Analysis

9.5 Attend Post Bid Review Meeting(s)

9.6 Submission Checklist

9.7 Submission Forms

Figure 9.4.1 Cost Analysis

Figure 9.6 Submission Checklist

CONSTRUCTION PHASE

10.1 Site Construction Administration

10.2 Pre-Construction Meeting

10.3 Construction Job Meetings

10.3.1 Agenda: Schedule and Chair Construction Job Meetings

10.3.2 Minutes: Prepare and Distribute Minutes within 5 working days of meeting

10.3.3 Schedules; Approve Contractors' Schedule & Update

10.3.4 Minutes Format: Prepare Job Meeting Minutes in approved format, figure 10.3.4-a

10.4 Correspondence

10.5 Prepare and Deliver Conformed Drawings

10.7 Approve Contractors Invoicing and Payment Process

10.8 Approve Contractors 12/13 Form for Subs, Samples and Materials

10.10 Approve Test Reports

10.11 Approve Shop Drawings

10.12 Construction Progress Schedule

10.12.1 Construction Progress Schedule

10.13 Review & Recommend or Reject Change Orders

- 10.13.1 Scope Changes
- 10.13.2 Construction Change Orders
- 10.13.3 Field Changes

10.14 Construction Photographs

10.15 Submit Field Observation Reports

10.16 Submission Forms

- Figure 10.3.4-a Job Meeting Format of Minutes
- Figure 10.3.4-b Field Report
- Figure 10.6 DPMC Insurance Form-24
- Figure 10.6-a Unit Schedule Breakdown
- Figure 10.6-b Monthly Estimate for Payment to Contractor DPMC 11-2
- Figure 10.6-c Monthly Estimate for Payment to Contractor DPMC 11-2A
- Figure 10.6-d Invoice DPMC 11
- Figure 10.6-e Prime Contractor Summary of Stored Materials DPMC 11-3
- Figure 10.6-f Agreement & Bill of Sale certificate for Stored Materials DPMC 3A
- Figure 10.7-a Approval Form for Subs, Samples & Materials DPMC 12
- Figure 10.7-b Request for Change Order DPMC 9b
- Figure 10.9 Transmittal Form DPMC 13
- Figure 10.10 Submission Checklist

PROJECT CLOSE-OUT PHASE

- 11.1 Responsibilities: Plan, Schedule and Execute Close-Out Activities**
- 11.2 Commencement: Initiate Close-Out w/DPMC 20A Project Close-Out Form**
- 11.3 Develop Punch List & Inspection Reports**
- 11.4 Verify Correction of Punch List Items**
- 11.5 Determination of Substantial Completion**
- 11.6 Ensure Issuance of “Temporary Certificate of Occupancy or Approval”**

11.7 Initiation of Final Contract Acceptance Process

11.8 Submission of Close-Out Documentation

- 11.8.1 As-Built & Record Set Drawings, 3 sets AUTOCAD Discs Delivered to DPMC
- 11.8.2 (a) Maintenance and Operating manuals, Warranties, etc.: 7 sets each
 - (b) Guarantees
 - (c) Testing and Balancing Reports
 - (d) Shop Drawings
 - (e) Letter of Contract Performance
- 11.8.3 Final Cost Analysis-Insurance Transfer DPMC 25
- 11.8.4 This Submission Checklist

11.9 Final Payment

- 11.9.1 Contractors Final Payment
- 11.9.2 A/E Invoice and Close-Out Forms for Final Payment

11.10 Final Performance Evaluation of the A/E and the Contractors

11.11 Ensure Issuance of a “Certificate of Occupancy or Approval”

11.12 Submission Forms

- Figure 11.2 Project Close-Out Documentation List DPMC 20A
- Figure 11.3-a Certificate of Substantial Completion DPMC 20D
- Figure 11.3-b Final Acceptance of Consultant Contract DPMC 20C
- Figure 11.5 Request for Contract Transition Close-Out DPMC 20X
- Figure 11.7 Final Contract Acceptance Form DPMC 20
- Figure 11.8.3-a Final Cost Analysis
- Figure 11.8.3-b Insurance Transfer Form DPMC 25
- Figure 11.8.4 Submission Checklist

XV. EXHIBITS

The attached exhibits in this section will include a sample project schedule, and any supporting documentation to assist the Consultant in the design of the project such as maps, drawings, photographs, floor plans, studies, reports, etc.

END OF SCOPE OF WORK

February 7, 1997
Rev.: January 29, 2002

Responsible Group Code Table

The codes below are used in the schedule field "GRP" that identifies the group responsible for the activity. The table consists of groups in the Division of Property Management & Construction (DPMC), as well as groups outside of the DPMC that have responsibility for specific activities on a project that could delay the project if not completed in the time specified. For reporting purposes, the groups within the DPMC have been defined to the supervisory level of management (i.e., third level of management, the level below the Associate Director) to identify the "functional group" responsible for the activity.

<u>CODE</u>	<u>DESCRIPTION</u>	<u>REPORTS TO ASSOCIATE DIRECTOR OF:</u>
CM	Contract Management Group	Contract Management
CA	Client Agency	N/A
CSP	Consultant Selection and Prequalification Group	Technical Services
A/E	Architect/Engineer	N/A
PR	Plan Review Group	Technical Services
CP	Construction Procurement	Planning & Administration
CON	Construction Contractor	N/A
FM	Financial Management Group	Planning & Administration
OEU	Office of Energy and Utility Management	N/A
PD	Project Development Group	Planning & Administration

EXHIBIT 'A'

Activity ID	Description	Rspn	Weeks
<PROJ>			
Design			
CV3001	Schedule/Conduct Pre-design/Project Kick-Off Mtg.	CM	
CV3020	Prepare Program Phase Submittal	AE	
CV3021	Distribute Program Submittal for Review	CM	
CV3027	Prepare & Submit Project Cost Analysis (DPMC-38)	CM	
CV3022	Review & Approve Program Submittal	CA	
CV3023	Review & Approve Program Submittal	PR	
CV3024	Review & Approve Program Submittal	CM	
CV3025	Consolidate & Return Program Submittal Comments	CM	
CV3030	Prepare Schematic Phase Submittal	AE	
CV3031	Distribute Schematic Submittal for Review	CM	
CV3037	Prepare & Submit Project Cost Analysis (DPMC-38)	CM	
CV3032	Review & Approve Schematic Submittal	CA	
CV3033	Review & Approve Schematic Submittal	PR	
CV3034	Review & Approve Schematic Submittal	CM	
CV3035	Consolidate & Return Schematic Submittal Comment	CM	
CV3040	Prepare Design Development Phase Submittal	AE	
CV3041	Distribute D. D. Submittal for Review	CM	
CV3047	Prepare & Submit Project Cost Analysis (DPMC-38)	CM	
CV3042	Review & Approve Design Development Submittal	CA	
CV3043	Review & Approve Design Development Submittal	PR	
CV3044	Review & Approve Design Development Submittal	CM	
CV3045	Consolidate & Return D.D. Submittal Comments	CM	
CV3050	Prepare Final Design Phase Submittal	AE	
CV3051	Distribute Final Design Submittal for Review	CM	
CV3052	Review & Approve Final Design Submittal	CA	
CV3053	Review & Approve Final Design Submittal	PR	
CV3054	Review Final Design Submit for Constructability	OCS	

Sheet 1 of 3

Bureau of Design & Construction Services
Routine Project

Exhibit "A"

DBCA - TEST

NOTE:
Refer to section "IV Project Schedule" of the
Scope of Work for contract phase durations.

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Activity ID	Description	Reph	Weeks
CV2055	Review & Approve Final Design Submittal	CM	
CV2056	Consolidate & Return Final Design Comments	CM	
CV3060	Prepare & Submit Permit Application Documents	AE	
CV3068	Prepare & Submit Bidding Cost Analysis (DPMC-38)	CM	
Plan Review-Permit Acquisition			
CV4001	Review Constr. Documents & Secure UCC Permit	PR	
CV4010	Provide Funding for Construction Contracts	CA	
CV4020	Secure Bid Clearance	CM	
Advertise-Bid-Award			
CV5001	Advertise Project & Bid Construction Contracts	CP	
CV5010	Open Construction Bids	CP	
CV5011	Evaluate Bids & Prep. Recommendation for Award	CM	
CV5012	Evaluate Bids & Prep. Recommendation for Award	AE	
CV5014	Complete Recommendation for Award	CP	
CV5020	Award Construction Contracts/Issue NTP	CP	
Construction			
CV6000	Project Construction Start/Issue NTP	CM	
CV6001	Contract Start/Contract Work (25%) Complete	CON	
CV6002	Preconstruction Meeting	CM	
CV6003	Begin Preconstruction Submittals	CON	
CV6004	Longest Lead Procurement Item Ordered	CON	
CV6005	Lead Time for Longest Lead Procurement Item	CON	
CV6006	Prepare & Submit Shop Drawings	CON	
CV6007	Complete Construction Submittals	CON	
CV6011	Roughing Work Start	CON	
CV6012	Perform Roughing Work	CON	
CV6010	Contract Work (50%+) Complete	CON	
CV6013	Longest Lead Procurement Item Delivered	CON	
CV6020	Contract Work (75%) Complete	CON	

Sheet 2 of 3

Bureau of Design & Construction Services
Routine Project

Exhibit 'A'

DRCA - TEST

NOTE:
Refer to section "IV Project Schedule" of the Scope of Work for contract phase durations.

