Notice is hereby given to all prospective bidders that plans and specifications on the subject project are modified as hereinafter set forth. This Addendum shall be attached to and form a part of the plans and specifications. All bidders must acknowledge receipt of this addendum on the Bid Form. In case of difference with previous addenda or communications, this addendum takes precedence.

It is the responsibility of all bidders to notify all subcontractors from whom they request bids and from whom they accept bids of all changes contained in this addendum.

PROJECT MANUAL

1. Item No. PM-1
   Reference: Section 013030 – Submittal Procedures
   Description: Delete Section in its entirety and replace with Section 013030, Submittal Procedures, Addendum No. 1

2. Item No. PM-2
   Reference: Section 075216 – SBS Roofing
   Description: Revise the following:
   1. Include paragraph 1.1.A.2: “Broadcast of new gravel ballast at areas of wind scour and surface loss at the upper roofs of the North and South Gymnasiums.”
   2. Revise paragraph 1.11.A.1 (Warranty) to read: “A minimum 30-year non-prorated, no-dollar-limit, labor-and-materials guarantee shall be issued at no additional cost to the Owner.”
   3. Revise paragraph 2.01.A (Manufacturers) to read: “Tremco, Siplast, and Johns Manville.”
   4. Delete paragraph 2.01.B.1. Roofing membrane base sheet shall comply with the above-described reference standards.
   5. Delete paragraph 2.01.C.1. Roofing membrane cap sheet shall comply with above-described reference standards.
   7. Delete paragraph 2.02.B.1. Fluid-applied flashing system shall be a liquid-applied catalyzed polymethyl methacrylate (PMMA) flashing resin.
10. Delete paragraph 3.05.A.1. (Torch-Applied Membrane Installation).

3. **Item No. PM-3**
   - **Reference:** Section 076200 – Sheet Metal Flashing and Trim
   - **Description:** Revise the following:
     11. Revise paragraph 2.1.A (Sheet Metals) to read: “Copper sheet: ASTM B370, cold-rolled copper sheet, H00 or H01 temper.”
     12. Revise paragraph 2.4.A.2 (Manufactured Sheet Metal Flashing and Trim; Material) to read: “Copper, 0.025.”
     13. Revise paragraph 2.5.B (Fabrication General; Scupper) to read: “Copper, 0.025.”

4. **Item No. PM-4**
   - **Reference:** Section 099113 – Exterior Painting
   - **Description:** Revise the following:
     14. Include paragraph 1.2.B.2: South and west elevations of Auditorium (Building C) including outboard parapet reveals.
     15. Include paragraph 2.3.E (Colors): “‘BBQ, manufactured by Dunn-Edwards;’ ‘Tinkerbell Trail, manufactured by Kelly-Moore;’ and ‘Carbon Copy, manufactured by Kelly-Moore.’”

5. **Item No. PM-5**
   - **Reference:** Section 22 14 35 – Roof Drains
   - **Description:** Revise the following:
     16. Revise paragraph 2.01.B.4 (Strainer Dome) to read: “Material: Cast Iron.”

6. **Item No. PM-6**
   - **Reference:** New Specification Section 06 10 00
   - **Description:** Add specification section 06 10 00 - Rough Carpentry, Addendum No. 1.

7. **Item No. PM-7**
   - **Reference:** New Specification Section 09 29 00
   - **Description:** Add specification section 09 29 00 - Gypsum Board, Addendum No. 1

8. **Item No. PM-8**
   - **Reference:** New Specification Section 09 51 13
   - **Description:** Add specification section 09 51 13 – Acoustic Ceiling Tiles, Addendum No. 1

9. **Item No. PM-9**
   - **Reference:** New Specification Section 09 67 23
   - **Description:** Add specification section 09 67 23 – Resinous Flooring, Addendum No. 1

**DRAWINGS**

1. **Item No. AD1-1**
   - **Reference:** New Drawing AD1-A1, Interior Finishes Reference Photos
   - **Description:** Add sheet to show photos of existing conditions in the ROTC Office and Classroom, and Auditorium cork flooring in front of the stage.

2. **Item No. AD1-2**
   - **Reference:** New Drawing AD1-A2, Auditorium Paint Schemes
   - **Description:** Add reference drawings to provide additional information on painting requirements for the west and south walls of the Auditorium.
3. Item No. AD1-3  
Reference: New Drawing AD1-A3, Building B (South Gymnasium) Pipe Chase Locations  
Description: Add reference drawings to show approximate locations of rainwater pipes and pipe chases. Pipes are either exposed or concealed in a pipe chase.

4. Item No. AD1-4  
Reference: New Drawing AD1-A4, Building C (North Gymnasium) Pipe Chase Locations  
Description: Add reference drawing to show approximate locations of rainwater pipes and pipe chases. Pipes are located in the corners of the Gym and are partly concealed in a furred wall.

5. Item No. AD1-5  
Reference: New Drawing AD1-A5, Building C (Auditorium) Pipe Chase Locations  
Description: Add reference drawing to show approximate locations of rainwater pipe which is concealed within the furred wall.

6. Item No. AD1-6  
Reference: New Drawing AD1-A6, Building C (Auditorium) Flooring  
Description: Add reference drawing to show extent of cork flooring removal/resilient flooring application at Auditorium.

END OF ADDENDUM ITEMS

ATTACHMENTS:

Specifications:  
01 30 30 Submittal Procedures Addendum No. 1 (dated 4/28/16), 12 pages  
06 10 00 Rough Carpentry Addendum No. 1 (dated 4/28/16), 4 pages  
09 29 00 Gypsum Board Addendum No. 1 (dated 4/28/16), 4 pages  
09 51 13 Acoustical Ceiling Tiles Addendum No. 1 (dated 4/28/16) 11 pages  
09 67 23 Resinous Flooring Addendum No. 1 (dated 4/28/16) 4 pages

Drawings:  
AD1-A1 Interior Finishes – Reference Photos (11"x17" dated 04/28/16) 1 page  
AD1-A2 Auditorium Paint Schemes (Phase 2): 2011 Drawings prepared by Levy Design Partners, showing the extent of paint application at the south and west Auditorium elevations.  
AD1-A3 Building B Pipe Chase Locations: 2007 Drawings prepared by Levy Design Partners, with approximate areas of pipe chases highlighted.  
AD1-A4 Building C (North Gymnasium Pipe Chase Locations: 2007 Drawings prepared by Levy Design Partners, with approximate areas of pipe chases highlighted.  
AD1-A5 Building C (Auditorium) Pipe Chase Locations: 2007 Drawings prepared by Levy Design Partners, with approximate areas of pipe chases highlighted.  
PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other miscellaneous submittals.

