HARPER PERKINS ARCHITECTS, INC.

4724 Old Jacksboro Highway Wichita Falls, Texas 76302-3599
Telephone 940.767.1421 Facsimile Number 940.397.0273

ADDENDUM NO. 2

To the Drawings and Project Manual dated 16 June 2017

for

TAS/ADA FIRE MARSHAL
DEFERRED MAINTENANCE PROJECTS
MIDWESTERN STATE UNIVERSITY

3410 Taft Boulevard
Wichita Falls, Texas

EXP. DATE: 25 AUGUST
DATE SIGNED: 10 August 2017

Addendum Date: 10 August 2017

NOTICE TO PROPOSERS:

This Addendum will be considered a part of the Contract Documents for the above referenced project as though it had been issued at the same time and incorporated integrally therewith. Where provisions of the following supplementary data differ from those in the original Contract Documents, this Addendum shall govern and take precedence.

Proposers are hereby notified that they shall make any necessary adjustments in their estimates on account of this Addendum. It will be construed that such Proposer's Competitive Sealed Proposal is submitted with full knowledge of all modifications and supplementary data specified herein.

ITEM 1 - AD#2: To the Project Manual and Drawings.
ADD: A Pre-Bid Conference was held in Room C-111 of the Fain Fine Arts Building on August 7, 2017 at 10:00 a.m. – the Conference also included a walk-through of the Bolin Science Hall, Fain Fine Arts Building, Ferguson Building, Hardin Administration Building, and associated Sites. A "pdf" file of the Sign-In Sheets from the Conference are available for download from the MSU Website at https://mwsu.edu/purchasing/.

ITEM 2 - AD#2: To the Drawings, Sheets "**B-A303**", "**FF-A304**", and "**FF-A305**".
ADD: As clarification, the steel mesh infill for the handrailing shall 2 x 2 x 12 gauge mesh.

ITEM 3 - AD#2: To the Drawings, Sheet "**B-AD101**", "**Building Plan – Bolin Science Hall – First Floor – Demolition**" and Sheet "**B-A101**", "**Building Plan – Bolin Science Hall – First Floor – New**"; and the Project Manual, Section **099990**, **FINISH SCHEDULE**.
ADD: As clarification, the existing ceiling is being removed in its entirety in the "**Corridor 1CORR4**" space. A new 2x2 suspended acoustical ceiling (new tiles and grid above) is being installed (refer to the Reflected Ceiling Plan on Sheet "**B-A703**") and existing light fixtures and HVAC diffusers/grilles being reused and installed in the new ceiling (refer to the MEP drawings).
ADD: The existing ceiling in "**Computer Lab 133**" shall be removed completely – salvage and maintain all existing

light fixtures, HVAC diffusers/grilles, and devices in the ceiling for reinstallation. Provide a new 2x2 suspended acoustical ceiling (new tiles & grid) in the space.
ADD: As clarification, new 2x2 suspended ceilings shall be provided in "**Vestibule 1VEST1**", "**West Corridor 1CORR1**", and "**Vestibule 1VEST4**" (refer to the Reflected Ceiling Plans on Sheets "**B-A702**" and "**B-A703**") and shall include new ceiling tiles and a new suspended grid system.

ITEM 4 - AD#1: To the Drawings, Sheet "**H-AD103**", "**Floor Plan – First Floor – Hardin Administration Building – Area "H-1A" – Demolition**"
ADD: As clarification, the existing suspended "cloud" ceiling above the Stage area shall be lowered to accommodate the installation of the new Fire Sprinkler System piping. Also disconnect the existing light fixtures. Protect the ceiling and fixtures from damage during the new work. After installation of the new lines is complete, raise the ceiling to its original position and reconnect the light fixtures and restore to their original working condition.
ADD: Protect the existing wood flooring at the Stage area during the installation of the new Fire Sprinkler System piping. Any damage to the flooring during the installation work shall be repaired or replaced as necessary with matching materials and finish.
ADD: No mechanical lift of any kind shall be used on the Stage to perform this work – only scaffolding will be allowed.

ITEM 5 - AD#1: To the Drawings, Sheet "**H-FP101**", "**Hardin Admin Building – First Floor – Area 1A Fire Protection Plan**"
ADD: As clarification, a new 4" Fire Sprinkler line is being extended and connected to the Main Water Service Line located west of the Building. Any existing asphalt paving that is disturbed and removed as part of this line installation shall be patched as necessary with matching materials upon completion of the work.

ITEM 6 - AD#1: To the Project Manual, Section **012100**, **ALLOWANCES**.
ADD: An allowance of $10,000 shall be included for the provision of new ceilings that must be removed for the installation of new Fire Sprinkler System lines. The provision of several new ceiling areas have already been identified in the Drawings or Project Manual. The funds from this allowance can be used when approved in writing by the Owner after consultation with the Architect and Owner. Any unused funds in this allowance will be returned to the Owner at the end of the project.

ITEM 7 - AD#1: To the Project Manual, Section **012300**, **ALTERNATES**.
ADD: An **Alternate #2**, adding a Fire Sprinkler System below the existing Stage area in Akin Auditorium in the Hardin Administration Building. Refer to the MEP Drawings from Campos Engineers attached with this Addendum for more information.

ITEM 8 - AD#1: To the Project Manual, Section **012300**, **ALTERNATES**; and the Drawings, Sheets "**FF-AD105**", "**FF-A105**", "**A501**", and "**A502**".
ADD: An **Alternate #3** which shall be all work associated with the removal of the existing sloped glazing system (existing steel tube joists and steel tube/pipe framing are to remain in place) and the provision of the new sloped glazing system (Opening **#FF21**) as indicated.
DELETE: On Sheet "**A502**", the opening details "**A502-18**" as indicated.
ADD: Opening details "**A502-18**" as indicated on Supplemental Drawings "**AD#2-01**" through "**AD#2-05**" attached with this Addendum.

ITEM 9 - AD#1: To the Drawings, Sheet "**A501**", "**Opening Schedules**".
DELETE: On the "**Opening Schedule – Bolin Science Hall**" under Openings **#B3**, **#B4**, **#B12**, **#B14**, **#B16**, and **#B17**, the indication of glazing type "**3**".
ADD: These openings shall have glazing type "**4**".
DELETE: On the "**Opening Schedule – Fain Fine Arts**" under Opening **#FF19**, the indication of glazing type "**3**".
ADD: This opening shall have glazing type "**4**".

ITEM 10 - AD#1: To the Drawings, **Mechanical Drawings**; and the Project Manual, Section **099100**, **PAINTING**.
ADD: Exposed mechanical piping and conduit in equipment and occupied spaces shall be painted as specified on page **099100-7**, part **3.3**(**F**) & (**G**).