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Activity ID	Description	Respn	Weeks
CV6014	Roughing Work Complete	CON	
CV6021	Interior Finishes Start	CON	
CV6022	Install Interior Finishes	CON	
CV6030	Contract Work to Substantial Completion	CON	
CV6031	Substantial Completion Declared	CM	
CV6075	Complete Deferred Punch List/Seasonal Activities	CON	
CV6079	Project Construction Complete	CM	
CV6080	Close Out Construction Contracts	CM	
CV6089	Construction Contracts Complete	CM	
CV6090	Close Out A/E Contract	CM	
CV6092	Project Completion Declared	CM	

DBCA - TEST

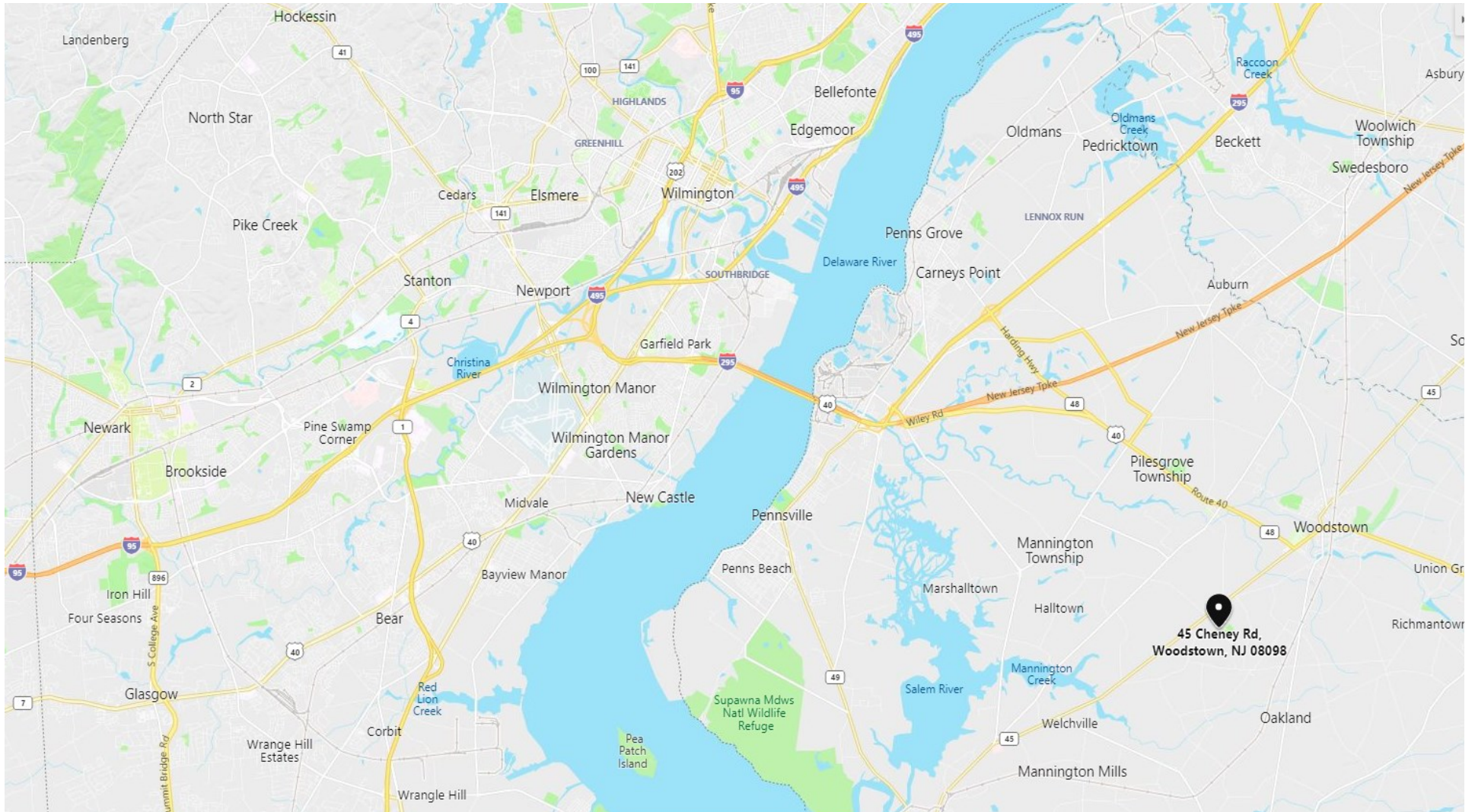
Sheet 3 of 3

Bureau of Design & Construction Services
Routine Project

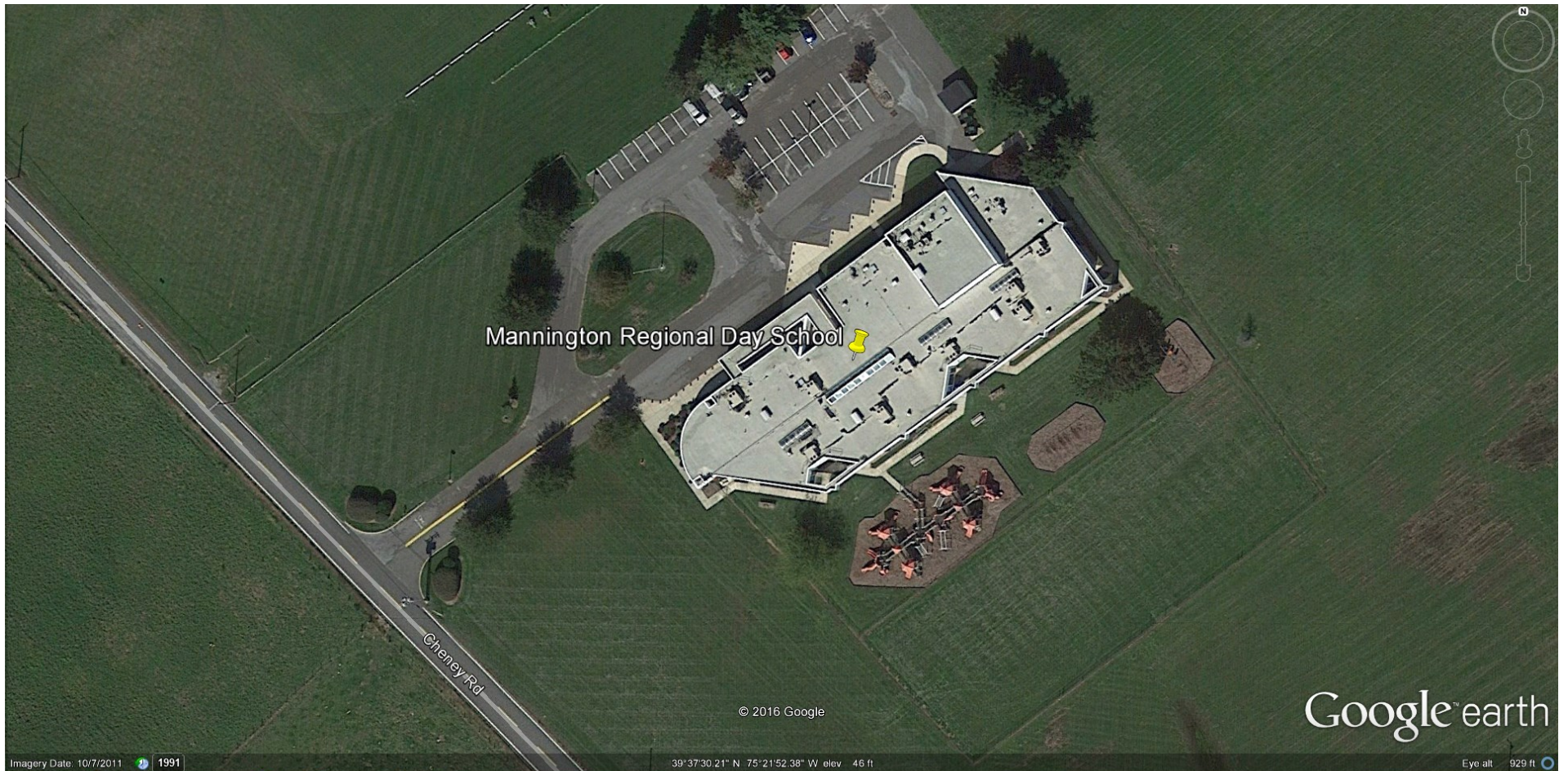
Exhibit 'A'

NOTE:
Refer to section "IV Project Schedule" of the
Scope of Work for contract phase durations.