B. See Division 0 Section "General Conditions" for submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule.

C. See Division 1 Section "Testing and Inspection" for submitting test and inspection reports.

D. See Division 1 Section "Closeout Procedures" for submitting warranties, Project Record Documents and operation and maintenance manuals.

1.2 DEFINITIONS

A. Action Submittals: Written and graphic information that requires Architect's responsive action.

B. Informational Submittals: Written information that does not require Architect's approval. Submittals may be rejected for not complying with requirements.

1.3 SUBMITTAL PROCEDURES

A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Within 7 days after Notice to Proceed, submit a complete list of major products, which are proposed for substitution. All submittals must be prepared and processed within 21 days of issuance of Notice to Proceed. Failure to comply with this requirement will result in Progress Payment (see Article 9, 9.03 Progress Payments of the General Conditions) to the Contractor being withheld.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

B. Submittals Schedule: Comply with requirements in this Section for list of submittals to be included in the Contractor’s submittal schedule.

C. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal.

1. Initial Review: Allow two (2) weeks (14 calendar days) for initial review of each submittal. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
2. If intermediate submittal is necessary, process it in same manner as initial submittal.
3. Allow one week (7 calendar days) for processing each resubmittal.
4. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing.

D. Identification: Place a permanent label or title block on each submittal for identification.

1. Indicate name of firm or entity that prepared each submittal on label or title block.
2. Provide a space approximately 4 by 5 inches (100 by 125 mm) on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
3. Include the following information on label for processing and recording action taken:

   a. Project name.
   b. Date.
   c. Name and address of Architect.
   d. Name and address of Contractor.
   e. Name and address of subcontractor.
   f. Name and address of supplier.
   g. Name of manufacturer.
   h. Unique identifier, including revision number.
   i. Number and title of appropriate Specification Section.
   j. Drawing number and detail references, as appropriate.
   k. Other necessary identification.
   l. All items requiring DSA deferred approval must include the DSA Application Number and File Number.

E. Deviations: Highlight, encircle, or otherwise identify deviations from the Contract Documents on submittals.
F. Additional Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions of the Contract Documents, initial submittal may serve as final submittal.

1. Additional copies submitted for maintenance manuals will not be marked with action taken and will be returned.

G. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form approved by the District. District will discard submittals received from sources other than Contractor.

1. Include Contractor's certification stating that information submitted complies with requirements of the Contract Documents.

H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

I. Use for Construction: Use only final submittals with mark indicating action taken by Architect in connection with construction.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

A. General: Prepare and submit Action Submittals required by individual Specification Sections.

1. Number of Copies: Submit eight copies of each submittal, unless otherwise indicated. District will return two copies. Mark up and retain one returned copy as a Project Record Document.

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:
   a. Manufacturer's written recommendations.
   b. Manufacturer's product specifications.
   c. Manufacturer's installation instructions.
   d. Manufacturer's catalog cuts.
e. Wiring diagrams showing factory-installed wiring.
f. Printed performance curves.
g. Operational range diagrams.
h. Compliance with recognized trade association standards.
i. Compliance with recognized testing agency standards.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data. (No FAX submittals will be accepted)

1. Preparation: Include the following information, as applicable:
   a. Dimensions.
   b. Identification of products.
   c. Fabrication and installation drawings.
   d. Roughing-in and setting diagrams.
   e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
   f. Shopwork manufacturing instructions.
   g. Templates and patterns.
   h. Schedules.
   i. Notation of coordination requirements.
   j. Notation of dimensions established by field measurement.

2. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.

3. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 30 by 40 inches (750 by 1000 mm).

D. Samples: Prepare physical units of materials or products, including the following:

1. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
   a. Submit five full sets of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return two sets with options selected.

2. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from the same material to be used for the Work, cured and finished in manner specified, and physically identical with the product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used
materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

a. Submit three sets of Samples. District will retain two Sample sets; remainder will be returned.

3. Preparation: Mount, display, or package Samples in manner specified to facilitate review of qualities indicated. Prepare Samples to match Architect's sample where so indicated. Attach label on unexposed side.

4. Submit Samples for review of kind, color, pattern, and texture for a final check of these characteristics with other elements and for a comparison of these characteristics between final submittal and actual component as delivered and installed.

5. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

E. Product Schedule or List: Prepare a written summary indicating types of products required for the Work and their intended location.

F. Submittals Schedule: Comply with requirements in Division 0 Section "General Conditions."

G. Application for Payment: Comply with requirements in Division 0 Section "General Conditions."

H. Schedule of Values: Comply with requirements in Division 0 Section "General Conditions."

I. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design.

2.2 INFORMATIONAL SUBMITTALS

A. General: Prepare and submit Informational Submittals required by other Specification Sections.

1. Number of Copies: Submit two copies of each submittal, unless otherwise indicated. Architect will not return copies.

2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
3. Test and Inspection Reports: Comply with requirements in Division 1 Section "Testing and Inspection."

B. Contractor's Construction Schedule: Comply with requirements in Division 0 Section "General Conditions."

C. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and Districts, and other information specified.

D. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements.

E. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.

F. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements and, where required, is authorized for this specific Project.

G. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements. Include evidence of manufacturing experience where required.

H. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements.

I. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.

J. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

K. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements.

L. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements. Base reports on evaluation of tests...
performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

M. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project.

N. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements in Division 1 Section "Closeout Procedures."

O. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

P. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer.

Q. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections.

R. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.

S. Construction Photographs: Comply with requirements in Division 1 Section "Construction Progress Documentation."

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Review each submittal and check for compliance with the Contract Documents. Clearly mark or note corrections, variations, and field dimensions. Mark with approval stamp before submitting to Architect.

B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.
C. By approving and submitting Shop Drawings, Product Data, Samples and other submittals, the Contractor represents that it has determined and verified materials, confirmed that the product does not contain any detectable amounts of asbestiform minerals and/or lead compounds in concentrations greater than 1/10th of 1% (0.1%), verified field measurements and field construction criteria related thereto, has checked and coordinated the information contained within such submittals with the requirements of the Work, the Contract Documents and adjacent Work.

3.2 ARCHITECT’S ACTION

A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.

