Liberty Public Schools – LHS Phase 1 Remodel
Addendum No: 03
Description Narrative

This Addendum is issued to all registered plan holders pursuant to the Instructions to Bidders and Conditions of the Contract. This Addendum serves to clarify, revise, and supersede information in the Project Manual, Drawings, and previously issued Addenda. Portions of the Addendum affecting the Contract Documents will be incorporated into the Contract by enumeration of the Addendum in the Owner/Contractor Agreement.

The Bidder shall acknowledge receipt of this Addendum in the appropriate space on the Bid Form.

A. **Scopes of Work Changes**
   1. 06-1000 – General Trades
   2. 09-2000 – Framing, Drywall & ACT Scope of Work
   3. 12-3000 – Casework
   4. 22-1000 – Plumbing
   5. 26-1000 – Electrical

B. **OTHER**
   1. Axiom Abatement Report – All Abatement to be by owner prior to start of construction
   2. Bidder Question Log

C. **SPECIFICATIONS**
   1. Please reference the attached Addendum No. 03 issued by Hollis + Miller

D. **DRAWINGS**
   2. Please reference the attached Addendum No. 03 issued by Hollis + Miller

Please direct any questions regarding the information in this addenda and the project to Newkirk Novak Construction Partners.
LPS LHS Phase 01 Remodel (Addendum 003)
06-1000 – General Trades Scope of Work

Specific scope of work to be performed:

Provide all required labor, material, equipment, permits, layout, freight, and applicable taxes necessary for the General Trades Scope of Work complete as set forth in the contract documents and all other applicable sections of the project manual and all other subcontract documents identified.

Scope of work includes, but is not limited to, the following specification sections:

- Division 00
- Division 01
- 061000 Rough Carpentry
- 061600 Sheathing
- 079500 Expansion Control
- 081113 Hollow Metal Doors and Frames
- 081416 Flush Wood Doors
- 083113 Access Doors and Frames
- 087100 Door Hardware
- 088300 Mirrors
- 097723 Fabric-Wrapped Panels
- 098433 Acoustical Wall Units
- 098436 Acoustical Ceiling Units
- 101100 Visual Display Units
- 101423 ADA and Code Signage
- 102123 Cubicles Curtains and Track
- 102600 Wall and Door Protection
- 102800 Toilet, Bath & Laundry Accessories
- 104413 Fire Extinguisher Cabinets
- 104416 Fire Extinguisher
- 105113 Metal Lockers
- 114000 Food Service Equipment
- 116623 Gymnasium Equipment
- 122113 Horizontal Louver Blinds
- 122413 Roller Window Shades

JOB SPECIFIC SCOPE INCLUDES (but is not limited to):

1. All items per Master Scope of Work.
2. Install all items noted to be provided by the Owner.
3. Provide all wood framing, wood blocking, nailers, wood sheathing, and plywood backing panels as
required per the Contract Documents. At locations where rigid insulation is called for between two layers of plywood, the rigid insulation shall be by this scope of work.

4. Provide all interior finish carpentry and interior architectural woodwork as shown in the Contract Documents. This includes any wood trim around openings as noted on the plans.

5. Furnish and install all hollow metal doors, door frames, flush wood doors, and door hardware for all openings as indicated in the Contract Documents.

6. Finish hardware at all doors by this scope of work. Coordinate keying with the Owner, Construction Manager, and other Contractors providing hardware. This Contractor is to provide the glazing Contractor with all lock cores for all aluminum doors.

7. Provide pathways and pull strings in doors/frames where access controls are required.

8. Provide doors that require electric operators with a single point of connection for electrical contractor to connect to. If doors are required to be tied into the Fire Alarm System that also will be a single point of connection for the electrician.
   a) Internal power and fire alarm wiring from a single point of connection would be by this package.
   b) Provide magnetic hold opens, and other control devices as required. Include layout so the electrician can rough in back boxes.

9. All in-wall and above-ceiling blocking or support at all required locations per the Contract Documents. Blocking for AV equipment. This includes In-wall blocking required by future Owner-provided items. Coordination is required between individual Contractors.

10. This contractor is to provide and install all fabric-wrapped panels, FRP panels, wall & ceiling sound-absorbing units, plastic paneling, and any special wall finish system as shown in the Contract Documents. Provide and install any blocking, clips, insulation, etc. required for a complete installation.

11. This contractor is to provide and install any horizontal louver blinds and roller shades.

12. Provide and install all wall & door protection as noted on the contract documents.

13. This contractor is to provide and install complete all visual display surfaces, markerboards, pegboards, signage, toilet compartments and accessories, fire extinguishers, and cabinets, metal/steel storage shelving and lockers, and any required cubicle curtains and track. Install any blocking required for such. Coordinate with CM, and mason for rough openings required.

14. Provide and install all gymnasium equipment, padding, and track system as shown in the Contract Documents.

15. Provide and install all food service equipment as shown in the Contract Documents. See drawing A623 detail K1.

16. This scope of work to provide and install sub floor plywood as noted on the plans.

17. Provide and install all acoustic or sound-absorbing ceilings, wall panels, etc. as indicated on the Contract Documents.

18. Provide and install all room signage, building signage, and specialty graphics. This includes any backing, z-clips, fasteners, etc. as required for a complete installation.

19. For locations and details where insulation is located behind plywood, this scope of work shall be responsible for the plywood and insulation. Any insulation located outside of the plywood shall be by others.

20. Include an allowance of $20,000 to be used as required, per the direction of the Construction Manager. Any unused portion will be returned to the Owner.

21. All work is assumed to take place during normal working hours. In case there is OT needed, please provide the following rate:
   a) OT Premium rate:$__________/hour
The following work is excluded:

1. Markerboard Sliding Doors – By Others
2. Casework – By others
3. Solid Surface Countertops – By others
4. Millwork signage – By Casework Contractor
5. Floor protection – By Demo Contractor
6. Phase 2 Scope as indicated by shaded areas noted on drawings.
Specific scope of work to be performed:

Provide all required labor, material, equipment, permits, layout, freight, and applicable taxes necessary for the Framing, Drywall, & Acoustical Ceilings Scope of Work complete as set forth in the contract documents and all other applicable sections of the project manual and all other subcontract documents identified.

Scope of work includes, but is not limited to, the following specification sections:

- Division 00
- Division 01
- 054000 Cold-Formed Metal Framing
- 061600 Sheathing (As Applicable)
- 072100 Thermal Insulation (As Applicable)
- 078446 Fire Resistive Joint Systems (As Applicable)
- 079200 Joint Sealants (As Applicable)
- 079500 Expansion Control (As Applicable)
- 092116 Non-Structural Metal Framing
- 092900 Gypsum Board
- 095113 Acoustical Panel Ceilings

JOB SPECIFIC SCOPE INCLUDES (but is not limited to):

1. All items per Master Scope of Work.
2. This scope is to handle all demo/salvaging of existing ceiling grid and tile where noted at each building.
3. Includes patching to match existing at all areas called out to be demoed.
4. Where there is a wall finish called out to be demoed, this scope of work will need to figure replacing the drywall or backer board as necessary for new finishes.
5. Gypsum wallboard assemblies include but are not limited to metal stud framing, furring channels, light gauge trusses, bracing, slip track, compressible gaskets, acoustical sealants, concealed sealants, insulation, and drywall.
6. All cold-formed metal framing and associated wall insulation to complete each wall type as applicable.
7. Upon completion of drywall work all excess sheetrock mud must be removed from floors. All floors are to be swept with a dust-collecting compound.
8. This scope will provide and install any required access doors per plan. All MEP-related access doors will be provided to this scope for installation.
9. All floor tracks shall be clean of debris prior to the installation of gypsum board.
10. Building expansion joint assemblies for all interior horizontal and vertical expansion joints.
Includes floor and ceiling expansion joints. Includes interior fire-rated expansion joint assemblies.
11. Standard and Decorative Acoustical ceiling system including but not limited to, suspension system including hangers and wire, metal grid system, acoustical ceiling tile, vertical/horizontal closures where ceilings do not terminate at walls, expansion/control joints, etc.
12. Cutouts in acoustical ceilings for other trades. Scope includes layout, protection of materials and finishes, and handling and distribution of materials throughout the project.
13. Interior expansion joints, reveals, and control joints as shown in the drawings.
14. Coordinate all framing, drywall, and ceiling work with all mechanical, plumbing, and electrical trade penetrations. The Subcontractor will include all additional tees, runners, hangers, tie wires, and filler tiles for the installation of light fixtures, sprinkler heads, diffusers, grilles, etc.
15. Metal stud kickers and structural stud support. Coordinate with MEP overhead systems.
17. Framing/blockouts for through-wall penetrations.
18. Drywall ceiling suspension, framing, trim, and miscellaneous hangers as required for an acceptable installation. Include additional framing as may be required for fixtures.
19. Includes all required Acoustical and fire sealants of walls as required for a complete wall assembly.
20. Coordinate bulkhead details and interfacing sheetrock ceilings with acoustical ceilings.
21. Provide and install all insulation where the stud wall abuts the metal deck and insulation between metal studs.
22. Include an allowance of $15,000 for miscellaneous work as directed by the Construction Manager. Any unused portion will be returned to the Owner.
23. Include an allowance for ceiling demo/re-work for RTU curb and steel work of $10,000 in base bid. Any unused portion will be returned to the Owner.
24. All Unistrut, grids, supports, etc. for any ceiling system shall be by this scope of work.
25. Where wall outlets are shown to be removed on existing to remain walls, this scope of work to include patching them following demo.
26. All work is assumed to take place during normal working hours. In case there is OT needed, please provide the following rate:
   a) OT Premium rate: $__________/hour

The following work is excluded:

1. Fire Stopping at MEP Penetrations – By Others
2. Plywood sheathing and blocking – General Trades Contractor
3. Phase 2 Scope as indicated by shaded areas noted on the drawings.
LPS LHS Phase 01 Remodel (Addendum 003)
12-3000 – Casework Scope of Work

Specific scope of work to be performed:

Provide all required labor, material, equipment, permits, layout, freight, and applicable taxes necessary for the Casework Scope of Work complete as set forth in the contract documents and all other applicable sections of the project manual and all other subcontract documents identified.

Scope of work includes, but is not limited to, the following specification sections:

- Division 00
- Division 01
- 064023 Interior Architectural Woodwork
- 123200 Manufactured Wood Casework
- 123666 Solid Surfacing Countertops
- 123669 Quartz Agglomerate Countertops

JOB SPECIFIC SCOPE INCLUDES (but is not limited to):

1. All items per Master Scope of Work.
2. Provide and install all manufactured wood casework, plastic-laminate-clad countertops, solid surface countertops, and all plastic laminate.
3. Install all concealed brackets/framing that support this package’s work.
4. This contractor is to provide field measurements and shop drawings for all casework and countertops.
5. Coordinate openings in tops with other trades prior to fabrication. If contractor fails to coordinate it will be their responsibility to field cut as required.
6. Backing is to be provided by General Trades Package. Provide backing sizes, locations, and layout to General Trades Package prior to wall being enclosed.
7. Provide all sheathing and 2x4s that are covered or in conjunction with solid surface, plastic-laminate-clad countertops and panels, or casework. (i.e. Reception desks)
8. Provide all display cases, shelving, brackets, hanging devices, hardware, locks, filler plates etc. necessary for a complete installation.
9. Provide and install joint sealant at casework and countertops as required for a complete installation.
10. Locks associated with all casework are to be provided by this package. Coordinate keying with Owner.
11. Provide temporary protection of all work installed by this package. Countertop protection by this scope of work will be required to remain in place until substantial completion of the entire project.
12. All glass and glass shelving shall be by this scope.
13. Include an allowance of $15,000 for additional work per the direction of the Construction Manager. Any unused portion shall be returned to the Owner.
14. The millwork signage, reveals, plastic laminate panels, and trim shall be by this scope of work.
15. Provide any access door sections indicated to be built into the casework.

16. All work is assumed to take place during normal working hours. In case there is OT needed, please provide the following rate:
   a) OT Premium rate:$__________/hour

The following work is excluded:
   1. Phase 2 Scope as indicated by shaded areas noted on the drawings.
LPS LHS Phase 01 Remodel
22-1000 – Plumbing Scope of Work – ADD 03

Specific scope of work to be performed:

Provide all required labor, material, equipment, permits, layout, freight, and applicable taxes necessary for the Plumbing Scope of Work complete as set forth in the contract documents and all other applicable sections of the project manual and all other subcontract documents identified.

Scope of work includes, but is not limited to, the following specification sections:

- Division 00
- Division 01
- 024119  Selective Demolition (As Applicable)
- 078413  Penetration Fire Stopping (As Applicable)
- Division 22  (All Sections)
- 221413 – Storm Drainage Piping (Addendum 003)
- 221423 – Storm Drainage Piping Specialties (Addendum 003)

JOB SPECIFIC SCOPE INCLUDES (but is not limited to):

1. All items per Master Scope of Work.
2. Provide firestopping at any plumbing piping penetrations in rated walls / barriers.
3. Provide complete plumbing system as indicated on the Contract Documents, including but not limited to:
   a) Any below slab plumbing work will be completed by this scope complete. Including saw cutting, excavation, and concrete pour back. Include xray of slab prior to saw cutting to ensure no existing MEP conflicts.
   b) Demo and capping of piping as shown.
   c) Caulking of all plumbing fixtures.
   d) Drip pans as required.
   e) Connections to all equipment within other sections or furnished by owner.
4. Provide and install all floor drains, floor cleanouts, and backflow preventers as show in the plumbing schedule.
5. Copper domestic water piping is required throught the bulidng. Please reference note 8 on P100A.
6. Provide all equipment, materails, labor, etc. necessary for the complete installation of the gas piping system.
7. Provide and set all roof penetrations as required for this Scope of Work. Pentrations will be flashed in and made weather tight by roofing contractor.
8. All supports, anchors, guides, misc metal supports, penetrations, sleeces, blocking, and equipment supports required for the proper installation.
9. Piping of condensate drains for equipment provided under the HVAC scope of work per the details, specifications, and manufacturers requirements. Work to include all piping, fittings, traps, insulations supports, etc. Coordinate with the HVAC Contractor.
10. All pumps as required.
11. Access doors required by this scope of work, not shown in the Contract Documents are to be provided by this scope of work. Lockable and rated where required.
12. This Contractor will be required to pull permits for all work as required.
13. Provide a $15,000 allowance for plumbing work beyond scope. Any unused portion will be returned to the owner.
14. This scope of work to handle all associated saw cutting for underground rough-in, including the patch back of the slab where needed. All demo items overhead should be dropped to the floor for the demo contractor to remove to the dumpster.
   a) For MEP demolition work, MEP contractors will make safe, cut and drop all material associated with re-work and new tie-ins. The demo contractor will remove the dropped material from the building to the dumpster.
   b) This scope of work to drop all plumbing items and drip trays as noted. Demo contractor to bring to dumpster.

The following work is excluded:

1. Toilet Room Accessories – By General Trades Contractor
2. Plumbing Fixture Demo – By Demo Subcontractor(Disconnect and cap by this contractor)
3. Phase 2 Scope at liberty High School as indicated by shaded areas noted on the Drawings.

Unit Prices:

1. All work is assumed to take place during normal working hours. In case there is OT needed, please provide the following rate:
   a) OT Premium rate:$__________/hour
Specific scope of work to be performed:

Provide all required labor, material, equipment, permits, layout, freight, and applicable taxes necessary for the Electrical Scope of Work complete as set forth in the contract documents and all other applicable sections of the project manual and all other subcontract documents identified.

Scope of work includes, but is not limited to, the following specification sections:

- Division 00
- Division 01
- 024119  Selective Demolition (As Applicable)
- 078413  Penetration Fire Stopping (As Applicable)
- Division 26  (All Sections)
- Division 27  (All Sections)
- Division 28  (All Sections)

JOB SPECIFIC SCOPE INCLUDES (but is not limited to):

1. All items per Master Scope of Work.
2. Make safe for demo. Demolition as shown on drawings for all electrical, low voltage, data, and fire alarm. Salvage, store and reinstall devices called out to relocate/reuse. This scope of work to salvage all projectors as noted on the plans.
3. For MEP demolition work, MEP contractors will make safe, cutting and dropping all material associated with re-work and new tie-ins. The demo contractor will remove the dropped material from the building to the dumpster.
   a) This scope of work is to handle all electrical demo and salvaging as needed. Coordinate with demo contractor on which items can be thrown away.
4. Any below slab electrical work will be completed by this scope complete. Including saw cutting, excavation, and concrete pour back. Include xray of slab prior to saw cutting to ensure no existing MEP conflicts.
5. Wall penetrations at existing walls required by this Scope of Work, including but not limited to, layout, core drilling, saw cutting, etc.
6. Provide and install penetration firestopping at electrical conduit / wire penetrations in rated walls.
7. Provide conduit raceways and sleeves for the following systems, including but not limited to:
   a) Temperature Control
   b) Building Automation System
   c) Data
8. Fire Alarm System complete, including but not limited to:
   a) This scope of work shall be responsible all work related to the relocation and reinstallation of the existing fire alarm panels and system. This includes but is not limited to any demolition, salvaging, relocation, and reinstallation, etc as required for a complete and functional system. This includes any and all accessories and materials as required. This scope of work will be resposible for
maintaining on operational fire alarm system from the time the existing panels are moved and until they are reinstalled and operational again.

b) Furnish of duct detectors. Include final connection and testing. Installation to be by my Mechanical Subcontractor.
c) Provide and install all new audio/visible devices.
d) Testing of all systems.
e) System shall interface with security electronics systems. Coordinate with security electronics subcontractor. Provide fire alarm system programming and auxiliary contracts as required to allow for fire alarm annunciation/control from the security electronics control panels as specified.
f) Provide input and output modules for all equipment that must be monitored/controlled for the purpose of smoke evacuation/pressurization.
g) Provide all fire alarm wiring including control and monitoring wire from each input/output module to its corresponding piece of smoke evacuation equipment.
h) Testing for fire alarm system in conjunction with HVAC contractor, electrical contractor and general contractor to verify accurate function of smoke evacuation/pressurization systems.

9. Electrical service to other MEPT systems, including but not limited to:
   a) Line voltage interlock wiring for mechanical system
   b) Starters and disconnect switches
   c) DOAS Units
   d) Fans
   e) Plumbing fixtures
   f) Duct detectors
   g) Variable frequency drives and/or controllers furnish by MEP subcontractors

10. Communications and AV system per the contract documents, including but not limited to:
    a) Cable tray
    b) Sleeves & sleeve seals
    c) Grout
    d) Enclosures for underground data transition
    e) Boxes and conduit
    f) Cabling
    g) Devices

11. Provide and install all power requirements and electrical connections to all equipment, furnishings, etc. requiring electric power including but not limited to, indicated or not indicated – handicap assist door operators, magnetic hold-open devices, all disconnects, other systems requiring power, etc.

12. Final hook up of kitchen equipment, shades, or other power operated devices.

13. Provide motor starters and disconnect switches for HVAC and plumbing equipment as required for mechanical equipment (reference mechanical schedules).

14. Provide and install all technology and AV equipment, systems, wiring, raceways and connections per TA series drawings of the Contract Documents.

15. Provide and install all access control cabling, devices, etc. complete.

16. Provide all hanger wires as part of the light replacement.

17. Provide and install all video surveillance cabling, devices, etc. complete.

18. Provide and install all fixtures, devices, raceway, unistrut etc. needed for exterior and interior lighting.

19. Any additional access doors required by this scope of work but not shown in the Contract Documents shall be by this scope of work. Lockable and rated where required.
20. Provide and set all roof penetrations as required for this Scope of Work. Penetrations will be flashed in and made weather tight by roofing contractor.

21. This Contractor will be required to pull permits for all work as required.

22. Include a $25,000 allowance for items not shown in the Contract Documents. Allowance to be used as directed by the Construction Manager, any unused portion will be returned to the owner.