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Mannington Regional Day School
45 Cheney Road, Woodstown, NJ 08098
Site Location Map
EXHIBIT 'B'



Mannington Regional Day School
EXHIBIT 'C'

E0386-00 Photographs of Existing Conditions



Gymnasium Rubber Floor to be replaced

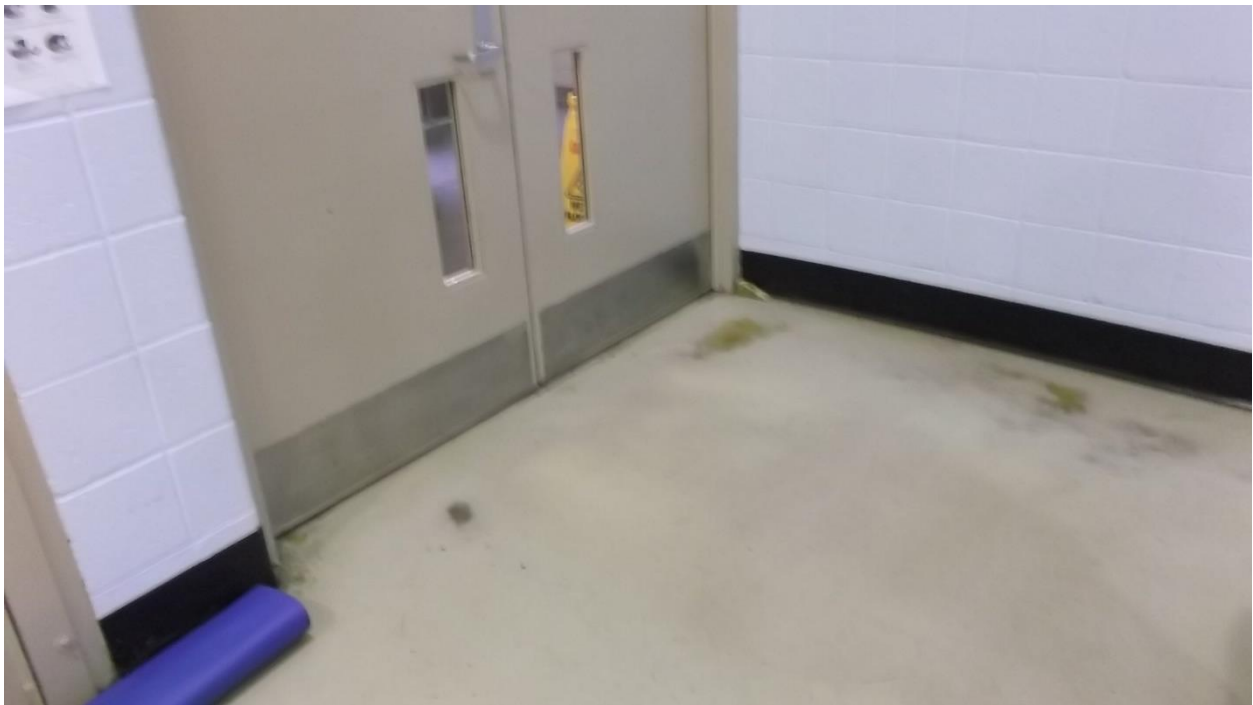


Gymnasium Rubber Floor to be replaced

E0386-00 Photographs of Existing Conditions



Gymnasium Entry To Connecting Hallway



Gymnasium Worn Flooring by Second Double Door Entrance to be replaced.

