DATE: October 2, 2020
TO: Potential Respondents
FROM: Carrie Stoeckert—Senior Contract Administrator
SUBJECT: Questions #1
RFCSP763-21-145826CS
Bioskills Lab Renovation

This document is being issued to answer questions that have been submitted as follows:

1. We did not have the M1-1B plans in our.pdf file we downloaded.

   The cover sheet index is saying phase 1 and phase 2, but I am only seeing phase 1 plans and not phase 2. All y’all are wanting is phase 1? We have M1-1 (2nd Floor plan) but do not have M1-1B for phase 2. We have P1-1 (2nd Floor plan) but do not have P1-1B for phase 2.

   RESPONSE: Replace sheets in their entirety, see attached Addendum #1.

2. Question on Window Shades:

   Section 122400:
   2.3B. Can Springs Contract Window Fashion manual roller shade be used in lieu of Lutron Contract Roller Manual Shades?
   All other clutch construction is the same, per Springs.
   Fascia at 3” or 4” is the same. Can be provided in black.
   **Sheerweave 4900” by Phifer, Color: V28-49-3 (3% open), color Slate is provided as equal

   Is this brand acceptable?
   Additionally, will you accept Timberblind fabricator using the same sheerweave shade fabric + same fascia?

   RESPONSE: Substitution is acceptable.

3. The index of sheets G0-1 calls out sheet M1-1A and M1-1B but they are not a part of the plan set.

   a) Please advise if they will be added.

   RESPONSE: Replace/ADD sheets in their entirety, see attached Addendum #1.
4. Please provide the specs for the acid waste and vent lines.

**RESPONSE:** Acid waste and vent will be added to P0-2.

5. Please provide the specs for the domestic hot and cold water lines.

**RESPONSE:** Piping will be added to P0-2.

6. Drawing E1-1 Key Note #4 references Getinge Drawings. Are these drawings available?

**RESPONSE:** Coordinate with Owner.

7. Drawing E1-1 Key Note #5 references the provision of Ironton Cord Reels with triple taps. Are there 4 or 8 required?

**RESPONSE:** 8 required.

8. Drawing E1-1 Room 201A and the adjacent room each have a floor box symbol with no circuit or Key Note 16 attached. Are these 2 floor boxes required and if so what circuit will be assigned?

**RESPONSE:** Floor boxes are not required in these locations. These are floor drains.

9. Drawing E4-1 Partial Electrical Riser Diagram reflects a 225A/3P/4W Bus Plug to feed new Panel 2LC. Is this existing or new?

**RESPONSE:** New.

10. The project has 2 phases with separate quotes. Reference Drawing E2-1, the 2—Type D recess can lights located at the corridor pockets, will they be Phase 1 or Phase 2?

**RESPONSE:** Phase II.

11. References sheet A2.1, Existing Elevators, G.30 Provide resilient flooring at existing Elevator Cab, Finish to match RF-1, Material Key on A2.1. There is only one (1) elevator cab being pointed to. Is only one (1) elevator cab flooring being replaced?

**RESPONSE:** No; Provide new resilient flooring for all existing bank of elevators.

12. Are existing A/V's in the rooms to be reused since they are wall mount. Or changed to new ceiling mount?

**RESPONSE:** Need more clarification on question. Provide specific rooms in question.

13. Can the engineer identify the type of existing electrical buss duct in place, make, model, manufacture? Are the existing buss plugs reusable and rated for panel 2LC new gear taps?

**RESPONSE:** Contractor to field verify the existing installation and equipment.
14. Is the Bus Plug for the new panel “2LC” new or existing? If it is new, please provide the manufacturer for the existing Plug-In Vertical Bus Duct.

**RESPONSE:** The Bus Plug is new. Contractor to field verify the existing equipment.

15. Will the Fire Alarm be under the electrical scope? If so who is the existing Fire Alarm?

**RESPONSE:** The Fire Alarm is under the Electrical scope and is a performance-based design. Please coordinate with Architect/Owner for the preferred Fire Alarm contractor.

Koetter Fire Protection Services is preferred installer.

16. Is there parking near the Bioskills Lab? Is there a cost to park?

**RESPONSE:** Parking rates are attached, and additional information can be found [https://www.unthsc.edu/police/parking-office/](https://www.unthsc.edu/police/parking-office/)

17. Are there time restraints when work can be done?

**RESPONSE:** Coordinate any after-hours work with owner. Normal hours are (M-F 7am-5pm)

18. Is there an area near the project for a dumpster? Can a dumpster be placed near the project at night and picked up in the morning?

**RESPONSE:** Night drop off and morning pick up can be coordinated, otherwise, dumpster location is the loading dock at the East side of the building.

19. Will additional pre-bid walk-throughs be made available?

**RESPONSE:** No additional walk-throughs will be available.

20. Please reference responsibility schedule on AV-101. During the walkthrough it was mentioned that we (the GC) would not be responsible for any low voltage cabling or equipment, including fire alarm items, security systems, and AV requirements. The AV schedule indicates some of these items by “AV C.” Please confirm that the AV Contractor is to be under the owner/UNT and not the GC.

**RESPONSE:** From our understanding, the AV vendors will be direct with UNT not under the GC contract.

21. If the AV contractor is under the GC, please confirm if the existing audio/visuals be reused or if we are to install new.

**RESPONSE:** A/V is provided by owner

22. Alternate 1, sheet A1-1, key note 22 00 00.A6 references the plumbing drawings for sink clarification. However plumbing drawings do not provide information on the restroom
sinks. Please provide sink basis of design in the men and women’s restroom.

RESPONSE: Sink spec to be added to Plumbing Sheets.

23. What is the basis of design of the new urinal screen as shown on Sheet A1-1, note G.34.

RESPONSE: Baked Enamel screen to match existing. Color to be selected by Architect.