The following work is excluded:
1. Phase 2 Scope at Liberty High School as indicated by shaded areas noted on the Drawings.

Unit Prices:
1. All work is assumed to take place during normal working hours. In case there is OT needed, please provide the following rate:
   a. OT Premium rate: $__________/hour
February 21, 2024

Mr. Justin Presson  
Project Manager  
Liberty Public Schools  
Liberty, Missouri 64068

AHERA Pre-Renovation Asbestos Sampling  
Date Performed: 2/16/2024  
Location: Liberty High School  
Address: 200 Blue Jay Drive, Liberty, Missouri 64068  
Area Description: Summer 2024 Renovations  
Requested By: Steve Aldrich  
Reason for Request: Pre-Renovation Survey  
Performed By: Glenn Robinson  
Certification #: 7011040623MOIR4804

Dear Mr. Presson:

On February 16, 2024, Glenn Robinson of Axiom Service Professionals (ASP) conducted limited asbestos sampling from the subject site detailed above. Liberty High School is of early 1970’s construction. The sampling was conducted to determine the potential asbestos content of any suspect materials to be disturbed in areas of planned renovations. Mr. Robinson’s Asbestos Inspector’s certification is provided in Appendix A.

Asbestos samples were collected in accordance with Environmental Protection Agency’s AHERA regulations (40 CFR Part 763, subpart E) and other applicable local, state, and federal asbestos guidelines and regulations. The samples were submitted to Asbestos Consulting and Testing for analysis. The lab is accredited by the National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) and the NVLAP Lab code number is 101649-0. The bulk samples were analyzed by polarized light microscopy (PLM) using EPA Method Reference 600/R-93/116.

A material is considered to be an asbestos-containing material (ACM) if at least one sample collected from the suspect material as identified by a qualified laboratory indicates asbestos present in an amount greater than one percent (1%), in accordance with the definition of ACM per the Environmental Protection Agency (EPA).

The sampling was performed on suspect materials that comprised of locations where renovations are anticipated. The suspect materials sampled during this pre-renovation inspection are listed in the table below. Laboratory results and the chain of custody can be found attached as Appendix B.
<table>
<thead>
<tr>
<th>Sample #</th>
<th>Area Description</th>
<th>Sample Description</th>
<th>Approximate Quantity</th>
<th>Friability</th>
<th>% Asbestos</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Room 401</td>
<td>12” VCT white w/ multi color fleck and yellow adhesive</td>
<td>N/A</td>
<td>Non-Friable</td>
<td>NAD</td>
</tr>
<tr>
<td>2</td>
<td>Room 401</td>
<td>Drywall &amp; Joint Compound</td>
<td>N/A</td>
<td>Friable</td>
<td>NAD</td>
</tr>
<tr>
<td>3</td>
<td>Room 401</td>
<td>6” Pipe Insulation</td>
<td>N/A</td>
<td>Friable</td>
<td>NAD</td>
</tr>
<tr>
<td>4</td>
<td>Hall @ Room 402</td>
<td>2’x 4’ ceiling tile small fissures &amp; tiny holes</td>
<td>N/A</td>
<td>Friable</td>
<td>NAD</td>
</tr>
<tr>
<td>5</td>
<td>Hall @ Room 402</td>
<td>Drywall and Joint Compound</td>
<td>N/A</td>
<td>Friable</td>
<td>NAD</td>
</tr>
<tr>
<td>6</td>
<td>Room 400 B (closet)</td>
<td>12” VCT white w/ multi color fleck and yellow adhesive</td>
<td>N/A</td>
<td>Non-Friable</td>
<td>NAD</td>
</tr>
<tr>
<td>7</td>
<td>Room 400 B</td>
<td>16” Tan LVT tiles</td>
<td>N/A</td>
<td>Non-Friable</td>
<td>NAD</td>
</tr>
<tr>
<td>8</td>
<td>100 Hallway</td>
<td>12” VCT tan w/ light tan fleck and yellow adhesive</td>
<td>N/A</td>
<td>Non-Friable</td>
<td>NAD</td>
</tr>
<tr>
<td>9</td>
<td>Room 114</td>
<td>2’x 4’ ceiling tile medium fissures &amp; small holes</td>
<td>N/A</td>
<td>Friable</td>
<td>NAD</td>
</tr>
<tr>
<td>10</td>
<td>Room 109</td>
<td>12”x 24” LVT tiles Gray</td>
<td>N/A</td>
<td>Non-Friable</td>
<td>NAD</td>
</tr>
<tr>
<td>11</td>
<td>Room 108</td>
<td>Sink undercoating Gray</td>
<td>N/A</td>
<td>Non-Friable</td>
<td>NAD</td>
</tr>
<tr>
<td>12</td>
<td>Room 114</td>
<td>Sink undercoating Gray</td>
<td>N/A</td>
<td>Non-Friable</td>
<td>NAD</td>
</tr>
<tr>
<td>13</td>
<td>Room 108</td>
<td>Drywall and Joint Compound (ceiling)</td>
<td>N/A</td>
<td>Friable</td>
<td>NAD</td>
</tr>
<tr>
<td>14</td>
<td>Room 111</td>
<td>16” LVT Tiles Brown</td>
<td>N/A</td>
<td>Non-Friable</td>
<td>NAD</td>
</tr>
<tr>
<td>15</td>
<td>Room 100</td>
<td>Drywall and Joint Compound</td>
<td>N/A</td>
<td>Friable</td>
<td>NAD</td>
</tr>
<tr>
<td>16</td>
<td>Room 100</td>
<td>CMU / Brick Mortar</td>
<td>N/A</td>
<td>Non-Friable</td>
<td>NAD</td>
</tr>
</tbody>
</table>

NAD - No Asbestos Detected
N/A – Not Applicable

There was no asbestos containing materials (ACM) identified from the samples collected from the areas of planned renovations.

Axiom Service Professionals appreciates the opportunity to serve you. If you have any questions, please feel free to call or email.

Sincerely,

Glenn Robinson
Senior Project Manager
913-579-2657
glennr@axiomservicepros.com

Limitations of Inspection

Axiom Service Professionals collected samples of suspect asbestos materials in planned renovation areas only. Other suspect materials within the facility were not sampled and should be presumed to be asbestos containing until sampling proves otherwise.
Appendix B
Laboratory Analytical Report
April 25, 2023

Glenn S Robinson
9065 Waverly Rd
DeSoto, KS 66018

RE: Missouri Asbestos Occupation Certification Card

Enclosed is your certification card for Asbestos Project Designer, as issued by the Missouri Department of Natural Resources' Air Pollution Control Program.

Missouri Certification Number: 7011020823MOPDR4804
Course Training Date: February 08, 2023
Missouri Certification Approval Date: April 25, 2023
Missouri Certification Expiration Date: February 08, 2024

Note:
- All Missouri-certified asbestos personnel must comply with the following statutes and regulations:
  - Sections 643.225 to 643.250, RSMo;
  - 10 CSR 10-6.241 Asbestos Projects-Registration, Abatement, Notification, Inspection, Demolition, and Performance Requirements; and
  - 10 CSR 10-6.250 Asbestos Projects-Certification, Accreditation and Business Exemption Requirements.
- To keep your occupation certification up-to-date, you must complete an annual refresher course and submit a renewal application each year.
- In order to be eligible to renew your certification, you must successfully complete a refresher course with a Missouri-accredited training provider within 12 months of the expiration date of your current training certificate. If you exceed this grace period, you will be required to retake a Missouri-accredited initial course in order to be eligible for Missouri certification.

To obtain a copy of the certification renewal application, or review regulations and requirements, please visit our website at http://dnr.mo.gov/env/apcp/asbestos/index.htm.

If you have any questions please call the Air Pollution Control Program at 573-751-4817.

AIR POLLUTION CONTROL PROGRAM

Director of Air Pollution Control Program

PO Box 176, Jefferson City, MO 65102-0176 • dnr.mo.gov
# Asbestos Chain of Custody / Analysis Request

**Customer:** AXIOM  
**Address:** PO. BOX 47166  
**City/State/Zip:** KCMO 64188  
**Email:** GLENN ROBINSON

**Project:** Liberty HIGH SCHOOL  
**Collected by:** GLENN ROBINSON  
**Date:** 2/17/24

**Sample No.** | **Material Type** | **ACT Lab ID**
--- | --- | ---
1 | Room 401/12" VCT white w/ multi color fleck & yellow mastic | 883085-1
2 | Room 401/ Drywall & Joint Compound | -2
3 | Room 401/6" Pipe Insulation | -3
4 | Room 401/ 2'x4' Ceiling Tile Small Assures & Tiny Holes | -4
5 | Hall @ Room 402/1 Drywall & Joint Compound | -5
6 | Room 400B/Closet/12" VCT White w/ yellow adhesive | -6
7 | Room 400B/16" Tan LVT Tiles | -7
8 | 100 Hallway 12" VCT Tan w/ light tan fleck & yellow adhesive | -8
9 | Room 114/2'x4' Ceiling Tiles Med. Assure & 5 small holes | -9
10 | Room 109/12"x24" LVT Gray | -10
11 | Room 108/Grey Sink Undercoat | -11
12 | Room 114/Gray Sink Undercoat | -12
13 | Room 108/Ceiling-Drywall & Joint Compound | -13
14 | Room 111/16" Brown LVT | -14
15 | Room 100/Drywall & Joint Compound | -15
16 | Room 100/Caulk/Brick Mortar | -16

**Relinquished by:** GLENN ROBINSON  
**Date/Time:** 2/17/24  
**Received by:** SAM DAV  
**Date/Time:** 2/20/24

**Report results via:** Email

**Sample Condition:** Acceptable  
**Other:**
February 21, 2024

Axiom  
PO Box 47166  
Kansas City, MO  64188

PROJECT: Liberty High School  
REPORT NO. B-83085

Enclosed please find results for bulk samples submitted to our laboratory for asbestos analysis from the above referenced project.

The asbestos analysis was performed using Polarized Light Microscopy (PLM) with dispersion staining in accordance with the required EPA Interim Method for the Determination of Asbestos in Bulk Insulation Samples, as found in 40 CFR, Part 763, Subpart E, Appendix E. The asbestos fiber type and percentage are reported. The method of measurement is based on calibrated visual estimation. The data provided herein is related only to those samples submitted for analysis. Samples comprised of greater than one percent (1%) asbestos are to be considered an asbestos containing material.

Verification by PLM point counting is available upon request. Due to limitations of the PLM microscope and the matrix of floor tile, any floor tile sample found to contain NO asbestos may be verified by TEM analysis upon the client's request. An additional fee will apply.

If samples submitted are not homogeneous, sub-samples of the components are analyzed separately as layers. A composite result may be requested.

This report may not be used by the client to claim product endorsement by NIST, NVLAP or any agency of the U.S. Government. This report shall not be reproduced, except in full, without the written approval of ACT.

If you have any questions, please contact me at 913-492-1337.

Respectfully submitted,

Tami L. Van  
Laboratory Director

NVLAP Lab Code: 101649-0
### Asbestos Bulk Analysis Laboratory Report

**Client Name:** Axiom  
**Project Name:** Liberty High School  
**REPORT NO.:** B-83085  
**RUSH TAT**

**Date collected:** 2/17/2024  
**Collected by:** Glenn Robinson  
**Submitted by:** Glenn Robinson  
**Date sample submitted:** 2/20/2024  
**ANALYST:** Tami Van

<table>
<thead>
<tr>
<th>Sample No./Lab ID:</th>
<th>Location of Material:</th>
<th>Description of Material:</th>
<th>Asbestos Fiber Type</th>
<th>Percentage</th>
<th>Non-Asbestos Fiber Type</th>
<th>Percentage</th>
<th>Non-Fibrous Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 / B83085-1</td>
<td>Floor tile</td>
<td>White flat smooth hard</td>
<td>NONE DETECTED</td>
<td></td>
<td>Bulk/Binder</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cellulose</td>
<td>15</td>
<td>Bulk/Binder</td>
</tr>
<tr>
<td>2 / B83085-2</td>
<td>Adhesive</td>
<td>Gold brittle</td>
<td>NONE DETECTED</td>
<td></td>
<td>Bulk/Binder</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>2 / B83085-2</td>
<td>Drywall</td>
<td>White chalky/ brown fibrous</td>
<td>NONE DETECTED</td>
<td></td>
<td>Cellulose</td>
<td>15</td>
<td>Bulk/Binder</td>
</tr>
<tr>
<td>3 / B83085-3</td>
<td>Pipe insulation</td>
<td>Gold/white fibrous / // foil</td>
<td>NONE DETECTED</td>
<td></td>
<td>Fibrous glass</td>
<td>70</td>
<td>Bulk/Binder</td>
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<td></td>
<td></td>
<td>Cellulose</td>
<td>15</td>
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</tr>
</tbody>
</table>
### Sample No./Lab ID: 4 / B83085-4
**Location of Material:** Ceiling tile  
**Description of Material:** Gray compact granular fibrous / paint

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<th>Percentage</th>
<th>Non-Asbestos Fiber Type</th>
<th>Percentage</th>
<th>Non-Fibrous Percentage</th>
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<tbody>
<tr>
<td>NONE DETECTED</td>
<td></td>
<td>Cellulose</td>
<td>40</td>
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<td></td>
<td></td>
<td>Fibrous glass</td>
<td>40</td>
<td>Perlite</td>
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### Sample No./Lab ID: 5 / B83085-5
**Location of Material:** Drywall  
**Description of Material:** White chalky/ brown fibrous

<table>
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<tr>
<th>Asbestos Fiber Type</th>
<th>Percentage</th>
<th>Non-Asbestos Fiber Type</th>
<th>Percentage</th>
<th>Non-Fibrous Percentage</th>
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<tr>
<td>NONE DETECTED</td>
<td></td>
<td>Cellulose</td>
<td>15</td>
<td>Bulk/Binder</td>
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</table>

### Sample No./Lab ID: 5 / B83085-5
**Location of Material:** Joint compound  
**Description of Material:** White shiny chalky

<table>
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<tr>
<th>Asbestos Fiber Type</th>
<th>Percentage</th>
<th>Non-Asbestos Fiber Type</th>
<th>Percentage</th>
<th>Non-Fibrous Percentage</th>
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</thead>
<tbody>
<tr>
<td>NONE DETECTED</td>
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<td>100</td>
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### Sample No./Lab ID: 6 / B83085-6
**Location of Material:** Floor tile  
**Description of Material:** White flat smooth hard

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<th>Asbestos Fiber Type</th>
<th>Percentage</th>
<th>Non-Asbestos Fiber Type</th>
<th>Percentage</th>
<th>Non-Fibrous Percentage</th>
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</thead>
<tbody>
<tr>
<td>NONE DETECTED</td>
<td></td>
<td>Bulk/Binder</td>
<td>100</td>
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### Sample No./Lab ID: 6 / B83085-6
**Location of Material:** Adhesive  
**Description of Material:** Gold brittle

<table>
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<tr>
<th>Asbestos Fiber Type</th>
<th>Percentage</th>
<th>Non-Asbestos Fiber Type</th>
<th>Percentage</th>
<th>Non-Fibrous Percentage</th>
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<tbody>
<tr>
<td>NONE DETECTED</td>
<td></td>
<td>Bulk/Binder</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
## Asbestos Bulk Analysis Laboratory Report

**Client Name:** Axiom  
**Project Name:** Liberty High School

**REPORT NO.:** B-83085  
**RUSH TAT**

**Date collected:** 2/17/2024  
**Submitted by:** Glenn Robinson  
**Collected by:** Glenn Robinson  
**Date sample submitted:** 2/20/2024  
**Analysis date:** 2/21/2024

<table>
<thead>
<tr>
<th>Sample No./Lab ID: 7 / B83085-7</th>
<th>Location of Material: Floor tile</th>
<th>Description of Material: Tan flat smooth hard</th>
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<td>Asbestos Fiber Type</td>
<td>Percentage</td>
<td>Non-Asbestos Fiber Type</td>
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<th>Sample No./Lab ID: 7 / B83085-7</th>
<th>Location of Material: Adhesive</th>
<th>Description of Material: Clear sticky</th>
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<tbody>
<tr>
<td>Asbestos Fiber Type</td>
<td>Percentage</td>
<td>Non-Asbestos Fiber Type</td>
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<tr>
<td>NONE DETECTED</td>
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<th>Location of Material: Floor tile</th>
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<tr>
<td>Asbestos Fiber Type</td>
<td>Percentage</td>
<td>Non-Asbestos Fiber Type</td>
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<tr>
<td>NONE DETECTED</td>
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<table>
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<th>Sample No./Lab ID: 8 / B83085-8</th>
<th>Location of Material: Adhesive</th>
<th>Description of Material: Gold brittle</th>
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<tbody>
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<td>Percentage</td>
<td>Non-Asbestos Fiber Type</td>
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<td>NONE DETECTED</td>
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<table>
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<th>Sample No./Lab ID: 9 / B83085-9</th>
<th>Location of Material: Ceiling tile</th>
<th>Description of Material: Gray compact granular fibrous / paint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos Fiber Type</td>
<td>Percentage</td>
<td>Non-Asbestos Fiber Type</td>
</tr>
<tr>
<td>NONE DETECTED</td>
<td>Cellulose 40</td>
<td>Bulk/Binder 5</td>
</tr>
<tr>
<td></td>
<td>Fibrous glass 40</td>
<td>Perlite 15</td>
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</tbody>
</table>
### Asbestos Bulk Analysis Laboratory Report

**Client Name:** Axiom  
**Project Name:** Liberty High School  
**REPORT NO.:** B-83085  
**RUSH TAT**

**Date collected:** 2/17/2024  
**Collected by:** Glenn Robinson  
**Submitted by:** Glenn Robinson  
**Date sample submitted:** 2/20/2024  
**ANALYST:** Tami Van  
**Analysis date:** 2/21/2024

<table>
<thead>
<tr>
<th>Sample No./Lab ID:</th>
<th>Location of Material:</th>
<th>Description of Material:</th>
<th>Asbestos Fiber Type</th>
<th>Percentage</th>
<th>Non-Asbestos Fiber Type</th>
<th>Percentage</th>
<th>Non-Fibrous Percentage</th>
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<tbody>
<tr>
<td>10 / B83085-10</td>
<td>Floor tile</td>
<td>Gray flat smooth hard</td>
<td>NONE DETECTED</td>
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<td>Bulk/Binder</td>
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<td></td>
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<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 / B83085-10</td>
<td>Adhesive</td>
<td>Clear sticky</td>
<td>NONE DETECTED</td>
<td></td>
<td>Bulk/Binder</td>
<td>100</td>
<td></td>
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<tr>
<td>11 / B83085-11</td>
<td>Sink undercoat</td>
<td>Gray brittle</td>
<td>NONE DETECTED</td>
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<td>Bulk/Binder</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>12 / B83085-12</td>
<td>Sink undercoat</td>
<td>Gray brittle</td>
<td>NONE DETECTED</td>
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<td>Bulk/Binder</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>13 / B83085-13</td>
<td>Drywall</td>
<td>Tan chalky/ brown fibrous</td>
<td>NONE DETECTED</td>
<td></td>
<td>Cellulose</td>
<td>15</td>
<td>Bulk/Binder 85</td>
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Analyst: TV
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<th>Sample No./Lab ID:</th>
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<th>Layer No.:</th>
<th>Description of Material:</th>
<th>Asbestos Fiber Type</th>
<th>Percentage</th>
<th>Non-Asbestos Fiber Type</th>
<th>Percentage</th>
<th>Non-Fibrous Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 / B83085-13</td>
<td>Joint compound</td>
<td>2</td>
<td>White shiny chalky</td>
<td>NONE DETECTED</td>
<td></td>
<td>Bulk/Binder 100</td>
<td></td>
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</tr>
<tr>
<td>14 / B83085-14</td>
<td>Floor tile</td>
<td>1</td>
<td>Brown flat smooth hard</td>
<td>NONE DETECTED</td>
<td></td>
<td>Bulk/Binder 100</td>
<td></td>
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<tr>
<td>14 / B83085-14</td>
<td>Adhesive</td>
<td>2</td>
<td>Clear sticky</td>
<td>NONE DETECTED</td>
<td></td>
<td>Bulk/Binder 100</td>
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<tr>
<td>15 / B83085-15</td>
<td>Drywall</td>
<td>1</td>
<td>Tan chalky/ brown fibrous</td>
<td>NONE DETECTED</td>
<td></td>
<td>Cellulose 15 Bulk/Binder</td>
<td>85</td>
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<tr>
<td>15 / B83085-15</td>
<td>Joint compound</td>
<td>2</td>
<td>White shiny chalky</td>
<td>NONE DETECTED</td>
<td></td>
<td>Bulk/Binder 100</td>
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<td></td>
</tr>
</tbody>
</table>
Asbestos Bulk Analysis Laboratory Report