E0386-00 Photographs of Existing Conditions



Gymnasium Worn Flooring along the Double Door Entrance Wall



Gymnasium torn Flooring along the inside Wall

E0386-00 Photographs of Existing Conditions



Gymnasium torn Flooring along the inside Wall

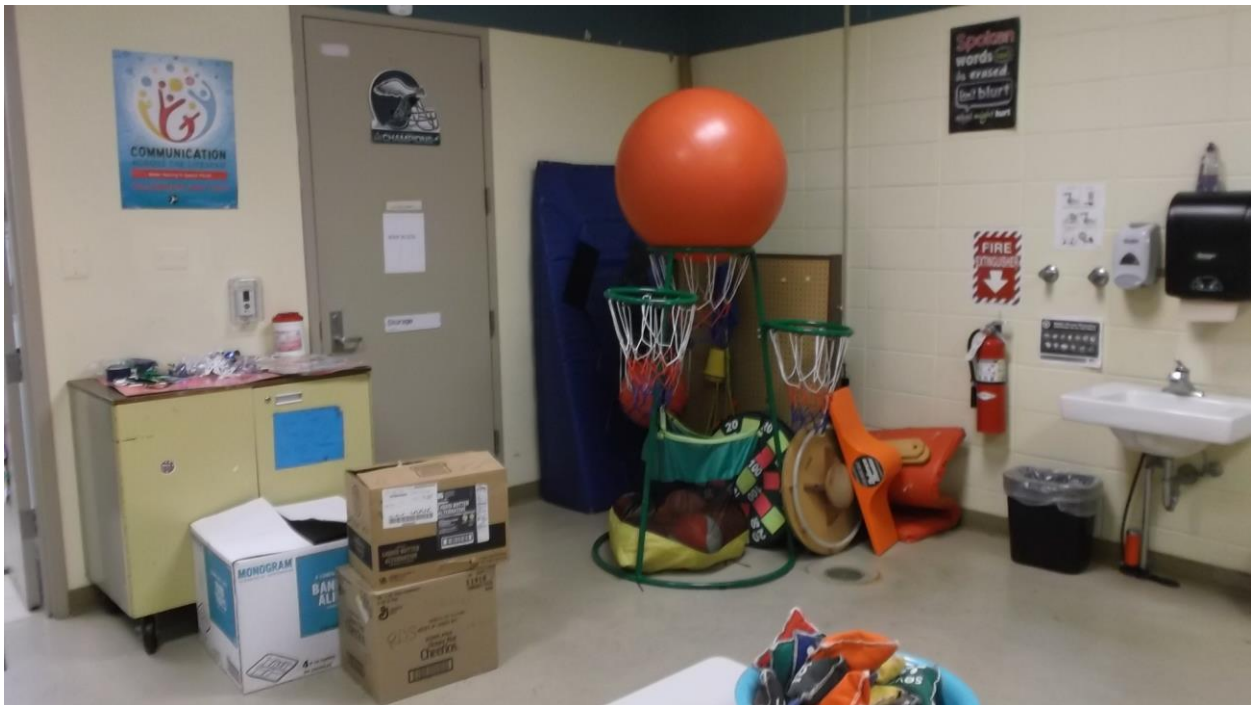


Gymnasium Worn Flooring under Basketball Hoop

E0386-00 Photographs of Existing Conditions



Gymnasium Worn Flooring under Basketball Hoop



PT/OT Classroom Floor to be replaced

E0386-00 Photographs of Existing Conditions



PT/OT Classroom Floor to be replaced



PT/OT Classroom Floor to be replaced

E0386-00 Photographs of Existing Conditions

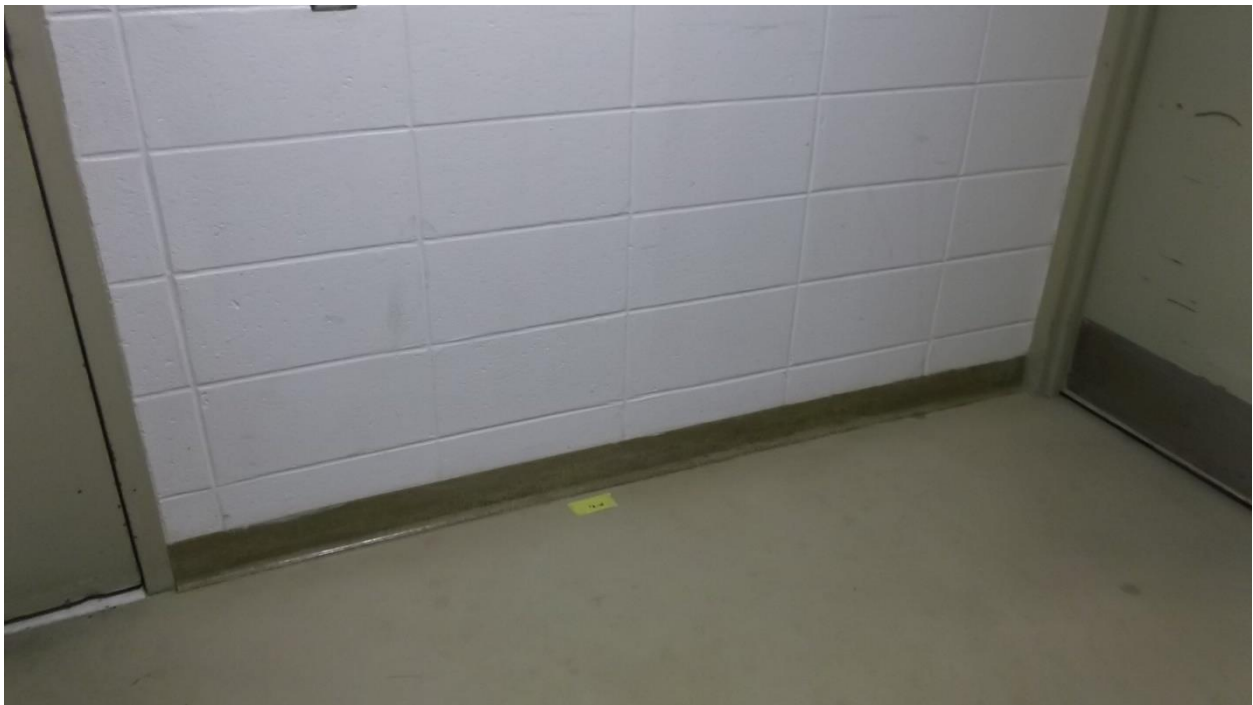


Connecting Hallway between Gymnasium and OT/PT Classroom

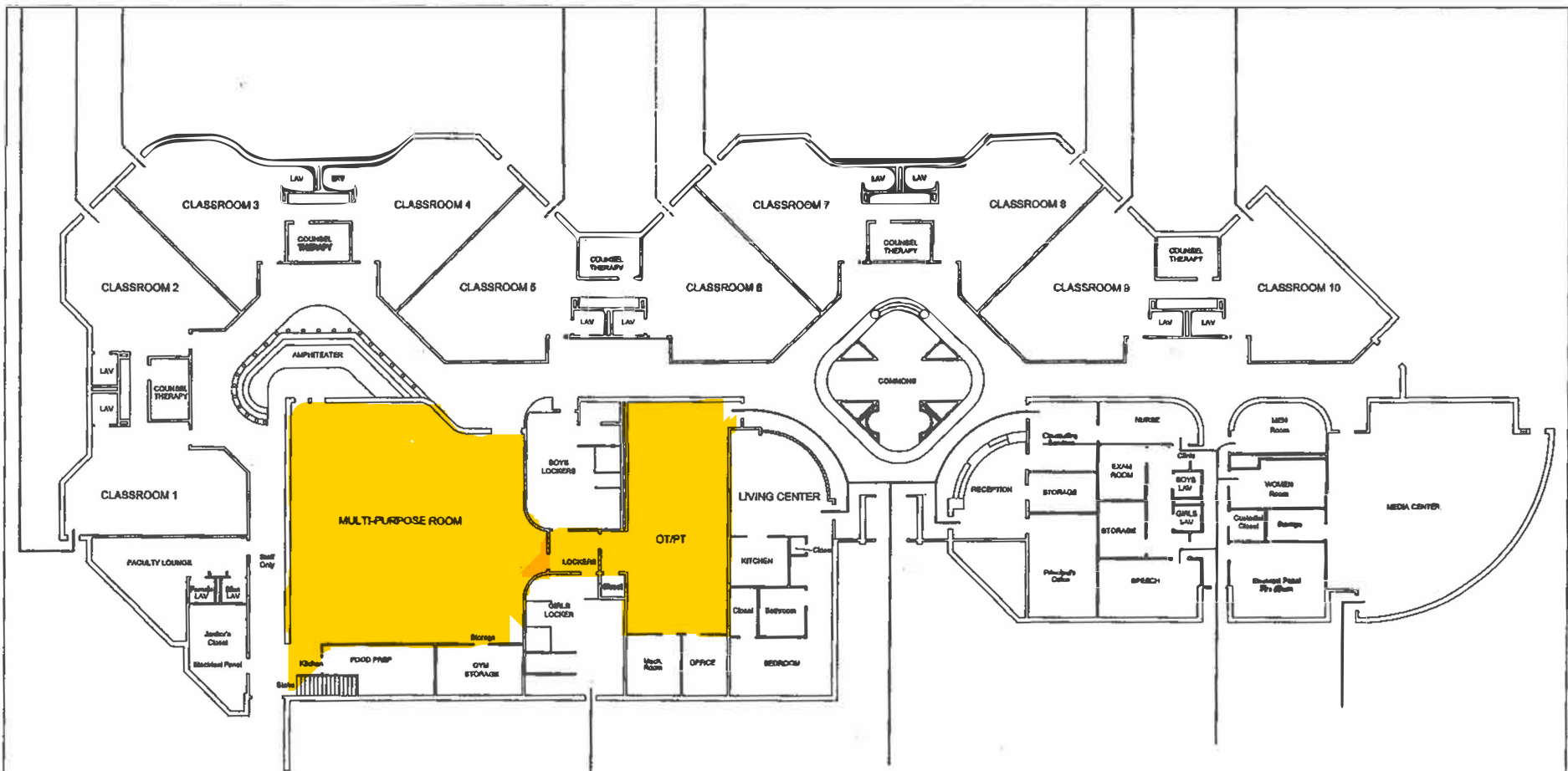
E0386-00 Photographs of Existing Conditions



Connecting Hallway between Gymnasium and OT/PT Classroom



Connecting Hallway between Gymnasium and OT/PT Classroom



Mannington Township RDS
 Salem, NJ

 AREA AFFECTED BY WORK

EXHIBIT 'E'

INDUSTRIAL HYGIENE REPORT

Prepared For:

Salem County Special Services School
45 Cheney Road
Woodstown, New Jersey 08098

Report Presented To:

Mr. Kevin Shipman
Supervisor of Buildings & Grounds
Special Services School District
Woodstown, New Jersey 08098

Report Prepared By:

Garden State Environmental, Inc.
555 Broad Street, Suite K
Glen Rock, New Jersey 07452

Date of Report:

June 17, 2018

I. INTRODUCTION

The subject of this report is a mercury related indoor air quality (IAQ) assessment conducted on May 17, 2019, by Tara E. Ekiert, B.S., Industrial Hygienist from Garden State Environmental, Inc. (GSE) of the school gym floor, in the Salem County Special Services School located 45 Cheney Road, Woodstown, New Jersey.

This air quality assessment was in follow-up to elevated mercury bulk sample results, which were collected on April 23, 2019 by Tara E. Ekiert. Our report describing the bulk sampling findings and results was distributed to Mr. Shipman on May 3, 2019.

Our findings of the mercury related IAQ testing are summarized in the report that follows.

II. BACKGROUND

The New Jersey School Boards Association distributed a report: "Health and Safety Guide: Mercury Hazard in Schools from Rubber-Like Polyurethane Floors," which was prepared by the New Jersey Education Association and the NJ Work Environment Council.

The report was designed to alert school officials to a potential health risk associated with exposure to metallic mercury vapors from rubber-like polyurethane floors. These floors have been in use since the 1960's. Suspect floors are synthetic polyurethane, not wood or vinyl tile. They are resilient and rubber-like, water resistant, and may be tinted any color. They may be one piece, sometimes pieced or poured in place. Some of this flooring material has been shown to contain mercury containing chemical, phenolic mercuric acetate (PMA), which under certain conditions may emit colorless and odorless metallic mercury vapors into the air.

Mercury exposures may be worse if the floors are damaged, or have deteriorated, or are located in hot rooms with poor ventilation, with limited fresh air or no air conditioning. Exposure to mercury vapors may be a serious health hazard to both students and school employees, such as custodians who clean this flooring material or Physical Education teacher who spend a majority of their day in the gymnasiums. Some floors have been shown to contain enough mercury to create significant airborne exposures and require disposal as hazardous waste.

