

SCHOOLS

PAIN AND PLASTER REPAIRS-VARIOUS
PAIN AND PLASTER REPAIRS-STANDARD SPECIFICATIONS

GENERAL SPECIFICATIONS

(DIVISION 01)

PAINT AND PLASTER REPAIRS-VARIOUS SCHOOLS
PAINT AND PLASTER REPAIRS-STANDARD SPECIFICATIONS

SECTION 01 1000 – SCOPE OF WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.
- B. See General Conditions for items pertaining to this section not enumerated herein.
- C. See Section 01 1100- ENVIRONMENTAL AND OTHER SPECIAL CONSTRUCTION REQUIREMENTS for “Environmental and Asbestos Abatement Coordination” and related attachments, and for information related to Asbestos Abatement and related Environmental coordination.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Work covered by the Contract Documents.
 - 2. Work sequence or phases.
 - 3. Work under other Contracts.
 - 4. Use of premises.
 - 5. Owner's occupancy requirements.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Specification B-002 G (General Construction) of 2018/19
- B. Project Location: _____
- C. Owner: School District of Philadelphia (“School District” or “Owner”),
Attention: Francine Locke and Jerry Junod, ,
Office of Capital Programs 3rd Floor Portal C
440 North Broad St.,
Philadelphia, Pennsylvania 19130.
- D. SDP Project Manager: Jerry Junod
- E. Construction Manager: TBD
- F. Architect/Engineer/Asbestos Project Designer

School District of Philadelphia (“School District” or “Owner”),
Attention: Francine Locke and Jerry Junod, ,
Office of Capital Programs 3rd Floor Portal C
440 North Broad St.,
Philadelphia, Pennsylvania 19130.

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G. Types of Construction Project:

1. Paint and Plaster Repairs

H. Types of Construction Contract:

1. Single Prime Contract
2. General Construction: Paint and Plaster Repairs

PART 2 - SCOPE OF WORK

2.1 The work to be done under this contract includes Paint and Plaster Repairs services at **(Insert project Location)** and is anticipated to include, but are not limited to the following:

- 1 Paint and Plaster Repairs per the attached Scope of Work detail for this location and in Compliance with the US EPA Renovation, Repair and Painting Regulations dated April 22 2010 and the School District of Philadelphia Paint and Plaster Stabilization Project Plan and Procedures (copy attached) .
2. Responding to spill cleanups requiring HEPA vacuuming and wet wiping response actions of Paint and Plaster on all surfaces
3. Spill cleanup service will be required seven (7) days per week, twenty-four (24) hours per day. All service calls must be responded to immediately.

2.2 **(Insert Detailed Scope of work for this location here or by attachment)**

- 2.3
1. The Contractor shall maintain an Inventory of Paint and Plaster and other materials and equipment necessary to perform work as outlined in the various locations Scope of Work.
 2. Work will consist of the furnishing of all labor, materials and equipment necessary for performing Paint and Plaster services. The Contractor will properly remove and dispose of waste generated materials in accordance with all federal, state and local regulations.
 - 3 The Contractor shall provide all the necessary tools and equipment of the trade to complete the required work of this contract including but not limited to: HEPA vacuum(s), airless sprayers, ground fault circuit interrupters (GFCI) panels, ladder(s), 1 tier scaffold, and all associated painting and plaster equipment at no additional cost to the District.
 - 4 The Contractor shall provide all the necessary materials of the trade to complete the required work of this contract including but not limited to: 6 mil poly, duct tape, painters tape, signage, personnel protective equipment and all associated filters, at no additional charge to the School District.
 - 5 No additional charges will be paid by the School District to the Contractor for the repair or replacement of any tools or equipment which are broken, vandalized, stolen, or wear out as a result of work done under this contract.

PART 3 – DETAILED REQUIREMENTS

3.1 EXECUTION OF THE WORK

1. The Contractor will receive a notice from the Project Director.
- .2 All paperwork, notification and Clearance Verification requirements for the US EPA Lead Renovation, Repair and Painting must be in good order before the paint and plaster work for this location is started
3. The Contractor shall notify the Project Coordinator assigned by the Office of Environmental Management and Services at least 48 hours prior to starting work.
4. A foreman shall be present on the site at all times when work is in progress.
5. After a job has been started, the Contractor is required to man the job continuously until it has been completed.
6. The Contractor and all subcontractors shall be responsible for all costs of parking their vehicles.
7. Actual size of work crew for each job will be determined by the Project Coordinator assigned by the Office of Environmental Management and Services

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PART 4 - WORK UNDER OTHER CONTRACTS

- 5.1. The Owner reserves the rights to award other separate Contracts for additional, different or other work or construction operations related to the Project or at the Project site, and to perform work or construction operations related to the Project or at the Project site with its own forces. See General Conditions and Supplementary Conditions.
- 5.2. The Contractor must cooperate fully with the other separate Contractors and the Owner and must coordinate its Work and the Work of its Subcontractors with the Work of the other separate Contractors and the Owner so as not to interfere with, delay, disrupt, or hinder any work or construction operations related to the Project or at the Project site. See General Conditions and Supplementary Conditions.
- 5.3. Preceding Work or Other Concurrent Work: The Owner will use their own personnel, or award separate Contract(s), for the following work or construction operations related to the Project or at the Project site:

PART 5 - USE OF PREMISES

- 6.1. General: The Contractor shall have use of the premises for construction operations as indicated on Drawings or specified in Contract Documents by Contract limits.
- 6.2. Use of the Site: Limit use of the premises to Work in areas indicated. Confine construction operations to areas within Contract limits indicated. Do not disturb portions of the Project site beyond the areas in which the Work is indicated. Allow for Owner occupancy of the Project site and use by the public as indicated.
- 6.3. Driveways and Entrances: Keep driveways and entrances serving the premises clear and available to the Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize use of driveways and entrances. Schedule deliveries to minimize use of space and time requirements for storage of materials and equipment on-site. Maintain all exit ways and exits clear and available for egress. See General Conditions and Supplementary Conditions.
- 6.4. Use of the Existing Building: Maintain the existing building in a weather-tight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building and its occupants during the construction period. See General Conditions and Supplementary Conditions.

PART 6 - OCCUPANCY REQUIREMENTS

- 7.1. Partial Owner Occupancy: Owner will occupy the premises during entire construction period or during certain portions of the construction period that coincide with the academic school year and daily academic program, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits, unless otherwise indicated.
- 7.2. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction. See General Conditions and Supplementary Conditions.

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7.3. Owner Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed areas of the building, before Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work. See General Conditions and Supplementary Conditions.

END OF SECTION 01 1000

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SECTION 01 1100 – ENVIRONMENTAL COORDINATION

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplemental Conditions and other Division 1 Specification Sections, apply to this section.

1.2 BACKGROUND –CONSTRUCTION, RENOVATION AND MAINTENANCE SPECIAL CONSIDERATIONS WITHIN THIS FACILITY AND ON SCHOOL DISTRICT PROPERTY

Construction, renovation and maintenance projects can generate large amounts of dust, particulates, odors and debris.

The contractor shall submit a plan that identifies the location of all trailers, dumpsters , machines and vessels to be used on site and in addition documents the inventory and storage plan and location of all chemicals that will be used on site. The plan must also include copies of all Material Safety Data Sheets (MSDS) for any products used on site.

During Construction Project

Provide active means to prevent dust, particulates and odors in the air from dispersing into the occupied areas of the facility.

Alter/isolate the air handling system in the area where the work is being performed to prevent contamination of the duct system. The contractor staff shall be responsible for blocking off supply ducts and covering return air ducts to prevent contamination with dust and particulates.

Complete all construction barriers before construction work begins.

- a. Where containment is possible; utilize building walls and doors (all doors except construction access doors), close and seal with duct tape to prevent dust and debris from escaping.
- b. Where construction, demolition, or reconstruction is not capable of containment by utilizing existing building walls and doors, use one of the following methods of isolation:
 - 1) Airtight plastic barriers extending from floor to ceiling decking, or ceiling tiles if not removed.
 - 2) Plastic barrier seams to be sealed with duct tape to prevent dust and debris from escaping.
 - 3) Drywall barriers. Seams or joints will be covered or sealed to prevent dust and debris from escaping.
 - 4) Seal holes, pipes, conduits and punctures to prevent dust migration.

Place isolation barriers at penetration of ceiling envelopes, chases and ceiling spaces to stop movement of air and debris.

When openings are made into existing ceilings in work areas, where possible, the decontamination unit should be used which will seal off openings and fit tightly from ceiling to floor.

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Construct to maintain airflow from clean area through and into work area. Require all personnel to pass through this room. Create overlapping flap (minimum of 2 feet wide) at plastic enclosures for personnel access.

Maintain negative pressure within the work site including venting outside of the building

Direct pedestrian traffic from construction areas away from occupied areas to limit opening and closing of doors (or other barriers) that may cause dust dispersion, entry of contaminated air, or tracking of dust to occupied areas.

Place dust mats (walk off pads) at entrance to work area and replace or clean regularly.

Contain construction waste before being transported in covered containers.

Upon Completion of Project

1. Do not remove barriers from the work area until completed project is thoroughly cleaned.
2. Vacuum work area including barriers.
3. Wet mop area and wipe down horizontal surfaces.
4. Remove barrier material carefully to minimize spreading of dirt and debris associated with construction.
5. Barrier material should be wet wiped before removal.
6. Remove alterations to the air handling system in the area where the work is being performed.

Contain construction waste before being transported in covered containers.

IMPORTANT – Contrary to any drawing notes or other statements in the technical specification that may indicate “Hazardous Materials by others”, the scope of work for the Contractor does include requirements to remove, handle and dispose of some pre-existing regulated materials as may be necessary to complete the work outlined in the summary of work. The contract work does include selective demolition, abatement, and/or removal and disposal of pre-existing materials which are covered by occupational, environmental, health and safety regulatory programs. Contractor(s) shall be obligated to perform the contract work in consideration of the presence of these materials at the project site and will be required to perform special handling and/or abatement of these materials as required to complete the project. Contractor(s) shall integrate and sequence any required special handling and/or abatement activities within the Contractor’s CPM Construction Cost and Manpower Loaded schedule. Proper procedures, precautions, protections and controls must be used with these materials in accordance with all applicable safety and environmental regulations as well as the Project Safety Manual and the Site Specific Safety Program.

This Contract includes renovation work where all Contractors must be aware that the Contract Work involves work with Pre-Existing Regulated Building Materials.