B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:

1. Reviewed with no exceptions.
2. Revise as noted and resubmit.
3. Reviewed with comments.
4. Rejected – Please resubmit.

C. Informational Submittals: Architect will review each submittal and will not return it, or will reject and return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

D. Submittals not required by the Contract Documents will not be reviewed and may be discarded.
E. LIST OF REQUIRED SUBMITTALS (Contractor is required to provide all submittals identified in the contract documents whether or not they are identified in this list)

<table>
<thead>
<tr>
<th>SPEC. SECTION</th>
<th>TITLE</th>
<th>MOCK-UP</th>
<th>** SAMPLE</th>
<th>CATALOG SHEET</th>
<th>* REPORT, SCHEDULE, OR SHOP DRAWING</th>
</tr>
</thead>
<tbody>
<tr>
<td>03 01 30</td>
<td>Product Data, including Material Safety Data Sheets</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>03 01 30</td>
<td>List of project references as documented in this specification under Quality Assurance</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>03 01 30</td>
<td>Protection plan of surrounding areas and non-cementious surfaces</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>03 01 30</td>
<td>Manufacturer Qualifications as described in Part 1.4, “Quality Assurance”</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>03 01 30</td>
<td>Field Sample installed at project site</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>06 10 00</td>
<td>Product Data, including Material Safety Data Sheets as applicable</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>06 10 00</td>
<td>Material Certificates and Evaluation Reports</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>07 52 16</td>
<td>Product Data, including Material Safety Data Sheets</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>07 52 16</td>
<td>Shop drawings, including base flashings and membrane terminations</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>07 52 16</td>
<td>Samples of sheet roofing materials and flashings, including walkway pads or rolls, as described in Technical Specifications</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>07 52 16</td>
<td>All informational submittals, including qualification data of roofing applicator, sample warranties, and relevant product test reports.</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>07 52 16</td>
<td>All closeout submittals, including Maintenance Data and Inspection Report</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>07 62 00</td>
<td>Product Data, including Material Safety Data Sheets</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>07 62 00</td>
<td>Manufacturer’s Instructions for correct application and installation of the materials</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>07 62 00</td>
<td>Samples for verification of each type of flashing and trim</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>SPEC. SECTION</td>
<td>TITLE</td>
<td>MOCK-UP</td>
<td>** SAMPLE</td>
<td>CATALOG SHEET</td>
<td>* REPORT, SCHEDULE, OR SHOP DRAWING</td>
</tr>
<tr>
<td>--------------</td>
<td>------------------------------------------------------------------------</td>
<td>---------</td>
<td>-----------</td>
<td>---------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>07 62 00</td>
<td>Qualification data of firms and persons responsible for fabricating and installing flashing and trim</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>07 62 00</td>
<td>Maintenance Data</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>07 92 00</td>
<td>Product Data, including Material Safety Data Sheets</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>07 92 00</td>
<td>Manufacturer’s Instructions for correct installation of the materials, including special surface preparation procedures</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>07 92 00</td>
<td>Samples for Initial Inspection</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>07 92 00</td>
<td>Samples for Verification</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>07 92 00</td>
<td>Joint Sealant Schedule</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>07 92 00</td>
<td>Qualification data of firms and persons responsible for applying joint sealants</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>07 92 00</td>
<td>Product Certificates</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>07 92 00</td>
<td>Certification from Manufacturer confirming that products comply with local regulations controlling use of VOCs</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>07 92 00</td>
<td>Compatibility and Adhesion Test Reports</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>07 92 00</td>
<td>Preconstruction Field Adhesion Test Reports from Sealant Manufacturer</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>07 92 00</td>
<td>Warranties</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>09 24 23</td>
<td>Product Data, including Material Safety Data Sheets and Manufacturer’s Technical Information</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>09 24 23</td>
<td>Manufacturer’s Instructions for correct application of materials</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>09 24 23</td>
<td>Product Certifications by Manufacturers</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>09 24 23</td>
<td>Maintenance Data</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>09 24 23</td>
<td>An inclusive list of required materials, including material color samples</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>09 24 23</td>
<td>Mock-up of repair area showing full application of material</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>09 29 00</td>
<td>All product data for proposed gypsum board</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>SPEC. SECTION</td>
<td>TITLE</td>
<td>MOCK-UP</td>
<td>** SAMPLE</td>
<td>CATALOG SHEET</td>
<td>REPORT, SCHEDULE, OR SHOP DRAWING</td>
</tr>
<tr>
<td>--------------</td>
<td>----------------------------------------------------------------------</td>
<td>---------</td>
<td>-----------</td>
<td>---------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>09 29 00</td>
<td>Mock-up of Chase structure</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>09 51 13</td>
<td>Product Data, including material lists and manufacturers information</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>09 51 13</td>
<td>Material Safety Data Sheets, if applicable</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>09 51 13</td>
<td>Samples for Verification: acoustical tile, concealed suspension system members, exposed moldings and trims</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>09 51 13</td>
<td>Qualification Data of firms and persons specified</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>09 51 13</td>
<td>Product Certificates</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>09 51 13</td>
<td>Maintenance Data</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>09 51 13</td>
<td>Manufacturer’s certification that products supplied comply with local regulations controlling use of VOCs</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>09 67 23</td>
<td>Research/Evaluation Reports, Maintenance Data, Warranty Samples</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>09 67 23</td>
<td>Product Data, including surface preparation instructions and recommenda-</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>tions, storage and handling requirements, and installation methods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09 67 23</td>
<td>Selection Samples</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>09 67 23</td>
<td>Shop drawings showing installation of cove base and termination /transi-</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>tion details.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09 67 23</td>
<td>Installer’s Project References</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>09 67 23</td>
<td>Maintenance Instructions</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>09 91 13</td>
<td>Product Data for each painting system specified. Must include primers, sol-</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>vents, cleaning compounds that will be used within the scope of this work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09 91 13</td>
<td>Samples for Verification of each color and material to be applied</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>09 91 13</td>
<td>Samples of each paint system, including primers.</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>09 91 13</td>
<td>Three samples on substrates for Architect’s review of color and texture.</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>22 14 35</td>
<td>Product Data for Roof Drains</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

April 26, 2016

01 30 30 - 11

Submittal Procedures
Addendum No. 1
### LIST OF REQUIRED SUBMITTALS

<table>
<thead>
<tr>
<th>SPEC. SECTION</th>
<th>TITLE</th>
<th>MOCK-UP</th>
<th>** SAMPLE</th>
<th>CATALOG SHEET</th>
<th>* REPORT, SCHEDULE, OR SHOP DRAWING</th>
</tr>
</thead>
<tbody>
<tr>
<td>22 14 35</td>
<td>Manufacturer’s Shop Drawings, including plans, elevations, sections, and details</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>22 14 35</td>
<td>Manufacturer’s Certification that materials comply with specified requirements and are suitable for intended application.</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>22 14 35</td>
<td>Operation and Maintenance Data upon closeout</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

**END OF SECTION 01 30 30**
SECTION 061000
ROUGH CARPENTRY

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

A. Work includes:
   1. Framing with dimension lumber
   2. Construction of new pipe chases at specific locations. The estimated total number of pipe chase framing assemblies to be constructed is approximately 40.