Mercury can affect you when inhaled and can be absorbed through the skin. Symptoms caused by over exposure may include irritation of the eyes, throat, nose, and lungs. As well as metallic taste in the mouth, nausea, vomiting, kidney damage, gum problems, memory issues, personality changes, abdominal pain, or mercury poisoning with tremors.

Based on these concerns and the elevated bulk material sample results, the Salem County Special Services School District authorized this additional mercury air sampling.

III. INSPECTION FINDINGS:

The HVAC system runs from 5:00 am to 7:00 pm at temperatures ranging between 64-67 degrees Fahrenheit with fresh air intake set at about 10%. There is no dehumidification system or exhaust fan within in gym.

No unusual odors were detected during our sampling.

A site walk-through included the gym, along with neighboring hallways/walkthroughs, storage areas, classrooms, kitchenette, and locker rooms for precautionary measures.

The gym measurements were conducted during the school day under normal HVAC operation; however the gym was unoccupied during sampling.

During the time of inspection, two (2) additional areas were discovered with the same homogeneous flooring as the gym; the small walkthrough to get to the locker rooms and Physical Therapy (PT) / Occupational Therapy (OT) classroom and in the PT/OT classroom itself.

Mr. Shipman was notified of the additional flooring found during inspection and approved our recommendation to take supplementary bulk samples in these areas. One (1) sample was taken in the walkthrough and two (2) in the PT/OT Classroom; the results are summarized below.

IV. SAMPLING METHODS

Relative Humidity, Temperature

Measurements were taken throughout the day using a Model 7575 *TSI X-Q-Trak* (SN: 7575X1213001) equipped with a four function probe. This device measures temperature, relative humidity (rh), carbon dioxide (CO₂) and carbon monoxide (CO) simultaneously. Temperature is displayed in degrees Fahrenheit (°F) and RH as a percent (%). Concentrations for CO₂ and CO are displayed in parts per million (PPM). Measurements were taken after allowing the device to become acclimated to the ambient temperature and relative humidity for a minimum of two minutes.

Mercury Vapor

A portable spectrometer, Lumex Plus *RA-915 Lite Mercury MeterI* (SN: 1282) was used for direct reading measurements. This is a multifunctional atomic absorption spectrometer with Zeeman background correction, which eliminates the effect of interfering impurities. This enables the user to conduct real time monitoring and detection of mercury vapor. The instrument is designed to determine mercury content in ambient air with the mercury detection limits being as low as 0.5 nanograms of mercury per cubic meter of air (ng/m³).

Full shift mercury measurements were collected using GilAir 3, sampling pumps equipped with CVAA tubes (226-17-1A). The pumps pulled air through the tubes at a flow rate of

approximately .19-.21 liters per minutes (LPM). The samples were taken at breathing zone height using a tripod.

Sample pumps were pre- and post-calibrated by the laboratory as well as verified in the field using a Bios Defender – L Calibrator, Model 510-L (SN: 112748); sample volume calculations were completed following post-calibration.

Sampling and analysis was conducted according to NIOSH Method 6009.

The laboratory analysis was conducted by:

Galson Laboratories, Inc.
6601 Kirkville Road
East Syracuse, NY 13057

Galson Laboratories, Inc. is fully accredited for industrial hygiene air sample analysis by the American Industrial Hygiene Association (AIHA) Laboratory Accreditation Program, #100324.

Bulk Mercury Analysis

Analysis of mercury content was conducted using Environmental Protection Agency (EPA) approved Method SW 846 7471A. After preparation of the sample, a cold-vapor atomic absorption method is used. This is based on the absorption of radiation at the 253.7-nm wavelength by mercury vapor. The mercury is reduced to the elemental state and aerated from solution in a closed system. The mercury vapor passes through a cell positioned in the light path of an Atomic Absorption Spectrophotometer. Absorbance (peak height) is measured as a function of mercury concentration, which is reported as milligrams per kilogram (mg/K), which is equivalent to parts per million (PPM).

The laboratory analysis was conducted by:

Precision Analytical Services, Inc.
2161 Whitesville Road
Toms River, New Jersey 08755

New Jersey Department of Environmental Protection Certification Number: 15001

V. SAMPLING AND MEASUREMENT RESULTS

Temperature, RH, CO2 & CO Measurements:

Time	Location	Relative Humidity (%)	Temperature (°F)	Carbon Dioxide (PPM)	Carbon Monoxide (PPM)
7:30am	In Gym	65.1	65.2	447	0.0
	Outside	71.0	64.8	552	0.0
10:15am	PT/OT Class	59.7	70.3	481	0.0
	Boys LR	60.7	69.5	454	0.0
	In Gym	70.2	68.4	445	0.0
	Outside	72.4	69.8	400	0.0
12:30pm	PT/OT Class	61.4	70.6	414	0.0
	Walkthrough	65.7	68.4	431	0.0
	Boys LR	63.7	69.2	445	0.0
	In Gym	73.0	66.8	419	0.0
12:30pm	Outside	69.2	71.4	388	0.0
	PT/OT Class	69.3	68.1	412	0.0
	Walkthrough	69.9	66.9	424	0.0

Direct-Read Measurements:

Directions are based on a front to back view of the gym. The front side of the gym is closest to the Maintenance /kitchenette entry and the back side is closest to the main hallway.

Results below are reported as three (3) readings per location in ng/m³.

Each of these measurements was taken at 2-3 inches from the ground, 2-3 feet from the ground and 5-6 feet from the ground.

Salem County Special Services School – Direct Reading – Lumex 915+									
<u>Location</u>	<u>Test 1</u> <u>8:30am</u> 2-3 inches	<u>Test 1</u> 2-3 Feet	<u>Test 1</u> 5-6 feet	<u>Test 2</u> <u>11:30am</u> 2-3 inches	<u>Test 2</u> 2-3 feet	<u>Test 2</u> 5-6 feet	<u>Test 3</u> <u>12:15pm</u> 2-3 inches	<u>Test 3</u> 2-3 Feet	<u>Test 3</u> 5-6 feet
Back Left	218, 240, 225	200, 177, 181	176, 174, 169	224, 221, 223	214, 217, 220	217, 217, 217	234, 236, 237	228, 202, 204	200, 197, 190
Front Left	224, 234, 224	232, 210, 208	212, 209, 206	269, 250, 239	209, 206, 206	214, 211, 212	256, 252, 280	218, 217, 216	208, 208, 210
Under basketball hoop left	238, 240, 247	225, 223, 222	231, 226, 229	239, 249, 248	224, 222, 225	217, 228, 228	211, 209, 198	193, 189, 180	178, 177, 175
Back right	198, 201, 195	193, 192, 191	195, 205, 195	213, 214, 208	203, 204, 206	204, 205, 205	242, 291, 256	173, 169, 168	172, 174, 173

<u>Location</u>	<u>Test 1</u> <u>8:30am</u> 2-3 inches	<u>Test 1</u> 2-3 Feet	<u>Test 1</u> 5-6 feet	<u>Test 2</u> <u>11:30am</u> 2-3 inches	<u>Test 2</u> 2-3 feet	<u>Test 2</u> 5-6 feet	<u>Test 3</u> <u>12:15pm</u> 2-3 inches	<u>Test 3</u> 2-3 Feet	<u>Test 3</u> 5-6 feet
Front right	223, 191, 181	177, 174, 170	179, 175, 179	209, 222, 223	202, 203, 200	202, 202, 201	185, 179, 168	155, 157, 157	153, 155, 156
Under basketball hoop right	220, 223, 229	204, 205, 205	206, 204, 203	252, 237, 232	206, 205, 206	208, 208, 205	188, 181, 191	163, 164, 165	166, 165, 163
Gym storage	225, 235, 228	220, 218, 219	219, 216, 216	228, 228, 228	218, 217, 217	217, 218, 216	223, 223, 223	218, 217, 218	217, 216, 216
Kitchenette	181, 180, 179	175, 173, 171	172, 170, 173	161, 156, 151	146, 143, 138	69, 72, 72	197, 198, 194	191, 190, 189	190, 195, 194
Foyer by Roof Access	24, 22, 20	16, 15, 15	15, 14, 14	42, 37, 49	8, 13, 9	8, 12, 16	-	-	-
Boys Locker Room	77, 71, 70	52, 52, 55	47, 46, 48	118, 116, 112	96, 90, 95	98, 92, 91	40, 31, 20	17, 12, 8	16, 5, 2
Girls Locker Room	15, 24, 24	18, 19, 20	19, 13, 17	71, 79, 89	68, 69, 69	69, 72, 72	-	-	-
Walkthrou gh	137, 132, 168,	94, 54, 56	78, 77, 74	144, 143, 145	111, 111, 116	110, 112, 113	138, 152, 170	90, 88, 90	85, 92, 85
PT/OT Room left	35, 36, 45	34, 26, 21	23, 22, 20	111, 150, 126	72, 74, 71	75, 74, 73	91, 104, 115	81, 78, 79	82, 81, 84
PT/OT room right	47, 50, 47	25, 25, 24	21, 21, 23	136, 114, 143	68, 72, 79	64, 66, 64	129, 133, 104	79, 81, 87	82, 81, 84
Hallway outside of staff room	7, 6, 7	5, 6, 5	5, 4, 5	10, 9, 9	7, 7, 7	7, 5, 6	-	-	-
Hallway outside classroom 2	8, 9, 8	7, 6, 6	7, 7, 6	10, 11, 12	13, 12, 12	12, 12, 13	-	-	-
Hallway outside classroom 4	3, 1, 2	1, 1, 0	2, 1, 0	1, 1, 1	1, 1, 1	0, 0, 0	-	-	-