The Contract Work includes selective demolition, abatement, and/or removal and disposal of pre-existing materials which are covered by occupational, environmental, health and safety regulatory programs. Contractors shall be obligated to perform the contract work in

consideration of the presence of these materials at the project site and will be required to perform special handling and/or abatement of these materials as described below. Contractors shall integrate and sequence any required special handling and/or abatement activities within the General Contractor's Coordinated CPM schedule. Proper procedures, precautions, protections and controls must be used with these materials in accordance with all applicable safety and environmental regulations as well as the Project Safety Manual and the Site Specific Safety Program.

All activities, including but not limited to, handling, abating, selective demolition, removal, surface preparation, or cleaning, involving the materials listed below are **not** excluded from the contract work per General Conditions.

Non-Friable Asbestos Containing Materials are not expected to be encountered in the replacement or repair and/or the demolition work involving this project. This material shall be removed by non-friable methods or shall require the submission of a City of Philadelphia Asbestos Control Regulations Alternative Method Work Plan.

Asbestos Containing Materials exists in areas but this work is not expected to impact these materials. If it becomes necessary for abatement work will be performed under a separate contract. This contract is for paint and plaster work and not for abatement contract work by an asbestos abatement contractor licensed by City of Philadelphia and the Commonwealth of Pennsylvania. The asbestos abatement shall be performed in accordance with the direction and oversight of a licensed Asbestos Project Inspector(s) as assigned to the project(s) by the SDP OEM&S and the contractor shall provide Contractors Insurance for the abatement as required by the General Conditions.

4. Due to the buildings construction date, the presence of **Lead Based Paint (LBP)** is possible. A detailed assessment for LBP was not conducted for this project. Nevertheless, the Contractor should expect to encounter LBP as is typical for buildings of this vintage. All surface preparation prior to painting or other specified renovation work which may result in disturbance of LBP, and is not regulated as LBP abatement under applicable state and federal regulations, is included in the contract scope of work. In work involving LBP, Contractor shall follow and document all applicable procedures required by OSHA. Renovation work involving LPB is covered and must comply with Section 18 Lead Reduction Plans of the Project Safety Manual for the School District of Philadelphia. In addition, for schools built prior to 1978 and defined as a child occupied facility (Children under age 6) contractors performing work must comply with the US EPA LEAD Safety for Renovation, Repair and Painting (US EPA RRP) regulation.
5. **Avian Droppings**, Pigeon or otherwise, if encountered during the execution of the work shall be addressed by the Contractor(s) according to the procedures detailed in Section 20 Histoplasmosis of the Project Safety Manual for the School District of Philadelphia.
6. Contractor shall separate all **used lamps** removed for the project that contain mercury from other demolition waste and store them safely on site, in appropriate containers in a secure location, without breakage (breakage releases the mercury and may convert the resultant waste into "Hazardous Waste"). Mercury Containing Light bulbs include **all** Fluorescent bulbs, High Intensity Discharge, Mercury Vapor, Metal Halide, High-Pressure Sodium, and Low-Pressure Sodium. The storage containers must be labeled: "Used Lamps - Universal Waste" and dated with the date of removal from the fixture. Upon accumulation of the used lamps from a completed phase of demolition, the contractor shall notify the Project Manager to arrange for the SDP OEM&S to remove them from the site for reuse or recycling per the US EPA Universal Waste regulations.

7. Electrical equipment that may contain **Polychlorinated biphenyls (PCBs)** may be present in the building. Removal, demolition, and secure storage in approved containers supplied by the contractor of fluorescent lighting fixtures and ballasts shall be the responsibility of the Contractor. Almost all fluorescent light fixtures made before **July 1979** have ballasts with capacitors containing small amounts of highly concentrated PCBs (polychlorinated biphenyls). When these ballasts fail, or are physically damaged, the PCBs can leak out. PCBs can be harmful to children and adults. Therefore, the contractor must take care to remove all fluorescent fixtures without damage to the ballast. Fluorescent Light Ballasts must be assumed to contain PCBs unless proven otherwise. For all employees handling light fixtures or ballasts that may contain PCBs, Contractor shall require the procedures under paragraph 4, Hazardous Non-Routine Tasks and Nearby Work, of Section 15, Hazard Communication, in the Project Safety Manual for the School District of Philadelphia.

Light fixtures that are assumed to have PCB containing ballasts must be securely stored in a container approved for PCB disposal at a secure on-site location. The container must be marked "Contains PCBs" and dated with the date of initial accumulation. Upon accumulation of light fixtures and ballast from a completed phase of demolition, the Contractor shall notify the Project Manager to arrange for the SDP OEM&S to remove them from the site and coordinate proper disposal.

Only light fixtures that are clearly marked with a manufacture date later than July 1979 or labels or marks indicating "No PCBs," fixtures shall be segregated from the Demolition Debris and stored separately for inspection and proper disposal by a person designated by the SDP OEM&S.

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PART 2 – SILICA SPECIFICATION

For Masonry Grinding, Cutting and Sawing

Purpose

The purpose of this specification is to protect employees, the public, the environment and property from the detrimental effects of silica-containing dust generated from construction and restoration/maintenance activities.

Scope and Application

1. This specification applies to powered tools or equipment used to cut, grind, core or drill masonry or concrete materials.

Definitions

1. Masonry Material – For purposes of this specification includes, concrete block, brick, stones (natural and man-made), terra cotta tile, mortar and concrete made by mixing cement, and water with sand, and aggregate such as gravel or crushed stone. Material that is apparently stone-like in appearance and texture shall be presumed to be concrete or masonry material, unless otherwise indicated by evidence as presented by the employer.
2. NIOSH REL – The National Institute of Occupational Safety and Health Recommended Exposure Limit. For silica this is 0.05 milligrams per cubic meter (mg/c) averaged over a 10-hour time-weighted average.
3. OSHA PEL – The Occupational Safety and Health Administration's Permissible Exposure Limit is expressed as per 1926.55 - Gases, vapors, fumes, dusts, and mists - by the equation:
$$\text{PEL} = 10 \text{ mg/ m}^3$$
$$\% \text{ silica} + 2$$
4. Powered tools or equipment – Tools in which the motive force that disrupts concrete or masonry materials is provided by a source other than human energy. Powered tools and equipment include those powered by electrical, combustion, hydraulic, chemical, or pneumatic energy.
5. Dust reduction system – Technology that utilizes the application of water or local exhaust ventilation to reduce airborne dust generated by the use of powered tools or equipment. Local exhaust ventilation may include vacuum systems, dust collection systems, and dust exhaust systems.

Controls

1. In all cases, engineering and/or work-practice or administrative controls that reduce dust at the source where it is being generated shall be the control of choice. In those instances where such controls cannot be used – even temporarily — employees shall be protected with respirators that are used as part of a respiratory protection program. Additionally, the contractor must document how they determined that engineering and/or work practice or administrative controls could not be used.
 - a. Safety and Effectiveness of Dust Control Systems

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- 1) Procedures shall be implemented to ensure that dust reduction systems maintain their effectiveness for dust reduction throughout the work shift.
- 2) Dust reduction systems shall be installed, operated, and maintained in accordance with manufacturer recommendations when there are such.
- 3) When electrical tools are used with water as a dust reduction system, it shall be done in accordance with applicable requirements of electrical safety.

b. Dust Collection/Management

- 1) Dust shall be contained and disposed of in bags that can effectively hold dust without breaking.
- 2) Work surfaces and clothing shall be cleaned with vacuums and not by dry sweeping or the use of compressed air.
- 3) Respirators shall be worn when changing out bags or handling dust.

Evaluating the Effectiveness of Controls

1. The primary purpose of exposure monitoring and site inspections for the presence of dust is to ensure that engineering controls are effective in reducing silica dust generation. When personal air monitoring results are elevated or when there is visible dust, the contractor must intervene to determine the cause of the problem and fix it.
2. As soon as possible after the beginning of cutting or grinding tasks, the contractor shall conduct personal air monitoring of workers performing the cutting/grinding tasks. An industrial hygienist shall perform the monitoring and must be consulted prior to the execution of work. If personal air monitoring results indicate that the exposures are above the NIOSH Recommended Exposure Limits (REL) for silica, the contractor must ensure that the controls are functioning and being used properly. In all cases when the REL is exceeded, workers shall be provided with proper respiratory protection.
3. Following modification of controls as described above, the contractor shall conduct personal air monitoring to verify the effectiveness of those modifications in reducing employee exposure to silica.
4. If the contractor has done similar work in the past, has conducted exposure monitoring, and has records of this, the results can be used as a preliminary means to evaluate the effectiveness of controls. It is important that the previous jobs where the monitoring was conducted be similar to the current job, and that the control used be the same, including the manufacturer and model of the vacuum used.
5. Periodic monitoring shall be performed to assure the effectiveness of controls over time.
6. The contractor shall conduct daily visual inspections of the site for the presence of visible dust during grinding and cutting tasks. The presence of such dust is a sign that the controls are not doing their job.

Training

1. Employee training. An employer whose operations include using powered tools or equipment to cut, grind, core, or drill concrete or masonry materials shall provide training

on the following topics to all employees prior to their assignment to jobs or work areas where the employer will be conducting these operations that potentially expose them to silica-containing dusts:

- a. The potential health hazards of overexposure to airborne dust generated from concrete and masonry materials, including silicosis, lung cancer, chronic obstructive lung disease (COPD) and decreased lung function.
 - b. Methods used by the employer to control employee exposures to airborne dust from concrete and masonry materials, including wet cutting, local exhaust ventilation systems, and process isolation, as applicable.
 - c. Proper use and maintenance of dust reduction systems, including the safe handling and disposal of waste materials collected in connection with their use.
 - d. The importance of good personal hygiene and housekeeping practices when working in proximity to dust from concrete and masonry materials including: not smoking tobacco products; appropriate methods of cleaning up before eating, and appropriate methods of cleaning clothes.
 - e. OSHA requirements including permissible exposure limits, requirements for engineering controls, and respirator protection program requirements.
2. Supervisor training. Prior to supervision of employees who will be cutting, grinding, drilling, or coring concrete or masonry materials, supervisory employees shall be trained on the following topics:
 - a. The information required to be provided by subsection above. Identification of tasks the employees will perform, which may result in employee exposure to concrete or masonry dust.
 - b. Procedures for implementation of the measures used by the employer to reduce the exposure to concrete or masonry dust.
 - c. Measures for verifying the effectiveness of controls.
 3. Periodic training. On jobs that last more than one year, the employer shall conduct the training required by this section at least annually.

G. Training Records

1. General Requirements: The contractor must maintain a record of all training required by this part within the preceding three (3) years for each person, who performs or directly supervises this specific job function (Masonry, Grinding, Cutting and Sawing). These training records must be maintained during the time that the person performs or supervises this job function (Masonry, Grinding, Cutting and Sawing). These training records must be kept for direct employees of the contractor as well as independent contractors, subcontractors and any other person who performs or directly supervises these job functions for the contractor.
2. Location of Records: The contractor must retain the training records required by this part

to include all initial and recurrent training received within the preceding three (3) years for all persons performing or directly supervising this job function (Masonry, Grinding, Cutting and Sawing). Records may be maintained electronically or by other acceptable means.