ITEM 11 - AD#2: To the Project Manual, Section **099990**, **FINISH SCHEDULE KEY**.
DELETE: On page **099990-1** under floor finish "**1B**", the word "**Polished**".
ADD: As clarification, the floor finish "**1B**" shall be "**Exposed Stained Concrete – Sealed**".

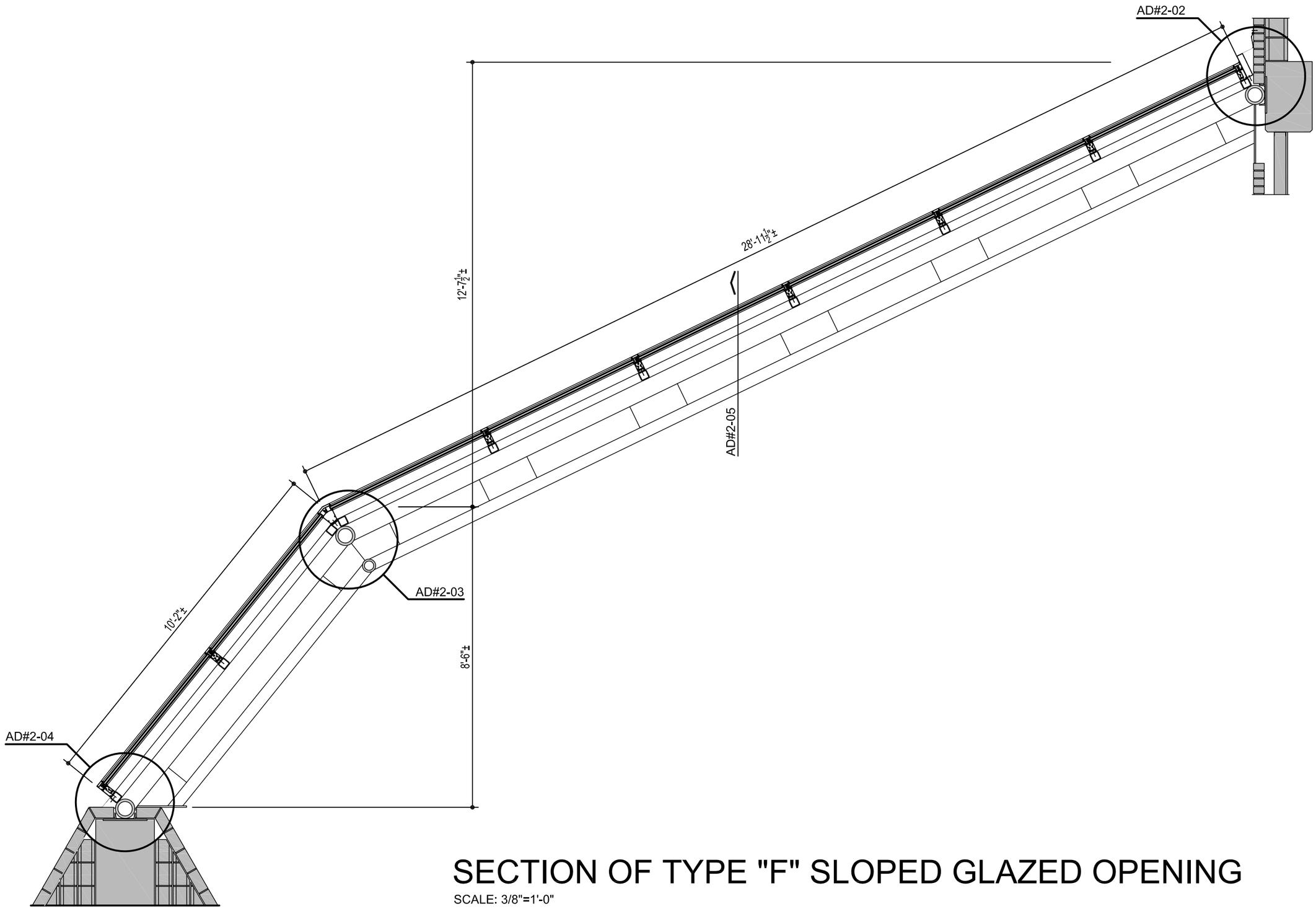
ITEM 12 - AD#2: To the Project Manual, Section **012300**, **ALTERNATES**, and Drawings, Sheet **"B-A105**", "**Enlarged Floor Plan – Bolin Science Hall – Third Floor – Area "B-3B" – New**"; and Sheet "**B-A106**", "**Enlarged Floor Plan – Bolin Science Hall – First Floor – Area "B-1C" – New)**"; and "**Floor Plan – Keynotes**".
DELETE: In keynote **#17**, the indication of a wood handrailing.
ADD: As clarification and as part of the **Base Bid**, provide aluminum handrailing as specified in Section **055200**, **ALUMINUM HANDRAILS AND RAILINGS**. All wall mounted handrailing shall turn 90 degrees and return to the wall on each end.
ADD: **Alternate #4** which shall provide painted 1¼" diameter steel pipe handrailing is (1.66" O.D.). At locations in which the Stairs have "open sides", provide 2 x 2 x 12 gauge mesh infill with a 1"x1"x1/8" perimeter steel frame. The bottom railing shall be located 2" above the stair treads. All wall mounted handrailing shall turn 90 degrees and return to the wall on each end.

ITEM 13 - AD#2: To the Mechanical/Electrical/Plumbing (MEP) Drawings.
ADD: The attached Addendum and associated revised drawings from Campos Engineering.

ITEM 14 - AD#2: To the Drawings, Sheet "**B-AD106**", "**Enlarged Floor Plan – Bolin Science Hall - First Floor – Area "B-1C" – Demolition**".
ADD: As clarification, the existing wall material associated with the demolition work at "**Vestibule 1VEST3**" and "**Lecture Hall 127**" is as indicated on the "**Enlarged Floor Plan – Bolin Science Hall - First Floor – Area "B-1C" – New**" on Sheet "**B-A106**".