24. The mechanical, plumbing, electrical, fire alarm, and fire protection does not show Phase I and Phase II separation similar to the architectural drawings. Please confirm that all scopes are to be broken out into Phase I and Phase II as indicated in the architectural drawings. Additionally, for locations that have scope that crosses over both phases (i.e. ductwork crossing from phase I to phase II with air supply in Phase II), please confirm that scope will be assigned to the phase that is impacted for end use (i.e. ductwork that crosses from phase I to phase II air supply with be assigned to phase II).

RESPONSE: Phasing added to drawings. Assign work to phase that is impacted for end use. The Fire Alarm scope of work is shown on sheet FA2-1 for Phase 1 and 2.

25. Please confirm that any work associated with data network, audio visual, and security is provided by UNT and not the General Contractor.

RESPONSE: CORRECT.

26. Per the site visit, please confirm that it is UNT's intent to have all the asbestos removed before the project begins. And that the GC is not to provide abatement.

RESPONSE: Yes.

27. Is the mechanical room 2M1 fire rated? If so, please confirm if fire dampers are to be installed at all new and existing ductwork penetrations of the South wall for room 2M1.

RESPONSE: Existing walls are fire rated. This is a code question to be further reviewed with HSC’s life safety and Architect.

28. Per a previous question, if room 2M1 walls are fire rated, are the eyewash stations in lab rooms rated as they are recessed in a fire rated wall. If not please advise if a different product is required.

RESPONSE: Yes, eyewash stations are rated. Refer to specifications in revised Plumbing Schedule on P2-1.

29. Sheet A6-2, references MT-1 above the countertop. The finish schedule does not indicate a MT-1. Is this intended to be CT-1 (ceramic tile)?

RESPONSE: Yes, the intent is to provide CT-1.

30. Sheet A7-2 shows several spec numbers, but the keyed notes are blank, please provide the keyed notes for this sheet.
RESPONSE: Replace Sheet A7-2 in its entirety, attached hereto.

31. Sheet E1-1 shows floor boxes in classrooms and lobby, which will require access to level 1 rooms below the classrooms and lobby to install the electrical conduit. Please provide hours when level 1 rooms will be accessible for construction to install the floor boxes.

RESPONSE: Coordinate with Owner/Architect.

32. Sheet A7-2, Detail 1 appears to shows the support for the operable partition. Per conversation with a operable partition subcontractor, cold form metal framing is not enough to structurally support the operable partition. Please provide the necessary support required for the operable partitions.

RESPONSE: Metal framing shown in detail is for acoustic separation only. Pre-engineered truss and post system to be used for structural support, refer to specification.

33. Per the site visit with UNT, please confirm that UNT is providing the following scope:
   a. Control:
      i. Wiring
      ii. Devices
      iii. Demo and make safe
      iv. Programming,
   b. Mechanical test and balance.

RESPONSE: Confirmed

34. Sheet M1-1 note E, please clarify if the Lab exhaust (LE) are to be reused as general exhaust (GE).

RESPONSE: This is correct.

35. Sheet M1-1, room 2M1 on the far right, the detail shows a section of ductwork to be removed, see image below. This appears to remove ductwork that feeds to the "VAV" show in the image. If this ductwork is removed this VAV will lose its air supply. Please confirm if this is correct.

RESPONSE: The duct work highlight is not serving any equipment, it is currently capped and it needs to be removed back to the nearest connection to create room for the corridor.
36. The plumbing drawings do not appear indicate if the laboratory sinks have electrified sink hardware. Are the sinks in the laboratory electrified? If so, please provide electrical connection information.

**RESPONSE:** Sink are owner provided. Refer to sheet E1-1 for power serving the laboratory sinks. Power is indicated by Keynote 6.

37. Plumbing drawings do not appear to indicate the piping and connections required for the owner provided laboratory sinks. Please provide what is to be supplied to the owner provided laboratory sinks.

**RESPONSE:** Provide 1/2” CW, 1/2” HW, 2” AW, 1-1/2” AV to sink.

38. For the floor boxes to be installed in classrooms and lobby, the rooms below will need to be accessed on level 1. What is the floor to deck height in level 1? Additionally, what is the finish ceiling in the rooms below the lobby and classrooms? If it is exposed to deck, is the deck painted? If the conduit feeding the floor boxes on level 2 is exposed, will the conduit need to be painted?

**RESPONSE:** The conduits serving floor boxes are installed below floor of second floor. Level 1 to be field verified.

39. Please provide the last flow test results for the fire protection of the building.

**RESPONSE:** Not available at this time

40. Sheet A6-2 shows elevations for casework in the lab rooms. However there does not appear be to section cut details for the laboratory case work. Detail 1, 2, 3, 4 indicate the millwork located in the breakroom. Please provide section cut details for the laboratory casework.

**RESPONSE:** Refer to model #’s in Stevens Advantage catalog for design intent.

41. Please confirm that the refrigerator to be located in the break room is provided and installed by the UNT.

**RESPONSE:** Correct.
42. Re: Bath Mirrors. (may need clarification) Pg A6.2 casework shows 1 custom sized mirror in both RR. There is no spec, or model on any page that I can find. Do you know where it is.

**RESPONSE:** Refer to Spec 08 80 00 – Glazing for custom mirror specifications.

43. (Note: For these sizes Bobrick B-290 has to be used.)

**RESPONSE:** The design intent for custom mirror is to be manufactured by local glazing supplier.

44. Re: Shades
If the other sources are accepted by Architect, can you guide as to which page is the best to understand Phase 1 area and Phase 2 area to count the shades.

I'm not understanding these areas.