When the person ceases to perform or directly supervise this job function (Masonry, Grinding, Cutting and Sawing) the contractor must retain the training records for an additional ninety (90) days.

3. Contents of Records: Each training record must contain the following:
 - a. The individual's name;
 - b. The most recent training completion date;
 - c. A description, copy or reference to training materials used to meet training requirements;
 - d. The name of the person or organization providing the training.

H. Written Program

1. The contractor shall have a site-specific, written program that contains the following elements:
 - a. Introduction: Project description, location, scope and schedule of work.
 - b. Personnel: Project manager, person in charge of silica program.
 - c. Silica dust-emitting activities: Tasks, equipment, materials, work crew.
 - d. Engineering and work-practice controls: Type of control, use and maintenance procedures and how effectiveness will be verified including personal air monitoring data and schedules for air monitoring.
 - e. Respiratory Protection Program.
 - f. Schedule: Timetable for implementing compliance program.
 - g. Hygiene procedures: Protective clothing (beside respirators) and equipment, housekeeping, hand washing stations.

PART 3 - NOT USED FOR THIS PROJECT

PART 4 - NOT USED FOR THIS PROJECT

PART 5 - EXECUTION

5.1 EXAMINATION

Existing Conditions: the existence and location of Asbestos Containing Materials per the available Asbestos Inspection Report is not guaranteed to include all that may effect the major renovation.

Before construction, the contractor will inspect areas of work and notify the Construction Manager of any suspected ACM not previously identified for abatement or confirmed as not containing asbestos according to the AIR prepared for the project renovation.

5.2 PERFORMANCE

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- A. During the major renovation contract work, if the Contractor discovers or suspects ACM in the area of work, work will not proceed in that area. The Contractor will immediately notify the Project Manager and the School District's Office of Environmental Management and Services who will schedule testing and abatement if required.

- B. All Contractors shall post a copy of the AIR in a visible location in each area of work.

The contractor's renovation schedule must provide for the coordination and phasing of All Paint and plaster work activities with the renovation contract work. This shall include allowing for post- abatement final clearance verification sampling as required by regulations, or as may be requested by the Philadelphia Federation of Teachers.

END OF SECTION 01 1100

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ASBESTOS INSPECTION REPORT
(Not Required for This Project)

SCHOOL DISTRICT OF PHILADELPHIA

**PAINr AND PLASTER STABILIZATION
PROJECT PLAN AND PROCEDURE**



Paint and Plaster Stabilization Project Plan and Procedures

The School District of Philadelphia (District) has developed a Paint and Plaster Stabilization Project Plan and Procedures. The plan and procedures were jointly developed with the District's Office of Environmental Management and Services and the Philadelphia Federation of Teachers' Health and Welfare Fund and Union's Director of Environmental Science & Occupational Safety & Health.

Paint and Plaster Stabilization is a term that describes the process of a qualified group of trained professionals performing the removal of loose, peeling, flaking and damaged paint and plaster under controlled conditions. The work is performed in accordance with the US Environmental Protection Agency (EPA) Lead Renovation, Repair and Painting rule. The purpose of the work is to minimize the risk of children's exposure to lead-based paint while at school.

Contents:

- I. Communication & Collaboration
 - II. Preliminary Steps
 - III. Stabilization Procedures
 - IV. Oversight
 - V. Testing
 - VI. Project Closeout
-

I. Communication & Collaboration

Communication by the Operations Division with parents, principals, teachers and staff will take place at a minimum of 10-days prior to work commencement at a school. The Operations Division will coordinate and collaborate with the Philadelphia Federation of Teachers' Health and Welfare Fund and Union's Director of Environmental Science & Occupational Safety & Health on all communication activities and all work scopes, FAQs, notifications and other materials will be shared. The following communication will take place at every school in the program.

1. *Email to Principal*

An email to principals will be sent by the Operations Division at least two weeks in advance of work starting to announce that the project will commence at their school. The email will share coordination information including:

- Determining relevant school calendar issues such as testing and holidays.
- Providing the initial work schedule.
- Explaining the need for logistical support and help with storage, relocations and replacement of belongings in classrooms and closets.
- Requesting a point of contact for School Advisory Council and/or Home and School Association.

2. *Letter to Families and FAQ Sheet*

Paint and Plaster Stabilization Project Plan and Procedures

A backpack letter will be sent home with students to announce that the project will commence within 10 days. A Frequently Asked Question sheet will be provided to parents. The EPA Lead RRP pamphlet will be sent home with students in grades Pre-K to 1 via backpack. The pamphlet will also be made available in the Main Office.

3. *Kick Off Meeting*

A kick off meeting will be conducted by the Operations Division. The meeting will be scheduled through the school's principal. The purpose of the meeting is to share information with teachers, staff and families about the project's work plan and procedures. A presentation will be provided by the Operations Division. The meeting will provide the opportunity for questions and answers.

4. *Teacher Notification*

Teachers will be notified directly by the Operations Division through an email and a postcard will be placed in each teacher's mailbox 10-days in advance of the project start.

5. *Detailed Work Scope Determination*

A school-specific scope determination report (i.e., the location and quantity of paint and plaster to be stabilized) will be made available in the school's main office and will also be emailed to a designated representative of the School Advisory Council and/or Home and School. An email from the school providing the name of the designated point of contact should be emailed to: capitalprograms@philasd.org.

6. *Weekly Email to Principal and SAC/HSA*

A weekly email will be sent to the Principal and a designated point of contact for the school's SAC/HSA to share the stabilization schedule. The Paint and Plaster Stabilization Plan and Procedures will also be emailed to the Principal and HSA/SAC.

II. Preliminary Steps

1. *Decluttering*

Classrooms, closets and other storage areas will need to be decluttered prior to commencing stabilization work. Coordination will be required for decluttering activities between teachers and facilities staff to ensure that outdated and unneeded academic materials can be discarded, and that resources are provided to assist in the decluttering task such as heavy lifting support staff for moving large furniture and such as additional recycling dumpsters.

2. *Wall Hangings*

Posters, bulletin boards, framed art and other wall hangings will have to be removed in order for the paint stabilization project to commence. This will be coordinated with teachers by the Operations Division at the kick off meeting and during the phasing of the project through the principal.

3. *Pre-Cleaning*

Paint and Plaster Stabilization Project Plan and Procedures

On an as-needed basis for areas such as cluttered storage closets that require extensive movement of materials and HEPA vacuuming and wet wiping prior to paint and plaster stabilization, the Maintenance Environmental staff will perform a pre-cleaning in advance of stabilization work. The intent of this task is to provide a clean work area prior to stabilization. Pre-cleaning will take place in work areas where painters are able to complete stabilization in one work shift. Otherwise, post-cleaning will take place (described below).

4. *Post-Cleaning*

Post-cleaning will be conducted by facilities staff after paint and plaster stabilization is completed. This will include the HEPA vacuuming and wet-wiping of all horizontal surfaces and polishing floors. Testing will be conducted after the post-cleaning is completed in accordance with the plan's testing section.

5. *Swing Space*

The identification of swing space will be required to ensure that classrooms are available during the school year. A plan will be created on a school by school basis to relocate students and teachers from classrooms during the course of this work. All work areas will be scheduled for a cleaning by facilities staff after the paint stabilization work is completed by Maintenance. This will require an additional day to complete, therefore, swing space is essential.

6. *Cleaning Staff Training*

Cleaning staff will be provided with information about this project and expectation for post-cleaning.

III. Stabilization Procedures

Paint and plaster stabilization work will comply with the EPA's Lead RRP rule. All staff conducting this work will be certified as Lead RRP workers.

The following procedures should be followed:

1. *Work Practices*

- Isolate work areas to restrict dust from impacting adjacent areas.
- Post signs/notifications as per EPA Lead RRP.
- Place "walk-off" pads at all access points into/out of work area.
- Seal all openings [windows, doors and HVAC system registers/grilles] inside work areas as per direction from on-site environmental monitors and consistent with the EPA Lead RRP rules & guidelines.
- **Workers should wear disposable clothing and foot coverings while inside work areas – do not leave work areas wearing disposable clothing.**
- Move/cover all remaining objects in work area to protect them.

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- Employ/Erect “portable” dust containment barrier systems to limit the size of work areas requiring post-cleaning and limit testing and exposure.
- Place plastic floor coverings to extend at least 6 feet out from vertical surfaces being stabilized unless utilizing vertical barriers/containment systems.
- Perform all paint stabilization work in compliance with the EPA Lead RRP rules & guidelines and as per the directions of on-site environmental monitors to minimize dust contamination.
- Take all steps necessary to ensure that no dust or debris leaves the work area while the work is being performed.
- Use precautions to ensure that all employees, tools, and other items, including the exteriors of waste containers, are free of dust and debris before leaving the work area.
- Collect all paint chips & debris, fold up plastic floor coverings and any other plastic sheeting used on horizontal surfaces, without dispersing dust or debris and dispose of the material in heavy duty plastic waste bags.
- Do not use power tools.
- Do not use dry sweeping with brooms.
- Do use water/misting during stabilization to minimize dust.
- Do use HEPA vacuums and wet wiping/cleaning techniques.

2. Clean-Up & Completion of Stabilization Work

- There should be no signs of loose, peeling, flaking, bubbling or crumbling paint or plaster visible on walls or ceilings or on any other painted surfaces.
- There should be no visible signs of paint chips, debris or dust of any kind on surfaces within “contained” and isolated work areas NOR outside of the contained and isolated work areas.
- Window sills, floors, baseboards, shelving units, tops of cabinets, desks, chairs, tables and all other horizontal surfaces must be free of any visible signs of paint and plaster dust and/or debris.
- There must be absolutely no visible signs of paint chips, and/or paint/plaster dust or debris on academic/educational materials, including books, bins, toys, desks, chairs, carpets, papers, etc., after each work shift and to allow for re-occupancy the next day,
- Any remaining paint and plaster must be tightly adhered to wall and ceiling surfaces such that it can not be further damaged, pried off or disturbed by “simple fingernail pressure” otherwise work will not be considered to be successfully completed.
- Newly painted surfaces should match the aesthetics of the area in total and should cover the entirety of the wall or ceiling area that was addressed through this work. No visible “patches” of paint should be observed.