END OF ADDENDUM NO. 2

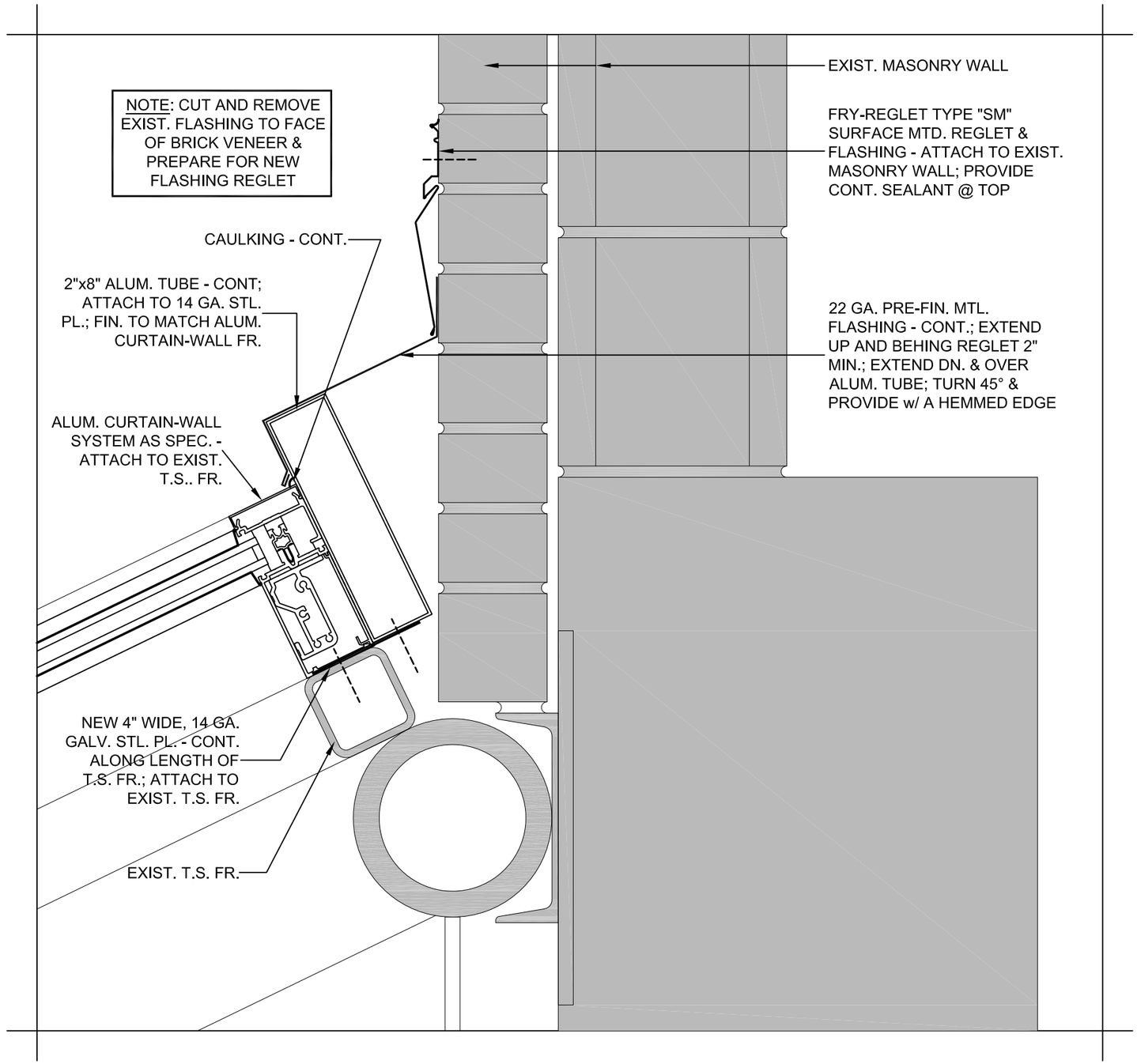
AD#2-01



SECTION OF TYPE "F" SLOPED GLAZED OPENING

SCALE: 3/8"=1'-0"

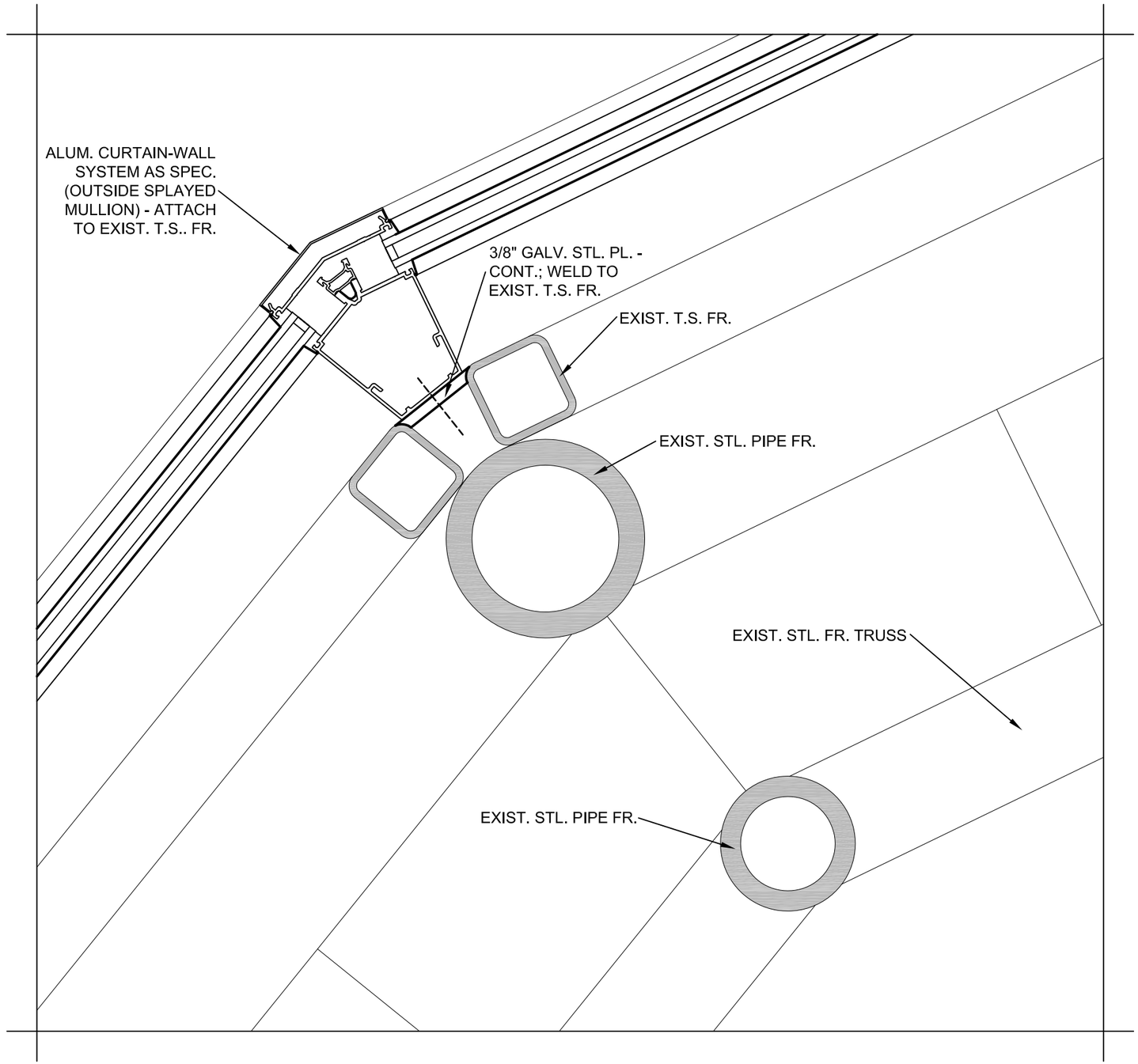
AD#2-02



TOP OF TYPE "F" SLOPED GLAZED OPENING

SCALE: 3"=1'-0"