B. Related Requirements:
   1. Section 092900, “Gypsum Board,” for finish material at chases.

1.03 DEFINITIONS

A. Exposed Framing: Framing not concealed by other construction.
B. Dimension Lumber: Lumber of 2 inches nominal (38 mm actual) or greater but less than 5 inches nominal (114 mm actual) in least dimension.
C. Timber: Lumber of 5 inches nominal (114 mm actual) or greater in least dimension.
D. Lumber grading agencies, and the abbreviations used to reference them, include the following:
   1. APA: American Plywood Association

1.04 ACTION SUBMITTALS

A. Submit under provision of Section 013030, “Submittal Procedures.”

B. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.

2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.

3. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

1.05 INFORMATIONAL SUBMITTALS

A. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.

B. Evaluation Reports: For the following, from ICC-ES:
   1. Wood-preservative-treated wood
   2. Fire-retardant-treated wood
   3. Engineered wood products
   4. Power-driven fasteners
   5. Powder-actuated fasteners

1.06 QUALITY ASSURANCE

A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - MATERIALS

2.01 LUMBER:

A. Lumber shall be dry and well seasoned. The moisture content shall not exceed 19% in boards 8" or less in depth, 15% in lumber more than 8" in depth and plywood.

B. Lumber herein referred to shall be graded and grade-marked and shall conform to
the following specifications, as applicable. All material shall be new.

1. **Plywood**: Chase structure, Structural I, CD (exterior glue) shall conform to the requirements designed in American Plywood Association, US Production Standard for soft plywood. Each Standard PS 1-74 size panel shall be stamped with appropriate grade marking, visibly shown.

2.02 **FASTENERS AND CONNECTORS**

   A. Nails, brads, and staples must comply with ASTM F 1667.
   
   B. Wood screws must comply with ASME B18.6.1.

PART 3 – EXECUTION

3.01 **WOOD MATERIALS:**

   All materials shall be new when incorporated into the Work.

3.02 **WORKMANSHIP:**

   A. The entire work of this Section shall be performed in accordance with the best standards of practice relating to the trade and under the constant supervision of a competent foreman who shall carefully plan and lay out the work as required to carry out the intent of the drawings and to properly accommodate the work of other trades.

   B. All lumber framing shall be accurately cut and fitted into the respective location, true to lines, grades and level as indicated or required and permanently secured in proper position with fastenings or fittings as detailed to render the work substantial and rigid in all parts and connections.

   C. All framing shall comply with the requirements of the local building codes and the San Francisco Unified School District Design Guidelines and Standards.

3.03 **CHASE STRUCTURE CONSTRUCTION**

   A. Trim new sheets in order to fit existing dimensions. Match existing plywood thickness. Mount the plywood such that the manufacturer’s stamps remain visible from the front side.

   B. Nail perimeter to substrate 5" O.C. using 8d nails.

   C. Interior nailing shall be 8" O.C. using 8d nails.

3.04 **PROTECTION**

   A. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes sufficiently wet that moisture content exceeds the specified 15% maximum,
apply EPA-registered borate treatment, in compliance with EPA standards.

END OF SECTION
SECTION 09 29 00
GYPSUM BOARD

PART 1 – GENERAL

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

1.02 SUMMARY
A. Work includes:
   1. Installation of new interior gypsum board at pipe chase structure. The estimated total number of pipe chase structures is approximately 40.
B. Related Requirements:
   1. Section 06 10 00, “Rough Carpentry” for additional information for framing of pipe chase structure.

1.03 ACTION SUBMITTALS
A. Submit under provision of Section 013030, “Submittal Procedures.”
B. Product Data for proposed gypsum board and accessories.

1.04 QUALITY ASSURANCE
A. Mockups: Before beginning construction of pipe chase, prepare mockup to demonstrate aesthetic effects and set quality standards for materials and execution. Subject to compliance with requirements, approved mockups may become part of the completed work if undisturbed at the time of Substantial Completion.

1.05 DELIVERY, STORAGE, AND HANDLING
A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

1.06 FIELD CONDITIONS
A. Environmental Limitation: Comply with ASTM C 840 requirements or gypsum board manufacturer’s written recommendations, whichever are more stringent.

B. Do not install paper-faced gypsum panels until installation areas are enclosed and conditioned. Ensure that all roof drain replacement work has been completed prior to commencement of chase structure installation.

C. Do not install panels that are wet, those that are moisture-damaged, and those that are mold-damaged.

   1. Indications that panels are wet or moisture-damaged include, but are not limited to, discoloration, sagging, or irregular shape.

   2. Indications that panels are mold-damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - MATERIALS

2.01 GYPSUM BOARD, GENERAL

   1. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.02 INTERIOR GYPSUM BOARD

   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

      1. American Gypsum
      2. CertainTeed Corp
      3. Georgia-Pacific Gypsum LLC
      4. Lafarge North America Inc
      5. National Gypsum Company
      6. PABCO Gypsum
      7. Temple-Inland
      8. USG Corporation

   B. Moisture- and Mold-Resistant Gypsum Board: ASTM C 1396/C 1396M. With moisture- and mold-resistant core and paper surfaces.

      1. Core: 5/8 inch (15.9 mm), Type X
      2. Long Edges: Tapered.
3. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

PART 3 – EXECUTION

3.01 EXAMINATION

A. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 APPLYING AND FINISHING PANELS, GENERAL

A. Comply with ASTM C 840, Level V.

3.03 PROTECTION

A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.

B. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

C. Remove and replace panels that are wet, moisture-damaged, and mold-damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.