Client Name: Axiom
Project Name: Liberty High School

REPORT NO.: B-83085

Date collected: 2/17/2024
Collected by: Glenn Robinson

Submitted by: Glenn Robinson
Date sample submitted: 2/20/2024
Analysis date: 2/21/2024

ANALYST: Tami Van

<table>
<thead>
<tr>
<th>Sample No./Lab ID: 16 / B83085-16</th>
<th>Location of Material: Brick mortar</th>
<th>Description of Material: Gray rocky cementitious</th>
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</thead>
<tbody>
<tr>
<td>Asbestos Fiber Type</td>
<td>Percentage</td>
<td>Non-Asbestos Fiber Type</td>
</tr>
<tr>
<td>NONE DETECTED</td>
<td></td>
<td>Bulk/Binder</td>
</tr>
</tbody>
</table>

Sample No./Lab ID: Location of Material: Description of Material:
Layer No.: Asbestos Fiber Type Percentage Non-Asbestos Fiber Type Percentage Non-Fibrous Percentage

Analyst: TV
<table>
<thead>
<tr>
<th>Question Issued By</th>
<th>Question #</th>
<th>Date</th>
<th>Review Discipline</th>
<th>Scope of Work</th>
<th>Question</th>
<th>Response</th>
<th>Answered By</th>
<th>Date Answered</th>
<th>Issued Addendum</th>
</tr>
</thead>
</table>
ADDENDUM NO. 3

Issued: 02/23/2024

Project: Liberty High School Interior Remodel

Project No. 23025

Owner: Liberty Public School District
8 Victory Lane
Liberty, Missouri 64068

Bidding Documents Issued: January 31st, 2024

This Addendum includes these 5 pages and the following attachments:

Project Manual:
Reissued Section 000105 “Certifications Page” consisting of 2 pages.
Reissued Section 000110 “Table of Contents” consisting of 4 pages.
Refer to Smith & Boucher, MEP Addendum No. 3

Drawings:
*Phase 2 only*
Refer to Smith & Boucher, MEP Addendum No. 3

GENERAL – BIDDER’S QUESTIONS

Question 004.1 – Is there a detail for the exhaust fans being deleted, specifically a patching detail?

Answer: No, details for exhaust fan for built-up roof.

Question 004.2 – Is the roof under warranty? If so, what manufacturer?

Answer: Tremco roof, follow manufacture standards for any roof repairs/patch.

Question 005 - Code question for hanger wires on lights. Do all of the lights being replaced need to have hanger wires? Is there two wires required?

Answer: All lighting shall be installed and supported per the requirements of the code and specification section 265119.

Question 006 - We were unable to find sub panel "PA" during the pre-bid walk. Can you please clarify its locations?

Answer: Panel PA is shown in room X109C on sheet E201A.

Question 007 - There is a rated ceiling above Phase 01 classrooms and corridor. Architect to review and confirm we are building to it and not demoing. There may need to be some acoustical spray at top of wall for sounds. Please advise.

Answer: Lid above ceiling will remain everywhere in Phase 1 unless demolition is required for access above. Walls noted to go to deck stop at top of lid. Ref Add #3 for clarification on sound sealant at top of wall.
Question 008 – Sierra Building Products, Kansas City, MO, please find substitution requests and technical data from Sound Seal and Custom Acoustical Products for the PET baffles (Section 095433), WP-1 fabric wrapped panels (Section 097723) and AP-1 acoustical wall panels (Section 098433)

Answer: Substitution for Sound Seal Baffles approved. Substitution request for Acoustical wall panels and acoustical tack panels are denied.

Question 009 - Storage A112 appears to show shelves on standards and brackets, but there are no elevations shown. Should there be shelves in this space? Is everything else within Art Storage A109a that is not elevated also going to be shelves on standards and brackets?

Answer: Yes these are the same shelves as storage as room A109a. Ref to Drawings in addendum #3.

Questions 010 - A1/A622 - Should the countertop finish be SS1 here? It is currently shown as laminated, but there are sinks in this location.

Answer: Ref Add #3 for clarification, Art countertops to be SS1.

Question 011 - E12 & H7/A622 - Both elevations show a laminate countertop. Is this correct? If correct, what is the finish?

Answer: Ref Add #3 for clarification, Art countertops to be SS1.

Question 012 – G1/A623 - How will the floating shelf be attached? Blind concealed hardware or standards and brackets?

Answer: Refer to drawing revision in ADD #3

Question 013 - Tectum specification for the Liberty Public Schools LHS Interior Remodel project. A C-20 mounting is called out for the direct attach Tectum panels but with that mounting method, the 3lb density fiberglass is a special order product with a long lead time. Would you be open to going with the C-40 mounting method instead? That configuration used batt insulation which is less expensive and easier to get and actually increases the acoustical value of the system from a 0.95 to a 1.00.

Answer: C-40 Mounting method is acceptable.

Question 014 - P9/A661 Right hand side of elevation 30” dimension notes WP2. Elevation or section does not show WP2 wall paneling. Please confirm if WP2 wall paneling is required somewhere on this elevation.

Answer: No, please disregard note. WP2 has been removed on drawings in addendum #3.

Question 015 - Opening A113b – Is this an ETR Door and Frame? Or will this be a new door with an existing frame?

Answer: Door A113b ETR, paint as noted in schedule. Alter frame to add new card reader.

Question 016 - What is the Species, Cut and Matching of the Venner-Faced Wood Doors that are to be matched to the existing?

Answer: District prefers plain sliced red oak wood doors, 5-ply construction with premium “A” grade face veneers. Stain to match ETR restroom doors in Area A.
Question 017 - Please confirm that cubicle curtains (F1) are required in phase 1. If so, please confirm location.

Answer: F1 to be provided in rooms Changing A100a, Restroom A103a, and Restroom A105a. RE: notes on RCP on A121A.

Question 018 - CLG3 is only shown on the RCP for Safe Room. Please confirm that CLG3 is to be used in the Active Sensory (A114) as well as called out in the Room Finish Schedule.

Answer: Active Sensory A114 ceiling to be CLG1/P1 like Calm Sensory A107. Ref drawings for revision.

Question 019 - Can you please confirm the existing roofing system that is being patched/cut-into for where the RTU and vent work is taking place?

Answer: Roof system is a built-up Roof from Tremco.

PROJECT MANUAL REVISIONS

A1 SECTION 000005 – CERTIFICATIONS PAGE
A1.1 REPLACE existing Section 000005 “Certifications Page” with the attached revised Section 000005 “Certifications Page”, dated February 23, 2024.

A2 SECTION 000110 - TABLE OF CONTENTS
A2.1 REPLACE existing Section 000110 “Table of Contents” with the attached revised Section 000110 “Table of Contents”, dated February 23, 2024.

A3 SECTION 024119 – SELECTIVE DEMOLITION
A3.1 DELETE Sub-paragraph 1.1.B.2 in Section 024119 “Selective Demolition.”
A3.2 ADD Sub-paragraph 1.1.B.3 as follows:

3. Section 017310 “Cutting and Patching” for cutting and patching procedures.

A3.3 REVISE Sub-paragraph 1.9.A.1 as follows:

1. Roof Warranty: TREMCO Roofing.

A4 SECTION 081416 – FLUSH WOOD DOORS
A4.1 REVISE Sub-paragraph 2.3.A.2 as follows:

2. Species: Red Oak, Stain to match ETR restroom doors in Area ‘A.’

A5 SECTION 098436 – ACOUSTICAL CEILING UNITS
A5.1 REVISE Sub-paragraph 2.3.A.3 as follows:

3. Edge Profile: Chamfered (beveled) on all four sides. Acoustical Performance: Sound absorption NRC of not less than 0.95 according to ASTM C423 for use with C-40 mounting.

DRAWINGS REVISIONS

A4 SHEET G000 – COVER SHEET
A4.1 Add Sheet A804 – Alternate #4 to sheet Index as clouded on sheet.

A5 SHEET A312 – SECTIONS & INTERIOR WALL TYPE
A5.1 Added top of wall detail – J1 as clouded as on sheet.
A5.2 Added detail call out on interior wall types as clouded on sheet.

A6 SHEET A501 – DOOR SCHEDULE – PHASE 1
A6.1 Revised notes on Door Schedule for door A113b.

A7 SHEET A601A – FINISH FLOOR PLAN – AREA A, B & E – LEVEL 1
A7.1 Added elevation tags for standard storage elevations to room Art Storage A109a.
A7.2 Added elevation tags for standard storage elevations to room Storage A112.
A7.3 Revised floor transition notes with keynote 09 65 13 around rooms Calm Sensory A107 and Active Sensory A114 as clouded on sheet.
A7.4 Added elevation reference to Active Sensory A114 west wall.
A7.5 Revised elevation callouts and dimensions to Pantry room A113.

A8 SHEET A622 – INTERIOR ELEVATIONS
A8.1 Revised keynotes on the following elevations on this sheet: A1, E12, H7

A9 SHEET A623 – INTERIOR ELEVATIONS
A9.1 Revised dimensions and notes on elevation D12 – Int Elev – Storage Short Wall typ.
A9.2 Revised dimensions and notes on elevation D14 – Int Elev – Storage Long Wall Typ.
A9.3 Revised casework dimensions on elevation G1 – Int Elev – A110 Pantry N.

A10 SHEET A624.2 – INTERIOR ELEVATIONS – PHASE 2 ONLY
A10.1 Revised notes and dimensions as clouded on elevation N1 on sheet.

A11 SHEET A625.2 – INTERIOR ELEVATIONS – PHASE 2 ONLY
A11.1 Revised keynote and note as clouded on elevation J1 on sheet.

A12 SHEET A661 – INTERIOR DETAILS
A12.1 Deleted dimension note from elevation P9 as clouded on this sheet.

A13 SHEET A681 – MATERIAL FINISH LEGEND & ROOM FINISH SCHEDULE
A13.1 Revised ceiling finish callout on Room finish schedule for room Active Sensory A114 phase 1 as clouded on sheet.

A1 SHEET A804 – ALTERNATE #4 – AREA D & H – PHASE 2 ONLY
A1.1 Added sheet for Alternate #4 – Reflected Ceiling plans and details as shown on sheet and described on cover sheet.

M1 REFERENCE ATTACHED MEP ADDENDUM NO. 3
SUBSTITUTION REQUEST APPROVALS

This portion of the addendum designates those materials, products and equipment approved prior to submission of bids, as set forth in the contract documents. Items added to the proposed contract documents by this addendum are the only proposed substitutions received and approved by the architect in accordance with those provisions. No other items shall be substituted or bid as “equals”.

It is understood that all items allowed by this addendum are subject to the full provisions of the original proposed contract documents and all modifications thereto and, as such, shall match standards of the original specified items with respect to materials, workmanship, design, size, capacity, type, function, finish, performance, quality, warranty, etc. Nothing in this addendum shall be construed as altering those original standards or modifications thereto.

Approvals are based upon the opinion, knowledge, information and belief of the architect at time of issuance of this addendum and reliance upon data submitted. Approvals are therefore interim in nature and subject to reconsideration as additional data, materials, workmanship and coordination with other work are observed and reviewed. In proposing items allowed by this addendum, bidder assumes all risk, costs and responsibility for item’s final acceptance, integration into the work and performance.

SECTION 09 54 33– DECORATIVE CEILINGS

Substitution request for PET Baffles from Sound Seal is approved.

END OF ADDENDUM NO. 3
SECTION 000105 - CERTIFICATIONS PAGE

ARCHITECT

I HEREBY, PURSUANT TO RSMO 327.411, STATE THAT THE SPECIFICATIONS INTENDED TO BE AUTHENTICATED BY MY SEAL ARE LIMITED TO SPECIFICATIONS LISTED BELOW:

DIVISION 1 SECTIONS: 011000, 012100, 012200, 012300, 012500, 012501, 013100, 013200, 013233, 013300, 014000, 014200, 014529, 016000, 017310, 017419, 017700, 017823, 017839, 017900.
DIVISION 2 SECTIONS: 024119.
DIVISION 4 SECTIONS: 042000.
DIVISION 5 SECTIONS: 055000, 055213.
DIVISION 6 SECTIONS: 061000, 061600, 064023.
DIVISION 7 SECTIONS: 071900, 072100, 072500, 072726, 076200, 078413, 078446, 079200, 079500.
DIVISION 8 SECTIONS: 081113, 081416, 083113, 083323, 083400, 083613, 084113, 087100, 088000, 088300.
DIVISION 9 SECTIONS: 092116, 092900, 093000, 095113, 095433, 096513, 096519, 096566, 096723, 096813, 097723, 098433, 098436, 099123, 099600.
DIVISION 10 SECTIONS: 101100, 101423, 102123, 102600, 102800, 104413, 104416, 105113.
DIVISION 11 SECTIONS: 116623.
DIVISION 12 SECTIONS: 122113, 122413, 123200, 123666, 123669.

I HEREBY DISCLAIM ANY RESPONSIBILITY FOR ALL OTHER SPECIFICATIONS, DRAWINGS, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE ARCHITECTURAL OR ENGINEERING PROJECT OR SURVEY.

KEVIN NELSON ___________________________ FEBRUARY 23, 2024 ___________________________
ARCHITECT DATE

STATE OF MISSOURI
KEVIN E. NELSON
A-2019015618
ARCHITECT

FEBRUARY 23, 2024
INTRODUCTORY INFORMATION

000101 Project Team Directory 01.31.2024
000105 Certifications and Seals 02.23.2024
000110 Table of Contents 02.23.2024

BIDDING REQUIREMENTS

(Refer to Construction Manager's Front End Manual for additional Bidding Requirements)

CONTRACTING REQUIREMENTS

(Refer to Construction Manager's Front End Manual for additional Contracting Requirements)

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012200 Unit Prices 01.31.2024
012300 Alternates 01.31.2024
012500 Substitution Procedures 01.31.2024
012501 Substitution Procedures Form 01.31.2024
013100 Project Management and Coordination 01.31.2024
013200 Construction Progress Documentation 01.31.2024
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013300 Submittal Procedures 01.31.2024
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014200 References 01.31.2024
014529 Testing and Inspections 01.31.2024
016000 Product Requirements 01.31.2024
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017700 Closeout Procedures 01.31.2024
017823 Operation and Maintenance Data 01.31.2024
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042200 Concrete Unit Masonry 01.31.2024

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052100 Steel Joist Framing 01.31.2024
053100 Steel Decking 01.31.2024
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116623  Gymnasium Equipment 01.31.2024

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122413  Roller Window Shades 01.31.2024
123200  Manufactured Wood Casework 01.31.2024
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123669  Quartz Agglomerate Countertops 01.12.2024

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211100  Facility Fire-Suppression Water-Service Piping 01.31.2024
211200  Fire-Suppression Standpipes 01.31.2024
211313  Wet-Pipe Sprinkler Systems 01.31.2024

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220513  Common Motor Requirements for Plumbing Equipment 01.31.2024
220516  Expansion Fittings and Loops for Plumbing Piping 01.31.2024
220519  Meters and Gauges for Plumbing Piping 01.31.2024
220523  General Duty Valves for Plumbing Piping 01.31.2024
220529  Hangers and Supports for Plumbing Piping and Equipment 01.31.2024
220553  Identification for Plumbing Piping and Equipment 01.31.2024
220719  Plumbing Piping Insulation 01.31.2024
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221119  Domestic Water Piping Specialties 01.31.2024
221123  Domestic Water Pumps 01.31.2024
221316  Sanitary Waste and Vent Piping 01.31.2024
221319  Sanitary Waste Piping Specialties 01.31.2024
221323  Sanitary Waste Interceptors 01.31.2024
221413  Storm Drainage Piping 02.23.2024
221423  Storm Drainage Piping Specialties 02.23.2024
223300  Electric, Domestic-Water Heaters 12.15.2023
224000  Plumbing Fixtures 01.31.2024
224700  Drinking Fountains/Water Coolers 01.31.2024

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230529  Hangers and Supports for HVAC Piping and Equipment 01.31.2024
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230593  Testing, Adjusting, and Balancing 01.31.2024
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230900  Instrumentation and Control for HVAC 01.31.2024
231123  Facility Natural-Gas Piping 01.31.2024
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233300  Duct Accessories 01.31.2024
233416  Centrifugal HVAC Fans 01.31.2024
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233813  Commercial-Kitchen Hoods 01.31.2024
237413  Packaged, Outdoor, Central-Station Air-Handling Units 01.31.2024

DIVISION 26 - ELECTRICAL
260500  Common Work Results for Electrical 01.31.2024
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ADDENDUM NO. 3

Liberty High School Renovation
Smith & Boucher Project No. 2314715

February 23, 2024

SPECIFICATIONS
1. 221413 Facility Storm Drainage Piping
   a. Added in its entirety.
2. 221423 Storm Drainage Piping Specialties
   a. Added in its entirety

DRAWINGS
1. ME301.2
   a. Modified ductwork schedule for exposed ductwork.
   b. Modified diffuser schedule.
   c. Modified plumbing piping insulation schedule for exposed locations.
2. DM101D.2 PHASE 2 ONLY
   a. Updated RCP background to show demolition ceiling plan.
   b. Added demolition and relocation of FPVAV-7D.
   c. Added demolition of return air duct.
   d. Added demolition of RTU-14 supply ducts.
3. DM101H.2 PHASE 2 ONLY
   a. Updated RCP background to show demolition ceiling plan.
4. M101D.2 PHASE 2 ONLY
   a. Added relocation of FPVAV-7D and replacement of ductwork. Relocated thermostat.
   b. Added replacement of return air duct.
   c. Modified return grille locations
   d. Added replacement of RTU-14 supply ducts.
5. M201.2
   a. Added relocation of FPVAV-7D and replacement of ductwork. Relocated thermostat.
   b. Added replacement of return air duct.
   c. Modified return grille locations
   d. Added replacement of RTU-14 supply ducts.
6. M301B
   a. Added general demolition notes
7. M301D.2 PHASE 2 ONLY
   a. Added sheet in its entirety.
8. M301H.2 PHASE 2 ONLY
   a. Added sheet in its entirety.
9. M301G
   a. Added general demolition notes
10. DP101D.2 PHASE 2 ONLY
    a. Updated RCP background to show demolition ceiling plan.
    b. Added notes.
11. DP101H.2 PHASE 2 ONLY
    a. Added sheet in its entirety.
12. P101D.2 PHASE 2 ONLY
    a. Modified notes.
13. P101H.2 PHASE 2 ONLY
a. Modified notes.
14. P301B
   a. Added general demolition notes
15. P301D.2 PHASE 2 ONLY
   a. Added sheet in its entirety.
16. P301H.2 PHASE 2 ONLY
   a. Added sheet in its entirety.
17. DE101D.2 PHASE 2 ONLY
   a. Revised demolition ceiling backgrounds to coordinate with existing.
   b. Added general notes for fire lid removal.
18. DE101H.2 PHASE 2 ONLY
   a. Revised demolition ceiling backgrounds to coordinate with existing.
19. DE201D.2 PHASE 2 ONLY
   a. Added general notes for fire lid removal.
20. E101H.2 PHASE 2 ONLY
   a. Added lighting.
21. E401D.2 PHASE 2 ONLY
   a. Added sheet to encompass alternate 4 lighting scope.
22. E401H.2 PHASE 2 ONLY
   a. Added sheet to encompass alternate 4 lighting scope.
23. E402D.2 PHASE 2 ONLY
   a. Added sheet to encompass alternate 4 power scope.
24. E402H.2 PHASE 2 ONLY
   a. Added sheet to encompass alternate 4 power scope.
25. E502
   a. Revised occupancy control device schedule.
26. E504
27. E501.2 PHASE 2 ONLY
   a. Added type N4/N4x and Q to light fixture schedule.
   b. Revised occupancy control device schedule.
28. E504.2 PHASE 2 ONLY
29. LV100
   a. Added notes to further describe low voltage demolition to overall plan.
30. LV100.2 PHASE 2 ONLY
   a. Added sheet to clarify data closet locations and low voltage demolition in phase 2.
31. LV401D.2 PHASE 2 ONLY
   a. Added sheet to encompass alternate 4 low voltage scope.
32. LV401H.2 PHASE 2 ONLY
   a. Added sheet to encompass alternate 4 low voltage scope.
MEP ENGINEER

I HEREBY, PURSUANT TO RSMO 327.411, STATE THAT THE SPECIFICATIONS INTENDED TO BE AUTHENTICATED BY MY SEAL ARE LIMITED TO SPECIFICATIONS LISTED BELOW:

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<td>230500, 230529, 230553, 230593, 230713, 230900, 231123, 233113, 233300, 233416, 233600, 233713, 233813, 237413.</td>
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<td>DIVISION 26 SECTIONS:</td>
<td>260500, 260519, 260523, 260526, 260529, 260533, 260553, 260923, 260943, 262726, 262813, 262816, 265119, 265213.</td>
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<td>DIVISION 27 SECTIONS:</td>
<td>270000, 270500, 270526.</td>
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<td>DIVISION 28 SECTIONS:</td>
<td>280500, 280513, 283111, 284800</td>
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I HEREBY DISCLAIM ANY RESPONSIBILITY FOR ALL OTHER SPECIFICATIONS, DRAWINGS, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE ARCHITECTURAL OR ENGINEERING PROJECT OR SURVEY.