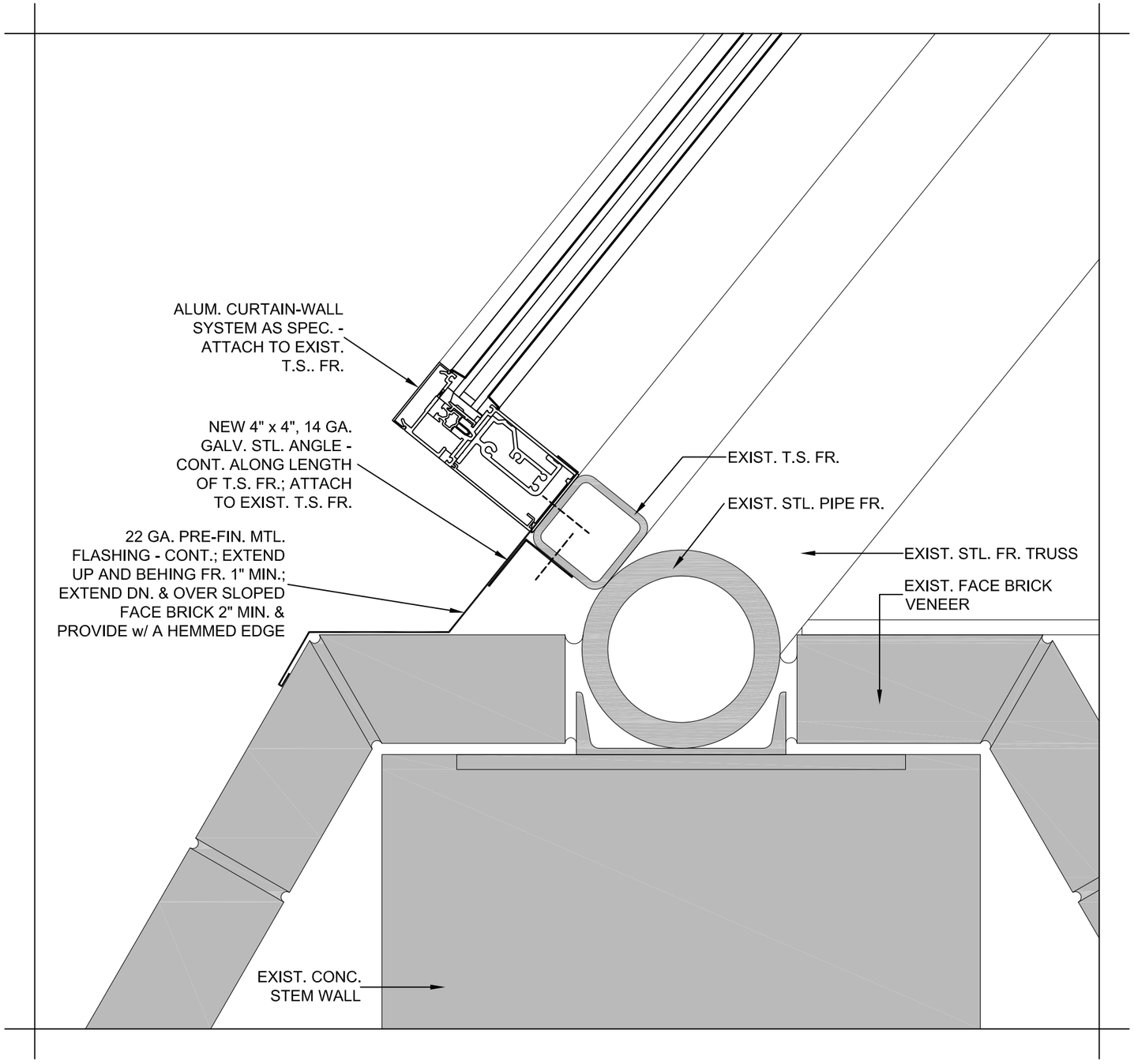
AD#2-03



MULLION @ SLOPE CHANGE OF TYPE "F" SLOPED GLAZED OPENING

SCALE: 3"=1'-0"