<u>Location</u>	<u>Test 1</u> <u>8:30am</u> 2-3 inches	<u>Test 1</u> 2-3 Feet	<u>Test 1</u> 5-6 feet	<u>Test 2</u> <u>11:30am</u> 2-3 inches	<u>Test 2</u> 2-3 feet	<u>Test 2</u> 5-6 feet	<u>Test 3</u> <u>12:15pm</u> 2-3 inches	<u>Test 3</u> 2-3 Feet	<u>Test 3</u> 5-6 feet
On steps leading to gym entry	6, 4, 4	4, 3, 3	4, 2, 2	18, 12, 14	9, 9, 8	8, 9, 6	-	-	-
Hallway outside Classroom 5	1, 0, 0	2, 2, 2	3, 2, 1	13, 14, 13	13, 12, 12	12, 12, 11	-	-	-

Full Shift Vapor Samples:

Salem County Special Services - Mercury Vapor Full Shift Results						
Sample Number	Gym Sample Location	Time (mins)	Flow (L/min.)	Volume (Liters)	Total (µg/m³)	Concentration (ng/m³)
5-17-TE-01	Left, Middle	475	0.21	99.75	<0.060	<600
5-17-TE-02	Middle	475	0.21	99.75	<0.060	<600
5-17-TE-03	Right, Middle	475	0.21	99.75	<0.060	<660
5-17-TE-04	Field Blank	0	N/A	0	<0.060	ND

Bulk Samples:

Salem County Special Services Bulk Samples – May 17, 2019				
Sample Code	Type	Location	Mercury (Mg/Kg)	Mercury (PPM)
5-17-TE-01	Bulk	Walkthrough leading to PT/OT class and Locker Rooms	258	258
5-17-TE-02	Bulk	PT/OT class – right side under magazine stand	256	256
5-17-TE-03	Bulk	PT/OT class – left side under printer cabinet	217	217

VI. DISCUSSION:

Q-Trak Measurements

Temperature:

Temperatures throughout the gym ranged from 65.2°F to 66.8°F. The surrounding areas ranged from 68.1°F to 70.6°F. The outdoor temperatures ranged from 64.8°F to 71.4°F. The indoor air temperature in the gym was within the set range of the HVAC and within recommended comfort levels

Relative Humidity:

The readings throughout the gym ranged from 65.1% to 73.0%. Outdoor readings ranged from 69.2 % to 72.4%. The interior relative humidity was slightly above the recommended range.

ASHRAE has established a recommended range for relative humidity of 30-60%. The ideal comfortable relative humidity range has been reported as 40% to 60%, as long as building materials or contents are not adversely affected.

Carbon Dioxide:

Indoor CO₂ levels measured throughout the gym ranged from 419 to 447 PPM. Surrounding areas showed levels ranging from 414 to 481 and outdoor CO₂ concentrations measured on that day ranged from 388 to 552 PPM. Measurements within the gym and surrounding areas were within recommended levels, NJ-PEOSH establishes a concentration guideline of 1,000 PPM.

Carbon dioxide (CO₂), a product of combustion and human respiration is a commonly used indicator of overall air quality and ventilation rates within an occupied building. The levels found in buildings are primarily a function of the rate and amount of fresh outside air delivery to the occupied space, the effectiveness of air distribution within the space, and the occupancy (number of people and activity) of the space.

Carbon Monoxide:

CO measurements were not detected in the gym or surrounding areas; with levels at 0.0 PPM for all testing trials. These measurements indicate that concentrations inside the building were within acceptable limits. The outdoor CO concentrations measured that day were at 0.0 PPM.

Carbon monoxide (CO) is a colorless, odorless, and tasteless gas formed during the combustion of hydrocarbon fuels. It is often encountered in garages and loading dock areas and can be introduced into buildings by way of the ventilation system. Carbon monoxide is a chemical asphyxiate to humans. When inhaled it combines with the hemoglobin of the blood to prevent oxygen transportation to the brain, heart, and other body parts. Prolonged exposure to CO can cause severe heart, brain, and circulatory damage.

Direct Reading

Direct measurements using the Lumex portable mercury analyzer showed mercury concentrations between 168 - 291 ng/m³ when measuring 2 - 3 inches above the gym floor, 155 - 232 ng/m³ at 2 -3 feet from the ground, and 153 – 212 ng/m³ at 5 - 6 feet from the gym floor. Any concentrations ranging between 3-5 feet would be considered representative of the occupants breathing zone in the room.

Direct read measurements of areas surrounding the gym showed levels between 0 – 235 ng/m³ when measuring 2-3 inches above the ground, 0 - 232 ng/m³ when 2-3 feet off the ground and 0-219 when 5-6 feet off the ground.

All direct read results were below the NJDOH / GSE mercury MCL.

The highest measurements were in the gym storage closet, the kitchenette adjacent to the gym the small walkthrough and the PT/OT classroom. Measurements in the boy's locker room decreased significantly during the third test trial, after closing the door to the walkthrough. The surrounding hallways showed the lowest mercury concentrations.

Direct reading of mercury vapor measurements were consistently higher when taken closer to the gym floor suggesting that mercury vapors are actively volatilizing from the gym flooring material. Mercury concentrations were also typically higher in areas where the floor was more worn, such as under basketball hoops. This suggests that as the floor experiences more wear, tear and deterioration, there will likely be increased release of mercury vapor into the air.

Full Shift Vapor Samples

Full shift air samples for mercury vapor were collected at exactly 475 minutes each. This form of sampling is an integrated measurement and addresses some of the limitations of direct reading measurements and is a more accurate measurement for mercury exposure over an extended period of time.

The mercury Health and Safety Guide distributed by the New Jersey School Boards Association recommended removing mercury-containing floors using precautions if air samples are above 60 ng/m³. However, there was no reference provided as to the source of this exposure guideline. Additionally, there are certain technical problems related to measuring full shift mercury exposures at this exposure level.

The New Jersey Department of Health (NJDOH), Indoor Air Environments Program has recently determined that mercury vapor exposure in school indoor environments should not exceed 0.8 ug/m³ (800 ng/m³), which is based on the exposure scenario in the risk model that is protective of preschool-aged children. Based on the NJDOH risk assessment, GSE is using 800 ng/m³ as a Maximum Contaminant Level (MCL) for mercury vapor in this school gym.

All three (3) samples were below the lowest detection limit of methodology (600 ng/m³) and are below the NJDOH and GSE mercury MCL (800 ng/m³),

Bulk Samples

Laboratory analysis of the 3 bulk samples of the flooring in the adjoining classroom and walk-through area were found to contain material that was positive for mercury, with reported concentrations ranging from 217 to 258 PPM.

When bulk sampling results shows mercury concentrations that exceed one (1) PPM, it is recommended that mercury vapor indoor air sampling is conducted. Direct reading measurements were taken at the time of inspection as seen in the chart above.