**RESPONSE:**
Phase I – Lobby 200
Phase II – Classroom 205A, Classroom 205B, Break 215, Office 230K, Office 230L, Office 232 and Office 233

45. Please advise if another date and time for subcontractor walk-throughs can be arranged, and an opportunity for them to ask questions.

**RESPONSE:** No additional walk-throughs are available.

46. Please provide location for paid construction parking and rates.

**RESPONSE:** [https://www.unthsc.edu/police/parking-office/](https://www.unthsc.edu/police/parking-office/)

47. What are the working hours for the project?

**RESPONSE:** 7am 5pm M-F unless coordinated otherwise

48. Will the condition of the spaces at commencement be clear of all Owner’s furnishings and equipment, and all hazardous material abated by the Owner?

**RESPONSE:** Yes

49. We understand that Phase 1 & Phase 2 construction will be consecutive, with no overlap and no delay/demobilization between the two phases. Please confirm.

**RESPONSE:** The situation described is the current intent.

50. Confirm if Builders Risk Insurance is to be included in the base bid, with an Alternate Deduct to exclude it, or excluded from base bid, with an Alternate Add to include it.

**RESPONSE:** It can be done either way. Just indicate whether it is an Add or Deduct.
51. Please confirm that the following items/scopes of work are provided turnkey by Owner and are N.I.C. for contractor:
   a. Abatement of any and all hazardous materials, including testing/discovery.
   b. Mechanical Controls System.
   c. Testing & Balancing.
   d. Security System and all Access Controls, including hardware.
   e. Telephone/Data/AV and all other IT systems.

   **RESPONSE: Correct.**

52. Please list any other materials, fixtures, scopes that the Owner will provide, not in the above list.

   **RESPONSE: N/A**

53. Confirm if any materials/equipment/fixtures from demolition are required to be salvaged for re-use or for Owner’s stock, if not specifically noted on plans.

   **RESPONSE: N/A**

54. Confirm if existing restrooms in the workspace can be used during construction, or if external temporary toilets must be provided.

   **RESPONSE: On site restrooms will be made available to contractor’s as long as cleanliness is maintained.**

55. Confirm if X-ray of slabs for penetrations is absolutely required, or if GPR scanning is acceptable.

   **RESPONSE: Refer to sheet E0-2 for X-ray requirements as indicated under General Electrical Notes, note 14.**
Bidders are advised of the following and shall be governed accordingly:

ARCHITECTURAL
DRAWINGS

1. Sheet A7-2 – Revise as shown on full size drawing sheet, attached hereto.
   a. ADD – Keynotes for reflected ceiling plan details

MECHANICAL, ELECTRICAL, PLUMBING
DRAWINGS

1. All SHEETS – Revise as shown on full size drawing sheet, attached hereto.
   a. RE-ISSUE – Corrected sheets with phasing title block
2. Sheet P0-2 - Revise as shown on full size drawing sheet, attached hereto.
   a. ADD spec sections for domestic water and acid waste and vent.
3. Sheet P1-1A - Revise as shown on full size drawing sheet, attached hereto.
   a. ADD rated emergency wash stations, floor drains, and added restroom lavatory specs for Alternate #1.
4. Sheet P2-1 - Revise as shown on full size drawing sheet, attached hereto.
   a. REVISE plumbing schedule to include L-1, EWS-1, and FD-1.

STRUCTURAL
DRAWINGS

1. All SHEETS – Revise as shown on full size drawing sheet, attached hereto.
   a. RE-ISSUE – Corrected sheet with phasing title block

ATTACHMENTS:       NUMBER OF PAGES/SHEETS
Architectural Sheets 1
MEP Sheets          23
Structural Sheets   1

END OF ADDENDUM NO. 1: EXCEPT ATTACHMENTS
GENERAL NOTES
FIREDALARMDEMOLITION

1. Prevent damage to existing equipment to be relocated or removed.
2. All equipment removed that is not being reused shall remain the existing fire alarm raceway or wiring that interferes with the active pull box and the openings blanked. Conduits in masonry or concrete slab.
3. Coordinate all demolition work with all trades.
4. Coordinate all work, including power outages, with the engineer.
5. Maintain the fire alarm protection for all areas during the demolition.
6. Seal raceway and wiring that enter conditioned areas from nonconditioned areas to provide an airtight seal.
7. Coordinate all demolition work with all trades.
8. Repairs (as required) the ceilings, walls and floors to match the unaffected adjacent surface.
9. Coordinate the final location of the mechanical, fire alarm, and electrical systems.
10. The most stringent requirement shall govern when there are conflicts between the specifications and drawings.

GENERAL NOTES EXISTING CONDITIONS

1. The data revealed on these sheets are based on existing conditions only and do not represent the current state of the room. All existing systems shall be disabled prior to beginning work. The contractor is responsible for coordinating all work with all trades and providing a complete, updated panel schedule for all affected systems.
2. Locate all existing utilities prior to starting the work.
3. Paint, patch and repair adjacent areas that are affected by the work.
4. Coordinate the work, including power outages, with the engineer.
5. Provide additional support for electrical equipment and other trades.
6. Seal raceway and wiring that enter conditioned areas from nonconditioned areas to provide an airtight seal.
7. Coordinate all demolition work with all trades.
8. Repair (as required) the ceilings, walls and floors to match the unaffected adjacent surface.
9. Coordinate the final location of the mechanical, fire alarm, and electrical systems.
10. The most stringent requirement shall govern when there are conflicts between the specifications and drawings.