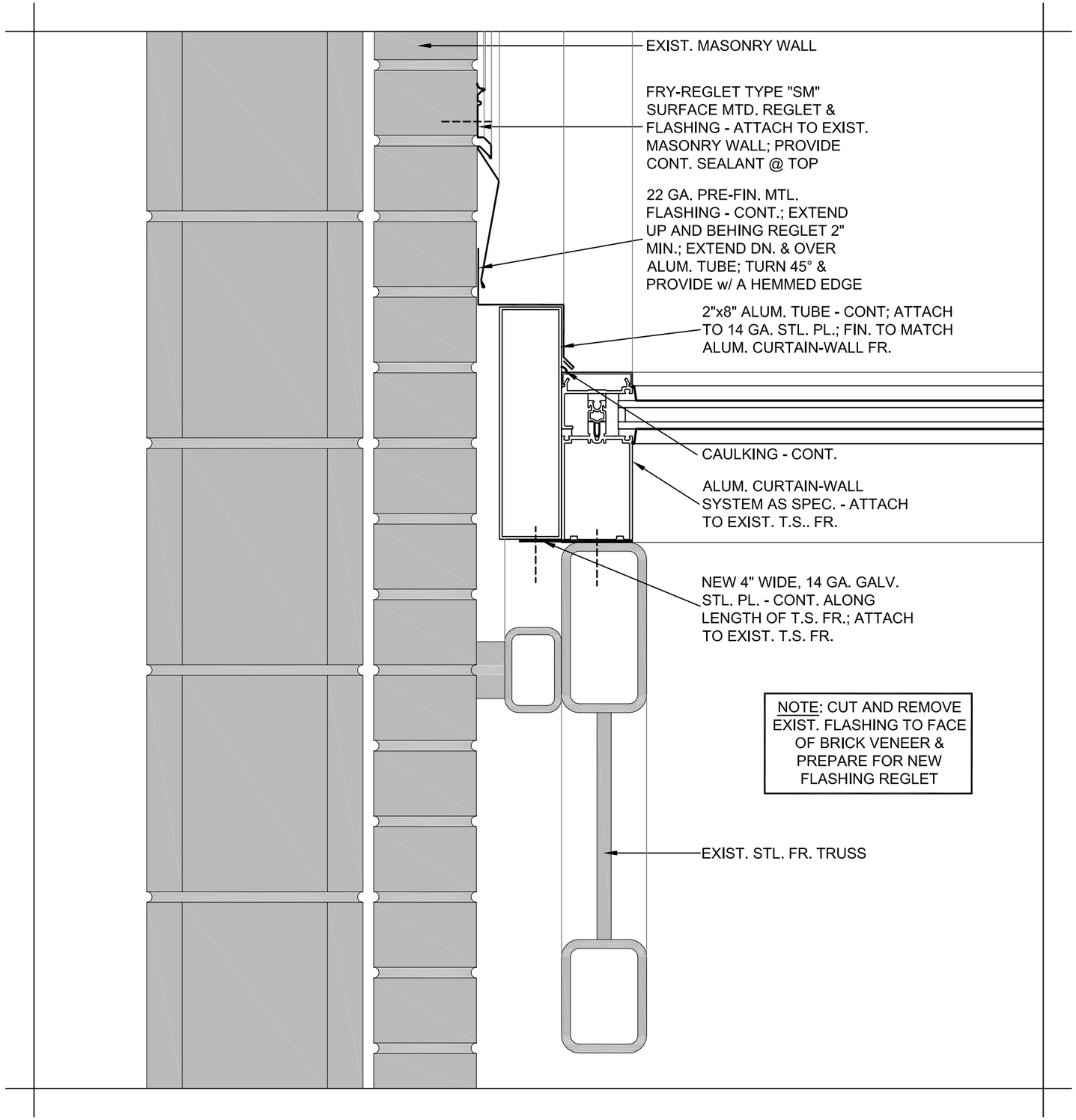
AD#2-04



BOTTOM OF TYPE "F" SLOPED GLAZED OPENING

SCALE: 3"=1'-0"

AD#2-05



SIDE OF TYPE "F" SLOPED GLAZED OPENING

SCALE: 3"=1'-0"

CAMPOS ENGINEERING, Inc.
Consulting Engineers

REVISION NARRATIVE

Project: **D17-1263.00 MSU ADA Deferred Maintenance**

Subject: **Addendum #2 - 08/10/2017**

To: **Harper Perkins Architects, Inc.: Sam K. Kenshalo, Project Manager**

Summarized below are the revisions made to the Contract Documents.

Electrical

1. Sheet B-ED101 – Revised Drawing as follows:
    a. Added Computer Lab room 133 lighting to be remove and stored as stated in Key Note #4.

2. Sheet B-E101 – Revised Drawing as follows:
    a. Added Computer Lab room 133 lighting to be re-installed as stated in Key Note #6.
    b. Removed heat trace from the drawing per owner instruction.
    c. Key Note #11 changed to “Not Used”, as it pertains to heat trace that was removed.

3. Sheet E001 – Revised Drawing as follows:
    a. Revised all General Notes.

4. Sheet FF-ED102 – Revised Drawing as follows:
    a. Added Key Note #3 regarding outlets on renovated walls.
    b. Enclosed the area in the drawing that is covered by Key Note #3.

5. Sheet FF-E102 – Revised Drawing as follows:
    a. Added Key Notes #14 and #15 regarding outlets on renovated walls.
    b. Enclosed the area in the drawing that is covered by Key Notes #14 and #15.

6. Sheet H-E101 – Revised Drawing as follows:
    a. Added Key Note #6 regarding lighting fixture removal and re-installation on areas affected by fire piping layout.
    b. Add Note Symbol #6 on areas in the drawing affected by fire protection piping installation.

Mechanical

1. Sheet B-MD101– Revised Drawing as follows:
    a. Rearrange sheet details to include HVAC demolition work in Area C1. It includes demolition of the supply and return ductwork serving the corridor as preparation for the inclusion of fire dampers.

2. Sheet B-M101– Revised Drawing as follows:
    a. Rearrange sheet details to include HVAC work in Area C1. It includes new Key Notes #6 and #7 to call for the installation of fire dampers on the supply and return ductwork in the corridor.

Plumbing

1. Sheet P003 – Revised Drawing as follows:
    a. Modified Plumbing Fixture Schedule to include correct manufacturer and model for the flushometers used by the water closets and urinals. Modified the manufacturer and model for the lavatories to comply with owner preferences.

Fire Protection

1. Sheet FP001 – Revised Drawing as follows:
    a. Added Key note #27, to direct the contractor to coordinate with the General Contractor the removal of the reflected ceiling along with any electrical, HVAC or any other appurtenance associated with it. It also states to save those materials for reinstallation.

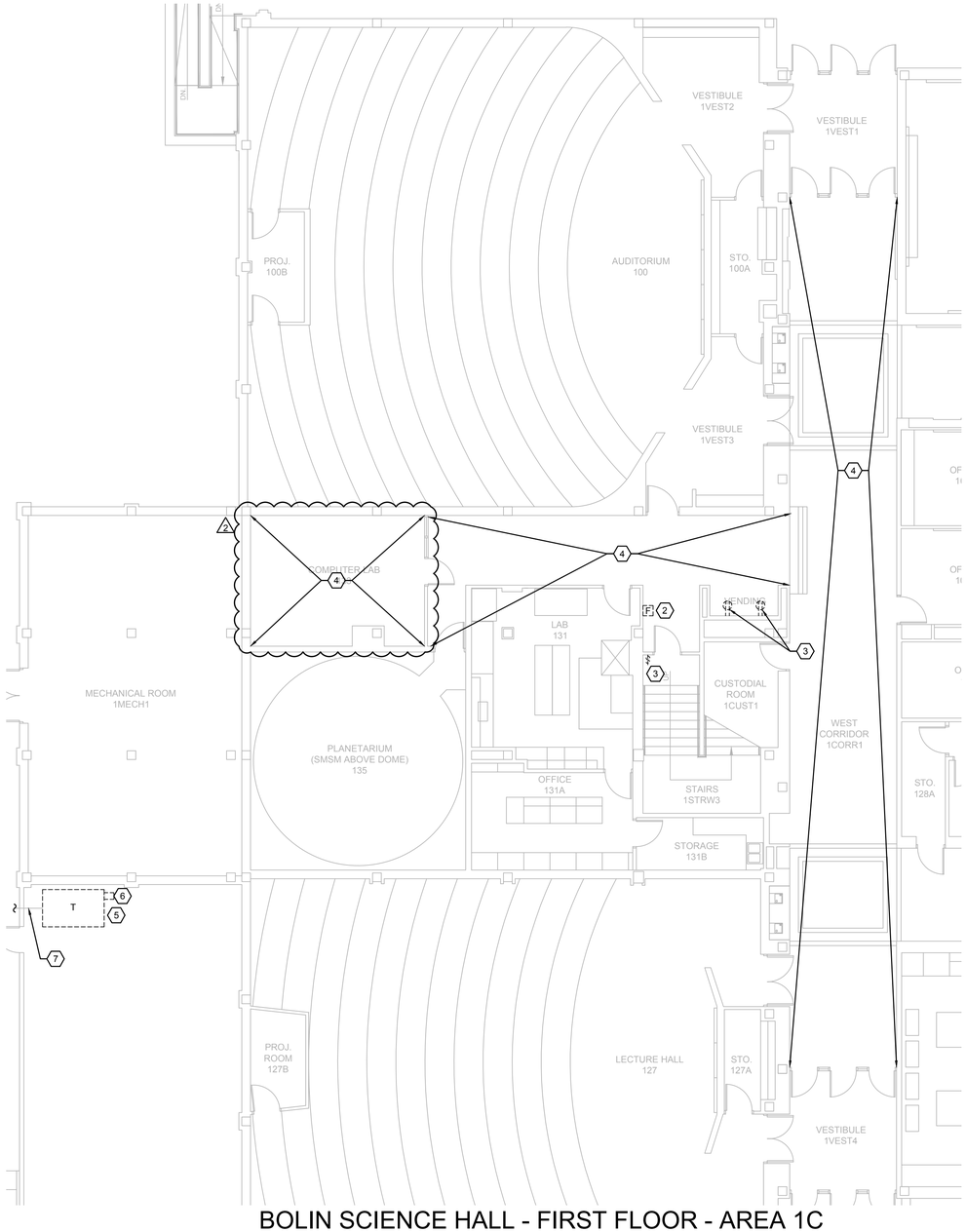
2. Sheet B-FP101 – Revised Drawing as follows:
    a. Modified Key Notes #1 and #2 to reflect new main size of 6" in lieu of 4". Also, Key Note #1 directs the contractor to insulate the fire piping inside the tunnel and got rid of the heat tracing. It also directs the contractor to coordinate the exact location of tie-ins to water main with MSU Staff.
    b. Modified main size in plans from 4" to 6".
    c. Remove post indicator from detail 2/B-FP101.