RYAN J. DIEDIKER, PE, RCDD, LEED AP  DATE  02.23.2024
SECTION 221413 - FACILITY STORM DRAINAGE PIPING

PART 1 - GENERAL

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

1.2 SUMMARY
A. This Section includes the following storm drainage piping inside the building:
   1. Pipe, tube, and fittings.
   2. Special pipe fittings.
   3. Encasement for underground metal piping.
B. Related Sections include the following:
   1. Division 22 Section "Sump Pumps."

1.3 DEFINITIONS
B. LLDPE: Linear, low-density polyethylene plastic.
C. PE: Polyethylene plastic.
D. PVC: Polyvinyl chloride plastic.
E. TPE: Thermoplastic elastomer.

1.4 PERFORMANCE REQUIREMENTS
A. Components and installation shall be capable of withstanding the following minimum working-pressure, unless otherwise indicated:
   1. Storm Drainage Piping: 10-foot head of water.

1.5 SUBMITTALS
A. Product Data: For pipe, tube, fittings, and couplings.
B. LEED Submittal:
   1. Product Data for Credit EQ 4.1: For solvent cements and adhesive primers, including printed statement of VOC content.
C. Shop Drawings:
D. Field quality-control inspection and test reports.

1.6 QUALITY ASSURANCE
A. Piping materials shall bear label, stamp, or other markings of specified testing agency.
PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 PIPING MATERIALS

A. Refer to Part 3 "Piping Applications" Article for applications of pipe, tube, fitting, and joining materials.

2.3 HUB-AND-SPIGOT, CAST-IRON SOIL PIPE AND FITTINGS

A. Pipe and Fittings: ASTM A 74, Service class.

B. Gaskets: ASTM C 564, rubber.

C. Calking Materials: ASTM B 29, pure lead and oakum or hemp fiber.

2.4 HUBLESS CAST-IRON SOIL PIPE AND FITTINGS

A. Pipe and Fittings: ASTM A 888 or CISPI 301; manufactured by AB&I, Charlotte or Tyler.

B. Shielded Couplings: ASTM C 1277 assembly of metal shield or housing, corrosion-resistant fasteners, and rubber sleeve with integral, center pipe stop.
   1. Standard, Shielded, Stainless-Steel Couplings: CISPI 310, with stainless-steel corrugated shield; stainless-steel bands and tightening devices; and ASTM C 564, rubber sleeve.
      a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
         1) ANACO.
         2) Mission Rubber Co.
         3) Tyler Pipe; Soil Pipe Div.
         4) Pre-approved equal.
      a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
         1) ANACO/Husky SD 4000.
         2) Clamp-All Corp.-125.
         3) Pre-approved equal.
   3. Heavy-Duty, Shielded, Cast-Iron Couplings: ASTM A 48/A 48M, two-piece, cast-iron housing; stainless-steel bolts and nuts; and ASTM C 564, rubber sleeve.
      a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
         1) MG Piping Products Co.
         2) Pre-approved equal.

2.5 STEEL PIPE AND FITTINGS

A. Steel Pipe: ASTM A 53/A 53M, Type E or S, Grade A or B, Standard Weight or Schedule 40, galvanized. Include ends matching joining method.

B. Drainage Fittings: ASME B16.12, galvanized, threaded, cast-iron drainage pattern.

C. Pressure Fittings:
D. Grooved-Joint Systems:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. Anvil International.
   b. Star Pipe Products; Star Fittings Div.
   c. Victaulic Co. of America.
   d. Ward Manufacturing, Inc.
   e. Pre-approved equal.
2. Grooved-End, Steel-Piping Fittings: ASTM A 47/A 47M, galvanized, malleable-iron casting; ASTM A 106, galvanized-steel pipe; or ASTM A 536, galvanized, ductile-iron casting; with dimensions matching steel pipe.
3. Grooved-End, Steel-Piping Couplings: AWWA C606, for steel-pipe dimensions. Include ferrous housing sections, gasket suitable for water, and bolts and nuts.

2.6 COPPER TUBE AND FITTINGS
A. Copper DWV Tube: ASTM B 306, drainage tube, drawn temper.
B. Hard Copper Tube: ASTM B 88, Type L, water tube, drawn temper.
   2. Copper Flanges: ASME B16.24, Class 150, cast copper with solder-joint end.
   3. Copper Unions: MSS SP-123, copper-alloy, hexagonal-stock body with ball-and-socket, metal-to-metal seating surfaces, and solder-joint or threaded ends.
C. Soft Copper Tube: ASTM B 88, Type L, water tube, annealed temper.

2.7 PVC PIPE AND FITTINGS
A. Solid-Wall PVC Pipe: ASTM D 2665, drain, waste, and vent.
B. Solvent Cement and Adhesive Primer:
   1. Use PVC solvent cement that has a VOC content of 510 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
   2. Use adhesive primer that has a VOC content of 550 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

2.8 SPECIAL PIPE FITTINGS
A. Flexible, Nonpressure Pipe Couplings: Comply with ASTM C 1173, elastomeric, sleeve-type, reducing or transition pattern. Include shear ring, ends of same sizes as piping to be joined, and corrosion-resistant-metal tension band and tightening mechanism on each end.
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      b. Fernco, Inc.
      c. Logan Clay Products Company (The).
      d. Mission Rubber Co.
      e. NDS, Inc.
      f. Plastic Oddities, Inc.
      g. Pre-approved equal.
   2. Sleeve Materials:
      b. For Plastic Pipes: ASTM F 477, elastomeric seal or ASTM D 5926, PVC.
      c. For Dissimilar Pipes: ASTM D 5926, PVC or other material compatible with pipe materials being joined.
B. Expansion Joints: Two or three-piece, ductile-iron assembly consisting of telescoping sleeve(s) with gaskets and restrained-type, ductile-iron, bell-and-spigot end sections complying with AWWA C110 or AWWA C153. Select and assemble components for expansion indicated. Include AWWA C111, ductile-iron glands, rubber gaskets, and steel bolts.
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
a. EBAA Iron Sales, Inc.
b. Romac Industries, Inc.
c. Star Pipe Products; Star Fittings Div.
d. Pre-approved equal.

C. Wall-Penetration Fittings: Compound, ductile-iron coupling fitting with sleeve and flexing sections for up to 20-degree deflection, gaskets, and restrained-joint ends complying with AWWA C110 or AWWA C153. Include AWWA C111, ductile-iron glands, rubber gaskets, and steel bolts.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. SIGMA Corp.
   b. Pre-approved equal.

PART 3 - EXECUTION

3.1 EXCAVATION

A. Refer to Division 31 Section "Earth Moving" for excavating, trenching, and backfilling.

3.2 PIPING APPLICATIONS

A. Flanges and unions may be used on aboveground pressure piping, unless otherwise indicated.

B. Aboveground storm drainage piping shall be the following:
   1. Hubless cast-iron soil pipe and fittings; standard, shielded, stainless-steel couplings; and coupled joints.

C. Underground storm drainage piping NPS 6 and smaller shall be any of the following:
   1. Service class, cast-iron soil pipe and fittings; gaskets; and gasketed joints.
   2. Solid-wall PVC pipe, PVC socket fittings, and solvent-cemented joints.
   3. Dissimilar Pipe-Material Couplings: Flexible, nonpressure pipe couplings for joining dissimilar pipe materials with small difference in OD.

D. Aboveground storm drainage force mains NPS 1-1/2 and NPS 2 shall be any of the following:
   1. Hard copper tube, Type L; copper pressure fittings; and soldered joints.
   2. Steel pipe, pressure fittings, and threaded joints.

E. Aboveground storm drainage force mains NPS 2-1/2 and NPS 6 shall be any of the following:
   1. Steel pipe, pressure fittings, and threaded joints.
   2. Grooved-end steel pipe, grooved-joint system fittings and couplings, and grooved joints.

3.3 PIPING INSTALLATION

A. Storm sewer and drainage piping outside the building are specified in Division 33 Section "Storm Utility Drainage Piping."

B. Basic piping installation requirements are specified in Division 22 Section "Common Work Results for Plumbing."

C. Install cleanouts at grade and extend to where building storm drains connect to building storm sewers. Cleanouts are specified in Division 22 Section "Storm Drainage Piping Specialties."

D. Install cleanout fitting with closure plug inside the building in storm drainage force-main piping.

E. Install underground, steel, force-main piping. Install encasement on piping according to ASTM A 674 or AWWA C105.

F. Install cast-iron sleeve with water stop and mechanical sleeve seal at each service pipe penetration through foundation wall. Select number of interlocking rubber links required to make installation watertight. Sleeves and mechanical sleeve seals are specified in Division 22 Section "Common Work Results for Plumbing."

G. Install wall-penetration fitting system at each service pipe penetration through foundation wall. Make installation watertight.
H. Install cast-iron soil piping according to CISPI's "Cast Iron Soil Pipe and Fittings Handbook," Chapter IV, "Installation of Cast Iron Soil Pipe and Fittings."
   1. Install encasement on underground piping according to ASTM A 674 or AWWA C105.

I. Make changes in direction for storm drainage piping using appropriate branches, bends, and long-sweep bends. Do not change direction of flow more than 90 degrees. Use proper size of standard increasers and reducers if pipes of different sizes are connected. Reducing size of drainage piping in direction of flow is prohibited.

J. Lay buried building storm drainage piping beginning at low point of each system. Install true to grades and alignment indicated, with unbroken continuity of invert. Place hub ends of piping upstream. Install required gaskets according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements. Maintain swab in piping and pull past each joint as completed.

K. Install storm drainage piping at the following minimum slopes, unless otherwise indicated:
   1. Building Storm Drain: 1 percent downward in direction of flow for piping NPS 3 and smaller; 1 percent downward in direction of flow for piping NPS 4 and larger.
   2. Horizontal Storm-Drainage Piping: 2 percent downward in direction of flow.

L. Install force mains at elevations indicated.

M. Install engineered controlled-flow storm drainage piping in locations indicated.

N. Sleeves are not required for cast-iron soil piping passing through concrete slabs-on-grade if slab is without membrane waterproofing.

O. Install PVC storm drainage piping according to ASTM D 2665.

P. Install underground ABS and PVC storm drainage piping according to ASTM D 2321.

Q. Do not enclose, cover, or put piping into operation until it is inspected and approved by authorities having jurisdiction.

3.4 JOINT CONSTRUCTION

A. Basic piping joint construction requirements are specified in Division 22 Section "Common Work Results for Plumbing."


E. Soldered Joints: Use ASTM B 813, water-flushable, lead-free flux; ASTM B 32, lead-free-alloy solder; and ASTM B 828 procedure, unless otherwise indicated.

F. Grooved Joints: Cut groove ends of pipe and assemble grooved ends of pipes, grooved-end fittings, and grooved-end-piping couplings according to AWWA C606.

G. PVC Nonpressure Piping Joints: Join piping according to ASTM D 2665.

3.5 VALVE INSTALLATION

A. General valve installation requirements are specified in Division 22 Section "General-Duty Valves for Plumbing Piping."

B. Shutoff Valves: Install shutoff valve on each sump pump discharge.
   1. Install gate or full-port ball valve for piping NPS 2 and smaller.
2. Install gate valve for piping NPS 2-1/2 and larger.

C. Check Valves: Install swing check valve, between pump and shutoff valve, on each sump pump discharge.

D. Backwater Valves: Install backwater valves in piping subject to backflow.
   1. Horizontal piping: Horizontal backwater valves. Use normally closed type, unless otherwise indicated.
   2. Install backwater valves in accessible locations.
   3. Backwater valve are specified in Division 22 Section "Storm Drainage Piping Specialties."

3.6 HANGER AND SUPPORT INSTALLATION

A. Pipe hangers and supports are specified in Division 22 Section "Hangers and Supports for Plumbing Piping and Equipment." Install the following:
   1. Vertical Piping: MSS Type 8 or Type 42, clamps.
   2. Individual, straight, horizontal piping runs: According to the following:
      a. 100 Feet and Less: MSS Type 1, adjustable, steel clevis hangers.
      b. Longer Than 100 Feet: MSS Type 43, adjustable roller hangers.
      c. Longer Than 100 Feet, if indicated: MSS Type 49, spring cushion rolls.
   3. Multiple, straight, horizontal piping runs 100 Feet or Longer: MSS Type 44, pipe rolls. Support pipe rolls on trapeze.
   4. Base of vertical piping: MSS Type 52, spring hangers.

B. Install supports according to Division 22 Section "Hangers and Supports for Plumbing Piping and Equipment."

C. Support vertical piping and tubing at base and at each floor.

D. Rod diameter may be reduced 1 size for double-rod hangers, with 3/8-inch minimum rods.

E. Install hangers for cast-iron soil piping with the following maximum horizontal spacing and minimum rod diameters:
   1. NPS 1-1/2 and NPS 2: 60 inches with 3/8-inch rod.
   2. NPS 3: 60 inches with 1/2-inch rod.
   3. NPS 4 and NPS 5: 60 inches with 5/8-inch rod.
   4. NPS 6: 60 inches with 3/4-inch rod.
   5. NPS 8 to NPS 12: 60 inches with 7/8-inch rod.
   6. Spacing for 10-foot lengths may be increased to 10 feet. Spacing for fittings is limited to 60 inches.

F. Install supports for vertical cast-iron soil piping every 15 feet.

G. Install hangers for steel piping with the following maximum horizontal spacing and minimum rod diameters:
   1. NPS 1-1/4: 84 inches with 3/8-inch rod.
   2. NPS 1-1/2: 108 inches with 3/8-inch rod.
   3. NPS 2: 10 feet with 3/8-inch rod.
   4. NPS 2-1/2: 11 feet with 1/2-inch rod.
   5. NPS 3: 12 feet with 1/2-inch rod.
   6. NPS 4 and NPS 5: 12 feet with 5/8-inch rod.
   7. NPS 6: 12 feet with 3/4-inch rod.
   8. NPS 8 to NPS 12: 12 feet with 7/8-inch rod.

H. Install supports for vertical steel piping every 15 feet.

I. Install hangers for copper tubing with the following maximum horizontal spacing and minimum rod diameters:
   1. NPS 1-1/4: 72 inches with 3/8-inch rod.
   2. NPS 1-1/2 and NPS 2: 96 inches with 3/8-inch rod.
   3. NPS 2-1/2: 108 inches with 1/2-inch rod.
   4. NPS 3 to NPS 5: 10 feet with 1/2-inch rod.
   5. NPS 6: 10 feet with 5/8-inch rod.
   6. NPS 8: 10 feet with 3/4-inch rod.

J. Install supports for vertical copper tubing every 10 feet.

K. Support piping and tubing not listed above according to MSS SP-69 and manufacturer's written instructions.
3.7 CONNECTIONS

A. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Connect interior storm drainage piping to exterior storm drainage piping. Use transition fitting to join dissimilar piping materials.

C. Connect storm drainage piping to roof drains and storm drainage specialties.

D. Connect force-main piping to the following:
   1. Storm Sewer: To exterior force main or storm manhole.
   2. Sump Pumps: To sump pump discharge.

3.8 FIELD QUALITY CONTROL

A. During installation, notify authorities having jurisdiction at least 24 hours before inspection must be made. Perform tests specified below in presence of authorities having jurisdiction.
   1. Roughing-in Inspection: Arrange for inspection of piping before concealing or closing-in after roughing-in.
   2. Final Inspection: Arrange for final inspection by authorities having jurisdiction to observe tests specified below and to ensure compliance with requirements.

B. Reinspection: If authorities having jurisdiction find that piping will not pass test or inspection, make required corrections and arrange for reinspection.

C. Reports: Prepare inspection reports and have them signed by authorities having jurisdiction.

D. Test storm drainage piping according to procedures of authorities having jurisdiction or, in absence of published procedures, as follows:
   1. Test for leaks and defects in new piping and parts of existing piping that have been altered, extended, or repaired. If testing is performed in segments, submit separate report for each test, complete with diagram of portion of piping tested.
   2. Leave uncovered and unconcealed new, altered, extended, or replaced storm drainage piping until it has been tested and approved. Expose work that was covered or concealed before it was tested.
   3. Test Procedure: Test storm drainage piping on completion of roughing-in. Close openings in piping system and fill with water to point of overflow, but not less than 10-foot head of water. From 15 minutes before inspection starts to completion of inspection, water level must not drop. Inspect joints for leaks.
   4. Repair leaks and defects with new materials and retest piping, or portion thereof, until satisfactory results are obtained.
   5. Prepare reports for tests and required corrective action.

E. Test force-main piping according to procedures of authorities having jurisdiction or, in absence of published procedures, as follows:
   1. Leave uncovered and unconcealed new, altered, extended, or replaced force-main piping until it has been tested and approved. Expose work that was covered or concealed before it was tested.
   2. Cap and subject piping to static-water pressure of 50 psig above operating pressure, without exceeding pressure rating of piping system materials. Isolate test source and allow to stand for four hours. Leaks and loss in test pressure constitute defects that must be repaired.
   3. Repair leaks and defects with new materials and retest piping, or portion thereof, until satisfactory results are obtained.
   4. Prepare reports for tests and required corrective action.

3.9 CLEANING

A. Clean interior of piping. Remove dirt and debris as work progresses.

B. Protect drains during remainder of construction period to avoid clogging with dirt and debris and to prevent damage from traffic and construction work.

C. Place plugs in ends of uncompleted piping at end of day and when work stops.
SECTION 221423 - STORM DRAINAGE PIPING SPECIALTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes the following storm drainage piping specialties:
   1. Backwater valves.
   2. Cleanouts.
   3. Through-penetration firestop assemblies.
   4. Roof drains.
   5. Miscellaneous storm drainage piping specialties.
   6. Flashing materials.