The air sample results indicate low level airborne mercury exposures below the levels which suggest an increased health risk to occupants. The bulk samples of the all floors tested were above the threshold of 1 PPM. Based on these findings, we offer the following recommendations:

VII. RECOMMENDATIONS:

1. Maintain the HVAC serving the gym and surrounding areas to ensure that temperatures remain below 70⁰ F and relative humidity remains between 30% and 55% throughout the year. This may require adding a dehumidification system to reduce relative humidity during the hot and humid months of the year.
2. During periods of heavy occupancy, and when ambient weather conditions are conducive, provide as much supplemental fresh air movement through the use of fans, open windows and doors, etc.
3. Install a large vent fan in the gym to create negative air pressure to draw out interior air and theoretically reduce the concentrations of indoor airborne contaminants.
4. At least annual monitoring for mercury vapors should be done in the gym and surrounding areas via 8-hour samples using NIOSH Method 6009.
5. Always wet wash the floors. Avoid vacuuming, sweeping or buffing which can abrade the floor and create dust.
6. Seal any cracks or other damage with a durable material and if damages worsen, remove that flooring from use as soon as possible.
7. Distribute a carefully worded risk communication document to the school community to explain mercury related issues, including the potential risks, and how the District is proactively managing the risks. GSE can assist in the preparation of this document upon request.

8. Ultimately GSE recommends removal and replacement of the floors using proper engineering controls and personal protective equipment by a qualified contractor when the school is unoccupied.

In the meantime, as long as the HVAC system is properly running as outlined above, measures are taken to increase fresh air intake, and proper cleaning and maintenance is performed, mercury vapor exposures should remain below the accepted mercury MCL and the risk to occupants should be minimal.

VIII. CONCLUSION:

The mercury concentrations are currently safe under the NJDOH criteria, however, we are recommending additional air sampling and ongoing temperature/ventilation controls (as listed in section VII above) to ensure that any mercury exposures remain low until such a time that the District decides to remove and replace the flooring material with a non-mercury containing material.

IX. CONDITIONS and LIMITATIONS

The findings described in this report are reflective of the conditions existent at the time of inspection and testing. In the field of environmental sampling, various environmental parameters such as temperature, humidity, air flow, may significantly impact the results.

Our findings and conclusions must be considered probabilities based upon professional judgment concerning the significance of the limited data gathered during the course of investigation. The results and recommendations set forth by GSE in this report will be valid as of the date of the report and are limited to the site condition at the time of investigation.

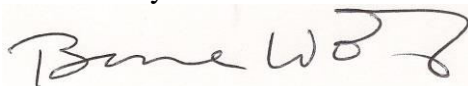
Please feel free to call GSE with any questions about this report.

Respectfully submitted,



Tara E. Ekiert, B.S.
Industrial Hygienist

Reviewed by:



Bruce D. Wolf, MPA, HO, IH, IEC
Sr. Vice President

TE/te/bw

APPENDIX I

CERTIFICATES OF LABORATORY ANALYSIS

**Ms. Tara Ekiert
Garden State Environmental, Inc.
555 South Broad Street
Suite K
Glen Rock, NJ 07452**

May 29, 2019

Account# 15067

Login# L480536

Dear Tara Ekiert:

Enclosed are the analytical results for the samples received by our laboratory on May 21, 2019. All samples on the chain of custody were received in good condition unless otherwise noted. Any additional observations will be noted on the chain of custody.

Please contact client services at (888) 432-5227 if you would like any additional information regarding this report. Thank you for using SGS Galson.

Sincerely,

SGS Galson



**Lisa Swab
Laboratory Director**

Enclosure(s)



GALSON

ANALYTICAL REPORT

Account : 15067
Login No. : L480536

Terms and Conditions & General Disclaimers

- This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.
- Any holder of this document is advised that information contained herein reflects the Company’s findings at the time of its intervention only and within the limits of Client’s instructions, if any. The Company’s sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Analytical Disclaimers

- Unless otherwise noted within the report, all quality control results associated with the samples were within established control limits or did not impact reported results.
- Note: The findings recorded within this report were drawn from analysis of the sample(s) provided to the laboratory by the Client (or a third party acting at the Client’s direction). The laboratory does not have control over the sampling process, including but not limited to the use of field equipment and collection media, as well as the sampling duration, collection volume or any other collection parameter used by the Client. The findings herein constitute no warranty of the sample’s representativeness of any sampled environment, and strictly relate to the samples as they were presented to the laboratory. For recommended sampling collection parameters, please refer to the Sampling and Analysis Guide at www.sgs.com.
- Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceding the final result column may have been rounded and therefore, if carried through the calculations, may not yield an identical final result to the one reported.
- The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).
- Unless otherwise noted within the report, results have not been blank corrected for any field blank or method blank data.

Accreditations SGS Galson holds a variety of accreditations and recognitions. Our quality management system conforms with the requirements of ISO/IEC 17025. Where applicable, samples may also be analyzed in accordance with the requirements of ELAP, NELAC, or LELAP under one of the state accrediting bodies listed below. Current Scopes of Accreditation can be viewed at <http://www.sgs.com> in the accreditations section of the "About" page. To determine if the analyte tested falls under our scope of accreditation, please visit our website or call Client Services at (888) 432-5227.

National/International	Accreditation/Recognition	Lab ID#	Program/Sector
AIHA-LAP, LLC - IHLAP, ELLAP, EMLAP	ISO/IEC 17025 and USEPA NLLAP	Lab ID 100324	Industrial Hygiene, Environmental Lead, Environmental Microbiology

State	Accreditation/Recognition	Lab ID#	Program/Sector
New York (NYSDOH)	ELAP and NELAC (TNI)	Lab ID: 11626	Air Analysis, Solid and Hazardous Waste
New Jersey (NJDEP)	NELAC (TNI)	Lab ID: NY024	Air Analysis
Louisiana (LDEQ)	LELAP	Lab ID: 04083	Air Analysis, Solid Chemical Materials
Texas	Texas Dept. of Licensing and Regulation	Lab ID: 1042	Mold Analysis Laboratory license

Legend

< - Less than	mg - Milligrams	MDL - Method Detection Limit	ppb - Parts per Billion
> - Greater than	ug - Micrograms	NA - Not Applicable	ppm - Parts per Million
l - Liters	m3 - Cubic Meters	NS - Not Specified	ppbv - ppb Volume
LOQ - Limit of Quantitation	kg - Kilograms	ND - Not Detected	ppmv - ppm Volume
ft2 - Square Feet	cm2 - Square Centimeters	in2 - Square Inches	ng - Nanograms

EXHIBIT F



GALSON

LABORATORY ANALYSIS REPORT

6601 Kirkville Road
 East Syracuse, NY 13057
 (315) 432-5227
 FAX: (315) 437-0571
 www.sgsgalson.com

Client : Garden State Environmental, In Account No.: 15067
 Site : SALEM CO. VO TECH/SPECIAL SERV Login No. : L480536
 Project No. : #7410 MERCURY VAPOR
 Date Sampled : 16-MAY-19 - 17-MAY-19 Date Analyzed : 23-MAY-19
 Date Received : 21-MAY-19 Report ID : 1136830

Mercury

<u>Sample ID</u>	<u>Lab ID</u>	<u>Air Vol</u> <u>liter</u>	<u>Total</u> <u>ug</u>	<u>Conc</u> <u>ng/m3</u>
5-16-TE-01	L480536-1	92.8	<0.060	<650
5-16-TE-02	L480536-2	99.75	<0.060	<600
5-16-TE-03	L480536-3	90.8	<0.060	<660
5-16-TE-04	L480536-4	94.8	<0.060	<630
5-16-TE-05	L480536-5	98.91	<0.060	<610
5-16-TE-06	L480536-6	NA	<0.060	NA
5-17-TE-01	L480536-7	99.75	<0.060	<600
5-17-TE-02	L480536-8	99.75	<0.060	<600
5-17-TE-03	L480536-9	99.75	<0.060	<600
5-17-TE-04	L480536-10	NA	<0.060	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of Quantitation: 0.060 ug
 Analytical Method : mod. NIOSH 6009; CVAA TUBE
 Collection Media : 226-17-1A

Submitted by: CMW
 Date : 29-MAY-19
 Supervisor : KEG

Approved by: JJL

EXHIBIT 'F'



GALSON

LABORATORY FOOTNOTE REPORT

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.sgsgalson.com

Client Name : Garden State Environmental, Inc.
Site : SALEM CO. VO TECH/SPECIAL SERV
Project No. : #7410 MERCURY VAPOR

Date Sampled : 16-MAY-19 - 17-MAY-19 Account No.: 15067
Date Received: 21-MAY-19 Login No. : L480536
Date Analyzed: 23-MAY-19

L480536 (Report ID: 1136830):

Reported results reflect elemental analysis of the requested metals. Certain compounds may not be solubilized during digestion, resulting in data that is biased low.