IV. Oversight

The environmental technician will oversee paint and plaster stabilization work to ensure compliance with lead safe work practices. An oversight report will be completed at the end of every shift to record the work areas that were stabilized. The following tasks will be verified and recorded:

- Pre-cleaning

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- Contents moved
- Work area prepped
- Surfaces stabilized
- Contents back in place
- Final inspection approval and photos

V. Testing

The District and the PFT worked closely to develop an agreed upon approach to verify that stabilization work was performed in accordance with lead safe work practices, and that classrooms will be safe for re-occupancy by children and staff. This approach exceeds the EPA Lead RRP rule requirements in terms of the types of and amounts of testing performed.

Testing will take place only on surfaces in a specified Lead RRP work area. All other areas in a space, e.g., classroom, will be visually inspected but not tested. For example, in a room where only one wall out of four is receiving paint and plaster stabilization, the testing procedures outlined in the plan will only apply to the designated work area for that wall. All other areas will be visually inspected for signs of paint chips, dust and debris.

Qualitative testing methods, i.e., visual inspection and EPA RRP Verification Testing, will be systematically compared with quantitative testing methods i.e., XRF Analyzer Dust Wipe Test, for 10-business days of the project at a given school. If the comparison testing is consistently correlated in terms of pass/fail, only qualitative testing will continue for the duration of the project.

1. *Initial Visual Inspection*

Following lead-based paint stabilization work and cleanup performed by RRP certified painters, a visual inspection will be performed by a “certified renovator” supervisor and the on-site, third party environmental technician, to verify that the area is free of paint chips, paint debris, and visible dust.

Following the completion of EPA RRP lead stabilization in a work area, sampling personnel will wait one (1)-hour prior to *initiating* the testing.

2. *EPA RRP Verification Testing*

The EPA RRP cleaning verification testing will be performed in accordance with Title 40 §745.85, within the work area.

Detailed as follows:

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- When work areas have passed the visual inspection, the cleaning verification procedure is performed by wiping all dust collection surfaces in the work area with a wet, disposable cleaning cloth and comparing that cloth visually to a cleaning verification card. Dust collection surfaces include, but are not limited to, window sills, countertops, desks, chairs, bookshelves, cabinets, and floors, found within the work area.
- Each window sill, in the work area, will be wiped by using a single, wet, disposable cleaning cloth. Once the entire window sill surface is wiped, the cleaning cloth is compared to the cleaning verification card.
- Each horizontal surface, within the work area, will be wiped using a wet disposable cleaning cloth.
- For smaller countertops, unit ventilator covers, floors, etc., with a total surface area less than 40 square feet—wipe the entire surface with a single wet disposable cleaning cloth and compare to the cleaning verification card.
- Large area surfaces, such as large countertops and floors, have surface areas larger than 40 square feet—each of these large countertops and floors must be divided into roughly equal sections that are 40 square feet or less.
- Wipe each section separately using a new wet disposable cleaning cloth for each separate section.
- When conducting cleaning verification on floors, the wet disposable cleaning cloth will be attached to the handle of a wet mopping system.
- The use of the wet mopping system handle allows the sampler to apply uniform pressure on the cleaning cloth.
- Each cleaning cloth is then compared to the cleaning verification card.

3. *Colorimetric Instant Wipe Test*

Following clearance by the EPA RRP cleaning verification testing, the environmental technician will use an SKC, Inc. “Full Disclosure® Instant Wipe” to validate the veracity of the results obtained by the qualitative dust verification testing outlined by the EPA RRP Rule. If the validation lead dust wipe sampling analytical results are found to be consistent with the results of the dust verification testing, the lead dust wipe sampling validation sampling will end after 10-business days.

The NIOSH-developed SKC, Inc. Full Disclosure® Instant Wipes will be used to collect an additional qualitative result for the presence of lead-containing dust on the surfaces of concern. Environmental technicians will follow the manufacturer’s recommendations for sample collection and colorimetric determination of results.

The “Instant Wipes” will be collected at agreed upon locations on at least 20% of the of the surfaces where the EPA RRP cleaning verification testing was performed ensuring that at least one wipe per impacted horizontal surface is used.

After a period of 10 business days or 2 weeks, and daily sample collection in at least the first two (2) schools, representative from the SDP-OEMS and PFTH&WF/U’s Director of Environmental

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Science & Occupational Safety & Health, will evaluate all results and findings and come up with recommendations for how, and if, this approach should be continued and on what frequency.

4. XRF Analyzer Dust Wipe Test

Lead-wipe samples, analyzed by an X-Ray Fluorescence (XRF) analyzer with dust wipe capabilities, will be performed to determine a quantitative result for the presence of lead-containing dust on the surfaces of concern. Environmental technicians will follow the manufacturer's recommendations for sample collection and analysis by XRF.

The XRF-analyzed wipes will be collected, at agreed-upon locations on at least 20% of the surfaces where the EPA RRP cleaning verification testing was performed and sufficient to ensure that a minimum of one sample per each individual type of horizontal surface (e.g stone flooring, hardwood flooring, desktops, etc.) will be collected.

For any location where either the "Instant Wipe" or XRF-analyzed wipe are found to have concentrations of lead above the lead clearance levels established, the location will be re-cleaned and re-tested until a concentration below the lead clearance level is achieved.

Three testing methods will be conducted as follows:

Type of Clearance Tests	Building Component	Number of Sample Locations within Work Area	Type of Testing	Testing Specifications/Limitations
EPA RRP Cleaning Verification Wipe	Floors, Countertops, Desks, Tables, Window Sills	One (1) wipe every 40 square feet (ft ²) or entire surface of component if surface area is less than 40ft ² One (1) wipe for every window sill	Qualitative	<ul style="list-style-type: none"> Qualitative testing based on cleanliness (white glove test) According to RRP, the areas pass after the 3rd cleaning, regardless of verification
SKC, Inc. Full Disclosure® Instant Wipes	Floors, Countertops, Desks, Tables, Etc Window Sills	20% of surfaces wiped using EPA RRP Cleaning Verification Wipes	Qualitative	<ul style="list-style-type: none"> Qualitative testing based on colorimetric visual comparison Lower Limit of Visual Detection is 18µg of lead False positive and false negative interferences from silver, cadmium, barium, mercury, and titanium (percentages unknown).² Involves field preparation of sampling media using reagents

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XRF-Analyzed Wipes	Floors, Countertops, Desks, Tables, Etc Window Sills	20% of surfaces wiped using EPA RRP Cleaning Verification Wipes	Quantitative	<ul style="list-style-type: none"> Limit of Detection is 10µg of lead per wipe XRF analysis is statistically comparable to analysis by Atomic Absorption Spectroscopy³ Involves field preparation of samples (drying of samples in toaster oven) that takes up to 25 minutes per sample.
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5. *Optional Stakeholder Involvement with Testing and Verification*

The opportunity for parent and teacher involvement in verifying that areas are safe for re-occupancy after stabilization work is completed will be provided in the form of a small stakeholder team on an as requested basis. This will be offered at kick off meetings and scheduled through the Environmental Office.

The process will include:

In the morning between 7:00 and 7:30 a.m., a small stakeholder team including parent, teacher and other designated representatives will meet at the school. Information about areas in which stabilization work was completed the night before will be provided.

Following a visual inspection by the stakeholder team, both supplemental testing methodologies will be demonstrated.

VI. Close Out

1. Letter to parents
2. Post card placed in teachers' classrooms after area is completed
3. Final report in Main Office

PAINT AND PLASTER REPAIRS-VARIOUS SCHOOLS
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SECTION 01 1200 – SPECIAL INSURANCE REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This section includes special insurance coverage or policies in addition to those set forth in the General Conditions-GC-11-INSURANCE
 - 1. **Builder's Risk Insurance** in the coverage and amounts set forth in GC-11.1.1.5 IS NOT REQUIRED for this project.
 - 2. **Rigger's Liability Insurance** in the coverage and amounts stated in GC-11.1.1.6 IS NOT REQUIRED for this project
 - 3. **Environmental Liability/Contractor's Pollution Insurance** in the coverages and amounts stated **GC-11.1.1.9** IS REQUIRED for this Project

PART 2 - PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION 01 1200

PAINT AND PLASTER REPAIRS-VARIOUS SCHOOLS
PAINT AND PLASTER REPAIRS-STANDARD SPECIFICATIONS

SECTION 01 1300 – TIME OF COMPLETION, MILESTONES, PHASING OR SEQUENCING
REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 TIME OF COMPLETION

.COMPLETION: All of the work of this contract, task or work order shall be finally complete, as determined by Paragraph GC-9.8 the General Conditions, NO LATER THAN (MO/DA/YR) OR (XXX DAYS after the effective date of Notice to Proceed

A. Related Sections: The following Sections contain requirements that relate to this Section:

1. Article GC-8 TIME of the General Conditions
2. Article GC-9 PAYMENTS AND COMPLETION of the General Conditions
3. Section 23 SCHEDULE AND REPORTS of the Supplementary Conditions
4. Refer to other Sections for specific requirements and limitations applicable to time of completion of the Work.

1.3 MILESTONES (INTERIM COMPLETION DATES)

A. (NOT USED FOR THIS PROJECT)

1.4 PHASING AND SEQUENCING REQUIREMENTS

A. (NOT USED FOR THIS PROJECT)

A. Related Sections:

1. Refer to other Sections for specific requirements and limitations applicable to phasing or sequencing individual parts of the Work.

END OF SECTION 01 1300

SECTION 01 1400 MODIFICATIONS TO THE GENERAL AND SUPPLEMENTARY CONDITIONS

PART 1-GENERAL

1.1 RELATED SECTIONS

- A. Except as modified below, all provisions of the General and Supplementary Conditions shall remain in full force and effect.

1.2 MODIFICATIONS TO THE GENERAL CONDITIONS

- A. the following provisions modify the General Conditions only to the limited and specific extent stated:

Any references in the General Conditions to the School Reform Commission shall be modified to read Board of Education, or Board of Education as the successor to the School Reform Commission, as the context may require.

1.3 MODIFICATIONS TO THE SUPPLEMENTARY CONDITIONS

- A. The following provisions modify the Supplementary Conditions only to the limited and specific extent stated
- B. Any references in the Supplementary Conditions to the School Reform Commission shall be Modified to read Board of Education, or Board of Education as the successor to the School Reform Commission, as the context may require.
- C. The following sections do not apply to this project.