B. Related Sections include the following:
   1. Division 22 Section "Sanitary Waste Piping Specialties" for backwater valves, floor drains, trench drains and channel drainage systems connected to sanitary sewer and grease interceptors.

1.3 DEFINITIONS


B. FOG: Fats, oils, and greases.

C. FRP: Fiberglass-reinforced plastic.

D. HDPE: High-density polyethylene plastic.

E. PE: Polyethylene plastic.

F. PP: Polypropylene plastic.

G. PUR: Polyurethane plastic.

H. PVC: Polyvinyl chloride plastic.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

1.5 QUALITY ASSURANCE

A. Drainage piping specialties shall bear label, stamp, or other markings of specified testing agency.

1.6 COORDINATION

A. Coordinate size and location of roof penetrations.

PART 2 - PRODUCTS

2.1 BACKWATER VALVES

A. Horizontal, Cast-Iron Backwater Valves:
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
b. MIFAB, Inc.
d. Tyler Pipe; Wade Div.
e. Watts Drainage Products Inc.
f. Zurn Plumbing Products Group; Specification Drainage Operation.
g. Pre-approved equal.


3. Size: Same as connected piping.


5. Cover: Cast iron with bolted or threaded access check valve.

6. End Connections: Hub and spigot or hubless.

7. Type Check Valve: Removable, bronze, swing check, factory assembled or field modified to hang closed or open for airflow unless subject to backflow condition.

8. Extension: ASTM A 74, Service class; full-size, cast-iron, soil-pipe extension to field-installed cleanout at floor; replaces backwater valve cover.

2.2 CLEANOUTS

A. Exposed Metal Cleanouts:
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      b. MIFAB, Inc.
      d. Tyler Pipe; Wade Div.
      e. Watts Drainage Products Inc.
      f. Zurn Plumbing Products Group; Specification Drainage Operation.
      g. Pre-approved equal.

   2. Standard: ASME A112.36.2M for cast iron for cleanout test tee.

   3. Size: Same as connected drainage piping.

   4. Body Material: Hub-and-spigot, cast-iron soil pipe T-branch or hubless, cast-iron soil pipe test tee as required to match connected piping.

   5. Closure: Countersunk or raised-head plug.

   6. Closure Plug Size: Same as or not more than one size smaller than cleanout size.


B. Metal Floor Cleanouts:
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      b. Oatey.
      c. Sioux Chief Manufacturing Company, Inc.
      e. Tyler Pipe; Wade Div.
      f. Watts Drainage Products Inc.
      g. Zurn Plumbing Products Group; Light Commercial Operation.
      h. Zurn Plumbing Products Group; Specification Drainage Operation.
      i. Pre-approved equal.

   2. Standard: ASME A112.36.2M for cast-iron soil pipe with cast-iron ferrule; heavy-duty, adjustable housing; or threaded, adjustable housing cleanout.

   3. Size: Same as connected branch.

   4. Body or Ferrule: Cast iron.

   5. Outlet Connection: Threaded.

   6. Closure: Brass plug with straight threads and gasket or brass plug with tapered threads.

   7. Adjustable Housing Material: Cast iron with threads, set-screws or other device.


   9. Frame and Cover Shape: Round or square in tiled areas.

   10. Top Loading Classification: Extra Heavy-Duty in Service, Equipment and Warehouse Areas; Light or Medium Duty.

   11. Riser: ASTM A 74, Extra-Heavy class in Service, Equipment and Warehouse Areas or service class, cast-iron drainage pipe fitting and riser to cleanout.

C. Cast-Iron Wall Cleanouts:
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
2. MIFAB, Inc.
4. Tyler Pipe; Wade Div.
5. Watts Drainage Products Inc.
7. Pre-approved equal.

2. Standard: ASME A112.36.2M. Include wall access.
3. Size: Same as connected drainage piping.
4. Body: Hubless, cast-iron soil pipe test tee as required to match connected piping.
5. Closure: Countersunk or raised-head, brass or cast-iron plug.
6. Closure Plug Size: Same as or not more than one size smaller than cleanout size.
7. Wall Access: Round, deep, chrome-plated bronze, flat, chrome-plated brass or stainless-steel cover plate with countersunk screw.

2.3 THROUGH-PENETRATION FIRESTOP ASSEMBLIES

A. Through-Penetration Firestop Assemblies:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. ProSet Systems Inc.
   b. Hilti.
   c. 3M, Inc.
   d. Pre-approved equal.
2. Standard: UL 1479 assembly of sleeve and stack fitting with firestopping plug.
3. Size: Same as connected pipe.
4. Sleeve: Molded PVC plastic, of length to match slab thickness and with integral nailing flange on one end for installation in cast-in-place concrete slabs.
6. Special Coating: Corrosion resistant on interior of fittings.

2.4 ROOF DRAINS

A. Metal Roof Drains:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   b. MIFAB, Inc.
   c. Prier Products, Inc.
   e. Tyler Pipe; Wade Div.
   f. Watts Drainage Products Inc.
   g. Zurn Plumbing Products Group; Light Commercial Operation.
   h. Zurn Plumbing Products Group; Specification Drainage Operation.
   i. Pre-approved equal.
2. Standard: ASME A112.21.2M.
3. Pattern: Roof drain.
5. Dome Material: Cast iron.
6. See Schedule on Drawings.

2.5 MISCELLANEOUS STORM DRAINAGE PIPING SPECIALTIES

A. Conductor/Downspout Nozzles:
1. Description: Bronze body with threaded inlet and bronze wall flange with mounting holes.
2. Size: Same as connected conductor.

2.6 FLASHING MATERIALS

A. Copper Sheet: ASTM B 152/B 152M, 12 oz./sq. ft. thickness.

B. Zinc-Coated Steel Sheet: ASTM A 653/A 653M, with 0.20 percent copper content and 0.04-inch minimum thickness, unless otherwise indicated. Include G90 hot-dip galvanized, mill-phosphatized finish for painting if indicated.

D. Fasteners: Metal compatible with material and substrate being fastened.

E. Metal Accessories: Sheet metal strips, clamps, anchoring devices, and similar accessory units required for installation; matching or compatible with material being installed.

F. Solder: ASTM B 32, lead-free alloy.

G. Bituminous Coating: SSPC-Paint 12, solvent-type, bituminous mastic.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Refer to Division 22 Section "Common Work Results for Plumbing" for piping joining materials, joint construction, and basic installation requirements.

B. Install cleanouts in aboveground piping and building drain piping according to the following, unless otherwise indicated:
   1. Size same as drainage piping up to NPS 4. Use NPS 4 for larger drainage piping unless larger cleanout is indicated.
   2. Locate at each change in direction of piping greater than 45 degrees.
   3. Locate at minimum intervals of 50 feet for piping NPS 4 and smaller and 100 feet for larger piping.
   4. Locate at base of each vertical soil and waste stack.

C. For floor cleanouts for piping below floors, install cleanout deck plates with top flush with finished floor.

D. For cleanouts located in concealed piping, install cleanout wall access covers, of types indicated, with frame and cover flush with finished wall.

E. Install trench drains at low points of surface areas to be drained. Set grates of drains flush with finished surface, unless otherwise indicated.

F. Assemble FRP channel drainage system components according to manufacturer's written instructions. Install on support devices so that top will be flush with adjacent surface.

G. Install through-penetration firestop assemblies in conductors and stacks at floor penetrations.

H. Install roof drains at low points of roof areas according to roof membrane manufacturer's written installation instructions. Roofing materials are specified in Division 07.
   1. Install roof-drain flashing collar or flange so that there will be no leakage between drain and adjoining roofing. Maintain integrity of waterproof membranes where penetrated.
   2. Position roof drains for easy access and maintenance.

I. Install sleeve flashing device with each riser and stack passing through floors with waterproof membrane.

J. Install expansion joints on vertical stacks and conductors. Position expansion joints for easy access and maintenance.

K. Install conductor nozzles at exposed bottom of conductors where they spill onto grade.

L. Install escutcheons at wall, floor, and ceiling penetrations in exposed finished locations and within cabinets and millwork. Use deep-pattern escutcheons if required to conceal protruding pipe fittings.

3.2 CONNECTIONS

A. Piping installation requirements are specified in other Division 22 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.
3.3 FLASHING INSTALLATION

A. Fabricate flashing from single piece unless large pans, sumps, or other drainage shapes are required. Join flashing according to the following if required:
   1. Lead Sheets: Burn joints of lead sheets 6.0-lb/sq. ft., 0.0938-inch thickness or thicker. Solder joints of lead sheets 4.0-lb/sq. ft., 0.0625-inch thickness or thinner.
   2. Copper Sheets: Solder joints of copper sheets.

B. Install sheet flashing on pipes, sleeves, and specialties passing through or embedded in floors and roofs with waterproof membrane.
   1. Pipe Flashing: Sleeve type, matching pipe size, with minimum length of 10 inches, and skirt or flange extending at least 8 inches around pipe.
   2. Sleeve Flashing: Flat sheet, with skirt or flange extending at least 8 inches around sleeve.
   3. Embedded Specialty Flashing: Flat sheet, with skirt or flange extending at least 8 inches around specialty.

C. Set flashing on floors and roofs in solid coating of bituminous cement.

D. Secure flashing into sleeve and specialty clamping ring or device.

E. Fabricate and install flashing and pans, sumps, and other drainage shapes.

3.4 PROTECTION

A. Protect drains during remainder of construction period to avoid clogging with dirt or debris and to prevent damage from traffic or construction work.

B. Place plugs in ends of uncompleted piping at end of each day or when work stops.

END OF SECTION 221423
DEMOLITION GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, SERVICES AND EQUIPMENT SHOWN FULL TONE AND DASHED ARE TO BE DEMOLISHED AND SERVICES AND EQUIPMENT SHOWN HALF TONE AND SOLID ARE TO REMAIN.

2. THE EXISTING CONDITIONS INDICATED ON THE DRAWINGS ARE TAKEN FROM THE BEST INFORMATION AVAILABLE AND FROM VISUAL SITE INSPECTION AND ARE NOT TO BE CONSTRUED AS "AS BUILT" CONDITIONS, THE INFORMATION IS SHOWN TO HELP ESTABLISH THE EXTENT OF THE NEW WORK, VERIFY ALL ACTUAL EXISTING CONDITIONS AT THE PROJECT SITE AND PERFORM WORK AS REQUIRED TO MEET THE EXISTING CONDITIONS AND THE EXTENT OF THE WORK INDICATED.

3. PATCH ROOFS, WALLS, AND CEILINGS WHERE ANY SERVICES ARE REMOVED UNLESS NOTED OTHERWISE.

4. DISCONNECT AND REMOVE ALL PIPING, WIRING, AND CONDUIT THAT BECOMES UNNECESSARY AS A RESULT OF THE REMOVAL OF EQUIPMENT INDICATED TO BE REMOVED. PROVIDE FOR THE CONTINUITY OF ALL REMAINING SERVICES SYSTEMS AND CIRCUITS.

5. WHERE MECHANICAL AND ELECTRICAL FIXTURES OR EQUIPMENT ARE REMOVED, CAP ALL UNUSED CONDUIT, WIRING, AND PIPING BEYOND THE FLOOR LINE OR WALL LINE AND PROVIDE RESTORATION OF FINISH.

6. RELOCATE AND RECONNECT ANY MECHANICAL AND ELECTRICAL FACILITIES THAT MUST BE RELOCATED IN ORDER TO ACCOMPLISH THE REMODELING SHOWN IN THE DRAWINGS, INDICATED IN THE SPECIFICATIONS, OR TO MEET NEC CODE REQUIRED CLEARANCES.

7. MAINTAIN CONTINUITY OF EXISTING SERVICES DURING CONSTRUCTION ACTIVITIES FOR ALL SPACES REMAINING IN USE BY THE OWNER.

DEMOLITION HVAC PLAN - AREA D - LEVEL 1 - PHASE 2

(Not included in this Bid Package)

- Phase 2 Scope of Work

SHEET KEYNOTE LEGEND

DRAWN BY:
DATE:
REVISIONS:
CHECKED BY:

Smith & Boucher Inc.
MEP Engineers
State Certificate of Authority # EGC-0001787
25618 West 103rd Street
Olathe, KS 66061
913.345.2127 phone

Missouri State Certificate of Authority
Architecture # 0000161
Hollis + Miller Architects

LIBERTY PUBLIC SCHOOL DISTRICT
LIBERTY HIGH SCHOOL INTERIOR REMODEL
200 BLUE JAY DRIVE
LIBERTY, MISSOURI 64068

01.31.2024 4:36:00 PM

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Please consider the environment before printing this.
DEMOLITION HVAC PLAN - AREA H - LEVEL 1 - PHASE 2

DEMOLITION GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, SERVICES AND EQUIPMENT SHOWN FULL TONE AND DASHED ARE TO BE DEMOLISHED AND SERVICES AND EQUIPMENT SHOWN HALF TONE AND SOLID ARE TO REMAIN.

2. THE EXISTING CONDITIONS INDICATED ON THE DRAWINGS ARE TAKEN FROM THE BEST INFORMATION AVAILABLE AND FROM VISUAL SITE INSPECTION AND ARE NOT TO BE CONSTRUED AS "AS BUILT" CONDITIONS, THE INFORMATION IS SHOWN TO HELP ESTABLISH THE EXTENT OF THE NEW WORK, VERIFY ALL ACTUAL EXISTING CONDITIONS AT THE PROJECT SITE AND PERFORM WORK AS REQUIRED TO MEET THE EXISTING CONDITIONS AND THE EXTENT OF THE WORK INDICATED.

3. PATCH ROOFS, WALLS, AND CEILINGS WHERE ANY SERVICES ARE REMOVED UNLESS NOTED OTHERWISE.

4. DISCONNECT AND REMOVE ALL PIPING, WIRING, AND CONDUIT THAT BECOMES UNNECESSARY AS A RESULT OF THE REMOVAL OF EQUIPMENT INDICATED TO BE REMOVED. PROVIDE FOR THE CONTINUITY OF ALL REMAINING SERVICES SYSTEMS AND CIRCUITS.

5. WHERE MECHANICAL AND ELECTRICAL FIXTURES OR EQUIPMENT ARE REMOVED, CAP ALL UNUSED CONDUIT, WIRING, AND PIPING BEYOND THE FLOOR LINE OR WALL LINE AND PROVIDE RESTORATION OF FINISH.

6. RELOCATE AND RECONNECT ANY MECHANICAL AND ELECTRICAL FACILITIES THAT MUST BE RELOCATED IN ORDER TO ACCOMPLISH THE REMODELING SHOWN IN THE DRAWINGS, INDICATED IN THE SPECIFICATIONS, OR TO MEET NEC CODE REQUIRED CLEARANCES.

7. MAINTAIN CONTINUITY OF EXISTING SERVICES DURING CONSTRUCTION ACTIVITIES FOR ALL SPACES REMAINING IN USE BY THE OWNER.

"- Phase 2 Scope of Work
(Not included in this Bid Package)"
DEMO PLUMBING PLAN - AREA D - LEVEL 1

DEMOLITION GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, SERVICES AND EQUIPMENT SHOWN FULL TONE AND DASHED ARE TO BE DEMOLISHED AND SERVICES AND EQUIPMENT SHOWN HALF TONE AND SOLID ARE TO REMAIN.

2. THE EXISTING CONDITIONS INDICATED ON THE DRAWINGS ARE TAKEN FROM THE BEST INFORMATION AVAILABLE AND FROM VISUAL SITE INSPECTION AND ARE NOT TO BE CONSTRUED AS "AS BUILT" CONDITIONS, THE INFORMATION IS SHOWN TO HELP ESTABLISH THE EXTENT OF THE NEW WORK, VERIFY ALL ACTUAL EXISTING CONDITIONS AT THE PROJECT SITE AND PERFORM WORK AS REQUIRED TO MEET THE EXISTING CONDITIONS AND THE EXTENT OF THE WORK INDICATED.

3. PATCH ROOFS, WALLS, AND CEILINGS WHERE ANY SERVICES ARE REMOVED UNLESS NOTED OTHERWISE.

4. DISCONNECT AND REMOVE ALL PIPING, WIRING, AND CONDUIT THAT BECOMES UNNECESSARY AS A RESULT OF THE REMOVAL OF EQUIPMENT INDICATED TO BE REMOVED. PROVIDE FOR THE CONTINUITY OF ALL REMAINING SERVICES SYSTEMS AND CIRCUITS.

5. WHERE MECHANICAL AND ELECTRICAL FIXTURES OR EQUIPMENT ARE REMOVED, CAP ALL UNUSED CONDUIT, WIRING, AND PIPING BEYOND THE FLOOR LINE OR WALL LINE AND PROVIDE RESTORATION OF FINISH.

6. RELOCATE AND RECONNECT ANY MECHANICAL AND ELECTRICAL FACILITIES THAT MUST BE RELOCATED IN ORDER TO ACCOMPLISH THE REMODELING SHOWN IN THE DRAWINGS, INDICATED IN THE SPECIFICATIONS, OR TO MEET NEC CODE REQUIRED CLEARANCES.

7. MAINTAIN CONTINUITY OF EXISTING SERVICES DURING CONSTRUCTION ACTIVITIES FOR ALL SPACES REMAINING IN USE BY THE OWNER.

PLAN NOTES:

1. RE-ROUTE AND/OR RAISE ALL FIRE PROTECTION, STORM DRAINAGE, COLD WATER, HOT WATER, VENT, AND GAS PIPING TO ABOVE THE NEW RAISED CEILING AREA. FIELD VERIFY BEFORE BID.

2. FIRE RATED LID (ABOVE EXISTING ACT CEILING) BEING REMOVED. RE-HANG ALL EXISTING PLUMBING PIPING.
DEMOLITION GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, SERVICES AND EQUIPMENT SHOWN FULL TONE AND DASHED ARE TO BE DEMOLISHED AND SERVICES AND EQUIPMENT SHOWN HALF TONE AND SOLID ARE TO REMAIN.

2. THE EXISTING CONDITIONS INDICATED ON THE DRAWINGS ARE TAKEN FROM THE BEST INFORMATION AVAILABLE AND FROM VISUAL SITE INSPECTION AND ARE NOT TO BE CONSTRUED AS "AS BUILT" CONDITIONS, THE INFORMATION IS SHOWN TO HELP ESTABLISH THE EXTENT OF THE NEW WORK, VERIFY ALL ACTUAL EXISTING CONDITIONS AT THE PROJECT SITE AND PERFORM WORK AS REQUIRED TO MEET THE EXISTING CONDITIONS AND THE EXTENT OF THE WORK INDICATED.

3. PATCH ROOFS, WALLS, AND CEILINGS WHERE ANY SERVICES ARE REMOVED UNLESS NOTED OTHERWISE.

4. DISCONNECT AND REMOVE ALL PIPING, WIRING, AND CONDUIT THAT BECOMES UNNECESSARY AS A RESULT OF THE REMOVAL OF EQUIPMENT INDICATED TO BE REMOVED. PROVIDE FOR THE CONTINUITY OF ALL REMAINING SERVICES SYSTEMS AND CIRCUITS.

5. WHERE MECHANICAL AND ELECTRICAL FIXTURES OR EQUIPMENT ARE REMOVED, CAP ALL UNUSED CONDUIT, WIRING, AND PIPING BEYOND THE FLOOR LINE OR WALL LINE AND PROVIDE RESTORATION OF FINISH.

6. RELOCATE AND RECONNECT ANY MECHANICAL AND ELECTRICAL FACILITIES THAT MUST BE RELOCATED IN ORDER TO ACCOMPLISH THE REMODELING SHOWN IN THE DRAWINGS, INDICATED IN THE SPECIFICATIONS, OR TO MEET NEC CODE REQUIRED CLEARANCES.

7. MAINTAIN CONTINUITY OF EXISTING SERVICES DURING CONSTRUCTION ACTIVITIES FOR ALL SPACES REMAING IN USE BY THE OWNER.

PLAN NOTES:

- RE-ROUTE AND/OR RAISE ALL FIRE PROTECTION, STORM DRAINAGE, COLD WATER, HOT WATER, VENT, AND GAS PIPING TO ABOVE THE NEW RAISED CEILING AREA. FIELD VERIFY BEFORE BID.