2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION
SECTION 09 51 13
ACOUSTICAL TILE CEILINGS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS
   A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
   B. Work includes:
      1. Replacement of new ceiling tiles where tiles are currently missing or water-damaged in Room B02 (ROTC Classroom in Building B). The estimated number of new tiles to be replaced pursuant to this Work item is 40.
      2. Remove and discard existing plaster ceiling, including metal lath, metal ceiling studs, and all existing hangers and accessories, in Room B02A (ROTC Office in Building B), and install a new acoustical tile ceiling system at ROTC Office. The estimated size of the new acoustical tile ceiling to be installed pursuant to this Work item is 500 square feet.

1.02 DEFINITIONS
   A. AC: Articulation Class.
   B. CAC: Ceiling Attenuation Class.
   C. LR: Light-Reflectance coefficient.
   D. NRC: Noise Reduction Coefficient.

1.03 SUBMITTALS
   A. Submit under provision of Section 013030, “Submittal Procedures.”
   B. Product Data: For each ceiling tile product specified, and other products not specified within this section, but that will be used during the course of this Work: Include manufacturer’s written instructions for evaluating, preparing, technical data, tested physical and performance properties, limitations, and color availability.
      1. Material List: An inclusive list of required ceiling tile products. Indicate each material and cross-reference specific ceiling tile and installation. Identify each material by manufacturer’s catalog number and general classification.
      2. Manufacturer’s Information: Manufacturer’s technical information, including label analysis and instructions for handling, storing, and installing sealant.
C. Include Material Safety Data Sheets, if applicable.

D. Samples for Verification: Provide Samples for each type and color of ceiling tile.
   1. Acoustical Tile: Set of full-size Samples of each type, color, pattern, and texture.
   2. Concealed Suspension System Members: 12-inch-long Sample of each type.
   3. Exposed Moldings and Trim: Set of 12-inch-long Samples of each type and color.
   4. Provide a list of materials and installations for each ceiling tile. Label each Sample for location and application.

E. Submit Qualification data of firms and persons specified in the “Quality Assurance” Article to demonstrate their capabilities and experience. Include lists of completed project with project names and addresses, names and addresses of architects and owners, and other information.
   1. For products required to be installed by workers approved by product manufacturers, include letters of acceptance by product manufacturers certifying that installers are approved to apply their products.

F. Product Certificates: For each type of ceiling tile and accessory, signed by product manufacturer certifying that products furnished comply with requirements and are suitable for the use indicated.

G. Maintenance Data: To include in maintenance manuals. Include recommendations for periodic inspections, cleaning, care, and maintenance.

H. Submit manufacturer’s certification that products supplied comply with local regulations controlling use of volatile organic compounds (VOCs).

I. Maintain one copy of each document on-site:
   1. Research/Evaluation Reports: For acoustical tile ceiling, components, and anchor and fastener type.
   2. Maintenance Data: For finishes to include in maintenance manuals.
   3. Warranties: Sample of warranties specified in this Section.

1.04 QUALITY ASSURANCE

A. Perform work in accordance with ASTM requirements for preparation of surface and material installation and in accordance with Manufacturer’s requirements for preparation of surfaces and material installation instructions.

B. Installer Qualifications: A firm or individual experienced in installing ceiling tiles 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 and who is certified by manufacturer.
   1. Company specializing in performing the work of this section with minimum five (5) years of experience.
2. Workers: Thoroughly skilled and specially trained in the techniques installing ceiling tiles. Applicators shall be able to demonstrate acceptable level of skill for review and acceptance by the Architect.

3. The work crew shall consist of only approved Installers. Maintain a list of approved Installers’ names for Project Record. Notify Architect for change of the work crew name list.

C. Use adequate numbers of skilled workmen thoroughly trained and experienced in the necessary crafts and completely familiar with the specified requirements and methods needed for proper performance of the Work of this Section.

D. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum ten (10) years of experience. Manufacturer shall have factory-trained representatives who are available for consultation and Project site inspection at no additional cost.

E. Ceiling tiles shall be installed in accordance with Manufacturer’s directions and printed specifications. Ceiling tiles installed shall be free of defects.

F. Source Limitations: Obtain each type of Ceiling tiles and accessories through one source from a single manufacturer.

G. Fire-Test-Response Characteristics: Provide acoustical tile ceilings that comply with the following requirements:

1. Fire-Resistance Characteristics: Where indicated, provide acoustical tile ceilings identical to those of assemblies tested for fire resistance per ASTM E 119 by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.

   a. Fire-Resistance Ratings: Indicated by design designations from UL's "Fire Resistance Directory".
   b. Identify materials with appropriate markings of applicable testing and inspecting agency.

2. Surface-Burning Characteristics: Provide acoustical tiles with the following surface-burning characteristics complying with ASTM E 1264 for Class [A] [B] [C] materials as determined by testing identical products per ASTM E 84:

   a. Smoke-Developed Index: 450 or less.

H. Seismic Standard: Provide acoustical tile ceilings designed and installed to withstand the effects of earthquake motions according to the following:

2. CISCA’s Recommendations for Acoustical Ceilings: Comply with CISCA’s "Recommendations for Direct-Hung Acoustical Tile and Lay-in Panel Ceilings--Seismic Zones 0-2."


4. UBC Standard 25-2, "Metal Suspension Systems for Acoustical Tile and for Lay-In Panel Ceilings."


I. Pre-installation Mock-ups: Before installation, install mock-ups for ceiling tile to verify selections made under sample Submittals and to demonstrate aesthetic effects and qualities of materials and execution. Install mock-ups to comply with the following requirements, using materials indicated for the completed Work and to demonstrate performance and constructability and set quality standards for materials and execution:

1. Install mock-ups in the location and of the size indicated or, if not indicated, request for Architect’s direction.

J. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section 013010 "Project Meetings."

K. All Work shall be subject to acceptance by the Owner and Architect. All Work that does not comply with the intent of the specifications shall be corrected by the Contractor.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in original unopened containers or bundles bearing manufacturer's name and label and the following information:

1. Manufacturer's brand name and stock number.

2. Product name or title of material.

3. Directions for storage and handling instructions and precautions.

4. Date of manufacture.

5. Color name and number.

B. Store and handle materials in compliance with manufacturer's written instructions to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.
C. Safety: Refer to all applicable data, including, but not limited to MSDS sheets, PDS sheets, Product labels, specific instructions for specific personal protection requirements.