GENERAL ELECTRICAL NOTES

1. All work shall be done in accordance with the drawings and specifications and in accordance with applicable codes and standards. All material shall be of the type and quality specified, unless otherwise stated in these notes.
2. The most stringent requirement shall govern when there are conflicts between the specifications and drawings.
3. Coordinate the work with the engineer.
4. Notify the engineer where existing conditions are in conflict with the plans.
5. Provide a complete, updated panel schedule for all affected systems.
6. Coordinate all demolition work with all trades.
7. Maintain the fire alarm protection for all areas during the demolition.
8. Seal raceway and wiring that enter conditioned areas from nonconditioned areas to provide an airtight seal.
9. Coordinate all demolition work with all trades.
10. The most stringent requirement shall govern when there are conflicts between the specifications and drawings.
1. STORE AND PROTECT FROM DAMAGE EQUIPMENT AND MATERIALS

2. ALL REQUIREMENTS, GENERAL, AND SUPPLEMENTARY CONDITIONS

SECTION 26A  ELECTRICAL SPECIFICATIONS:

26A 1-4  COORDINATION

4. PROVIDE AND MAINTAIN ALL NECESSARY SIGNAL LIGHTS AND GUARDS

WORKMANSHIP IN ELECTRICAL CONSTRUCTION.

E. PARTS LISTS.

B. WIRING DIAGRAMS.

COORDINATE ALL WORK WITH OTHER DIVISIONS AND TRADES SO THAT

A. COMMERCIAL SPECIFICATION GRADE.

MANUFACTURERS' CATALOGS AND PRODUCT DATA SHEETS.

UNLESS SPECIFIC ITEMS ARE NOTED TO CARRY A LONGER WARRANTY

MANUFACTURING THE SPECIFIED PRODUCT FOR NO LESS THAN 5

PERSONNEL ON THE OPERATION AND MAINTENANCE OF THE

DELIVERED TO JOB SITE, IN ACCORDANCE WITH MANUFACTURERS'

VARIATIONS, STORE INSIDE IN CONDITION SPACES. FOR MATERIALS

GENERAL CONDITIONS.

ORDINANCES, RULES, REGULATIONS, REFERENCED STANDARDS, AND

CODE COMPLIANCE, AT A MINIMUM, IS MANDATORY. CONSTRUE

EQUIPMENT PROVIDED OR FURNISHED OR INSTALLED UNDER THIS

ROOFS:

26A 2 -2  CUTTING AND PATCHING

26A 2-1  COINCIDENTAL DAMAGE

D. COLOR SHALL BE BLACK BACKGROUND WITH WHITE LETTERS FOR

B. SELF-ADHERING, WITH A PERMANENT, WEATHERPROOF ADHESIVE.

MAKE A FINAL CLEANUP OF DIRT AND REFUSE RESULTING FROM THE

PENETRATIONS SHALL BE LEAKTIGHT AT THE TERMINATION OF THE

INSULATION, OF THE PROPER TYPE, SIZE AND NUMBER, AS REQUIRED,

EQUIPMENT, LOAD, OR CIRCUIT AS DESIGNATED ON THE

THREE NO. 12 AWG CONDUCTORS, IN 3/4-INCH RACEWAY, AND A 20A

CONTROL WIRING SHALL BE STRANDED COPPER CONDUCTORS, 600V

AND CABLES, SUCH AS LOW VOLTAGE CONTROL AND SHIELDED

ELECTRICAL SYSTEMS ACCORDING TO NFPA 70 AND WHERE

COLOR CODE: ICEA METHOD 1, WITH GREEN INSULATED GROUNDING

NEUTRAL - GRAY GROUND GREEN

ISOLATED GROUND - GREEN WITH YELLOW STRIPE

BOXES, WITH HUBS AND WEATHERPROOF COVERS, IN ALL AREAS

PERFORATION AND MARKED "WEATHER PROOF", DESIGNATED BY A ‘WP’ ON THE

AS INDICATED "WHILE-IN-USE" NEMA 3R RECESSED OR FLUSH MOUNT,

5. MOUNT RECEPTACLES IN MECHANICAL AND ELECTRICAL EQUIPMENT

AND IN CONFORMANCE AT A MINIMUM WITH NFPA 70 OR THESE

AND CONDUIT SIZED PER

BRANCH CIRCUIT, PROVIDE CONDUCTORS AND CONDUIT SIZED PER

LARGER: STRANDED.

ELECTRICAL RACEWAY:

FOR SWITCHES AND VERTICALLY MOUNTED RECEPTACLES;

1. PROVIDE RECEPTACLES AT PANELBOARDS AND JUNCTION BOXES TO

MINIMUM OF TWO 50A, 480V PRESSURE TIGHT BREAKERS OR A 150A,

PROVIDE PRE-FABRICATED MOLDED SEALS COMPATIBLE WITH THE

FOR FEEDERS WITH MALLEABLE SPLIT RING HANGERS WITH ROD AND

SUPPORTS TO THE BUILDING STRUCTURE. HANG SINGLE RACEWAYS

ACCESSIBLE CEILINGS TO JUNCTION BOXES (ATTACHED TO BUILDING

INSTALLATION OF CONDUCTORS OR CABLES UNDER OTHER DIVISIONS

EXPANSION/CONTRACTION PROPERTIES OF RNC OR RAC.