SOPs: MT-SOP-20 (11), im-hgair (25)

L480536-1 (Report ID: 1136830):

Conc = <0.00065 mg/m3

L480536-2,7-9 (Report ID: 1136830):

Conc = <0.00060 mg/m3

L480536-3 (Report ID: 1136830):

Conc = <0.00066 mg/m3

L480536-4 (Report ID: 1136830):

Conc = <0.00063 mg/m3

L480536-5 (Report ID: 1136830):

Conc = <0.00061 mg/m3

L480536 (Report ID: 1136830):

Accuracy and mean recovery data presented below is based on a 95% confidence interval (k=2). The estimated accuracy applies to the media, technology, and SOP referenced in this report and does not account for the uncertainty associated with the sampling process. The accuracy is based solely on spike recovery data from internal quality control samples. Where N/A appears below, insufficient data is available to provide statistical accuracy and mean recovery values for the associated analyte.

Parameter	Accuracy	Mean Recovery
Mercury	+/-6.2%	98.8%

EXHIBIT 'F'

120E79610393311731
 Date: 05/21/19
 Shipper: UPS
 Initials: MAK
 Prep: UNKNOWN

480536

GALSON

CHAIN OF CUSTODY

27

Turn Around Time (TAT):	(surcharge)	You may edit and complete this COC electronically by logging in to your Client Portal account at https://portal.galsonlabs.com/	
<input checked="" type="checkbox"/> Standard	0%	Client Acct No.: 15067	Report To: Ms. Tara Ekiert
<input type="checkbox"/> 4 Business Days	35%	Company Name: Garden State Environmental, Inc.	Invoice To: Ms. Tuesdae Ward
<input type="checkbox"/> 3 Business Days	50%	Address 1: 555 South Broad Street	Company Name: Garden State Environmental, Inc.
<input type="checkbox"/> 2 Business Days	75%	Address 2: Suite K	Address 1: 555 S. Broad Street
<input type="checkbox"/> Next Day by 6pm	100%	City, State Zip: Glen Rock, NJ 07452	Address 2: Suite K
<input type="checkbox"/> Next Day by Noon	150%	Phone No.: 201 - 652 - 1119	City, State Zip: Glen Rock, NJ 07452
<input type="checkbox"/> Same Day	200%	Cell No.:	Phone No.: 201 - 652 - 1119
<input checked="" type="checkbox"/> Samples submitted using the FreePumpLoan™ Program		CS Rep: TLANCASTER	Email Address: tward@gseconsultants.com
<input type="checkbox"/> Samples submitted using the FreeSamplingBadges™ Program		Online COC No.: 180827	Comments:
		Email reports to: tekiert@gseconsultants.com, labreports@gseconsultants.com	P.O. No.:
		Comments:	Payment info: <input type="checkbox"/> I will call SGS Galson to provide credit card info <input type="checkbox"/> Card on File (enter the last five digits on the line below)

Comments: results also in ng/m³ if possible, please! Thank you!

State Sampled: Please indicate which OEL(s) this data will be used for:
 OSHA PEL ACGIH TLV MSHA Cal OSHA
 IAQ: 60ng/m³ Other: _____
 Specify Limit(s) Specify Other

Site Name: Salem Co. VO tech services | Project: #7410 Mercury Vapor | Sampled By: Tara Ekiert
 List description of industry or Process/interferences present in sampling area: unoccupied.

Sample ID * (Maximum of 20 Characters)	Date Sampled *	Collection Medium	Sample Volume / Sample Time Sample Area *	Liters Minutes in ³ , cm ³ , ft ³ *	Analysis Requested	Method Reference *	Hexavalent Chromium Process (e.g., welding, plating, painting, etc.)
5-16-TE-01	5/16/19	226-17-1A	92.8	Liters	Mercury Vapor	mod. NIOSH 6009; CVAA TUBE	
5-16-TE-02	5/16/19	226-17-1A	99.75	Liters	Mercury Vapor	mod. NIOSH 6009; CVAA TUBE	

* If the method(s) indicated on the COC are not our routine/preferred method(s), we will substitute our routine/preferred methods. If this is not acceptable, check here to have us contact you.

Chain of Custody	Print Name / Signature	Date	Time	Print Name / Signature	Date	Time
Relinquished By:	Tara Ekiert	5/20/19	9:30am	Received By:		
Relinquished By:				Received By:	Michelle Krause	5/21/19 1113

* You must fill in these columns for any samples which you are submitting.
 Samples received after 3pm will be considered as next day's business.
 Online COC No.: 180827
 Prep No.: PSY528566
 Account No.: 15067
 Draft: 5/10/2019 10:31:26 AM

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: <http://www.sgs.com/en/Terms-and-Conditions.aspx>

EXHIBIT 'F'



GALSON

CHAIN OF CUSTODY

Liters

Comments :

1. pump 1633 @ .20 Lpm x 389 min = 77.8
2. pump 2214 @ .18 Lpm x 68 min = 12.24

→ Had to use two pumps: First was fault.

Sample ID * (Maximum of 20 Characters)	Date Sampled *	Collection Medium	Sample Volume Sample Time Sample Area *	Liters Minutes in ² , cm ² , ft ² *	Analysis Requested	Method Reference ^	Hexavalent Chromium Process (e.g., welding, plating, painting, etc.)
5-16-TE-03	5/16/19	226-17-1A	77.8 + 12.24 = 90.82	Liters	Mercury Vapor	mod. NIOSH 6009; CVAA TUBE	
5-16-TE-04	5/16/19	226-17-1A	94.8	Liters	Mercury Vapor	mod. NIOSH 6009; CVAA TUBE	
5-16-TE-05	5/16/19	226-17-1A	98.91	Liters	Mercury Vapor	mod. NIOSH 6009; CVAA TUBE	
5-16-TE-06	5/16/19	226-17-1A	0 (Field Blank)	Liters	Mercury Vapor	mod. NIOSH 6009; CVAA TUBE	
5-17-TE-01	5/17/19	226-17-1A	99.75	Liters	Mercury Vapor	mod. NIOSH 6009; CVAA TUBE	
5-17-TE-02	5/17/19	226-17-1A	99.75	Liters	Mercury Vapor	mod. NIOSH 6009; CVAA TUBE	
5-17-TE-03	5/17/19	226-17-1A	99.75	Liters	Mercury Vapor	mod. NIOSH 6009; CVAA TUBE	
5-17-TE-04	5/17/19	226-17-1A	0 (Field Blank)	Liters	Mercury Vapor	mod. NIOSH 6009; CVAA TUBE	
Calibration tube		226-17-1A			Mercury Vapor	mod. NIOSH 6009; CVAA TUBE	
NOT SANIT 5/21/19 SK		226-17-1A			Mercury Vapor	mod. NIOSH 6009; CVAA TUBE	

^ If the method(s) indicated on the COC are not our routine/preferred method(s), we will substitute our routine/preferred methods. If this is not acceptable, check here to have us contact you.

Chain of Custody	Print Name / Signature	Date	Time	Print Name / Signature	Date	Time
Relinquished By:				Received By:		
Relinquished By:				Received By: Michelle Krause	5/21/19	11:13

* You must fill in these columns for any samples which you are submitting.

Samples received after 3pm will be considered as next day's business.

Online COC No.: 180827
Prep No.: PSY528566
Account No.: 15067
Draft: 5/10/2019 10:31:26 AM

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: <http://www.sgs.com/en/Terms-and-Conditions.aspx>



CERTIFICATE OF ANALYSIS

Customer : Garden State Environmental
555 South Broad Street, Suite K
Glen Rock, NJ 07452

Project ID : #7410 Salem County Special Services - Mercury in Rubberized Gym Floor

Matrix : Solid

PAS Project ID : P19-3606

Report Date : 5/31/2019

PAS Sample ID	Client ID	Analysis	Results	Units	DF	PQL	MDL	Method	% Solids	Date Sampled	Date Analyzed
P19-3606-01	5-17-TE-01 Gym Path	Mercury	258	mg/Kg	2500	122	26.7	SW 846 7471 B	100	5/17/19 14:15	5/22/19 12:55
P19-3606-02	5-17-TE-02 PT Room - Under Magazine	Mercury	256	mg/Kg	1250	58.9	13.0	SW 846 7471 B	100	5/17/19 14:23	5/22/19 12:56
P19-3606-03	5-17-TE-03 PT Room - Left Side Cabinet	Mercury	217	mg/Kg	1250	46.8	10.3	SW 846 7471 B	100	5/17/19 14:33	5/22/19 12:57

Except for the parameters tested, PAS makes no representation as to the fitness or quality of the sample taken.

DF = Dilution Factor

PQL = Practical Quantitation Limit

MDL = Minimum Detection Limit

All samples are analyzed in accordance with
New Jersey Department of Environmental
Protection protocols.

Mark D. Feitelson, Lab. Director

EXHIBIT 'F'