D. Ventilation: General ventilation is recommended; zero VOC materials do not generate harmful or flammable vapors. Secondary materials may present hazards to be addressed.

E. Take precautionary measures and store in UL listed storage locker to protect from fire hazards and spontaneous combustion.

F. Remove all materials, including cloths, tarps, and empty containers from the area of Work at the close of each day.

G. Before installing acoustical tiles, permit them to reach room temperature and a stabilized moisture content.

H. Handle acoustical tiles carefully to avoid chipping edges or damaging units in any way.

1.06 REGULATORY REQUIREMENTS

A. Conform to applicable federal, state, and local regulatory requirements including flame and smoke rating requirements for finishes.

B. Flammable Liquids serve all current regulation regarding flammable liquids such as posting “No Smoking” signs. Allow no open flames, welding, or other ignition sources in the Work.

C. Conform to all applicable laws, codes, and regulations for disposal of all materials, debris, and containers.

D. Sealants shall be VOC Compliant.

1.07 PROJECT CONDITIONS

A. Environmental Limitations: Do not install acoustical tile ceilings until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

1. Pressurized Plenums: Operate ventilation system for not less than 48 hours before beginning acoustical tile ceiling installation.

1.08 WARRANTY

A. When warranties are required, verify with Owner's counsel that special warranties stated in this Article are not less than remedies available to Owner under prevailing local laws. Coordinate with Division 1 Section "Product Requirements."
B. General Warranty: Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

L. Special Installer's Warranty: Installer's standard written form in which Installer agrees to repair or replace ceiling tiles that do not comply with performance and other requirements specified in this Section within specified warranty period.

   1. Warranty Period: **Five (5)** years from date of Substantial Completion.

M. Special Manufacturer's Warranty: Manufacturer's standard written form in which ceiling tiles manufacturer agrees to furnish tile materials to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.

   1. Warranty Period: **Five (5)** years from date of Substantial Completion.

1.09 EXTRA MATERIALS

A. Furnish extra 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 extra materials to Owner.

   1. Acoustical Ceiling Units: Full-size tiles equal to **5 percent** of quantity installed.

   2. Suspension System Components: Quantity of each concealed grid and exposed component equal to **5 percent** of quantity installed.

   3. Label each sealed container with color, type, texture, locations, and the manufacturer's label.

PART 2 - MATERIALS

2.01 PRODUCTS AND MANUFACTURERS

A. Products: Subject to compliance with requirements.

   1. New ceiling tile shall be made from perlite or mineralized wood fiber (formaldehyde-free).

   2. New ceiling tile should have a minimum NRC of 0.65.

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   1. Armstrong
2. Ortega

3. USG Interiors, Inc., Ceilings Division

2.02 ACOUSTICAL TILES, GENERAL

A. Acoustical Tile Standard: Provide manufacturer's standard tiles of configuration indicated that comply with ASTM E 1264 classifications as designated by types, patterns, acoustical ratings, and light reflectances, unless otherwise indicated.

1. Mounting Method for Measuring NRC: Type E-400; plenum mounting in which face of test specimen is 15-3/4 inches away from test surface per ASTM E 795.

B. Acoustical Tile Colors and Patterns: Match existing appearance characteristics.

1. Where appearance characteristics of acoustical tiles are indicated by referencing pattern designations in ASTM E 1264 and not manufacturers' proprietary product designations, provide products selected by Architect from each manufacturer's full range that comply with requirements indicated for type, pattern, color, light reflectance, acoustical performance, edge detail, and size.

2. Product: provide from above-listed manufacturers.

C. Broad Spectrum Antimicrobial Fungicide and Bactericide Treatment: Provide acoustical tiles treated with manufacturer's standard antimicrobial formulation that inhibits fungus, mold, mildew, and gram-positive and gram-negative bacteria and showing no mold, mildew, or bacterial growth when tested according to ASTM D 3273 and evaluated according to ASTM D 3274 or ASTM G 21.

D. Antimicrobial Fungicide Treatment: Provide acoustical tiles with face and back surfaces coated with antimicrobial treatment consisting of manufacturer's standard formulation with fungicide added to inhibit growth of mold and mildew and showing no mold or mildew growth when tested according to ASTM D 3273 and evaluated according to ASTM D 3274 or ASTM G 21.

2.03 ACOUSTICAL TILES FOR ACOUSTICAL TILE CEILING

A. Classification: Provide fire-resistance-rated tiles complying with ASTM E 1264 for type, form, and pattern:

1. Match appearance and performance characteristics of existing acoustic tile.

B. Antimicrobial Treatment: Broad spectrum fungicide and bactericide and Fungicide based.

2.04 METAL SUSPENSION SYSTEMS, GENERAL

A. Metal Suspension System Standard: Provide manufacturer's standard metal suspension systems of types, structural classifications, and finishes indicated that
comply with applicable requirements in ASTM C 635. Under the standards set forth in IR 25-2.10, issued by the Division of the State Architect, the ceiling grid system must be rated “Heavy Duty.” Suspension wires shall be 12-gauge, soft annealed, and galvanized steel wires with Class 1 coating. Main runners, cross runners, splices, expansion devices, and intersection connectors shall be designed to carry a mean ultimate test load of not less than 180 lbs. in compression and tension, in accordance with Section 5.1.2. of ASTM E 580.

B. Finishes and Colors, General: Comply with NAAMM’s “Metal Finishes Manual for Architectural and Metal Products” for recommendations for applying and designating finishes. Provide manufacturer’s standard factory-applied finish for type of system indicated.

C. Attachment Devices: Size for five times the design load indicated in ASTM C 635, Table 1, "Direct Hung," unless otherwise indicated. Comply with seismic design requirements: Match existing system.

2.05 METAL EDGE MOLDINGS AND TRIM

A. General: Match existing system, and comply with requirements set forth in ASTM C 635 and E 580.

2.06 ACOUSTICAL SEALANT

A. Available Products: Subject to compliance with requirements. Refer to Section 0792 00, “Joint Sealants.”

B. Acoustical Sealant for Exposed and Concealed Joints: Manufacturer’s standard non-sag, paintable, non-staining latex sealant, with a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24), complying with ASTM C 834 and effective in reducing airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

C. Acoustical Sealant for Concealed Joints: Manufacturer’s standard nondrying, non-hardening, non-skinning, non-staining, gun grade, synthetic-rubber sealant, with a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24), recommended for sealing interior concealed joints to reduce airborne sound transmission.