- 10. Temporary Water Supply
- 11. Temporary heat and Ventilation
- 12. Temporary Lighting and Power
- 14. Sign
- 16. Photographs
- 19. Shop Drawings/Samples
- 22. General Coordination
- 23. Schedule and Reports
- 24. Record and Information Binder
- 25. Guarantee/Warranty
- 27. Chases, Openings and Alterations, Sleeves, Thimbles and Inserts
- 30. Operation and Maintenance Data
- 31. Demonstration and Training
- 32. Surveys
- 33. Crane Lifting Requirements

END OF SECTION 01 1400

SECTION 01 1500 – CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes requirements for construction facilities and temporary controls, including support facilities, and security and protection.
- B. Support facilities include, but are not limited to, the following:
 - 1. Field offices and storage sheds.
 - 2. Temporary enclosures.
 - 3. Temporary elevator use.
 - 4. Waste disposal services.
 - 5. Rodent and pest control.
 - 6. Construction aids and miscellaneous services and facilities.
- C. Security and protection facilities include, but are not limited to, the following:
 - 1. Temporary fire protection.
 - 2. Barricades, warning signs, and lights.
 - 3. Environmental protection.

1.3 QUALITY ASSURANCE

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:
 - 1. Building code or International Construction Code (ICC) requirements.
 - 2. Health and safety regulations.
 - 3. Police, fire department, and rescue squad rules.
 - 4. Environmental protection regulations.
- B. Standards: Comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," ANSI A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities".
 - 1. Electrical Service: Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70 "National Electric Code". See Paragraph 51 of the Supplementary Conditions.

1.4 PROJECT CONDITIONS

- A. Temporary Utilities: Electric power and water exist at the Project site and will be provided to Contractor on an as-needed basis.
- B. Temporary Sanitary Facilities: Temporary sanitary facilities must be provided and maintained by the Contractor. Contractor and Subcontractor(s) employees will not be permitted to use the School District toilet or sanitary facilities outside of the immediate work area or in any occupied portions of the facility.

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- C. Conditions of Use: Keep School District services and facilities clean and neat in appearance. Operate in a safe, efficient, and sanitary manner. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.
- D. Delivery and Storage of Materials: Obtain prior approval of material storage and staging areas from school personnel. Assure that Contractor's personnel are present to receive all deliveries. Coordinate delivery schedules with school personnel.
- E. See Article GC-4.12 USE OF SITE and Article GC-4.15 CLEANING UP and Section 9-Sanitary Provisions, Section 10-Temporary Water Supply, Section 11-Temporary Heat and Ventilation, Section 11-Temporary Lighting and Power and Section 13-Temporary Fire Protection of the Supplementary Conditions for related requirements.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide new materials. If acceptable to the School District, the Contractor may use undamaged, previously used materials in serviceable condition. Provide materials suitable for use intended.
- B. Tarpaulins: Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.
- C. Open-Mesh Fencing: Provide 0.120-inch- thick, galvanized 2-inch chain link fabric fencing 6 feet high with galvanized steel pipe posts, 1-1/2 inches I.D. for line posts and 2-1/2 inches I.D. for corner posts, mounted in heavy concrete bases.

2.2 EQUIPMENT

- A. General: Provide new equipment. If acceptable to the School District, the Contractor may use undamaged, previously used equipment in serviceable condition. Provide equipment suitable for use intended.
- B. Electrical Outlets: Provide properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-Volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.
- C. Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
- D. Fire Extinguishers: In each area of Work, provide hand-carried portable, UL-rated, Class ABC, dry chemical extinguishers or a combination of NFPA-recommended classes for the exposures.
 - 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.
- E. Field Offices will not be required, Storage facilities, only, will be permitted.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed.
- C. The Contractor shall not be permitted to use School District toilet and sanitary facilities. Contractor shall provide temporary toilet and sanitary facilities, (i.e. Porta-Potties).
- D. Installation of temporary toilet and sanitary facilities for Contractor and Subcontractor employee use shall be according to the city of Philadelphia Plumbing Code.

3.2 SUPPORT FACILITIES INSTALLATION

- A. Locate storage sheds, if used, and other temporary construction and support facilities for easy access.
 - 1. Maintain support facilities until near Substantial Completion. Remove prior to Substantial Completion.
- B. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.
 - 1. Install tarpaulins securely, with incombustible wood framing and other materials. Close openings of 25 sq. ft. (2.3 sq. m) or less with plywood or similar materials.
- C. Temporary Elevator Use: Existing elevator shall not be available for Contractor's use during building occupancy. Any and all use of the elevator must be scheduled with the onsite School District Project Management Team.
- D. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F (27 deg C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material lawfully. The contractor must submit an Asbestos Waste bag out plan that includes all methods of movement within the facility and the hours of operation for review and approval of work plan by the onsite School District Project Management Team
- E. Rodent and Pest Control: If rodents, roaches, or other pests infiltrate the site after commencement of construction activities, retain a local exterminator or pest control company to recommend practices to minimize attraction. Employ this service to perform extermination and control procedures at regular intervals so the Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using environmentally safe materials.
- F. Rodent and pest control is the responsibility of the General Construction Contractor, per GC-4.15.9 of the General Conditions.

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3.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of the type needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers" and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations".
 - 1. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher in each room where construction activities are occurring.
 - 2. Store combustible materials in containers in fire-safe locations.
 - 3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in all areas.
 - 4. Provide supervision of welding operations, and similar sources of fire ignition.
- B. Exterior Enclosure Fence: Before selective demolition work begins, install an enclosure fence with lockable entrance gates. Locate where necessary to be effective with construction operations. Install in a manner that will prevent people and animals from easily entering work areas, except by the entrance gates.
 - 1. Provide open-mesh, chain link fencing with posts set in heavy pre-cast concrete bases.
- C. Security Enclosure and Lockup: Install substantial temporary enclosure of partially completed areas of construction. Assure that exterior door locations are secure and that intrusion protection systems are functional at the end of each working day. Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
 - 1. Storage: Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.
- D. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result. Avoid use of tools and equipment that produce harmful noise. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons at the site.
- E. See General Conditions and Supplementary Conditions.

3.4 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- B. Maintenance: Maintain facilities in good operating condition until removal.
- C. Termination and Removal: Remove each temporary facility when the need has ended or no later than Substantial Completion. Repair damages to facilities during use by Contractor. Clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
- D. See General Conditions and Supplementary Conditions

END OF SECTION 01 1500

PAINr AND PLASTER REPAIRS-VARIOUS SCHOOLS
PAINr AND PLASTER REPAIRS-STANDARD SPECIFICATIONS

TECHNICAL SPECIFICATIONS

SECTION 09 0290 – PLASTER PATCHING AND REPAIR

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Metal lath and gypsum plastering for patching and repair of existing plaster finishes, including skim coat over existing plaster surfaces.

B. Scope and extent of plaster patching and repair as indicated on the Drawings, and may include the following:

1. Plaster surfaces within the area of new construction that are cracked, spalled, bubbled or otherwise deteriorated.
2. Plaster surfaces that are damaged during demolition or construction operations.
3. Conditions that are exposed by demolition or construction and will be exposed in the completed Work.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.3 QUALITY ASSURANCE

A. Single Source Responsibility: Obtain gypsum lath and gypsum plaster from a single manufacturer.

B. Field Constructed Mockup: Before starting plaster work, prepare a sample application for each type of finish and application required to demonstrate aesthetic effects of application and qualities of materials and execution.

1. Locate mockups on site in location directed by Architect.
2. Erect 4 foot by 4 foot by full thickness mockup in presence of Architect using materials, including lath, indicated for final work.
3. Demonstrate the proposed range of aesthetic effects including texture and workmanship to be expected in completed work.
4. Demonstrate that adhesion to existing surface will be achieved where skim coat over plaster is indicated.
5. Obtain Architect's acceptance of mockups before start of plaster work.
6. Retain and maintain mockups during construction in undisturbed condition as a standard for judging completed plaster work.

1.4 PRODUCT HANDLING

A. Deliver materials in original packages, containers, or bundles bearing brand name and identification of manufacturer.

- B. Store materials inside, under cover, and in manner to keep them dry, protected from weather, direct sunlight, surface contamination, aging, corrosion, and damage from construction traffic and other causes. Neatly stack gypsum lath flat to prevent deformation.
- C. Protect metal lath, corner beads and trim from being bent or damaged.

1.5 PROJECT CONDITIONS

- A. Environmental Requirements, General: Comply with requirements of referenced plaster application standards and recommendations of plaster manufacturer for environmental conditions before, during, and after application of plaster.
- B. Ventilation: GC to provide temporary mechanical equipment that will assure proper temperature, humidity and ventilation is optimal for plaster curing. Adherence to project schedule and phasing plan will required.
 - a. Ventilate building spaces as required to remove water in excess of that required for hydration of plaster. Begin ventilation immediately after plaster is applied and continue until it sets and cures.
- C. Protect adjacent work from soiling, spattering, moisture deterioration and other harmful effects.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Gypsum Plaster Materials:
 - a. United States Gypsum Co.
 - b. Gold Bond Building Products Div. National Gypsum Co.
 - 2. Expanded Metal Lath:
 - a. Alabama Metal Industries Corp. (AMICO)
 - b. Gold Bond Building Products Div., National Gypsum Co
 - c. United States Gypsum Co.
 - d. Western Metal Lath Co.
 - 3. Accessories:
 - a. Fry Reglet Corp.
 - b. Gold Bond Building Products Div., National Gypsum Co.
 - c. Keene Corp.
 - d. MM Systems Corp.
 - e. United States Gypsum Co.

2.2 EXPANDED-METAL LATH

- A. Expanded-Metal Lath: Fabricate from zinc coated (galvanized) steel sheet, ASTM C 847.
 - 1. Configuration: Flat
 - 2. Weight: 3.4 lbs. Per sq. yd
- B. Lath Attachment Devices: Devices of material and type required by referenced standards and recommended by lath manufacturer for secure attachment of lath to substrate and of lath to lath.

2.3 ACCESSORIES

- A. General: Comply with material provisions of ASTM C 841; coordinate depth of accessories with thicknesses and number of plaster coats required.
- B. Metal Corner Beads: Fabricated from zinc coated (galvanized) steel.
 - 1. Type: Small nose with expanded flanges, unless otherwise indicated.
- C. Strip Reinforcement: Smooth edge strips of expanded metal lath fabricated from zinc coated (galvanized) steel sheet.
 - 1. Cornerite: Strips prebent lengthwise in center for internal plaster angles not otherwise reinforced by metal lath lapped or carried around.
 - 2. Stripite: Flat strips for reinforcing joints in gypsum lath, nonmetallic bases, and between dissimilar plaster bases.
- D. Control Joints: Prefabricated, of material and type indicated below:
 - 1. Material: Zinc-coated (galvanized) steel. Small nose corner bead with perforated flanges; use on curved corners.
 - 2. One-Piece Type: Folded pair of nonperforated screeds in M-shaped configuration, with expanded or perforated flanges.
 - 3. Provide removable protective tape on plaster face of control joints.