3. Sheet H-FP101 – Revised Drawing as follows:
    a. Modified Key Notes #1 and #2 to reflect new main size of 6" in lieu of 4". Also, Key Note #1 directs the contractor to coordinate exact location of tie-ins to water main with MSU Staff.
    b. Modified main size in plans from 4" to 6".
    c. Added Key Note # 7 to indicate that the area underneath the stage is to be provided with a fire sprinkler system under Alternate #2.

Please let us know if you have any questions or concerns.

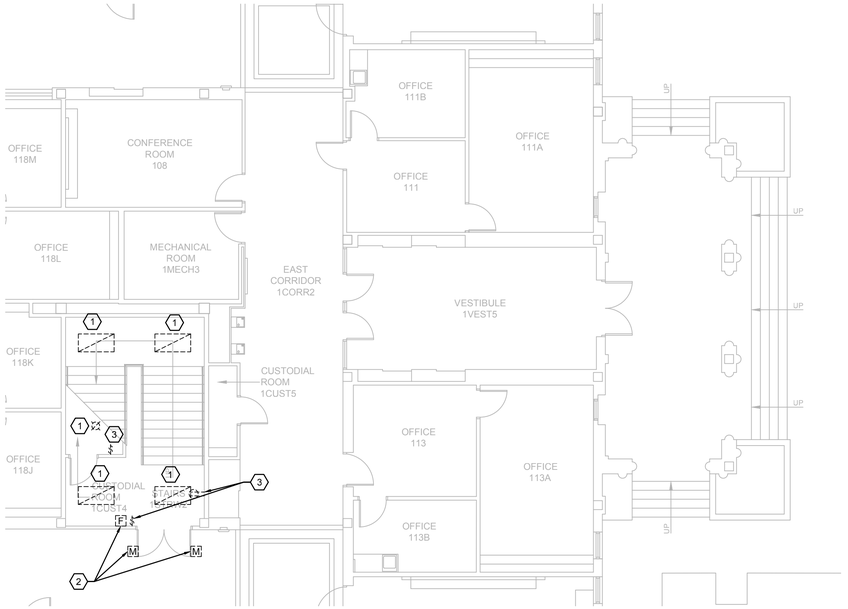
Sincerely,
Campos Engineering, Inc.

Fred Crabtree, PE
Project Manager/Mechanical Engineer



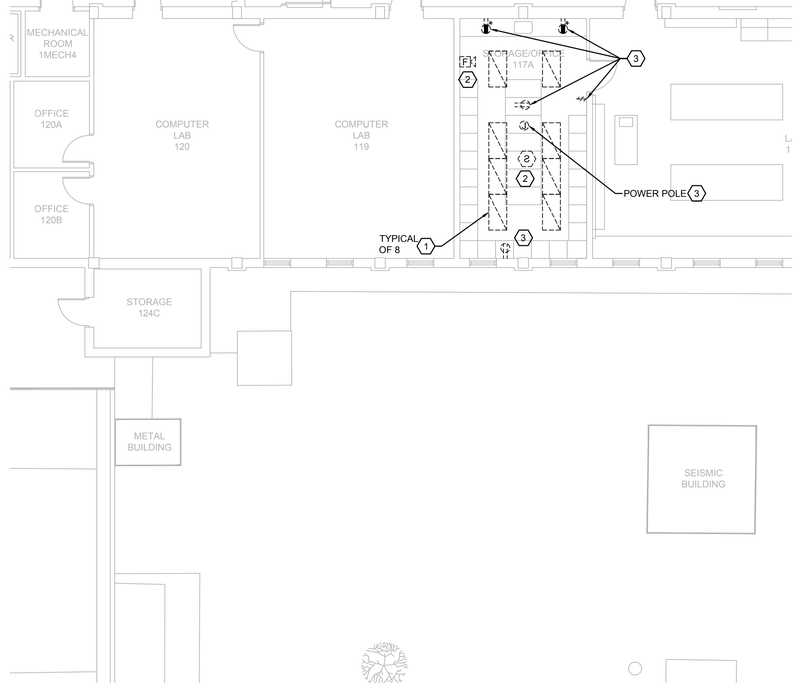
BOLIN SCIENCE HALL - FIRST FLOOR - AREA 1C
ELECTRICAL DEMOLITION PLAN

3 / B-ED101 SCALE: 1/8" = 1'-0"



BOLIN SCIENCE HALL - FIRST FLOOR - AREA 1B
ELECTRICAL DEMOLITION PLAN

1 / B-ED101 SCALE: 1/8" = 1'-0"



BOLIN SCIENCE HALL - FIRST FLOOR - AREA 1A
ELECTRICAL DEMOLITION PLAN

2 / B-ED101 SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. REFER TO ARCHITECTURAL OVERALL FLOOR PLANS FOR LOCATIONS SCOPE OF WORK AREAS WITHIN THE BUILDING.