2.07 LIGHTING

A. Lighting systems installed shall comply with existing SFUSD Standards. Provide a 2'x4' recessed mounted fluorescent fixture (impact-modified acrylic prismatic refractor with mounting for T-bar ceiling), with 2/T8, 32-watt lamps, 120 Volts, by Lithonia (Model #2RT* 232 MVOLT BSNPL835HT8).
PART 3 – EXECUTION

3.01 EXAMINATION

A. Examine substrates, areas, and conditions, including structural framing and substrates to which acoustical tile ceilings attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage and with requirements for installation tolerances and other conditions affecting performance of acoustical tile ceilings.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

C. Verify that all other work involved with this area, done under other Sections, has been completed and accepted by the Architect and general contractor prior to starting the application.

3.02 PREPARATION

A. Measure each ceiling area, and establish layout of acoustical tiles to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width tiles at borders. Where installing new system, continue existing grid at adjacent room.

3.03 INSTALLATION

A. General: Install acoustical tile ceilings to comply with ASTM C 636, UBC Standard 25-2, DSA IR 25-2.10, and seismic design requirements indicated, per manufacturer’s written instructions and CISCA’s "Ceiling Systems Handbook."

1. Fire-Rated Assembly: Install fire-rated ceiling systems according to tested fire-rated design.

B. Suspend ceiling hangers from building’s structural members and as follows:

1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structure or of ceiling suspension system.

2. Splay hangers only where required to miss obstructions; offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.

3. Splay hangers only where required and, if permitted with fire-resistance-rated ceilings, to miss obstructions; offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.

4. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with location of hangers at spacings required to support
standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices.

5. Secure wire hangers to ceiling suspension members and to supports above with a minimum of three tight turns. Connect hangers directly either to structures or to inserts, eye screws, or other devices that are secure and appropriate for substrate and that will not deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.

6. Secure flat, angle, channel, and rod hangers to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices that are secure and appropriate for both structure to which hangers are attached and type of hanger involved. Install hangers in a manner that will not cause them to deteriorate or fail due to age, corrosion, or elevated temperatures.

7. Do not support ceilings directly from permanent metal forms or floor deck. Fasten hangers to cast-in-place hanger inserts, postinstalled mechanical or adhesive anchors, or power-actuated fasteners that extend through forms into concrete.

8. When steel framing does not permit installation of hanger wires at spacing required, install carrying channels or other supplemental support for attachment of hanger wires.

9. Do not attach hangers to steel deck tabs.

10. Do not attach hangers to steel roof deck. Attach hangers to structural members.

11. Space hangers not more than 48 inches o.c. along each member supported directly from hangers, unless otherwise indicated; provide hangers not more than 8 inches from ends of each member.

12. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards and publications.

C. Secure bracing wires to ceiling suspension members and to supports with a minimum of four tight turns. Suspend bracing from building’s structural members as required for hangers, without attaching to permanent metal forms, steel deck, or steel deck tabs. Fasten bracing wires into concrete with cast-in-place or post-installed anchors.

D. Install edge moldings and trim of type indicated at perimeter of acoustical tile ceiling area and where necessary to conceal edges of acoustical tiles.

1. Apply acoustical sealant in a continuous ribbon concealed on back of vertical legs of moldings before they are installed.

2. Screw attach moldings to substrate at intervals not more than 16 inches o.c. and not more than 3 inches from ends, leveling with ceiling suspension system to a tolerance of 1/8 inch in 12 feet. Miter corners accurately and connect securely.
3. Do not use exposed fasteners, including pop rivets, on moldings and trim.

E. Install suspension system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members.

F. Expansion joints must follow the requirements set forth in ASTM C 635 and E 580.

G. Arrange directionally patterned acoustical tiles as follows:
   1. Match existing pattern.

H. Install acoustical tiles in coordination with suspension system and exposed moldings and trim. Place splines or suspension system flanges into kerfed edges so tile-to-tile joints are closed by double lap of material. Re-installation of existing ceiling tile is not allowed.
   1. Fit adjoining tile to form flush, tight joints. Scribe and cut tile for accurate fit at borders and around penetrations through tile.
   2. Hold tile field in compression by inserting leaf-type, spring-steel spacers between tile and moldings, spaced 12 inches o.c.
   3. Protect lighting fixtures and air ducts to comply with requirements indicated for fire-resistance-rated assembly.

3.04 FIELD QUALITY CONTROL

A. The contractor for work under this section shall maintain a quality control program specifically to verify compliance with this specification.

B. Owner may engage a qualified independent testing agency to test:
   1. Suspended ceiling system
   2. Hangers, anchors and fasteners

C. If test results show ceiling tile materials do not comply with requirements, remove non-complying materials, prepare surfaces, and reinstall with new tile materials.

D. Additional testing and inspecting, at Contractor’s expense, will be performed to determine compliance of replaced or additional work with specified requirements.

E. Retest failed applications until test results prove tile materials comply with indicated requirements.

3.05 CLEANING

A. Clean work and disposal under provisions of Section 017070 “Cleaning and Closeout Procedures”. 
B. Cleanup: At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

C. Clean exposed surfaces of acoustical tile ceilings, including trim and edge moldings. Comply with manufacturer’s written instructions for cleaning and touchup of minor finish damage. Remove and replace tiles and other ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

D. Remove spills from adjacent surfaces. Restore to original condition or replace with new materials to the satisfaction of the Architect.

E. Contractor shall replace all materials in kind that are damaged during Work of this Section.

F. Collect waste material that may constitute a fire hazard, place in closed metal containers and remove daily from site.

G. Provide continuous dust control to protect all areas of the Work.

H. Legally dispose of debris in accordance with local, state, and federal regulations.

I. Upon completion of the Work, remove all debris and surplus items from the site.

3.06 PROTECTION

A. Protect tile materials during and after period from contact with contaminating substances and from damage resulting from construction operations or other causes so tile materials are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, remove damaged or deteriorated tile materials immediately so installations with repaired areas are indistinguishable from original work.

B. Provide all protection necessary to protect the tenants of the building, the public, and the property, including adjacent properties, from damage as a result of the Work in this Section.

C. Provide continuous protection of all public and private property including automobiles from damage during the Work.

D. Protect work of other trades from damage. Correct damage by cleaning, repairing, replacing, and recoating as approved by Architect. Leave in an undamaged condition.