8. PROVIDE TWO 100A, 480V BREAKERS OR A 150A, 480V DISCONNECT

TO SERVICE PANEL BOXES THE EQUIPMENT, LOAD, OR CIRCUIT AS

DESIGNED IN THE WIRING DIAGRAMS. COORDINATE WITH MECHANICAL

FOR DISCONNECTS UNDER MECHANICAL WORK. CONNECT PER

MANUFACTURERS' WIRING

B. PROVIDE A FINAL CLEANUP OF DIRT AND REFUSE RESULTING FROM THE

PENETRATIONS SHALL BE LEAKTIGHT AT THE TERMINATION OF THE

INSULATION, OF THE PROPER TYPE, SIZE AND NUMBER, AS REQUIRED,

EQUIPMENT, LOAD, OR CIRCUIT AS DESIGNATED ON THE

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ELECTRICAL SYSTEMS ACCORDING TO NFPA 70 AND WHERE

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ISOLATED GROUND - GREEN WITH YELLOW STRIPE

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AS INDICATED "WHILE-IN-USE" NEMA 3R RECESSED OR FLUSH MOUNT,

5. MOUNT RECEPTACLES IN MECHANICAL AND ELECTRICAL EQUIPMENT

AND IN CONFORMANCE AT A MINIMUM WITH NFPA 70 OR THESE

AND CONDUIT SIZED PER

BRANCH CIRCUIT, PROVIDE CONDUCTORS AND CONDUIT SIZED PER

LARGER: STRANDED.

ELECTRICAL RACEWAY:

FOR SWITCHES AND VERTICALLY MOUNTED RECEPTACLES;

1. PROVIDE RECEPTACLES AT PANELBOARDS AND JUNCTION BOXES TO

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PROVIDE TWO 100A, 480V BREAKERS OR A 150A, 480V DISCONNECT

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DESIGNED IN THE WIRING DIAGRAMS. COORDINATE WITH MECHANICAL

FOR DISCONNECTS UNDER MECHANICAL WORK. CONNECT PER

MANUFACTURERS' WIRING

B. PROVIDE A FINAL CLEANUP OF DIRT AND REFUSE RESULTING FROM THE

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LARGER: STRANDED.

ELECTRICAL RACEWAY:

FOR SWITCHES AND VERTICALLY MOUNTED RECEPTACLES;

1. PROVIDE RECEPTACLES AT PANELBOARDS AND JUNCTION BOXES TO

MINIMUM OF TWO 50A, 480V PRESSURE TIGHT BREAKERS OR A 150A,
ELECTRICAL FIRE ALARM SECOND FLOOR DEMOLITION PLAN - PHASE I

PHASE II
(FUTURE PHASE)

ELECTRICAL FIRE ALARM SECOND FLOOR PLAN - PHASE I

PHASE II
(FUTURE PHASE)

KEYNOTES

1 UNHATCHED AREA INDICATES EXISTING FIRE ALARM SYSTEM INCLUDING ALL DEVICES TO BE DEMOLISHED.

2 UNHATCHED AREA INDICATES NEW FIRE ALARM SYSTEM TO BE PROVIDED.

A REFER TO GENERAL NOTES AND SYMBOL LEGEND FOR ADDITIONAL INFORMATION.

B REFER TO SHEET E0-2 FOR ADDITIONAL FIRE ALARM SYSTEM GENERAL NOTES.
A FIRE PROTECTION CONTRACTOR SHALL PROVIDE WET PIPE FOR THE NOTED NEW AND RENOVATION AREAS IN ACCORDANCE WITH NFPA 13, NFPA 14, AND THE CITY OF FORT WORTH OR AUTHORITY HAVING JURISDICTION (AHJ). COORDINATE ALL FIRE PROTECTION WORK WITH ALL ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND STRUCTURAL DISCIPLINES TO ENSURE THAT A COMPLETELY COORDINATED INSTALLATION IS ACHIEVED. THESE PLANS SERVE AS A GENERAL GUIDE ONLY. THE SPRINKLER CONTRACTOR IS RESPONSIBLE FOR A COMPLETE SYSTEM BASED ON CODES MENTIONED ABOVE.

B PROVIDE WET PIPE SPRINKLER PROTECTION WITH 0.10 GPM PER SQUARE FOOT DENSITY OVER MOST REMOTE 1500 SQUARE FEET OVER THE NOTED LIGHT HAZARD AREAS. PROVIDE LIGHT HAZARD SPRINKLER SPACING, 135° F TEMPERATURE RATING.

C HATCHED AREAS INDICATE THE LIMITS OF COVERAGE FOR FIRE SPRINKLER SYSTEM WORK.