2.4 PLASTER MATERIALS

- A. Base Coat Plasters: Gypsum neat plaster, ASTM C 28.
- B. Finish Coat Plasters: Gypsum Keene's cement, ASTM C 61.
- C. Finishing Hydrated Limes: ASTM C 206, Type S, normal double hydrated lime for finishing purposes.
- D. Aggregates for Base Coat Plasters: ASTM C 35, sand aggregate.
- E. Aggregates for Finish Coat Plaster with Floated Finish: ASTM C 35; graded per ASTM C 842, sand aggregate.
- F. Products: Subject to compliance with requirements, provide one of the following:
 - 1. Gypsum Neat Plasters:

- a. Red Top Gypsum Plaster; United States Gypsum Co.
 - b. Red Top Two Purpose Plaster; United States Gypsum Co.
 - c. Two Way Hardwall Plaster; Gold Bond Building Products Div., National Gypsum Co.
2. Gypsum Keene's Cement:
 - a. Red Top Keene's Cement; United States Gypsum Co.
3. Finishing Hydrated Limes, Type S:
 - a. Ivory Finish Lime; United States Gypsum Co.

2.5 MISCELLANEOUS MATERIALS

- A. Water for Mixing and Finishing Plaster: Drinkable and free of substances capable of affecting plaster set or of damaging plaster, lath, or accessories.
- B. Bonding Agent for Gypsum Plaster: ASTM C 631

2.6 GYPSUM PLASTER MIXES AND COMPOSITIONS

- A. Plaster Base Coat Compositions: Comply with ASTM C 842 and manufacturer's directions for gypsum plaster base coat proportions that correspond to application methods and plaster bases indicated below:
 1. Three Coat Work Over Metal Lath: Base coats as follows:
 - a. Scratch Coat: Gypsum neat plaster with job mixed sand.
 - b. Brown Coat: Gypsum neat plaster with job mixed sand.
- B. Finish Coats: Proportion materials in parts by dry weight for finish coats to comply with the following requirements:
 1. Troweled Finish to Match Existing Smooth Finish: Finish coat of Gypsum Keene's Cement; proportion 2 parts plaster to 1 part lime.

2.7 MIXING

- A. Mechanically mix cementitious and aggregate materials for plasters to comply with applicable referenced application standard and with recommendations of plaster manufacturer.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Interior Lathing Installation Standard: Install lathing materials indicated for gypsum plaster to comply with ASTM C 841.

- B. Isolation: Where lathing abuts building structure horizontally and where partition/wall work abuts overhead structure, isolate the work from structural movement sufficiently to prevent transfer of loading into the work from the building structure. Install slip or cushion type joints to absorb deflections but maintain lateral support.
- C. Install expanded metal lath where plaster base coats are required. Provide appropriate type, configuration, and weight of metal lath selected from materials indicated that comply with referenced lathing installation standards.

3.2 INSTALLING ACCESSORIES

- A. General: Comply with referenced lathing and furring installation standards for provision and location of plaster accessories of type indicated. Miter or cope accessories at corners; install with tight joints and in alignment. Attach accessories securely to plaster bases to hold accessories in place and alignment during plastering.
- B. Cornerbeads: Install at external corners.
- C. Control Joints: Install at locations indicated or, if not indicated, at spacings and locations required by referenced standard, recommended by plaster manufacturer, and approved by Architect..

3.3 PLASTER APPLICATION

- A. General: Prepare monolithic surfaces for bonded base coats and use bonding compound or agent to comply with requirements of referenced plaster application standards for conditioning of monolithic surfaces.
- B. Tolerances: Do not deviate more than 1/8 inch in 10 feet from a true plane in finished plaster surfaces, as measured by a 10 foot straightedge placed at any location on surface.
- C. Sequence plaster application with the installation and protection of other work so that neither will be damaged by the installation of the other.
- D. Apply thicknesses and number of coats of plaster as indicated or as required by referenced standards.
- E. Power wash or clean as required for full to adhesion existing plaster surfaces scheduled to receive skim coat plaster.
- F. Interior Gypsum Plaster Application Standard: Apply gypsum plaster materials, composition, mixes, and finishes indicated to comply with ASTM C 842.
- G. Number of Coats: Apply gypsum plaster, of composition indicated, to comply with the following requirements.
 - 1. Use two coat work where existing plaster base is intact.
 - 2. Use three coat work over metal lath for areas where no intact plaster base remains.
- H. Bonding: Apply bonding agent to existing plaster surfaces prior to application of base or finish coats.
- I. Finish Coats:

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1. Troweled finishes for gypsum finish coat plasters, to match existing plaster finish textures.

3.4 CUTTING AND PATCHING

- A. Cut, patch, point up, and repair plaster as necessary to accommodate other work and to restore cracks, dents, and imperfections. Repair or replace work to eliminate blisters, buckles, excessive crazing and check cracking, dry outs, efflorescence, sweat outs, and similar defects and where bond to the substrate has failed.
- B. Sand smooth troweled finishes lightly to remove trowel marks and arrises

3.5 CLEANING AND PROTECTION

- A. Remove temporary protection and enclosure of other work. Promptly remove plaster from door frames, windows, and other surfaces that are not to be plastered. Repair floors, walls, and other surfaces that have been stained, marred, or otherwise damaged during the plastering work. When plastering work is completed, remove unused materials, containers, and equipment and clean floors of plaster debris.
- B. Provide final protection and maintain conditions, in a manner suitable to Installer that ensure plaster work's being without damage or deterioration at time of Substantial Completion.

END OF SECTION 09 0290

SECTION 099123 – PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes surface preparation and field painting of interior items and surfaces.
 - 1. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.
- B. Paint exposed surfaces, except where these Specifications indicate that the surface or material is not to be painted or is to remain natural. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Architect will supply a color selection.
 - 1. Painting includes field painting of exposed bare and covered pipes and ducts (including color coding), hangers, exposed steel and iron supports, and surfaces of mechanical and electrical equipment that do not have a factory-applied final finish.
- C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.
 - 1. Prefinished items include the following factory-finished components:
 - a. Acoustical wall panels.
 - b. Metal toilet enclosures.
 - c. Metal lockers.
 - 2. Concealed surfaces include walls or ceilings in the following generally inaccessible spaces:
 - a. Foundation spaces.
 - b. Furred areas.
 - c. Ceiling plenums.
 - d. Utility tunnels.
 - e. Pipe spaces.
 - f. Duct shafts.
 - g. Elevator shafts.
 - 3. Finished metal surfaces include the following:
 - a. Anodized aluminum.
 - b. Stainless steel.
 - c. Chromium plate.
 - d. Copper and copper alloys.
 - e. Bronze and brass.
 - 4. Operating parts include moving parts of operating equipment and the following:
 - a. Valve and damper operators.
 - b. Linkages.
 - c. Sensing devices.
 - d. Motor and fan shafts.
 - 5. Labels: Do not paint over UL, FMG, or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

D. Related Sections include the following:

1. Division 9 Section "Gypsum Board" for surface preparation of gypsum board.

1.3 DEFINITIONS

A. General: Standard coating terms defined in ASTM D 16 apply to this Section.

1. Flat refers to a lusterless or matte finish with a gloss range below 15 when measured at an 85-degree meter.
2. Eggshell refers to low-sheen finish with a gloss range between 20 and 35 when measured at a 60-degree meter.
3. Semigloss refers to medium-sheen finish with a gloss range between 35 and 70 when measured at a 60-degree meter.
4. Full gloss refers to high-sheen finish with a gloss range more than 70 when measured at a 60-degree meter.

1.4 SUBMITTALS

A. Product Data: For each paint system indicated. Include block fillers and primers.

1. Material List: An inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification. Submit in same format as specification.
2. Manufacturer's Information: Manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material.
3. Certification by the manufacturer that products supplied comply with local regulations controlling use of volatile organic compounds (VOC's).

B. Colors: Match Architect's color selections.

C. Samples for Verification: For each color and material to be applied, with texture to simulate actual conditions, on representative Samples of the actual substrate.

1. Submit 4 sets of samples of each final color and finish.

D. Qualification Data: For firms and persons specified in the "Quality Assurance" Article to be demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

E. Certifications:

1. Furnish a letter from the paint manufacturer or their factory representative certifying that the paint system proposed for this project are equal to or better than the specified systems in appearance and performance levels. Submit proof of equivalency for approval including generic type, descriptive information, VOC content, performance data, solids by volume, and recommended film thickness. Submittals not accompanied by this certification will be returned, "REJECTED."

F. Coating Maintenance Manual: Upon conclusion of the project, the Contractor or paint manufacturer/supplier shall furnish a coating maintenance manual, such as Sherwin-Williams "Custodian Project Color and Product Information" report or equal. Manual shall include an Area Summary with finish schedule, Area Detail designating where each product/color/finish was used, product data pages, Material Safety Data Sheets, care and cleaning instructions, touch-up procedures, and color samples of each color and finish used.

1.5 QUALITY ASSURANCE

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STANDARD SPECIFICATIONS

- A. Applicator Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.
- B. Source Limitations: Obtain block fillers and primers for each coating system from the same manufacturer as the finish coats.
- C. Benchmark Samples (Mockups): Provide a full-coat benchmark finish sample for each type of coating and substrate required. Comply with procedures specified in PDCA P5. Duplicate finish of approved sample Submittals.
 - 1. Architect will select one room or surface to represent surfaces and conditions for application of each type of coating and substrate.
 - a. Provide mock up of first and second coats of block filler or primer for approval of application.
 - b. Wall Surfaces: Provide samples on at least 100 sq. ft.
 - c. Small Areas and Items: Architect will designate items or areas required.
- D. Apply benchmark samples, according to requirements for the completed Work, after permanent lighting and other environmental services have been activated. Provide required sheen, color, and texture on each surface. Where materials are being applied over previously painted surfaces, apply mock up samples and perform field testing to check for compatibility, adhesion, and film integrity of the new materials to existing painted surfaces. Report in writing any condition that may affect application, appearance, or performance of the specified coating system.
 - 1. After finishes are accepted, Architect will use the room or surface to evaluate coating systems of a similar nature.
 - 2. Final approval of colors will be from benchmark samples.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:
 - 1. Product name or title of material.
 - 2. Product description (generic classification or binder type).
 - 3. Manufacturer's stock number and date of manufacture.
 - 4. Contents by volume, for pigment and vehicle constituents.
 - 5. Thinning instructions.
 - 6. Application instructions.
 - 7. Color name and number.
 - 8. VOC content.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F. Maintain storage containers in a clean condition, free of foreign materials and residue.
 - 1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily.
- C. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.

1.7 PROJECT CONDITIONS

- A. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90 deg F.

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- B. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45 and 95 deg F.
- C. Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent; or at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.
 - 1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.