END OF SECTION
SECTION 09 67 23
RESINOUS FLOORING

PART 1 – GENERAL

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

B. Work includes:
1. Removal and disposal of existing cork flooring at east end (front) of Auditorium.
2. Application of new resinous flooring at east end of Auditorium. The estimated total surface area of new resinous flooring application pursuant to the scope of this Work is 800 square feet.

1.02 DEFINITIONS
A. The resinous flooring system specified under this Section is referenced on the drawings as “Concrete Coating.”

1.03 SUBMITTALS
A. Submit under provision of Section 013030, “Submittal Procedures.”

B. Product Data: Manufacturer’s Data Sheets on each product to be used, including:
1. Surface preparation instructions and recommendations
2. Storage and handling requirements and recommendations
3. Installation methods

C. Selection Samples: Submit 2-foot square cured samples of flooring system, indicating color combination and no-skid properties. Approved samples will be used during application for product match, and will serve as a job standard for the final installation.

D. Shop drawings: Shop drawings shall be furnished showing installation of cove base and termination details and details at floor material transitions. Locate and provide detailing for flexible joints required for flooring in area of installation, if necessary.

E. Installer’s Project References: Submit list of successfully completed projects, including project name and location, name of Architect, and type and quantity of concrete floor finish systems applied.

F. Maintenance Instructions: Submit current copies of the flooring manufacturer’s printed recommendations on maintenance methods and products. Submit to Owner.
1.04 QUALITY ASSURANCE

A. Installer Qualifications: Contractor shall be an established firm regularly engaged in satisfactory installation of similar materials and shall provide a list of three (3) projects of similar nature and complexity completed within the last five (5) years. These projects must be located within 50 miles of San Francisco, and of similar size of proposed work.

B. Contractor shall provide a letter of certification by manufacturer that Contractor is a current qualified installer.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Material shall be delivered to project site in manufacturer’s original unopened containers bearing manufacturer’s name, product, and color.

B. Material shall be stored indoors, protected from damage, moisture, direct sunlight, and temperatures below 50 degrees Fahrenheit or above 85 degrees Fahrenheit.

1.06 WARRANTY

A. Contractor shall furnish a written warranty covering both material and workmanship for a period of one full year from the date of installation.

PART 2 - MATERIALS

2.01 PRODUCTS AND MANUFACTURERS

A. Products: Subject to compliance with requirements. Provide a solid color, high gloss, smooth, resin rich, seamless, epoxy based floor coating. Typically applied between 24 to 60 mils (0.7 to 1.5 mm) thick. System to consist of the following components:

1. Primer: applied between 8 – 10 mils.

2. Top coat: applied between 6 – 25 mils.

3. Optional top coat: applied between 3 – 3.5 mils.

4. Optional top coat: applied at 20 mils.

5. The slip resistance of the finished floor must be the following:
   a. 0.6 minimum coefficient of friction at level floors
   b. 0.8 nominal coefficient of friction at ramps and sloping floors

6. Cove base: Epoxy cove mortar
B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. DEX-O-TEX, Sika, BASF, or approved equal.

2.02 FINISHES

A. Color, finish, and sheen as selected by Owner from the manufacturer’s standard colors.

PART 3 – EXECUTION

3.01 EXAMINATION

A. Contractor shall verify, in writing, 30 days prior to scheduled flooring application.

B. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for maximum moisture content, installation tolerances, and other conditions affecting flooring performance.

C. Verify that substrates and conditions are satisfactory for flooring application, and comply with requirements specified.

3.02 SURFACE CONDITIONS

A. Existing concrete surfaces shall be free of oil, grease, curing compounds, loose particles, moss, algae growth, laitance, friable matter, dirt, and bituminous products. All adhesive from previous flooring system shall be mechanically removed. No holes, voids, or defects shall be visible on the concrete floor. Cracks and abrupt changes in surface profile must be corrected.

B. Verify that moisture content is within range acceptable to flooring manufacturer, using a calcium chloride test kit in accordance with ASTM F1869. Maximum moisture content shall be 5 lbs. of water per 1000 square feet of concrete slab within a 24-hour period.

C. Contractor must report, in writing, surfaces left in improper condition by other trades. Application will constitute acceptance of surfaces by the applicator.

3.03 PREPARATION

A. Prepare surfaces as required, per manufacturer’s printed instructions. Preferred surface preparation is shotblast or similar mechanical method.

B. Patch all depressions, divots, honeycombed or scaled concrete with filler as recommended by manufacturer.
C. Level and slope floor, as required, with manufacturer’s acrylic or epoxy modified mortar underlayment.

D. Fill all non-moving cracks or control joints with joint filler as recommended by manufacturer.

E. Fill all moving cracks or joints with a firm but flexible (or non-rigid) sealant material as recommended by manufacturer. Expansion joints should be re-cut in finished floor, if required, and filled with sealant.

F. Masking: Mask surfaces that require protection.

3.04 INSTALLATION

A. Comply with flooring system manufacturer’s recommendation.

1. Materials shall be prepared and mixed in compliance with flooring manufacturer’s instructions.

2. Apply primer as recommended by flooring manufacturer.

3. Trowel apply mixed material at manufacturer’s recommended rate to achieve the minimum specified thickness. Incorporate non-slip aggregate as required.

4. Apply two coats of finish in color selected at manufacturer’s recommended rate to achieve desired finish and texture selected.

3.05 CLEANUP

A. Remove waste materials, rubbish and debris and dispose of them in accordance with local regulations. Leave work areas in a clean condition.

3.06 PROTECTION

A. Protect the completed work from water, airborne particles or other surface contaminants until cured, tack free, approximately 18-24 hours after application.

B. Protect completed system from traffic and physical abuse for approximately 72 hours. Protect completed system from immersion and chemical exposure until thoroughly cured, approximately seven (7) days.
LEGEND:

LOCATION OF PIPE

1. BUILDING B, BASEMENT LEVEL (PHASE 1)
   PIPE CHASE LOCATIONS, FOR REFERENCE ONLY

2. BUILDING B, GROUND FLOOR (PHASE 1)
   PIPE CHASE LOCATIONS, FOR REFERENCE ONLY

LOCATION OF PIPE

LEGEND:
AUDITORIUM, BUILDING C (PHASE 2)
LOCATION OF CORK FLOORING REMOVAL/RESNOUS FLOORING APPLICATION

1. LOCATION OF CORK FLOORING REMOVAL/RESNOUS FLOORING APPLICATION