KEY NOTES (#)

1. REMOVE EXISTING LIGHTS. RETAIN CIRCUITING FOR RE-USE.
2. REMOVE EXISTING FIRE ALARM DEVICE. RETAIN FOR RE-USE IN NEW LOCATION.
3. REMOVE EXISTING WIRING DEVICE. RETAIN CIRCUITING FOR RE-USE.
4. REMOVE ALL LIGHTS IN THIS AREA AND STORE THEM DURING CONSTRUCTION FOR RE-INSTALLATION AFTER THE SPRINKLER PIPING HAS BEEN INSTALLED.
5. REMOVE EXISTING 2000KVA TRANSFORMER, APPLY ALL NECESSARY PRECAUTION TO PRESERVE THE PRIMARY DUCTBANK SERVING TRANSFORMER IN GOOD AND SAFE CONDITION. TIMING OF REMOVAL AND THE INSTALLATION OF THE NEW TRANSFORMER SHALL BE COORDINATED WITH OWNER TO MINIMIZE POWER DISRUPTION TO THE BUILDING, REF. DRAWING B-101. DISPOSE OF THE EXISTING TRANSFORMER IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. OWNER WILL PROVIDE TEST REPORT SHOWING TRANSFORMER DOES NOT CONTAIN PCB PRIOR TO REMOVAL.
6. REMOVE EXISTING TXU METER AND METERING CURRENT TRANSFORMERS (CT'S) AND RETURN TO OWNER. PRESERVE IN GOOD CONDITION. PRESERVE EXISTING SCHNEIDER ELECTRIC PM750 METER AND WIRING FOR REUSE AND INSTALLATION IN THE NEW TRANSFORMER. REFERENCE BE-102 FOR ADDITIONAL REQUIREMENTS.
7. APPROXIMATE LOCATION OF EXISTING PRIMARY CABLE IN DUCTBANK. FIELD VERIFY EXACT LOCATION.

STATE OF TEXAS
JOSEPH D. CAMPOS
45513
REGISTERED
PROFESSIONAL ENGINEER

08/10/2017

DATE SIGNED:

HPA
ARCHITECTS PROGRAMMERS PLANNERS
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Registration No. F-001731
CEI Project Number D17-1263.00

TAS/ADA - FIRE MARSHAL DEFERRED MAINTENANCE PROJECTS FOR
MIDWESTERN STATE UNIVERSITY
WICHITA FALLS, TEXAS
3410 TAFT BOULEVARD

DRAWN BY:

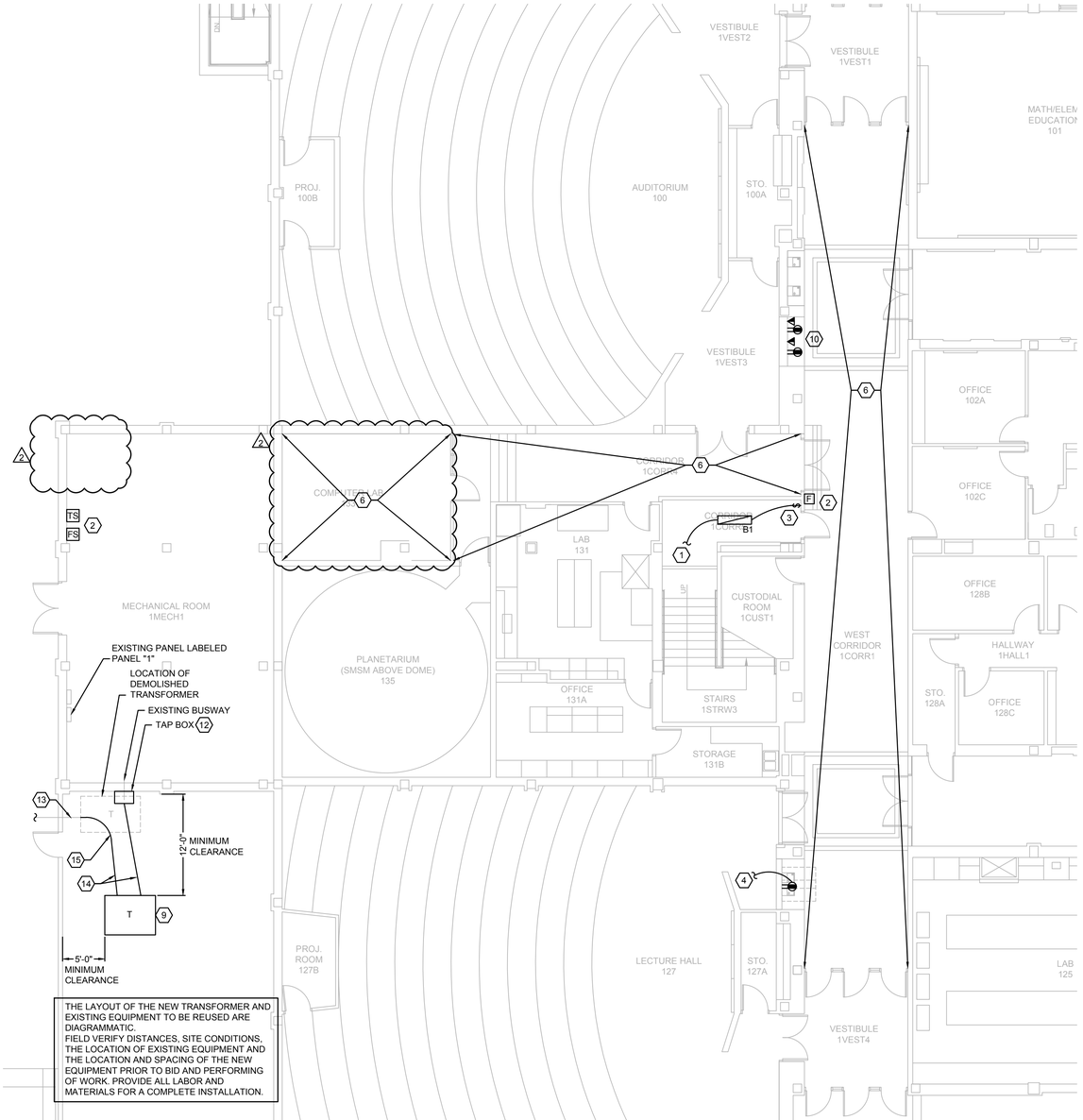
DATE: 15 MAY 2017

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 1	08/02/17
2	ADDENDUM 2	08/10/17