NOTE: THIS IS A PERFORMANCE BASED DESIGN.
### MISCELLANEOUS SYMBOLS

- **BOP 12'-6"**
- **2" HWR**
- **4" CWS**
- **4" CWR**

### GRAPHIC SYMBOLS

- **N**
- **AFF UPPER**
- **PIPE RACK**

### PIPE & FITTING SYMBOLS

- **HORIZONTAL RUN ON PLAN**
- **M5.01**
- **READ TOP TO BOTTOM**
- **(F) FUTURE**

### VALVE SYMBOLS

- **EQUIPMENT DESIGNATION**
- **EXISTING ITEMS TO REMAIN**
- **NEW ITEMS (PIPING/DUCTWORK/EQUIPMENT)**

### DUCTWORK SYMBOLS

- **ROOM**
- **AIRFLOW**
- **AIR DISTRIBUTION**
- **AIRFLOW PROOF SWITCH**

### MECHANICAL SYMBOL LEGEND

#### GRAPHIC SYMBOLS

- **TOP TITLE**
- **BOTTOM TITLE**
- **MULTILINE KEY**

#### PIPE & FITTING SYMBOLS

- **AIRFLOW**
- **SECTION NO.**
- **SHEET NO.**
- **SCALE OF FLOOR PLAN, DETAIL NO. AND SHEET NO.**

#### VALVE SYMBOLS

- **BODY VALVE**
- **BATTERY VALVE**
- **BLOW VALVE**
- **BLOW OUT**

#### DUCTWORK SYMBOLS

- **DUCTWORK**
- **DUCTWORK**
- **DUCTWORK**
- **DUCTWORK**

### CONTROL SYMBOLS

- **MECHANICAL SYMBOL LEGEND**
- **AIR DISTRIBUTION**
- **AIR DISTRIBUTION**
- **AIR DISTRIBUTION**
ABBREVIATIONS

MECHANICAL GENERAL NOTES

1. PROVIDE CAPPED DRAIN VALVES AT LOW POINTS OF PIPING SYSTEMS AND AT EQUIPMENT CONNECTIONS. PROVIDE HOSE BIBB
2. PIPING CONNECTIONS TO ALL EQUIPMENT SHALL BE FABRICATED WITH THE ISOLATION VALVES, FLANGES AND/OR UNIONS
3. SLEEVE ALL PIPING THAT PENETRATES FIRE RATED WALLS, FLOORS AND PARTITIONS. PENETRATIONS SHALL BE SEALED WITH A U.L.
4. PROVIDE ESCUTCHEON PLATES WHERE PIPES EXPOSED TO VIEW PENETRATE FINISHED WALLS, FLOORS AND CEILINGS. SPLIT-RING
5. CONNECTIONS WITH CAPS AT DRAIN VALVES WHICH DO NOT DISCHARGE DIRECTLY OVER OR ARE NOT PIPED DIRECTLY TO AN
6. THE CONTRACTOR SHALL PROVIDE TEMPORARY DUCTWORK, ELECTRICAL SERVICE, PIPING OR OTHER BUILDING SERVICES AS REQUIRED
7. FOR THE PROJECT, TO BE COMPLETED AT TIME OF ACCEPTANCE.
8. THE CONTRACTOR SHALL DETERMINE THE APPROPRIATE METHOD OF INSTALLATION, AND INSTALL AS INDICATED.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE CORRECT SIZE AND TYPE OF ISOLATION VALVES, FLANGES AND UNIVERSITY OF TEXAS MUSEUM SYSTEM
10. SHEET METAL DIMENSIONS OF DUCTWORK (内部的清晰度)
D. THE ENGINEER RESERVES THE RIGHT TO REJECT MATERIAL OR WORKMANSHIP NOT
B. ALL ITEMS MOUNTED AT OR BELOW THE CEILING AND ANY ITEM PENETRATING THE
C. ALL WORK UNDER THIS CONTRACT SHALL BE PERFORMED BY COMPETENT
INTERFERENCE WITH ESTABLISHED OPERATIVE ROUTINE. ARRANGE WORK TO
ILLUSTRATED ON THE ACCOMPANYING DRAWINGS, OR AS DIRECTED BY THE
FOR SUCH PERMITS AND LICENSES.

M. ALL DUCT TRANSITIONS FROM SQUARE TO ROUND SHALL BE SMOOTH
C.2. MAINTAIN INTEGRITY OF VAPOR-BARRIER JACKETS ON PIPE INSULATION AND

A STEEL SPRING AND 0.3" DEFLECTION NEOPRENE ELEMENT IN SERIES. THE
E. PROVIDE TEMPORARY CONNECTIONS IF REQUIRED TO PROVIDE CONTINUITY OF
N. MATERIAL AND EQUIPMENT WHICH IS TO BE INSTALLED UNDER THE CONTRACT. THE
MATERIAL AND EQUIPMENT INVOLVED. THE SCHEDULE SHALL INCLUDE FOR MATERIALS THE

A. PROVIDE SUBMITTALS AND SHOP DRAWINGS FOR THE FOLLOWING EQUIPMENT AND

L. WATERPROOF INTEGRITY OF THE BUILDING AS REQUIRED BY THE REMOVAL AND/OR

K. THE SCHEDULE SHALL INCLUDE FOR MATERIALS THE
M. THE SCHEDULE SHALL INCLUDE FOR MATERIALS THE

I. THE SCHEDULE SHALL INCLUDE FOR MATERIALS THE

H. THE SCHEDULE SHALL INCLUDE FOR MATERIALS THE

G. THE SCHEDULE SHALL INCLUDE FOR MATERIALS THE

F. THE SCHEDULE SHALL INCLUDE FOR MATERIALS THE

E. THE SCHEDULE SHALL INCLUDE FOR MATERIALS THE

D. THE SCHEDULE SHALL INCLUDE FOR MATERIALS THE

C. THE SCHEDULE SHALL INCLUDE FOR MATERIALS THE

B. THE SCHEDULE SHALL INCLUDE FOR MATERIALS THE

A. THE SCHEDULE SHALL INCLUDE FOR MATERIALS THE

C. Variable Air Volume Box

B. Variable Air Volume Box

A. Variable Air Volume Box

...
MECHANICAL SECOND FLOOR DEMOLITION PLAN - PHASE I

PHASE II (FUTURE PHASE)

MECHANICAL SECOND FLOOR PLAN - PHASE I

N.I.C.
## AIR DEVICE SCHEDULE

<table>
<thead>
<tr>
<th>Name</th>
<th>Service</th>
<th>Mark</th>
<th>Type</th>
<th>Manufacturer</th>
<th>Remar</th>
<th>Size and Model No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>SUPPLY</td>
<td>24&quot;</td>
<td>X</td>
<td>24&quot; LAY-IN REULOVER</td>
<td>TITUS TDC</td>
<td>1, 2, 3, 4, 6</td>
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<tr>
<td>E1</td>
<td>EXHAUST</td>
<td>24&quot;</td>
<td>X</td>
<td>24&quot; LAY-IN PERFORATED</td>
<td>TITUS PAR</td>
<td>1, 2, 3, 5, 6, 7</td>
</tr>
<tr>
<td>R1</td>
<td>RETURN</td>
<td>24&quot;</td>
<td>X</td>
<td>24&quot; LAY-IN PERFORATED</td>
<td>TITUS PAR</td>
<td>1, 2, 3, 5, 6, 7</td>
</tr>
</tbody>
</table>