- FIRE RATED LID (ABOVE EXISTING ACT CEILING) BEING REMOVED. RE-HANG ALL EXISTING PLUMBING PIPING.

(Not included in this Bid Package)
CONTRACTOR TO ONE FOR ONE REPLACE AND RECONNECT ALL EXISTING FLUORESCENT LIGHTING WITH LED THROUGHOUT THE BUILDING UNLESS SPECIFICALLY NOTED OTHERWISE. FIELDS VERIFY EXACT LOCATIONS OF FIXTURES.

1. DISCONNECT AND REMOVE ALL CIRCUITRY, DISCONNECTS, CONTROLLERS AND CONDUIT THAT BECOMES UNNECESSARY AS A RESULT OF THE REMOVAL OF FIXTURES, DEVICES OR BREAKERS IN EXISTING PANELBOARDS NO LONGER IN USE AS SPARE. CAP ALL UNUSED CONDUIT AND WIRING BEYOND THE FLOOR LINE OR WALL LINE TO FACILITATE RESTORATION OF FINISH.

2. VERIFY AND RESTORE CONTINUITY OF ALL EXISTING CIRCUITRY INDICATED TO REMAIN IN USE. WHERE REMOVAL OF EXISTING WIRING INTERRUPTS ELECTRICAL CONTINUITY OF CIRCUITS WHICH ARE TO REMAIN, FURNISH AND INSTALL ALL REQUIRED CIRCUITRY, CONDUIT, JUNCTION BOXES, ETC. TO INSURE CONTINUED ELECTRICAL CONTINUITY.

3. DISCONNECT AND REMOVE ALL EXISTING LIGHT FIXTURES AND CONTROL PANELS IN EXISTING TO REMAIN, AND FULL TONE AND DASHED ARE EXISTING TO BE DEMOLISHED.

4. THE EXISTING CONDITIONS INDICATED ON THE DRAWINGS ARE TAKEN FROM THE BEST INFORMATION AVAILABLE AND ARE NOT TO BE CONSTRUED AS "AS BUILT" CONDITIONS. THE INFORMATION IS SHOWN TO HELP ESTABLISH THE EXTENT OF THE NEW WORK. VERIFY ALL ACTUAL EXISTING CONDITIONS AT THE PROJECT SITE AND PERFORM WORK AS REQUIRED TO MEET THE EXISTING CONDITIONS AND THE EXTENT OF THE WORK INDICATED.

5. REMOVE ALL CIRCUITRY AND CONDUIT BEYOND THE TRUE FLOOR LINE OR WALL LINE TO FACILITATE RESTORATION OF FINISH.

6. REMOVE ALL CIRCUITRY AND CONDUIT BEYOND THE TRUE FLOOR LINE OR WALL LINE TO FACILITATE RESTORATION OF FINISH.

7. ALL EXISTING LIGHTING CONTROLS ARE TO REMAIN.

8. VERIFY AND RESTORE CONTINUITY OF ALL EXISTING CIRCUITRY INDICATED TO REMAIN IN USE. WHERE REMOVAL OF EXISTING WIRING INTERRUPTS ELECTRICAL CONTINUITY OF CIRCUITS WHICH ARE TO REMAIN, FURNISH AND INSTALL ALL REQUIRED CIRCUITRY, CONDUIT, JUNCTION BOXES, ETC. TO INSURE CONTINUED ELECTRICAL CONTINUITY.

9. DEMOLITION LIGHTING PLAN - AREA D - LEVEL 1

Scale 1/8" = 1'-0"
CONTRACTOR TO ONE FOR ONE REPLACE AND RECONNECT ALL EXISTING FLUORESCENT LIGHTING WITH LED THROUGHOUT THE BUILDING UNLESS SPECIFICALLY NOTED OTHERWISE. FIELD VERIFY EXACT LOCATIONS OF FIXTURES.
1. The existing conditions indicated on the drawings are taken from the best information available and from visual site inspection and are not to be construed as "as built" conditions. The information is shown to help establish the extent of the work. Verify all actual existing conditions at the project site and perform the work as required to meet the existing conditions and the extent of the work indicated.

2. Dark dashed lines indicate electrical equipment that shall be removed. Light solid lines represent existing equipment or material to remain, except existing demo disconnect and remove all cabling, wiring, and the removal of equipment indicated to be removed. Disconnect and remove all wiring back to panelboards that become unnecessary due to circuits. Provide for the continuity of all electrical devices that penetrate floors and walls are demolished. Patch structural openings to match existing where not noted. Patch detail.

3. Electrical contractor to remove light fixtures and exit signs indicated on the drawings. Remove existing circuiting back to nearest available junction box and retain for extension to new fixtures and exit signs for reinstallation in new locations.

4. Area A
- Alarm system, associated devices, panels, and cabling. Remove all conduit where possible. Provide blank wall plates where devices have been outlets, poke through fittings, and cabling back to communications closet where noted. Patch and repair any walls where new devices do not replace existing. Blank faceplates are prohibited.

5. Area B
- Electrical contractor to remove all electrical wiring as required to maintain devices to remain.

6. Area C
- Electrical contractor to remove all electrical devices to remain. Retain existing circuit for reuse in new work.

7. Area D
- Service panel and mark existing circuit as spare.

8. Area E
- Alarm system, associated devices, panels, and cabling. Remove all conduit where possible. Provide blank wall plates where devices have been outlets, poke through fittings, and cabling back to communications closet where noted. Patch and repair any walls where new devices do not replace existing. Blank faceplates are prohibited.

9. Area F
- Alarm system, associated devices, panels, and cabling. Remove all conduit where possible. Provide blank wall plates where devices have been outlets, poke through fittings, and cabling back to communications closet where noted. Patch and repair any walls where new devices do not replace existing. Blank faceplates are prohibited.

10. Area G
- Alarm system, associated devices, panels, and cabling. Remove all conduit where possible. Provide blank wall plates where devices have been outlets, poke through fittings, and cabling back to communications closet where noted. Patch and repair any walls where new devices do not replace existing. Blank faceplates are prohibited.

11. Area H
- Alarm system, associated devices, panels, and cabling. Remove all conduit where possible. Provide blank wall plates where devices have been outlets, poke through fittings, and cabling back to communications closet where noted. Patch and repair any walls where new devices do not replace existing. Blank faceplates are prohibited.

12. Area I
- Alarm system, associated devices, panels, and cabling. Remove all conduit where possible. Provide blank wall plates where devices have been outlets, poke through fittings, and cabling back to communications closet where noted. Patch and repair any walls where new devices do not replace existing. Blank faceplates are prohibited.

13. Area J
- Alarm system, associated devices, panels, and cabling. Remove all conduit where possible. Provide blank wall plates where devices have been outlets, poke through fittings, and cabling back to communications closet where noted. Patch and repair any walls where new devices do not replace existing. Blank faceplates are prohibited.

14. Area K
- Alarm system, associated devices, panels, and cabling. Remove all conduit where possible. Provide blank wall plates where devices have been outlets, poke through fittings, and cabling back to communications closet where noted. Patch and repair any walls where new devices do not replace existing. Blank faceplates are prohibited.

15. Area L
- Alarm system, associated devices, panels, and cabling. Remove all conduit where possible. Provide blank wall plates where devices have been outlets, poke through fittings, and cabling back to communications closet where noted. Patch and repair any walls where new devices do not replace existing. Blank faceplates are prohibited.

16. Area M
- Alarm system, associated devices, panels, and cabling. Remove all conduit where possible. Provide blank wall plates where devices have been outlets, poke through fittings, and cabling back to communications closet where noted. Patch and repair any walls where new devices do not replace existing. Blank faceplates are prohibited.

17. Area N
- Alarm system, associated devices, panels, and cabling. Remove all conduit where possible. Provide blank wall plates where devices have been outlets, poke through fittings, and cabling back to communications closet where noted. Patch and repair any walls where new devices do not replace existing. Blank faceplates are prohibited.

18. Area O
- Alarm system, associated devices, panels, and cabling. Remove all conduit where possible. Provide blank wall plates where devices have been outlets, poke through fittings, and cabling back to communications closet where noted. Patch and repair any walls where new devices do not replace existing. Blank faceplates are prohibited.

19. Area P
- Alarm system, associated devices, panels, and cabling. Remove all conduit where possible. Provide blank wall plates where devices have been outlets, poke through fittings, and cabling back to communications closet where noted. Patch and repair any walls where new devices do not replace existing. Blank faceplates are prohibited.

20. Area Q
- Alarm system, associated devices, panels, and cabling. Remove all conduit where possible. Provide blank wall plates where devices have been outlets, poke through fittings, and cabling back to communications closet where noted. Patch and repair any walls where new devices do not replace existing. Blank faceplates are prohibited.

21. Area R
- Alarm system, associated devices, panels, and cabling. Remove all conduit where possible. Provide blank wall plates where devices have been outlets, poke through fittings, and cabling back to communications closet where noted. Patch and repair any walls where new devices do not replace existing. Blank faceplates are prohibited.

22. Area S
- Alarm system, associated devices, panels, and cabling. Remove all conduit where possible. Provide blank wall plates where devices have been outlets, poke through fittings, and cabling back to communications closet where noted. Patch and repair any walls where new devices do not replace existing. Blank faceplates are prohibited.

23. Area T
- Alarm system, associated devices, panels, and cabling. Remove all conduit where possible. Provide blank wall plates where devices have been outlets, poke through fittings, and cabling back to communications closet where noted. Patch and repair any walls where new devices do not replace existing. Blank faceplates are prohibited.
**Section 16 - Wall Section - FACS Wall with Window - Phase 1**

- **Reinforcing Each Continuous LID:**
  - 1-1/2" ONE SIDE, WP2

- **Wall Height Confirmation:**
  - 3' - 6"

- **RE: ELEV FOR BULLNOSE FINISH:**
  - PHASE 2 ONLY

- **Wall Types:**
  - 4" MIN
  - 8" Wall Section - FACS Wall with Window - Phase 1
  - 8" CMU BLOCK
  - BULL NOSE BLOCK
  - PHASE 2 ONLY

- **REINFORCEMENT EACH CONTINUOUS LID:**
  - Metal Furring Channel

- **Acoustical Sealant:**
  - 09 29 00.A15
  - ACOUSTICAL SEALANT

- **Abuse/Impact-Resistant Gypsum Board:**
  - 09 29 00.A05
  - ABUSE/IMPACT-RESISTANT GYPSUM BOARD

- **Metal Laminated Clear Film:**
  - 09 29 00.A01
  - METAL LAMINATED CLEAR FILM

- **Fire Retardant Joist System:**
  - 09 29 00.A02
  - FIRE RETARDANT JOIST SYSTEM

- **Sealant:**
  - 07 92 00.A01
  - SEALANT

- **Fire Resistant Joint System:**
  - 07 84 46.A01
  - FIRE RESISTIVE JOINT SYSTEM

- **Plastic Laminate-Clad Panel:**
  - 06 10 00.A16
  - PLASTIC LAMINATE-CLAD PANELS

- **Concrete Masonry Unit:**
  - 04 20 00.A01
  - CONCRETE MASONRY UNITS

- **Steel Treated Wood Blocking & Lumber:**
  - 03 30 00.A01
  - CAST-IN-PLACE CONCRETE

- **Display Case:**
  - 06 16 00.A03
  - DISPLAY CASE

- **Counter & ETR Wall Fv:**
  - 09 29 00.A02
  - COUNTER & ETR WALL, FV

- **ACOUSTICAL DRYWALL:**
  - 09 29 00.A14
  - ACOUSTICAL DRYWALL

- **First Floor:**
  - 102' - 0"
COORDINATE DOOR CONTROL BUTTON LOCATION AT SAFE CORNERS WITHIN ROOMS MOUNTED ADJACENT TO ENTRY DOORS OR AT OUTSIDE SWITCHES, THERMOSTATS, FIRE ALARM STROBES TO BE REFER TO MEP SHEETS FOR LOCATION DIAGRAM OF PROJECTOR PROVIDE BACKDROPS RE: RCP OFOI COORDINATE WITH MECHANICAL SHEETS FOR LOCATIONS OF VENTILATION FIXTURES LOCATED WITHIN ROOMS REFER TO PLUMBING DRAWINGS FOR LOCATIONS OF SINKS MATERIAL, UNO ORDER TO SHEET G000 FOR SHEET INDEX
ALL COUNTERTOPS TO BE SS1 UNO.

HP1

1/4" = 1'-0"

Scale

1/4" = 1'-0"

Int Elev - D123 Scramble NW

Int Elev - D125 Typ Dining Acoustical Panel

MANUAL SCREEN REINSTALLED TYP.

RE: J1 A625.2

CHECKED BY:

Bob D. Campbell & Co.

Kansas City, MO 64111

816.531.4144 Phone

4338 Belleview Ave.

State Certificate of Authority # EGC-0001787

and this architect expressly disclaims any and all responsibility for such plan, drawings, or documents not exhibiting this seal.
DEMO AND RAISE BULKHEAD TO BOTTOM OF STRUCTURE. 11' 5" AFF FINISH AND PAINT TO MATCH EXISTING @ OUTSIDE FACE. INSIDE FACE TO BE PAINTED P2.

RE: BASE BID

OTS PAINT P2

CLG4 TO BE DIRECT ATTACHED TO TRUSSES PAINT TO MATCH OTS P2. CLG4 24" X 96" UNO

3' - 0"

CLG3 TO BE DIRECT ATTACHED TO TRUSSES PAINT TO MATCH OTS P2. CLG4 24" X 96" UNO

72" 12"

26' - 9" RE: BASE BID

72" 12"

12" 72"
### MECHANICAL AND ELECTRICAL SCHEDULES

#### Missouri State Certificate of Authority
- Architecture # 0000161
- Hollis + Miller Architects

#### DRAWN BY: DATE: REVISIONS:

#### CHECKED BY:

The Professional Architects seal affixed to this sheet applies only to the material and items shown on this sheet. All drawings, instruments or other documents not exhibiting this seal shall not be considered prepared by this architect, and this architect expressly disclaims any and all responsibility for such plan, drawings, or documents not exhibiting this seal.

#### JOB NO: SBI RJD 23025

- Smith & Boucher
  - MEP Engineers
  - State Certificate of Authority #EGC000178
  - 25618 W 103rd St
  - Olathe, KS 66061
  - 913.345.2127 phone
  - 913.345.0617 fax

- Liberty Public School District
  - Liberty High School Interior Remodel
  - 200 Blue Jay Drive
  - Liberty, Missouri 64068

- Structural Engineer
  - Bob D Campbell
  - State Certificate of Authority #000442
  - 4338 Bellview Ave
  - Kansas City, MO 64111
  - 816.531.4144 phone
  - 816.531.8572 Fax

#### ADDENDUM #3 02/23/2024

- Phase 2 Scope of Work
  - Not included in this Bid Package

### DUCTWORK SCHEDULE

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### FAN SCHEDULE

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### PLUMBING SCHEDULE

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### PIPE INSULATION SCHEDULE - PLUMBING

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GENERAL NOTES:

1. TRADES.
2. ENGINEER.
   PROVIDE MANUAL VOLUME DAMPER IN DUCTWORK FOR EVERY SUPPLY AND
   EXHAUST DIFFUSER/GRILLE NOT SCHEDULED TO HAVE AN INTEGRAL VOLUME
   DAMPER. REFER TO DIFFUSER/GRILLE SCHEDULE.

3. DUCT RUN-OUT TO VAV BOX TO MATCH CHEDULED INLET SIZE UNLESS NOTED

4. FINAL DUCT RUN-OUT SIZE TO DIFFUSER TO MATCH DIFFUSER NECK SIZE
   UNLESS NOTED OTHERWISE ON PLANS. REFER TO DIFFUSER TAGS.
DEMOLITION GENERAL NOTES:

1. FULL TONE AND DASHED ARE TO BE DEMOLISHED AND SERVICES AND EQUIPMENT SHOWN HALF TONE AND SOLID ARE TO REMAIN.

2. UNLESS NOTED OTHERWISE, SERVICES AND EQUIPMENT SHOWN ARE TO BE DEMOLISHED. THE EXISTING CONDITIONS INDICATED ON THE DRAWINGS ARE TAKEN FROM THE BEST INFORMATION AVAILABLE AND FROM VISUAL SITE INSPECTION AND ARE NOT TO BE CONSTRUED AS "AS BUILT" CONDITIONS. THE INFORMATION IS SHOWN TO HELP ESTABLISH THE EXTENT OF THE NEW WORK, VERIFY ALL ACTUAL EXISTING CONDITIONS AT THE PROJECT SITE AND PERFORM WORK AS REQUIRED TO MEET THE EXISTING CONDITIONS AND THE EXTENT OF THE WORK INDICATED.

3. PATCH ROOFS, WALLS, AND CEILINGS WHERE ANY SERVICES ARE REMOVED UNLESS NOTED OTHERWISE.

4. DISCONNECT AND REMOVE ALL PIPING, WIRING, AND CONDUIT THAT BECOMES UNNECESSARY AS A RESULT OF THE REMOVAL OF EQUIPMENT INDICATED TO BE REMOVED. PROVIDE FOR THE CONTINUITY OF ALL REMAINING SERVICES SYSTEMS AND CIRCUITS.

5. WHERE MECHANICAL AND ELECTRICAL FIXTURES OR EQUIPMENT ARE REMOVED, CAP ALL UNUSED CONDUIT, WIRING, AND PIPING BEYOND THE FLOOR LINE OR WALL LINE AND PROVIDE RESTORATION OF FINISH.

6. RELOCATE AND RECONNECT ANY MECHANICAL AND ELECTRICAL FACILITIES THAT MUST BE RELOCATED IN ORDER TO ACCOMPLISH THE REMODELING SHOWN IN THE DRAWINGS, INDICATED IN THE SPECIFICATIONS, OR TO MEET NEC CODE REQUIRED CLEARANCES.

7. MAINTAIN CONTINUITY OF EXISTING SERVICES DURING CONSTRUCTION ACTIVITIES FOR ALL SPACES REMAINING IN USE BY THE OWNER.

8. COORDINATE EQUIPMENT AND DUCTWORK WITH STRUCTURE AND ALL OTHER TRADES.

9. COORDINATE ROOF AND WALL OPENINGS WITH ARCHITECT AND STRUCTURAL ENGINEER.

10. PROVIDE MANUAL VOLUME DAMPER IN DUCTWORK FOR EVERY SUPPLY AND EXHAUST DIFFUSER/GRILLE NOT SCHEDULED TO HAVE AN INTEGRAL VOLUME DAMPER. REFER TO DIFFUSER/GRILLE SCHEDULE.

11. DUCT RUN-OUT TO VAV BOX TO MATCH SCHEDULED INLET SIZE UNLESS NOTED OTHERWISE. REFER TO VAV BOX SCHEDULE.

12. FINAL DUCT RUN-OUT SIZE TO DIFFUSER TO MATCH DIFFUSER NECK SIZE.

13. 22"X22" OR 22"X12" RG-1 TYPICAL FOR LAY-IN CEILING RETURN GRILLES UNLESS NOTED OTHERWISE.

Please consider the environment before printing this.
UNLESS NOTED OTHERWISE, SERVICES AND EQUIPMENT SHOWN FULL TONE AND DASHED ARE TO BE DEMOLISHED AND SERVICES AND EQUIPMENT SHOWN HALF TONE AND SOLID ARE TO REMAIN. THE EXISTING CONDITIONS INDICATED ON THE DRAWINGS ARE TAKEN FROM THE BEST INFORMATION AVAILABLE AND FROM VISUAL SITE INSPECTION AND ARE NOT TO BE CONSTRUED AS "AS BUILT" CONDITIONS, THE INFORMATION IS SHOWN TO HELP ESTABLISH THE EXTENT OF THE NEW WORK, VERIFY ALL ACTUAL EXISTING CONDITIONS AT THE PROJECT SITE AND PERFORM WORK AS REQUIRED TO MEET THE EXISTING CONDITIONS AND THE EXTENT OF THE WORK INDICATED.