1.8 EXTRA MATERIALS

- A. Furnish extra paint materials from the same production run as the materials applied and in the quantities described below. Package with protective covering for storage and identify with labels describing contents. Deliver left-over paint materials to Owner.
 - 1. Quantity: Furnish Owner with extra paint materials in quantities indicated below:
 - a. Interior: 1 case of each color applied.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Products: Subject to compliance with requirements, provide products from one of the following manufacturers. Sherwin-Williams is the basis of design and establishes the standard of quality required.
- B. Manufacturers' Names:
 - 1. Sherwin Williams (SW).
 - 2. Duron.
 - 3. MAB.
 - 4. Glidden.

2.2 PAINT MATERIALS, GENERAL

- A. Material Compatibility: Provide block fillers, primers, and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience. Each system should be from the same manufacturer.
- B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint-material containers not displaying manufacturer's product identification will not be acceptable.
 - 1. Proprietary Names: Use of manufacturer's proprietary product names to designate colors or materials is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers. Furnish manufacturer's material data and certificates of performance for proposed substitutions.
- C. Colors: Match Architect's samples.

PART 3 - EXECUTION

3.1 EXAMINATION

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- A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for paint application. Comply with procedures specified in PDCA P4.
 - 1. Proceed with paint application only after unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
 - 2. Start of painting will be construed as Applicator's acceptance of surfaces and conditions within a particular area.
- B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
 - 1. Notify Architect about anticipated problems when using the materials specified over substrates primed by others.
- C. Where materials are being applied over previously painted surfaces, apply mock up samples and perform field testing to check for compatibility, adhesion, and film integrity of the new materials to existing painted surfaces. Report in writing any condition that may affect application, appearance, or performance of the specified coating system.

3.2 PREPARATION

- A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of size or weight of the item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
- B. Cleaning: Before applying paint or other surface treatments, clean substrates of substances that could impair bond of the various coatings. Remove oil and grease before cleaning. All surfaces must be clean, dry, and free of all oil, grease, surface contaminants, and substances that could impair adhesion.
 - 1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
 - 2. All previously coated surfaces shall clean, dry, dull, and in sound condition prior to coating. All loose paints (either visible or not) shall be removed to expose a sound surface for repainting. All smooth, glossy surfaces shall be abraded to impart a surface profile that will promote adhesion of the subsequent coating system. A test-patch shall be applied prior to a full installation to assure adequate adhesion will be achieved.
- C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
 - 1. Provide barrier coats over incompatible primers or remove and reprime.
 - 2. Cementitious Materials: Prepare brick, concrete, concrete unit masonry, cement plaster, and mineral-fiber-reinforced cement panel surfaces to be painted. Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.
 - a. Use abrasive blast-cleaning methods if recommended by paint manufacturer.
 - b. Determine alkalinity and moisture content of surfaces by performing appropriate tests. If surfaces are sufficiently alkaline to cause the finish paint to blister and burn, correct this condition before application. Do not paint surfaces if moisture content exceeds that permitted in manufacturer's written instructions.
 - 3. Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.

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- a. Scrape and clean small, dry, seasoned knots, and apply a thin coat of white shellac or other recommended knot sealer before applying primer. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.
 - b. Prime, stain, or seal wood to be painted immediately on delivery. Prime edges, ends, faces, undersides, and back sides of wood, including cabinets, counters, cases, and paneling.
 - c. If transparent finish is required, back-prime with spar varnish.
 - d. Back-prime paneling on interior partitions where masonry, plaster, or other wet wall construction occurs on back side.
 - e. Seal tops, bottoms, and cutouts of unprimed wood doors with a heavy coat of varnish or sealer immediately on delivery.
4. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with SSPC's recommendations.
- a. Power Tool Clean steel surfaces clean as recommended by paint system manufacturer and according to SSPC-SP 3.
 - b. Treat bare and sandblasted or pickled clean metal with a metal treatment wash coat before priming.
 - c. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by paint manufacturer, and touch up with same primer as the shop coat.
5. Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum-based solvents so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.
6. Interior Grilles, Louvers and Sprinkler Escutcheons shall be painted in the field to match adjacent material color. Contractor shall prep and prime factory finished items to receive new paint finish in the field.
- D. Material Preparation: Mix and prepare paint materials according to manufacturer's written instructions.
1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
 2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
 3. Use only thinners approved by paint manufacturer and only within recommended limits.
- E. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

3.3 APPLICATION

- A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.
1. Paint colors, surface treatments, and finishes are indicated in the paint schedules.
 2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
 3. Provide finish coats that are compatible with primers used.
 4. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, grilles, convactor covers, covers for finned-tube radiation, and similar components are in place. Extend coatings in these areas, as required, to maintain system integrity and provide desired protection.
 5. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only.

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6. Paint interior surfaces of ducts with a flat, nonspecular black paint where visible through registers or grilles.
 7. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
 8. Finish interior of wall and base cabinets and similar field-finished casework to match exterior.
 9. Sand lightly between each succeeding enamel or varnish coat.
- B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
1. The number of coats and film thickness required are the same regardless of application method. Do not apply succeeding coats until previous coat has cured as recommended by manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
 2. Omit primer over metal surfaces that have been shop primed and touchup painted.
 3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure that edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
 4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, and does not deform or feel sticky under moderate thumb pressure, and until application of another coat of paint does not cause undercoat to lift or lose adhesion.
- C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.
1. Brushes: Use brushes best suited for type of material applied. Use brush of appropriate size for surface or item being painted.
 2. Rollers: Use rollers of carpet, velvet-back, or high-pile sheep's wool as recommended by manufacturer for material and texture required.
 3. Spray Equipment: Use airless spray equipment with orifice size as recommended by manufacturer for material and texture required.
- D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate to achieve dry film thickness indicated. Provide total dry film thickness of the entire system as recommended by manufacturer.
- E. Mechanical and Electrical Work: Painting of mechanical and electrical work is limited to items exposed in equipment rooms and occupied spaces.
- F. Mechanical items to be painted include, but are not limited to, the following:
1. Exposed uninsulated metal piping.
 2. Exposed uninsulated plastic piping.
 3. Exposed pipe hangers and supports.
 4. Tanks that do not have factory-applied final finishes.
 5. Visible portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets.
 6. Duct, equipment, and pipe insulation having "all-service jacket" or other paintable jacket material.
 7. Mechanical equipment that is indicated to have a factory-primed finish for field painting.
- G. Electrical items to be painted include, but are not limited to, the following:
1. Switchgear.
 2. Panel boards.
 3. Electrical equipment that is indicated to have a factory-primed finish for field painting.
- H. All interior exposed gypsum wallboard, including any bulkheads and soffits to be painted.

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- I. All interior ferrous metal to be painted including any lintels, railings, grilles, and louvers (does not include factory or pre-finished items).
- J. All hollow metal doors and frames to be painted.
- K. Block Fillers: Apply block fillers to concrete masonry block at a rate to ensure complete coverage with pores filled.
- L. Prime Coats: Before applying finish coats, apply a prime coat, as recommended by manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing.
- M. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
- N. Transparent (Clear) Finishes: Use multiple coats to produce a glass-smooth surface film of even luster. Provide a finish free of laps, runs, cloudiness, color irregularity, brush marks, orange peel, nail holes, or other surface imperfections.
 - 1. Provide satin finish for final coats.
- O. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.
- P. Marking and Identification: Fire walls, fire barriers, fire partitions, smoke barriers and smoke partitions or any other wall required to have protected openings or penetrations shall be effectively and permanently identified with signs or stenciling. Such identification shall:
 - 1. Be located in accessible concealed floor, floor-ceiling or attic spaces;
 - 2. Be repeated at intervals not exceeding 30 feet measured horizontally along the wall or partition; and
 - 3. Include lettering not less than 0.5 inch in height, incorporating the suggested wording: "FIRE AND/OR SMOKE BARRIER-PROTECT ALL OPENINGS," or other wording.
 - a. Exception: Walls in Group R-2 occupancies that do not have a removable decorative ceiling allowing access to the concealed space.

3.4 FIELD QUALITY CONTROL

- A. Owner reserves the right to invoke the following test procedure at any time and as often as Owner deems necessary during the period when paint is being applied:
 - 1. Owner will engage a qualified independent testing agency to sample paint material being used. Samples of material delivered to Project will be taken, identified, sealed, and certified in the presence of Contractor.
 - 2. Testing agency will perform appropriate tests for the following characteristics as required by Owner:
 - a. Quantitative material analysis.
 - b. Abrasion resistance.
 - c. Apparent reflectivity.
 - d. Flexibility.
 - e. Washability.
 - f. Absorption.
 - g. Accelerated weathering.
 - h. Dry opacity.
 - i. Accelerated yellowness.
 - j. Recoating.

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- k. Skinning.
 - l. Color retention.
 - m. Alkali and mildew resistance.
3. Owner may direct Contractor to stop painting if test results show material being used does not comply with specified requirements. Contractor shall remove noncomplying paint from Project site, pay for testing, and repaint surfaces previously coated with the noncomplying paint. If necessary, Contractor may be required to remove noncomplying paint from previously painted surfaces if, on repainting with specified paint, the two coatings are incompatible.

B. Pre-installation Meetings:

- 1. Schedule a conference and inspection to be held on-site before field application of coating systems begins.
- 2. Conference shall be attended by Contractor, Owner's representative, Engineer, Construction Manager, coating applicators, and a representative of coating material manufacturer.
- 3. Topics to be discussed at meeting shall include:
 - a. A review of Contract Documents and accepted shop drawings shall be made and deviations or differences shall be resolved.
 - b. Review items such as environmental conditions, surface conditions, surface preparation, application procedures, and protection following application.
 - c. Establish which areas on-site will be available for use as storage areas and working area
- 4. Pre-construction conference and inspection shall serve to clarify Contract Documents, application requirements and what work should be completed before coating application can begin.
- 5. Prepare and submit, to parties in attendance, a written report of pre-installation conference report shall be submitted with 3 days following conference.
- 6. Field Samples:
 - a. Provide a full coating system to the required sheen, color, texture, and recommended coverage rates. Simulate finished lighting conditions for reviewing in-place work.
- 7. The Architect, Construction Manager or Owners Representative will select one room, area, or combination of areas and surfaces and conditions for each type of coating and substrate to be coated. Apply coatings in this room, area, combination of areas and surfaces according to the schedule, or as specified. After finishes are accepted, this room, area or combination of areas and surfaces will serve as the standard of quality and for evaluation of coating systems of similar nature.
- 8. A manufacturer's representative shall be available upon request by the General Contractor or Painting subcontractor, to advise applicator on proper application technique and procedures.

3.5 CLEANING

- A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from Project site.
- 1. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping without scratching or damaging adjacent finished surfaces.