1. UNITS SHALL BE FURNISHED WITH APPROPRIATE FRAMES, ETC. FOR MOUNTING IN RESPECTIVE CEILING/WALL TYPES AND CONDITIONS
2. STANDARD WHITE FINISH, UNLESS NOTED OTHERWISE. VERIFY FINAL COLOR SELECTION WITH ARCHITECT/OWNER PRIOR TO ORDERING
3. OR APPROVED EQUAL
4. FOUR-WAY THROW UNLESS OTHERWISE INDICATED ON PLAN
5. TRANSITION FROM BACK OF GRILLE TO DUCT SIZE SHOWN ON PLAN. PROVIDE RECTANGULAR TO ROUND TRANSITIONS AS REQUIRED
6. ALL DIFFUSERS, REGISTERS AND GRILLES SHALL HAVE AN NC < 25 AT DESIGN CONDITION
7. PROVIDE RETURN AIR SOUND ATTENUATORS WHERE RETURN GRILLE IS USED IN PLENUM RETURN APPLICATION.

## DOUBLE DUCT VAV BOX SCHEDULE

<table>
<thead>
<tr>
<th>Name</th>
<th>Service</th>
<th>Mark</th>
<th>VAV-</th>
<th>SERVES</th>
<th>MAX</th>
<th>MAX</th>
<th>E.S.P.</th>
<th>(IN. W.G.)</th>
<th>MAX</th>
<th>N.C.</th>
<th>AIR VALVE</th>
<th>MANUFACTURER</th>
<th>MAKE AND MODEL</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>CR</td>
<td>205</td>
<td>12</td>
<td>1</td>
<td>30</td>
<td>820</td>
<td>1025</td>
<td>525</td>
<td>TRANE</td>
<td>VDDF1</td>
<td>ALL</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. PROVIDE WITH MINIMUM STATIC PRESSURE IN INCHES W.G. AT INLET TO BOX.
2. PROVIDE MAXIMUM STATIC PRESSURE IN INCHES W.G. THAT COULD OCCUR AT INLET TO BOX. USE MAXIMUM S.P. IN THE SELECTION OF THE SOUND RATING N.C. BASED ON POWER LEVEL RATING
3. PROVIDE OUTLET DUCTWORK AT LOW VELOCITY.
4. PROVIDE RECOMMENDED MAINTENANCE CLEARANCES. PROVIDE ACCESS PANELS IN WALLS/CEILINGS AS REQUIRED.
5. PROVIDE CONTROLS PER SEQUENCE OF OPERATION AND SPECIFICATIONS.
6. PROVIDE MOTORIZED DAMPERS.
7. PROVIDE CORROSION RESISTANT AND SELF LUBRICATING MOVING PARTS.
8. BOX SELECTION SHALL BE BASED ON 80 PERCENT OF MANUFACTURER'S LISTED MAXIMUM ALLOWABLE CFM
9. CFM MIN/MAX VALUES REFER TO THE RANGE OF CAPABILITY FOR THIS AIR VALVE SIZE. IT IS NOT A MINIMUM/MAXIMUM SETTING
10. PROVIDE WITH INTEGRAL DISCONNECT SWITCH
11. PROVIDE 20 GAUGE HOT DIPED GALVANIZED STEEL UNIT CASING - LEAKPROOF CONSTRUCTION.
12. PROVIDE EXTERNALLY FIELD MOUNTED DIGITAL ELECTRONIC CONTROLLER AND REMOTE WALL MOUNTED SENSOR WITH ADJUSTABLE SET-POINTS FOR DUAL DUCT MIXING BOX COOLING AND HEATING WITH MINIMAL FLOWS. COORDINATE WITH CONTROLS CONTRACTOR FOR SYSTEM REQUIREMENTS.
1. NOTIFY AND COORDINATE WITH THE OWNER AT LEAST SEVEN DAYS PRIOR TO SHUTDOWN OF ANY BUILDING SERVICES OR EQUIPMENT.

2. INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL, NOT INVERTED.

3. PROVIDE INSULATION MATERIALS FOR EXPOSED WATER PIPING AND VENTS AND RELATED FIXTURES IN ACCORDANCE WITH LOCAL BUILDING CODES AND CONTRACT REQUIREMENTS. INSULATION MATERIALS MUST BE OF THE REQUIREMENT OF THE AUTHORITY HAVING JURISDICTION.

4. PROVIDE STORAGE PIPING THAT PENETRATES EXTERIOR BUILDING WALLS AND GRADE BEAMS. SEAL PENETRATIONS WATER TIGHT.

5. PROVIDE ALL PLUMBING FIXTURES WITH APPROPRIATE SIZING AND MATERIALS.

6. PROVIDE INSULATION MATERIALS FOR EXPOSED WATER PIPING AND VENTS AND RELATED FIXTURES IN ACCORDANCE WITH LOCAL BUILDING CODES AND CONTRACT REQUIREMENTS. INSULATION MATERIALS MUST BE OF THE REQUIREMENT OF THE AUTHORITY HAVING JURISDICTION.