PATCH ROOFS, WALLS, AND CEILINGS WHERE ANY SERVICES ARE REMOVED UNLESS NOTED OTHERWISE.

DISCONNECT AND REMOVE ALL PIPING, WIRING, AND CONDUIT THAT BECOMES UNNECESSARY AS A RESULT OF THE REMOVAL OF EQUIPMENT INDICATED TO BE REMOVED. PROVIDE FOR THE CONTINUITY OF ALL REMAINING SERVICES SYSTEMS AND CIRCUITS.

WHERE MECHANICAL AND ELECTRICAL FIXTURES OR EQUIPMENT ARE FLOOR LINE OR WALL LINE AND PROVIDE RESTORATION OF FINISH.

RELOCATE AND RECONNECT ANY MECHANICAL AND ELECTRICAL FACILITIES THAT MUST BE RELOCATED IN ORDER TO ACCOMPLISH THE REMODELING SHOWN IN THE DRAWINGS, INDICATED IN THE SPECIFICATIONS, OR TO MEET NEC CODE REQUIRED CLEARANCES.

MAINTAIN CONTINUITY OF EXISTING SERVICES DURING CONSTRUCTION.
 DEMOLITION GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, SERVICES AND EQUIPMENT SHOWN FULL TONE AND DASHED ARE TO BE DEMOLISHED AND SERVICES AND EQUIPMENT SHOWN HALF TONE AND SOLID ARE TO REMAIN.

2. THE EXISTING CONDITIONS INDICATED ON THE DRAWINGS ARE 100 CFM.

3. ESTABLISH THE EXTENT OF THE NEW WORK, VERIFY ALL ACTUAL EXISTING CONDITIONS AT THE PROJECT SITE AND PERFORM WORK AS REQUIRED TO MEET THE EXISTING CONDITIONS AND THE EXTENT OF THE WORK INDICATED.

4. PATCH ROOFS, WALLS, AND CEILINGS WHERE ANY SERVICES ARE REMOVED UNLESS NOTED OTHERWISE.

5. DISCONNECT AND REMOVE ALL PIPING, WIRING, AND CONDUIT THAT BECOMES UNNECESSARY AS A RESULT OF THE REMOVAL OF EQUIPMENT INDICATED TO BE REMOVED. PROVIDE FOR THE CONTINUITY OF ALL REMAINING SERVICES SYSTEMS AND CIRCUITS.

6. WHERE MECHANICAL AND ELECTRICAL FIXTURES OR EQUIPMENT ARE REMOVED, CAP ALL UNUSED CONDUIT, WIRING, AND PIPING BEYOND THE FLOOR LINE OR WALL LINE AND PROVIDE RESTORATION OF FINISH.

7. RELocate AND RECONNECT ANY MECHANICAL AND ELECTRICAL FACILITIES THAT MUST BE RELOCATED IN ORDER TO ACCOMPLISH THE REMODELING SHOWN IN THE DRAWINGS, INDICATED IN THE SPECIFICATIONS, OR TO MEET NEC CODE REQUIRED CLEARANCES.

8. MAINTAIN CONTINUITY OF EXISTING SERVICES DURING CONSTRUCTION ABOVE ACTIVITIES FOR ALL SPACES REMAINING IN USE BY THE OWNER.
DEMOLITION:

1. THE EXISTING CONDITIONS INDICATED ON THE DRAWINGS ARE TAKEN FROM THE BEST INFORMATION AVAILABLE AND FROM VISUAL SITE INSPECTION AND ARE NOT TO BE CONSTRUED AS "AS BUILT" CONDITIONS, THE INFORMATION IS SHOWN TO HELP ESTABLISH THE EXTENT OF THE NEW WORK, VERIFY ALL ACTUAL EXISTING CONDITIONS AT THE PROJECT SITE AND PERFORM WORK AS REQUIRED TO MEET THE EXISTING CONDITIONS AND THE EXTENT OF THE WORK INDICATED.

2. DISCONNECT AND REMOVE ALL PIPING, WIRING, AND CONDUIT UNLESS NOTED OTHERWISE.

3. WHERE MECHANICAL AND ELECTRICAL FIXTURES OR EQUIPMENT ARE REMOVED, CAP ALL UNUSED CONDUIT, WIRING, AND PIPING BEYOND THE FLOOR LINE OR WALL LINE AND PROVIDE RESTORATION OF FINISH.

4. RELocate AND RECONNECT ANY MECHANICAL AND ELECTRICAL FACILITIES THAT MUST BE RELOCATED IN ORDER TO ACCOMPLISH THE REMODELING SHOWN IN THE DRAWINGS, INDICATED IN THE SPECIFICATIONS, OR TO MEET NEC CODE REQUIRED CLEARANCES.

5. MAINTAIN CONTINUITY OF EXISTING SERVICES DURING CONSTRUCTION ACTIVITIES FOR ALL SPACES REMAINING IN USE BY THE OWNER.

6. COORDINATE EQUIPMENT AND DUCTWORK WITH STRUCTURE AND ALL OTHER TRADES.

7. COORDINATE ROOF AND WALL OPENINGS WITH ARCHITECT AND STRUCTURAL ENGINEER.

8. PROVIDE MANUAL VOLUME DAMPER IN DUCTWORK FOR EVERY SUPPLY AND EXHAUST DIFFUSER/GRILLE NOT SCHEDULED TO HAVE AN INTEGRAL VOLUME DAMPER. REFER TO DIFFUSER/GRILLE SCHEDULE.

9. DUCT RUN-OUT TO VAV BOX TO MATCH CHEDULED INLET SIZE UNLESS NOTED OTHERWISE. REFER TO VAV BOX SCHEDULE.

10. FINAL DUCT RUN-OUT SIZE TO DIFFUSER TO MATCH DIFFUSER NECK SIZE UNLESS NOTED OTHERWISE ON PLANS. REFER TO DIFFUSER TAGS.

11. UNLESS NOTED OTHERWISE, SERVICES AND EQUIPMENT SHOWN IN TABLE 1. THE EXISTING CONDITIONS INDICATED ON THE DRAWINGS ARE TAKEN FROM THE BEST INFORMATION AVAILABLE AND FROM VISUAL SITE INSPECTION AND ARE NOT TO BE CONSTRUED AS "AS BUILT" CONDITIONS, THE INFORMATION IS SHOWN TO HELP ESTABLISH THE EXTENT OF THE NEW WORK, VERIFY ALL ACTUAL EXISTING CONDITIONS AT THE PROJECT SITE AND PERFORM WORK AS REQUIRED TO MEET THE EXISTING CONDITIONS AND THE EXTENT OF THE WORK INDICATED.

12. DISCONNECT AND REMOVE ALL PIPING, WIRING, AND CONDUIT UNLESS NOTED OTHERWISE.

13. WHERE MECHANICAL AND ELECTRICAL FIXTURES OR EQUIPMENT ARE REMOVED, CAP ALL UNUSED CONDUIT, WIRING, AND PIPING BEYOND THE FLOOR LINE OR WALL LINE AND PROVIDE RESTORATION OF FINISH.

14. RELocate AND RECONNECT ANY MECHANICAL AND ELECTRICAL FACILITIES THAT MUST BE RELOCATED IN ORDER TO ACCOMPLISH THE REMODELING SHOWN IN THE DRAWINGS, INDICATED IN THE SPECIFICATIONS, OR TO MEET NEC CODE REQUIRED CLEARANCES.

15. MAINTAIN CONTINUITY OF EXISTING SERVICES DURING CONSTRUCTION ACTIVITIES FOR ALL SPACES REMAINING IN USE BY THE OWNER.
EXISTING SPRINKLERS IN D122 DINING TO REMAIN AS-IS.
GENERAL NOTES:
1. REFER TO PLUMBING RISER DIAGRAM FOR ADDITIONAL ROUTING INFORMATION AND PIPE SIZING.
2. REFER TO PLUMBING FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION AND FIXTURE CONNECTION SIZES.
3. SANITARY PIPING SHALL BE ROUTED AT A SLOPE OF 1/8" PER FOOT FOR 3" AND LARGER AND 1/4" PER FOOT FOR 2-1/2" AND SMALLER. GREASE PIPING SHALL BE ROUTED AT A SLOPE OF 1/4" PER FOOT FOR ALL SIZES. STORM DRAIN PIPING SHALL BE ROUTED AT A SLOPE OF 1/8" PER FOOT.
4. COORDINATE ROOF AND WALL OPENINGS WITH ARCHITECT AND STRUCTURAL ENGINEER.
5. COORDINATE ROUTING OF PLUMBING SYSTEM WITH STRUCTURE AND ALL OTHER TRADES. ROUTE PIPING THROUGH STRUCTURAL BEAM/JOIST SPACE WHERE POSSIBLE.
6. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR FIXTURE MOUNTING LOCATIONS AND HEIGHTS.

PLAN NOTES:
1. RE-ROUTE AND/OR RAISE ALL FIRE PROTECTION, STORM DRAINAGE, COLD WATER, HOT WATER, VENT, AND GAS PIPING TO ABOVE THE NEW RAISED CEILING AREA. FIELD VERIFY BEFORE BID. USE SIDEWALL SPRINKLER HEADS AS NEEDED FOR THIS AREA.
2. INSTALL CONCEALED HEAD SPRINKLERS.

= Phase 2 Scope of Work
(Not included in this Bid Package)
LEVEL 1

DEMOLITION

GENERAL NOTES:
1. UNLESS NOTED OTHERWISE, SERVICES AND EQUIPMENT SHOWN FULL TONE AND DASHED ARE TO BE DEMOLISHED AND SERVICES AND EQUIPMENT SHOWN HALF TONE AND SOLID ARE TO REMAIN.
2. ESTABLISH THE EXTENT OF THE NEW WORK, VERIFY ALL ACTUAL EXISTING CONDITIONS AT THE PROJECT SITE AND PERFORM WORK AS REQUIRED TO MEET THE EXISTING CONDITIONS AND THE EXTENT OF THE WORK INDICATED.
3. PATCH ROOFS, WALLS, AND CEILINGS WHERE ANY SERVICES ARE REMOVED UNLESS NOTED OTHERWISE.
4. DISCONNECT AND REMOVE ALL PIPING, WIRING, AND CONDUIT THAT BECOMES UNNECESSARY AS A RESULT OF THE REMOVAL OF EQUIPMENT INDICATED TO BE REMOVED. PROVIDE FOR THE CONTINUITY OF ALL REMAINING SERVICES SYSTEMS AND CIRCUITS.
5. WHERE MECHANICAL AND ELECTRICAL FIXTURES OR EQUIPMENT ARE REMOVED, CAP ALL UNUSED CONDUIT, WIRING, AND PIPING BEYOND THE FLOOR LINE OR WALL LINE AND PROVIDE RESTORATION OF FINISH.
6. RELOCATE AND RECONNECT ANY MECHANICAL AND ELECTRICAL INDICATED IN THE SPECIFICATIONS, OR TO MEET NEC CODE REQUIRED CLEARANCES.
7. MAINTAIN CONTINUITY OF EXISTING SERVICES DURING CONSTRUCTION.

PLUMBING PLAN - AREA B - LEVEL 1 - ALTERNATE 2 - PHASE 1

LIBERTY HIGH SCHOOL INTERIOR REMODEL

200 Blue Jay Drive
Liberty, Missouri 64068

Hollis + Miller Architects
Missouri State Certificate of Authority
Architecture # 0000161

Bob D. Campbell & Co.
State Certificate of Authority # 000442

Structural Engineer
State Certificate of Authority # EG-603

3/4" B401

1 1/2" B401a

3" B401b

2" FD-1 (TYP 2)

1 1/2" V UP TO WCO

3" VTR

Early Birds

Restroom

San

X413

X414

REFER TO PLUMBING RISER DIAGRAM FOR ADDITIONAL ROUTING
CONNECT TO 1" HW
CONNECT TO 4" CW
RESTROOM PIPING SHALL BE ROUTED AT A SLOPE OF 1/8" PER FOOT FOR 3" AND LARGER AND 1/4" PER FOOT FOR 2-1/2" AND SMALLER. GREASE PIPING SHALL BE ROUTED AT A SLOPE OF 1/4" PER FOOT FOR ALL SIZES. STORM DRAIN PIPING SHALL BE ROUTED AT A SLOPE OF 1/8" PER FOOT.

PLUMBING PLAN - AREA B - LEVEL 1 - ALTERNATE 2 - PHASE 1

PLUMBING PLAN - AREA B - LEVEL 1 - ALTERNATE 2 - PHASE 1

PLUMBING PLAN - AREA B - LEVEL 1 - ALTERNATE 2 - PHASE 1

PLUMBING PLAN - AREA B - LEVEL 1 - ALTERNATE 2 - PHASE 1

PLUMBING PLAN - AREA B - LEVEL 1 - ALTERNATE 2 - PHASE 1
Demolition General Notes:

1. Unless noted otherwise, services and equipment shown full tone and dashed are to be demolished and services and equipment shown half tone and solid are to remain.

2. The existing conditions indicated on the drawings are taken from the best information available and from visual site inspection and are not to be construed as "as built" conditions. The information is shown to help establish the extent of the new work, verify all actual existing conditions at the project site and perform work as required to meet the existing conditions and the extent of the work indicated.

3. Patch roofs, walls, and ceilings where any services are removed unless noted otherwise.

4. Disconnect and remove all piping, wiring, and conduit that becomes unnecessary as a result of the removal of equipment indicated to be removed. Provide for the continuity of all remaining services systems and circuits.

5. Where mechanical and electrical fixtures or equipment are removed, cap all unused conduit, wiring, and piping beyond the floor line or wall line and provide restoration of finish.

6. Remodeling shown in the drawings, maintaining continuity of existing services during construction activities for all spaces remaining in use by the owner.

7. Refer to plumbing riser diagram for additional routing information and pipe sizing.

8. Sanitary piping shall be routed at a slope of 1/8" per foot for 3" and larger and 1/4" per foot for 2-1/2" and smaller. Grease piping shall be routed at a slope of 1/8" per foot. Coordinate roof and wall openings with architect and structural engineer.

9. Coordinate routing of plumbing system with structure and all other trades. Route piping through structural beam/ joist space where possible.

10. Refer to architectural plans and elevations for fixture mounting locations and heights.

11. Water, hot water, vent, and gas piping into structural joist space to allow for an aesthetically pleasing exposed (no ceiling) installation with as much clear height as possible. Field verify before bid.

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Key Sheet Notes:

- Phase 2 Scope of Work (Not included in this Bid Package)
1. Full tone and dashed are to be demolished and services and equipment shown half tone and solid are to remain.

2. The existing conditions indicated on the drawings are taken from the best information available and from visual site inspection and are not to be construed as "as built" conditions. The information is shown to help existing conditions at the project site and perform work as required to meet the existing conditions and the extent of the work indicated.

3. Disconnect and remove all piping, wiring, and conduit that becomes unnecessary as a result of the removal of equipment indicated to be removed. Provide for the continuity of all remaining services systems and circuits.

4. Where mechanical and electrical fixtures or equipment are removed, cap all unused conduit, wiring, and piping beyond the indicated in the specifications, or to meet NEC Code required clearances.

5. Relocate and reconnect any mechanical and electrical facilities that must be relocated in order to accomplish the remodeling shown in the drawings.

6. Maintain continuity of existing services during construction activities for all spaces remaining in use by the owner.

7. Structural Engineer

8. MEP Engineers

9. Plumbing Plan - Area H - Level 1 - Alternate 4 - Phase 2

PLUMBING PLAN - AREA H - LEVEL 1 - ALTERNATE 4

8' = 1'-0" 1/8" = 1'-0"

Please consider the environment before printing this.
DEMOLITION GENERAL NOTES:
REFER TO SHEET DE101D.2 FOR PROJECT LIGHTING DEMOLITION NOTES.

GENERAL NOTES:
REFER TO SHEET E101D.2 FOR PROJECT LIGHTING GENERAL NOTES.

1. DEMOLITION PLAN NOTES
REFER TO BASEBID REQUIREMENTS ON SHEET DE101D.2 FOR ADDITIONAL WORK IN THIS AREA.

THE EXISTING CEILING IN AREA DENOTED BY DASHED LINE IS SCHEDULED FOR REMOVAL WITHOUT REPLACEMENT. ALL EXISTING ABOVE CEILING WIRE AND CONDUIT TO BE REMOVED BACK TO NEAREST ACCESSIBLE CEILING POINT AND EXISTING LIGHTING CIRCUITS FOR THIS AREA TO BE RETAINED FOR REUSE IN NEW WORK.

PLAN NOTES:
REFER TO BASEBID REQUIREMENTS ON SHEET E101D.2.
ALL EXISTING WIRE AND CONDUIT REMOVED DURING DEMOLITION TO BE REWORKED NEATLY TO COORDINATE WITH NEW OPEN TO STRUCTURE CEILING. MOUNT ALL CONDUITS TIGHT TO STRUCTURE WHERE POSSIBLE. PAINT CONDUITS TO MATCH. MODIFY/EXTEND EXISTING CIRCUITS AS NECESSARY.

= Phase 2 Scope of Work
(Not included in this Bid Package)
LIGHTING PLAN - AREA H - LEVEL 1 - ALTERNATE 4

DEMO LIGHTING PLAN - AREA H - ALTERNATE 4 - LEVEL 1 - PHASE 2

1. DEMOLITION PLAN NOTES
   - REFER TO BASEBID REQUIREMENTS ON SHEET DE101H.2 FOR ADDITIONAL WORK IN THIS AREA.
   - THE EXISTING CEILING IN AREA DENOTED BY DASHED LINE IS SCHEDULED FOR REMOVAL WITHOUT REPLACEMENT. ALL EXISTING ABOVE CEILING WIRE AND CONDUIT TO BE REMOVED BACK TO NEAREST ACCESSIBLE CEILING POINT AND EXISTING LIGHTING CIRCUITS FOR THIS AREA TO BE RETAINED FOR REUSE IN NEW WORK.

2. PLAN NOTES:
   - REFER TO BASEBID REQUIREMENTS ON SHEET E101H.2.
   - ALL EXISTING WIRE AND CONDUIT REMOVED DURING DEMOLITION TO BE REWORKED NEATLY TO COORDINATE WITH NEW OPEN TO STRUCTURE CEILING. MOUNT ALL CONDUITS TIGHT TO STRUCTURE WHERE POSSIBLE. PAINT CONDUITS TO MATCH. MODIFY/EXTEND EXISTING CIRCUITS AS NECESSARY.

Phase 2 Scope of Work (Not included in this Bid Package)
DEMO GENERAL NOTES:
REFER TO SHEET DE201D.2 FOR PROJECT ELECTRICAL DEMO NOTES.

GENERAL NOTES:
REFER TO SHEET E201D.2 FOR PROJECT GENERAL NOTES AND RACEWAY GENERAL NOTES.

1. DEMO PLAN NOTES
REFER TO BASEBID REQUIREMENTS ON SHEET DE201D.2 FOR ADDITIONAL WORK IN THIS AREA.
THE EXISTING CEILING IN AREA DENOTED BY DASHED LINE IS SCHEDULED FOR REMOVAL WITHOUT REPLACEMENT. ALL EXISTING CEILING MOUNTED ELECTRICAL DEVICES TO BE REMOVED IN THEIR ENTIRETY. ALL EXISTING ABOVE CEILING WIRE AND CONDUIT TO BE REMOVED BACK TO NEAREST ACCESSIBLE CEILING POINT AND PREPARED FOR REWIRING IN NEW WORK.