3.6 PROTECTION

- A. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.

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- B. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.
1. After work of other trades is complete, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

3.7 INTERIOR PAINT SCHEDULE

- A. Gypsum Board: Provide the following finish systems over interior gypsum board surfaces:

1. Flat Acrylic Finish (Ceiling Application): Two finish coats over a primer.
 - a. Primer: SW, ProMar 200 Zero VOC Latex Primer, B28W600.
 - b. Finish Coat: SW, ProMar 200 Zero VOC Latex Flat, B30W2650 series.
*Zero VOC, Anti-Microbial, *Product remains Zero VOC when tinted.
2. Low Luster Acrylic-Enamel Finish (Wall Application @ Administration): Two finish coats over a primer.
 - a. Primer: SW, ProMar 200 Zero VOC Latex Primer, B28W600.
 - b. Finish Coats: SW, ProMar 200 Zero VOC Latex Eg-Shel, B20W2650 series.
*Zero VOC, Anti-Microbial, *Product remains Zero VOC when tinted.
3. Semi-Gloss Acrylic-Enamel Finish (Wall Application): Two finish coats over a primer.
 - a. Primer: SW, ProMar 200 Zero VOC Latex Primer, B28W600.
 - b. Finish Coats: SW, ProMar 200 Zero VOC Latex Semi-Gloss, B31W2650 series.
*Zero VOC, Anti-Microbial, *Product remains Zero VOC when tinted.

- B. Previously Painted Gypsum Board: Provide the following finish systems over previously painted interior gypsum board surfaces. *Note: Mock-Up with adhesion test per ASTM-D3359 is required prior to installation of this system.

1. Flat Acrylic Finish (Ceiling Application): Two finish coats over an adhesion promoting primer.
 - a. Primer: SW, Extreme Bond Interior/Exterior Bonding Primer, B51-150.
 - b. Finish Coat: SW, ProMar 200 Zero VOC Latex Flat, B30W2650 series.
*Zero VOC, Anti-Microbial, *Product remains Zero VOC when tinted.
2. Low Luster Acrylic-Enamel Finish (Wall Application @ Administration): Two finish coats over an adhesion promoting primer.
 - a. Primer: SW, Multi-Purpose Interior/Exterior Latex Primer/Sealer, B51-450 series
Extreme Bond Interior/Exterior Bonding Primer, B51-150.
 - b. Finish Coats: SW, ProMar 200 Zero VOC Latex Eg-Shel, B20W2650 series.
*Zero VOC, Anti-Microbial, *Product remains Zero VOC when tinted.
3. Semi-Gloss Acrylic-Enamel Finish (Wall Application): Two finish coats over an adhesion promoting primer.
 - a. Primer: SW, Extreme Bond Interior/Exterior Bonding Primer, B51-150.
 - b. Finish Coats: SW, ProMar 200 Zero VOC Latex Semi-Gloss, B31W2650 series.
*Zero VOC, Anti-Microbial, *Product remains Zero VOC when tinted.

- C. Previously Painted Gypsum Board Epoxy Finish: Provide the following epoxy finish systems over previously painted interior gypsum board surfaces. *Note: Mock-Up with adhesion test per ASTM-D3359 is required prior to installation of this system.

1. Eg-Shel Waterbased Epoxy Finish: two finish coats over an adhesion promoting primer.
 - a. Primer: Multi-Purpose Interior/Exterior Latex Primer/Sealer, B51-450 series
 - b. 1st Coat: Pro Industrial Waterbased Catalyzed Epoxy Eg-Shel, B73-360 series
 - c. 2nd Coat: Pro Industrial Waterbased Catalyzed Epoxy Eg-Shel, B73-360 series

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D. Ferrous Metal: Provide the following finish systems over ferrous metal:

1. Semi-Gloss Finish: Two finish coats over a primer.
 - a. Primer: SW, Pro-Industrial Pro-Cryl Universal Metal Primer, B66-310 series
 - b. Finish Coats: SW, Pro-Industrial Waterbased Catalyzed Epoxy Gloss.

E. Previously Painted Ferrous Metal: Provide the following finish systems over previously painted ferrous metal. *Note: Mock-Up with adhesion test per ASTM-D3359 is required prior to installation of this system.

1. Semi-Gloss Finish: Two finish coats over an adhesion promoting primer.
 - a. Spot Primer (for bare or rusty areas): SW, Pro-Industrial Pro-Cryl Universal Metal Primer, B66-310 series
 - b. Primer: SW, Multi-Purpose Interior/Exterior Latex Primer/Sealer, B51W450.
 - c. Finish Coats: SW, Pro-Industrial Waterbased Catalyzed Epoxy Gloss.

F. Galvanized Metal: Provide the following finish systems over galvanized metal:

1. Semi-Gloss Finish: Two finish coats over a primer.
 - a. Primer: SW, Pro-Industrial Pro-Cryl Universal Metal Primer, B66-310 series
 - b. Finish Coats: SW, Pro-Industrial Waterbased Catalyzed Epoxy Gloss.

G. Previously Painted Galvanized Metal: Provide the following finish systems over previously painted galvanized metal. *Note: Mock-Up with adhesion test per ASTM-D3359 is required prior to installation of this system.

1. Semi-Gloss Finish: Two finish coats over an adhesion promoting primer.
 - a. Spot Primer (for bare or rusty areas): SW, Pro-Industrial Pro-Cryl Universal Metal Primer, B66-310 series
 - b. Primer: SW, Extreme Bond Interior/Exterior Bonding Primer, B51-150.
 - c. Finish Coats: SW, Pro-Industrial Waterbased Catalyzed Epoxy Gloss.

H. Dry Fog Paint: Provide where indicated for painted exposed structure.

1. Provide dry fog paint system according to approved manufacture's recommendations.
 - a. Primer: SW, Pro-Industrial Pro-Cryl Universal Metal Primer, B66-310 series
*Omit primer on clean galvanized surfaces
 - b. Finish Coats, SW, Pro-Industrial Waterborne Acrylic Dryfall Flat, B42W81 series

I. Concrete Masonry Units: Provide the following finish systems over primer for wall applications.

1. Semi-Gloss Finish: Two finish coats over a primer.
 - a. Filler: SW, PrepRite Block Filler, B25W25.
 - b. Finish Coats: SW, ProMar 200 Zero VOC Latex Semi-Gloss, B31W2650 series
*Zero VOC, Anti-Microbial, *Product remains Zero VOC when tinted.

J. Previously Painted Concrete Masonry Units: Provide the following finish systems over an adhesion promoting primer for wall applications. *Note: Mock-Up with adhesion test per ASTM-D3359 is required prior to installation of this system.

1. Semi-Gloss Finish: Two finish coats over a primer.
 - a. Primer: SW, Extreme Bond Interior/Exterior Bonding Primer, B51-150.
 - b. Finish Coats: SW, ProMar 200 Zero VOC Latex Semi-Gloss, B31W2650 series.
*Zero VOC, Anti-Microbial, *Product remains Zero VOC when tinted.

K. Plaster – Latex System: Provide the following finish systems over interior plaster surfaces:

1. Flat Acrylic Finish for ceiling applications only: - Two finish coats over a primer.

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- a. Primer: Loxon Concrete & Masonry primer, A24W8300
 - b. 1st Coat: ProMar 200 Zero VOC Latex Flat, B30W2650 series
 - c. 2nd Coat: ProMar 200 Zero VOC Latex Flat, B30W2650 series *
2. Semi-Gloss Acrylic-Enamel Finish: two finish coats over a primer.
- a. Primer: Loxon Concrete & Masonry primer, A24W8300
 - b. 1st Coat: ProMar 200 Zero VOC Latex Semi-Gloss, B31W2650 series
 - c. 2nd Coat: ProMar 200 Zero VOC Latex Semi-Gloss, B31W2650 series
- L. Plaster - Epoxy Finish: Provide the following epoxy finish systems over plaster surfaces:
1. Eg-Shel Waterbased Epoxy Finish: two finish coats over a primer.
- a. Primer: Loxon Concrete & Masonry primer, A24W8300
 - b. 1st Coat: Pro Industrial Waterbased Catalyzed Epoxy Eg-Shel, B73-360 series
 - c. 2nd Coat: Pro Industrial Waterbased Catalyzed Epoxy Eg-Shel, B73-360 series
- M. Previously Painted Brick and Concrete Masonry Units Eg-Shel Epoxy Finish: Provide the following epoxy finish systems over previously painted wall applications. *Note: Mock-Up with adhesion test per ASTM-D3359 is required prior to installation of this system.
1. Eg-Shel Waterbased Epoxy Finish: two finish coats over an adhesion promoting primer.
- a. Primer: Multi-Purpose Interior/Exterior Latex Primer/Sealer, B51W450
 - b. 1st Coat: Pro Industrial Waterbased Catalyzed Epoxy Eg-Shel, B73-360 series
 - c. 2nd Coat: Pro Industrial Waterbased Catalyzed Epoxy Eg-Shel, B73-360 series
- N. Previously Painted Wood: Provide the following finish systems over previously painted trim applications. *Note: Mock-Up with adhesion test per ASTM-D3359 is required prior to installation of this system.
1. Semi-Gloss Finish: Two finish coats over a primer.
- a. Primer: PrepRite ProBlock Latex Interior/Exterior Primer/Sealer, B51-600 series
 - b. 1st Coat: ProMar 200 Zero VOC Latex Semi-Gloss, B31W2650
 - c. 2nd Coat: ProMar 200 Zero VOC Latex Semi-Gloss, B31W2650

3.8 INTERIOR STAIN AND NATURAL-FINISH WOODWORK SCHEDULE

- A. Natural-Finish Woodwork: Provide the following natural finishes over new interior woodwork:
1. Waterborne Satin-Varnish Finish: Two finish coats of waterborne clear satin varnish over a sanding sealer.
- a. Filler Coat: Optional Open-grain wood filler (if needed).
 - b. 1st Coat: Wood Classics Waterborne Polyurethane Satin Finish, A68F90.
 - c. 2nd Coat: Wood Classics Waterborne Polyurethane Satin Finish, A68F90
- B. Stain-Finish Woodwork with Sealer: Provide the following stain finish with sealer over new interior woodwork:
1. Waterborne Satin-Varnish Finish: Two finish coats of waterborne clear satin varnish over a sanding sealer. Wipe wood filler before applying stain.
- a. Filler Coat: Optional Open-grain wood filler (if needed).
 - b. Stain Coat: Wood Classics 250 VOC Interior Oil Stain, A49-800 series.

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- c. 1st Coat: Wood Classics Waterborne Polyurethane Satin Finish, A68F90.
- d. 2nd Coat: Wood Classics Waterborne Polyurethane Satin Finish, A68F90

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