7. PROVIDE ALL PLUMBING FIXTURES WITH APPROPRIATE SIZING AND MATERIALS.

8. PROVIDE ALL PLUMBING FIXTURES WITH APPROPRIATE SIZING AND MATERIALS.

9. PROVIDE ALL PLUMBING FIXTURES WITH APPROPRIATE SIZING AND MATERIALS.

10. PROVIDE ALL PLUMBING FIXTURES WITH APPROPRIATE SIZING AND MATERIALS.

11. PROVIDE ALL PLUMBING FIXTURES WITH APPROPRIATE SIZING AND MATERIALS.

12. PROVIDE ALL PLUMBING FIXTURES WITH APPROPRIATE SIZING AND MATERIALS.

13. PROVIDE ALL PLUMBING FIXTURES WITH APPROPRIATE SIZING AND MATERIALS.

14. PROVIDE ALL PLUMBING FIXTURES WITH APPROPRIATE SIZING AND MATERIALS.

15. PROVIDE ALL PLUMBING FIXTURES WITH APPROPRIATE SIZING AND MATERIALS.
PLUMBING

A. CONTRACTOR SHALL OBTAIN AT HIS OWN EXPENSE A COMPLETE, FULL-SIZE ISSUED FOR:
PROJECT #:
P0-2

P0-2

Fort Worth, Texas 76107
1015 W. Broadway Ave. #A

10/02/2020

Hoffer
Hahnfeld

E
F
E
D
A

EG
CM

PLUMBING

A. CONTRACTOR SHALL OBTAIN AT HIS OWN EXPENSE A COMPLETE, FULL-SIZE ISSUE FOR:

P0-2

Fort Worth, Texas 76107
1015 W. Broadway Ave. #A

10/02/2020

Hoffer
Hahnfeld

E
F
E
D
A

EG
CM
### PLUMBING EQUIPMENT SCHEDULE

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Manufacturer</th>
<th>Model</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>WCO</td>
<td>Wall Cleanout Fitting</td>
<td>WATTS</td>
<td>CO-440-RD</td>
<td>Gas and Watertight Expandable Plug and Round Stainless Steel Wall Access Cover with Vandal Proof Stainless Steel Securing Screw.</td>
</tr>
<tr>
<td>FD-1</td>
<td>Floor Drain</td>
<td>WATTS</td>
<td>FD-100-A</td>
<td>Epoxy Coated Cast Iron Floor Drain with Anchor Flange, Reversible Clamping Collar with Primary and Secondary WeepHoles, Adjustable Round Heel Proof Nickel Bronze Strainer, and No Hub Outlet.</td>
</tr>
</tbody>
</table>

### PLUMBING FIXTURE SCHEDULE

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Manufacturer</th>
<th>Model</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-1</td>
<td>Double Bowlsink (ADA Compliant)</td>
<td>ELKAY</td>
<td>ELUHAD3216</td>
<td>Undermount, 32&quot;x17&quot; Overall, 14&quot;x14&quot;x5-1/2&quot; Double Bowls, Type 304 18-8 Stainless Steel, Hand Polished Satin Finish, Underside Fully Coated for Sound and Condensation, Conforms to ANSI A112.19.3, 3-1/2&quot; Center Rear Drain, Elkay LKAD35 Chrome Plated Brass Offset Tailpiece and Elbow with Stainless Steel Basket Strainer, Chrome Plated Cast Brass P-Trap with Cleanout Plug, Wall Flange, and Adjustable Swivel Joint. Faucet Shall Be Pull Down Gooseneck 180° Swivel Type with Stainless Steel Finish, Single Lever Handle, Three Function Sprayer, Cast Brass Body, 2.0 GPM Aerator, ASME A112.18.1, NSF/ANSI 61 Annex G with Quarter Turn Stops with Flexible Braided Stainless Steel Supplies. Provide Protective Shielding Pipe Covers Per Spec.</td>
</tr>
<tr>
<td>L-1</td>
<td>Lavatory</td>
<td>KOHLER, CHICAGO</td>
<td>K-2006</td>
<td>LAVATORY, 20&quot;X17&quot; Oval Self-Rimming Basin with Faucet Ledge, 4&quot; Center Faucet Holes, Vitreous China, Front Overflow, ANSI A112.19.2., Deck Mount Faucet, Electronic Proximity with Dual Beam Infrared Sensor, Chrome Plated Finish, Cast Brass Spout, Single Center Hole Installation, Concealed Internal Temperature Control Mixer, Supply and Stops, Loose Key, Chrome Plated Brass Valves and Chrome Plated Copper Risers (MCGUIRE, H2165CCLK), P-Trap, Chrome Plated Cast Brass Body with Cleanout, Seamless Wall Bend, 17 GA. (MCGUIRE, 8902), Offset Tailpiece and Strainer, Chrome Plated Cast Brass (MCGUIRE, 155WC).</td>
</tr>
</tbody>
</table>

### NOTES:
1. REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHTS AND EXACT LOCATIONS OF PLUMBING FIXTURES ACCESSORIES.
2. ALL ADA COMPLIANT PLUMBING FIXTURES SHALL MEET THE LATEST TEXAS ACCESSIBILITY STANDARDS, NSF, ANSI, ASTM, ASME, AND ASSE STANDARDS AND GUIDELINES.
3. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Premium Reserved Garage 4</td>
<td>$529</td>
<td>$529</td>
<td>$561</td>
<td>$595</td>
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<tr>
<td>Premium Reserved Lot 6</td>
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<td>$466</td>
<td>$494</td>
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<td>$555</td>
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<tr>
<td>Employee (Surface Lot General) (Faculty &amp; Staff Option)</td>
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<td>$315</td>
<td>$334</td>
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<td>$375</td>
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<tr>
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<td>$416</td>
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<td>$467</td>
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<td>$522</td>
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<tr>
<td>Student (Surface Lot General)</td>
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<td>$139</td>
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<td>Student (Garage General)</td>
<td>$189</td>
<td>$189</td>
<td>$200</td>
<td>$212</td>
<td>$225</td>
<td>$258</td>
</tr>
</tbody>
</table>

FY21 updated Information

General Surface Day Pass - $5/day

Premium Lot 6 Day Pass - $8/day

Monthly Permits (Temporary Permit purchased in Parking Office) - Based on permit type

Additional Permit - $5 Temporary Permit purchased in Parking office (sales start after regular permit sales. Proof of insurance required).