2. PLAN NOTES:
REFER TO BASEBID REQUIREMENTS ON SHEET E201D.2 FOR ADDITIONAL WORK IN THIS AREA.
ALL EXISTING WIRE AND CONDUIT REMOVED DURING DEMO TO BE REWORKED NEATLY TO COORDINATE WITH NEW OPEN TO STRUCTURE CEILING. MOUNT ALL CONDUITS TIGHT TO STRUCTURE WHERE POSSIBLE. PAINT CONDUITS TO MATCH. MODIFY/EXTEND EXISTING CIRCUITS AS NECESSARY.

FEET

1/8" = 1'-0"
DEMO GENERAL NOTES:
REFER TO SHEET DE201D.2 FOR PROJECT ELECTRICAL POWER DEMOLITION NOTES.

1. GENERAL NOTES:
REFER TO SHEET E201D.2 FOR PROJECT ELECTRICAL GENERAL NOTES AND RACEWAY GENERAL NOTES.

DEMOLITION PLAN NOTES:
REFER TO BASEBID REQUIREMENTS ON SHEET DE201H.2 FOR ADDITIONAL WORK IN THIS AREA.
The existing ceiling in area denoted by dashed line is scheduled for removal without replacement. All existing ceiling mounted electrical devices to be removed in their entirety. All existing above ceiling wire and conduit to be removed back to nearest accessible ceiling point and prepared for rewiring in new work.

PLAN NOTES:
REFER TO BASEBID REQUIREMENTS ON SHEET E201H.2 FOR ADDITIONAL WORK IN THIS AREA.
All existing wire and conduit removed during demolition to be reworked neatly to coordinate with new open to structure ceiling. Mount all conduits tight to structure where possible. Paint conduits to match. Modify/extend existing circuits as necessary.

Phase 2 Scope of Work
(Not included in this Bid Package)
ADDENDUM #3

LESS DAYLIGHT PHOTO CELL.

UNIT ONE AND TWO RELAY UNITS SIMILAR, LESS

GENERAL NOTES:

NOTE 3: SENSOR LOCATIONS SHOWN ON FLOOR PLANS ARE GENERIC, CONTRACTOR TO MODIFY LOCATIONS AS REQUIRED BASED COVERAGE CAPABILITIES OF SUBMITTED PRODUCTS.

NOTE 1: THE BASIS OF DESIGN MANUFACTURER IS NLIGHT. ALL PRODUCT SUBSTITUTIONS SUBMITTED MUST BE APPROVED AS EQUAL. RE: PLANS FOR QUANTITIES.

NOTE 9: ANY CATEGORY CABLING USED FOR LIGHTING CONTROLS MUST BE OF A SPECIAL COLOR AND NOT BE THE SAME COLOR AS ANY OTHER LOW VOLTAGE SYSTEM IN THE BUILDING. SUCH AS DATA

NOTE 4: PROVIDE A DIGITAL LIGHTING CONTROL SYSTEM FROM A MANUFACTURER LISTED IN SPECIFICATION SECTION 260923 - LIGHTING CONTROL DEVICES. WIRELESS SYSTEMS ARE NOT PERMITTED.

NOTE 5: DEVICE SHALL CONNECT TO UTILITY POWER BRANCH DURING NORMAL OPERATION, AND SWITCH TO GENERATOR BRANCH CIRCUIT DURING A LOSS OF UTILITY POWER CIRCUIT.

NOTE 1: WHERE NOTED ABOVE, SCHEDULED BUILDING HOURS OF OPERATION ARE AS FOLLOWS: 6:30 AM TO 6:30 PM.

LIGHT FIXTURE SCHEDULE

- AUTOMATIC DAYLIGHT HARVESTING PHOTOCELL(S), WHEN APPLICABLE:
  - ZONES ARE DENOTED ON EACH ASSOCIATED LIGHT FIXTURE WHEN MULTIPLE ZONES ARE PRESENT WITHIN ROOM, USING LOWER CASE LETTERS AS FOLLOWS: "a", "b", ETC.
  - ZONE DESIGNATIONS ARE DENOTED FOR EACH DIMMER LOCATION WHEN DIFFERENT ZONES ARE CONTROLLED FROM DIFFERENT DIMMERS WITHIN THE SAME ROOM.
  - LOCAL DEVICES IN ACCESSIBLE LOCATIONS AS REQUIRED TO ACHIEVE CONTROL METHOD INDICATED.

- RAISE AND LOWER CONTROL FOR EACH ZONE, WITH SEPARATE ENGRAVED BUTTONS FOR RAISE AND LOWER. DENOTE EACH ZONE AND FUNCTION WITH SYMBOL OR ENGRAVING.

- ON AND OFF CONTROL FOR EACH ZONE, WITH SEPARATE ENGRAVED BUTTONS FOR ON AND OFF. DENOTE EACH ZONE AND FUNCTION WITH SYMBOL OR ENGRAVING.

- ZONES ARE DENOTED ON EACH ASSOCIATED LIGHT FIXTURE WHEN MULTIPLE ZONES ARE PRESENT WITHIN ROOM, USING LOWER CASE LETTERS AS FOLLOWS: "a", "b", ETC.

- ZONE DESIGNATIONS ARE DENOTED FOR EACH SWITCH WHEN DIFFERENT ZONES ARE CONTROLLED FROM DIFFERENT SWITCHES WITHIN THE SAME ROOM.

- ZONE QUANTITIES FOR EACH SWITCH LOCATION DENOTED ON FLOOR PLANS.

- LOCATION(S) AND QUANTITIES SHOWN ON FLOOR PLANS.

- TYPE, LOCATION(S), AND MINIMUM QUANTITY NOTED ON PLANS. MODELS/SETTINGS AS NEEDED TO PROVIDE SMALL MOTION COVERAGE IN ENTIRE ROOM.

- SET TIME DELAYS FOR SHUT-OFF AT 20 MINUTES.
UNIT ONE AND TWO RELAY UNITS SIMILAR, LESS SCHEMATIC REPRESENTATIVE OF THREE RELAY ADDITIONAL RELAY(S) AND ASSOCIATED LOAD(S).

WALL MOUNTED SENSORS AS CEILING SENSOR(S) OCCUPANCY ADDITIONAL POWER NEUTRAL LOAD NEUTRAL NEUTRAL CAT-5E MOUNTED SENSOR CEILING 0-10V PHOTO DIGITAL LOAD LOAD

NOTE 2: ALL WALL MOUNTED LIGHTING CONTROLS MUST HAVE MATCHING FINISHES TO THOSE LISTED IN SPECIFICATION SECTION 262726 - WIRING DEVICES.

NOTE 9: ANY CATEGORY CABLING USED FOR LIGHTING CONTROLS MUST BE OF A SPECIAL COLOR AND NOT BE THE SAME COLOR AS ANY OTHER LOW VOLTAGE SYSTEM IN THE BUILDING. SUCH AS DATA

NOTE 7: PROGRAM DAYLIGHT HARVESTING SETPOINTS AT NIGHT WITH ALL LIGHT FIXTURES AT FULL LIGHT OUTPUT. PHOTOCELL TO DIM LIGHTING BASED ON THIS SETPOINT IN A CLOSED LOOP SYSTEM.

NOTE 6: CONTRACTOR MUST COORDINATE WITH LIGHT FIXTURE SCHEDULE, AND MOST IMPORTANTLY THE LIGHT FIXTURE SUBMITTAL, TO VERIFY DIMMING TYPE NEEDED FOR EACH RELAY/CONTROLLER.

NOTE 4: PROVIDE A DIGITAL LIGHTING CONTROL SYSTEM FROM A MANUFACTURER LISTED IN SPECIFICATION SECTION 260923 - LIGHTING CONTROL DEVICES. WIRELESS SYSTEMS ARE NOT PERMITTED.

NOTE 3: ALL WALL MOUNTED LIGHTING CONTROLS MUST HAVE MATCHING FINISHES TO THOSE LISTED IN SPECIFICATION SECTION 262726 - WIRING DEVICES.

NOTE 2: CONTRACTOR MUST INCLUDE SHOP DRAWINGS WITH LIGHTING CONTROLS SUBMITTAL SHOWING WIRING SCHEMATICS/DIAGRAMS OVERLAYED ON FLOOR PLANS FOR EACH ROOM.

GENERAL NOTES:

TYPE DT IR

1,3,4

TELEPHONE, SECURITY, ETC. COORDINATE COLOR NEEDED DURING SHOP DRAWING SUBMITTAL PROCESS, DO NOT ASSUME THE STANDARD COLOR FROM THE MANUFACTURER CAN BE USED.

POWER PACKS/CONTROLLERS:

OCCUPANCY SENSOR(S):

CONTROL METHOD: MANUAL ON - OCCUPANCY OFF - MANUAL DIMMING CONTROLS:

ON/OFF ZONE SWITCHES:

AUTOMATIC DAYLIGHT HARVESTING PHOTOCELL(S), WHEN APPLICABLE:

# INDICATES QUANTITY OF ZONES CONTROLLED AT EACH LOCATION-

-ZONES ARE DENOTED ON EACH ASSOCIATED LIGHT FIXTURE WHEN MULTIPLE ZONES ARE PRESENT WITHIN ROOM, USING LOWER CASE LETTERS AS FOLLOWS: "A", "B", ETC.

-ZONE DESIGNATIONS ARE DENOTED FOR EACH SWITCH WHEN DIFFERENT ZONES ARE CONTROLLED FROM DIFFERENT SWITCHES WITHIN THE SAME ROOM.

-ZONE QUANTITIES FOR EACH SWITCH LOCATION DENOTED ON FLOOR PLANS.

TYPE, LOCATION(S), AND MINIMUM QUANTITY NOTED ON PLANS. MODELS/SETTINGS AS NEEDED TO PROVIDE SMALL MOTION COVERAGE IN ENTIRE ROOM.

-LOCAL DEVICES IN ACCESSIBLE LOCATIONS AS REQUIRED TO ACHIEVE CONTROL METHOD INDICATED.
COMMUNICATIONS GROUNDING RISER DIAGRAM

DATA OUTLET ROUGH-IN DETAIL

WALL MOUNTED PHONE/DATA OUTLET

COMMUNICATIONS OUTLET

COMMUNICATIONS INSTALLATION DETAILS

DISPLAY INFRASTRUCTURE DETAIL

DISPLAY WITH USER CONNECTION BELOW INFRASTRUCTURE DETAIL

TELECOMMUNICATIONS DEVICE SCHEDULE

TELECOMMUNICATIONS CABLING AT FIRE WALL PENETRATIONS

TYPICAL TELECOM RACK ELEVATION

CONSTRUCTION DOCUMENTS

E504
COMMUNICATIONS GROUNDING RISER DIAGRAM

DATA OUTLET ROUGH-IN DETAIL

WALL MOUNTED PHONE/DATA OUTLET

DISPLAY INFRASTRUCTURE DETAIL

DISPLAY WITH USER CONNECTION BELOW INFRASTRUCTURE DETAIL

TELECOMMUNICATIONS DEVICE SCHEDULE

TELECOMMUNICATIONS CABLING AT FIRE WALL PEFNATION

TYPICAL TELECOM RACK ELEVATION

NOTE:

1. ALL CONDUCTORS IN THIS GROUNDING RISER SHALL BE #6 AWG COPPER CONDUCTORS (GREEN) UNLESS NOTED OTHERWISE.

2. PROVIDE ONE RUNWAY EXTENSION KIT FOR EVERY RACK MOUNTED UPS.

3. FIRESTOP DEVICE - FIRESTOP DEVICE CONSISTS OF A 1.4 BY 1.4 BY 10-1/2 IN. (36 BY 36 BY 267 MM) LONG GALV STEEL TUBE WITH AN OPEN TOP. MARKED WITH THE UL CLASSIFICATION MARK.

4. BLANK FACE PLATE. HDMI CABLE PROVIDED BY DISTRICT.

5. WALL MOUNTED USER CONNECTION FOR TV/WALL MOUNTED INTERCOM STATION

6. HDMI CABLE (TYP.)

NOTE:

1. REFER TO POWER FLOOR PLANS FOR RECEPTACLE CIRCUITING INFORMATION.

2. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT T.V. MOUNTING LOCATION.

3. PROVIDE 4" SQUARE BACK BOX WITH SINGLE GANG RING, 1" CONDUIT TO ABOVE ACCESSIBLE CEILING. COMMUNICATIONS CABLE(S) AND WALL MOUNTED USER CONNECTION FOR TV/ DATA CAT6 JACKS AS NOTED ON PLANS.

4. MOUNT CENTER OF BACK BOXES 6" ABOVE TOP OF DISPLAY.

5.-runway radius drop at each rack location. REFER TO RACK TO EQUIPMENT RACK TO PREVENT MOVEMENT OF THE VERTICAL POWER DISTRIBUTION UNIT (PDU).

6. PROVIDE COMMUNICATIONS OUTLET BOX AND LOW VOLTAGE BOX BEHIND DISPLAY.

7. BLANK FACE PLATE. HDMI CABLE PROVIDED BY DISTRICT.

8. WALL MOUNT DATA OUTLET FOR TV/CABLE(S) PROVIDED BY DISTRICT.

9. TV/COMM DEVICE DESCRIPTION

10. ERP/GND STRING

11. TELECOMMUNICATIONS CABLE TRAY (TYP.)

12. STRUCTURAL ENGINEER

13. ELECTRICAL - SCHEDULES & DETAILS

14. TELECOMMUNICATIONS CABLING AT FIRE WALL PENETRATION

15. TYPICAL TELECOM RACK ELEVATION

16. TELECOMMUNICATIONS DEVICE SCHEDULE

17. CEILING MOUNTED OUTLET DETAIL
1. Refer to Sheet E201A for typical electrical raceway general notes applicable to the entire project.

2. Bidding fire alarm contractor is responsible for preparing signed/sealed shop drawings and installing a design-building based on the approximate device locations and scope coordination shown on these plans. Actual specification section 283111.

3. Set candela settings on all strobes per the 4.

4. Furnish and install duct mounted smoke detectors at each RTU return air inlet and FPVAV terminal 2000 CFM operation. Verify locations and quantities with HVAC floor plans and equipment schedules, as well as field investigation of all existing HVAC equipment.

5. Refer to all low voltage specifications for additional information regarding low voltage scope.

6. All low voltage cabling for areas A, E and basement area Z to be terminated in IDF-8. Refer to Sheet LV100 for data closet location.

7. All existing data drops in area A to be removed in demolition work unless specifically noted. All cabling to be removed and disconnected from existing data associated IT rack and disconnected.

8. Refer to sheet LV101A. All low voltage cabling to be pulled back to associated IT rack and disconnected.
1. REFER TO SHEET E201A FOR TYPICAL ELECTRICAL RACEWAY GENERAL NOTES APPLICABLE TO THE ENTIRE PROJECT.

2. BIDDING FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR PREPARING SIGNED/SEALED SHOP DRAWINGS AND INSTALLING A DESIGN-BUILD FIRE ALARM SYSTEM FOR THE ENTIRE BUILDING BASED ON THE APPROXIMATE DEVICE LOCATIONS AND SCOPE COORDINATION SHOWN ON THESE PLANS. ACTUAL DEVICE TYPE, LOCATION, REFER TO PERFORMANCE SPECIFICATION SECTION 283111.

3. SET CANDELA SETTINGS ON ALL STROBES PER THE REQUIREMENTS OF NFPA 72.

4. REFER TO "TELECOMMUNICATION DEVICE SCHEDULE" CABLING REQUIREMENTS OF ALL SYMBOLS SHOWN.

5. REFER TO ALL LOW VOLTAGE SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING LOW VOLTAGE SCOPE.

IN AREA DENOTED BY DASHED LINE, REMOVE ALL EXISTING CEILING MOUNTED LOW VOLTAGE DEVICES. ALL LOW VOLTAGE CABLING TO BE PULLED BACK TO ASSOCIATED IT RACK AND DISCONNECTED.

Phase 2 Scope of Work (Not included in the Bid Package)
GENERAL NOTES:
REFER TO SHEET LV101.2 FOR PROJECT LOW VOLTAGE AND FIRE ALARM NOTES. REFER TO SHEET E201D.2 FOR PROJECT ELECTRICAL RACEWAY NOTES.

1. DEMOLITION PLAN NOTES
THE EXISTING CEILING IN AREA DENOTED BY DASHED LINE IS SCHEDULED FOR REMOVAL WITHOUT REPLACEMENT. ALL EXISTING CEILING MOUNTED LOW VOLTAGE DEVICES TO BE REMOVED IN THEIR ENTIRETY. ALL EXISTING ABOVE CEILING BACKBONE AND HORIZONTAL LOW VOLTAGE CABLING RUNNING THROUGH THIS AREA IS TO BE REMOVED AND REPLACED IN NEW WORK. REMOVE ALL CABLING BACK TO ASSOCIATED IT RACK AND DISCONNECT. REMOVE ALL ASSOCIATED HANGERS AND SUPPORTS. ALL EXISTING WORK STATION DATA DEVICES TO REMAIN AND TO BE RECONNECTED IN NEW WORK.

REFER TO BASEBID REQUIREMENTS ON SHEET LV100.2 FOR ADDITIONAL WORK IN THIS AREA.

PLAN NOTES:
ALL EXISTING BACKBONE AND HORIZONTAL CABLING TO BE REPLACED IN NEW WORK. CONNECT ALL NEW CABLING TO EXISTING IT RACK PATCH PANEL OR SWITCH AND EXISTING WORK STATION DATA DEVICES. ROUTE ALL NEW CABLING IN CABLE TRAY WHERE POSSIBLE. ANY HORIZONTAL CABLING RAN OUTSIDE OF CABLE TRAY SHALL BE SUPPORTED AS CLOSE TO STRUCTURE AS POSSIBLE.

REFER TO BASEBID REQUIREMENTS ON SHEET LV101D.2 FOR ADDITIONAL WORK IN THIS AREA.

# Description Date
3 ADDENDUM #3 02/23/2024
SHEET KEYNOTE LEGEND

GENERAL NOTES:
- REFER TO SHEET LV101.2 FOR PROJECT LOW VOLTAGE AND
  FIRE ALARM NOTES. REFER TO SHEET E201D.2 FOR PROJECT
  ELECTRICAL RACEWAY NOTES.

1. DEMOLITION PLAN NOTES
   THE EXISTING CEILING IN AREA DENOTED BY DASHED LINE IS
   SCHEDULED FOR REMOVAL WITHOUT REPLACEMENT. ALL
   EXISTING CEILING MOUNTED LOW VOLTAGE DEVICES TO BE
   REMOVED IN THEIR ENTIRETY. ALL EXISTING ABOVE CEILING
   BACKBONE AND HORIZONTAL LOW VOLTAGE CABLING
   RUNNING THROUGH THIS AREA IS TO BE REMOVED AND
   REPLACED IN NEW WORK. REMOVE ALL CABLING BACK TO
   ASSOCIATED IT RACK AND DISCONNECT. REMOVE ALL
   ASSOCIATED HANGERS AND SUPPORTS. ALL EXISTING WORK
   STATION DATA DEVICES TO REMAIN AND TO BE
   RECONNECTED IN NEW WORK.
   REFER TO BASEBID REQUIREMENTS ON SHEET LV100.2 FOR
   ADDITIONAL WORK IN THIS AREA.

2. PLAN NOTES:
   ALL EXISTING BACKBONE AND HORIZONTAL CABLING TO BE
   REPLACED IN NEW WORK. CONNECT ALL NEW CABLING TO
   EXISTING IT RACK PATCH PANEL OR SWITCH AND EXISTING
   WORK STATION DATA DEVICES. ROUTE ALL NEW CABLING IN
   CABLE TRAY WHERE POSSIBLE. ANY HORIZONTAL CABLING
   RAN OUTSIDE OF CABLE TRAY SHALL BE SUPPORTED AS CLOSE
   TO STRUCTURE AS POSSIBLE.
   REFER TO BASEBID REQUIREMENTS ON SHEET LV101H.2 FOR
   ADDITIONAL WORK IN THIS AREA.

DRAWN BY:
DATE:
REVISIONS:
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