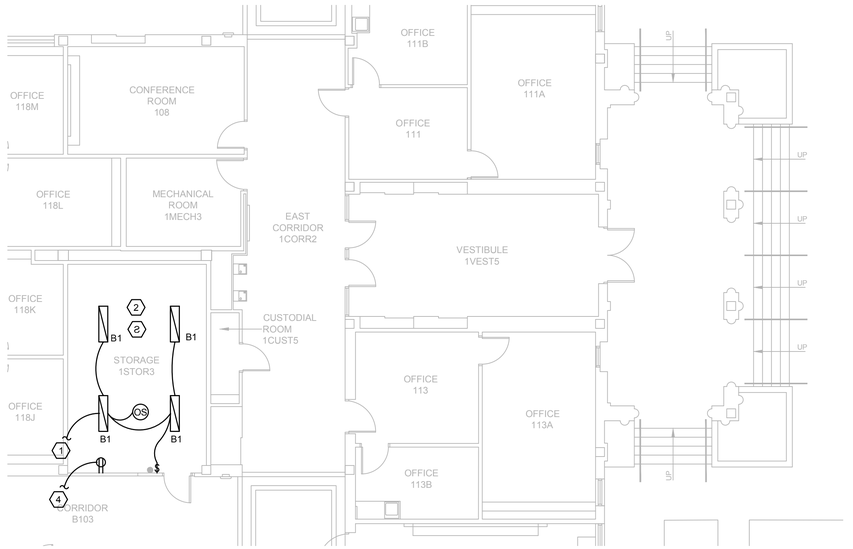
16782.00

B-ED101



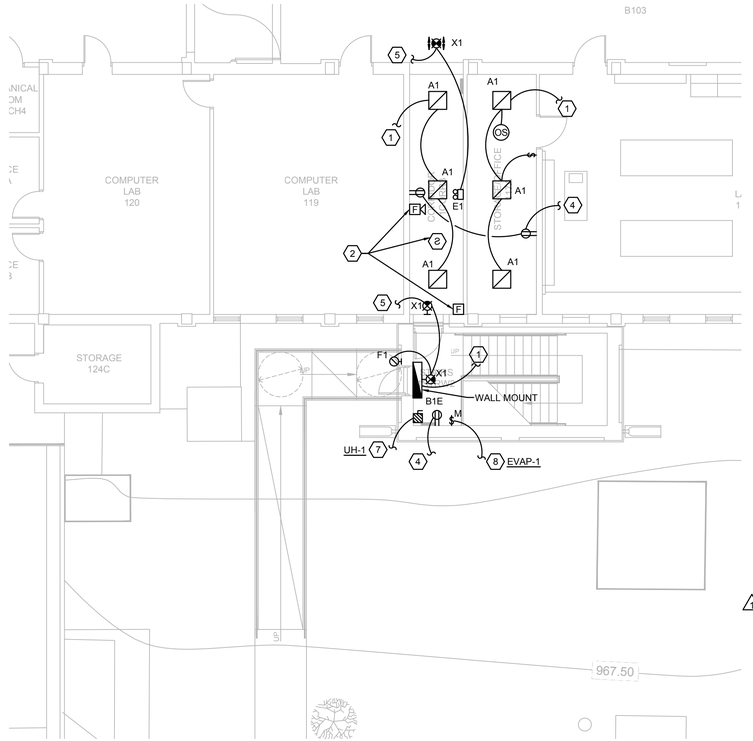
BOLIN SCIENCE HALL - FIRST FLOOR - AREA 1C ELECTRICAL PLAN

3 B-E101 SCALE: 1/8" = 1'-0"



BOLIN SCIENCE HALL - FIRST FLOOR - AREA 1B ELECTRICAL PLAN

1 B-E101 SCALE: 1/8" = 1'-0"



BOLIN SCIENCE HALL - FIRST FLOOR - AREA 1A ELECTRICAL PLAN

2 B-E101 SCALE: 1/8" = 1'-0"

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	LAMP			MOUNTING	ELECTRICAL		MANUFACTURER	CATALOG NUMBER	NOTES
		TYPE	COLOR TEMP	CRI		VOLTS	VA			
A1	2X2 LENSED TROFFER	FLUORESCENT	4000K	85	RECESSED GRID	UNV	35	HEW	50G-S22-2-17-F-AF12125-UNV	
B1	1X4 SURFACE MOUNTED WRAP AROUND	FLUORESCENT	4000K	85	SURFACE	UNV	65	HEW	21-4-232-I-EB2-UNV	
B1E	SAME AS B1 EXCEPT WITH EMERGENCY BATTERY BACK-UP									
X1	STANDARD LED EXIT SIGN	LED	N/A	N/A	SURFACE	UNV	10	HEW	EXIT-R-EM-WHT-SDT	1,2
E1	INTERIOR EMERGENCY WALL PACK	LED	N/A	N/A	SURFACE	UNV	10	HEW	EMER/LED-WHT-SDT	
F1	EXTERIOR WALL MOUNTED LIGHT	LED	6350K	N/A	WALL ABOVE DOOR	UNV	2.78	HEW	PGP-HTR	

NOTES:
1. VERIFY MOUNTING, NUMBER OF FACES AND ARROW CONFIGURATION WITH PLANS PRIOR TO ORDERING FIXTURES.
2. VERIFY MOUNTING HEIGHT AND ORIENTATION WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.

GENERAL NOTES

1. REFER TO ARCHITECTURAL OVERALL FLOOR PLANS FOR LOCATIONS SCOPE OF WORK AREAS WITHIN THE BUILDING.
2. REFER TO MECHANICAL AND PLUMBING PLANS FOR LOCATIONS AND INFORMATION ON MECHANICAL AND PLUMBING EQUIPMENT.

KEY NOTES (#)

1. CONNECT NEW LIGHTS TO EXISTING LIGHTING CIRCUIT SERVING THIS AREA (16A LOAD MAX. PER 20A CIRCUIT).
2. NEW FIRE ALARM DEVICE. CONNECT TO EXISTING FIRE ALARM SYSTEM. VERIFY LOCATION WITH AHJ PRIOR TO INSTALLATION.
3. RELOCATED LIGHT SWITCH. RECONNECT TO LIGHTING IN THIS AREA.
4. CONNECT NEW RECEPTACLE TO NEAREST EXISTING 120V RECEPTACLE CIRCUIT (16.0A LOAD MAX. PER 20A CIRCUIT).
5. CONNECT NEW EXIT SIGN AND EMERGENCY WALL PACK TO NEAREST AVAILABLE UNCONTROLLED LIGHTING CIRCUIT (16A LOAD MAX. PER 20A CIRCUIT).
6. RE-INSTALL THE EXISTING LIGHT FIXTURES IN THIS AREA AFTER THE NEW SPRINKLER PIPING HAS BEEN INSTALLED.
7. PROVIDE 30/NF/2 DISCONNECT SWITCH FOR UNIT HEATER, 208V, 1-PH, 2.5KW. USE CIRCUIT RC-37/39. FIELD VERIFY THAT THE EXISTING BREAKER IN THE PANEL IS 20A/2P, OTHERWISE REPLACE WITH NEW. ROUTE 2#10, #10G, 3/4" CONDUIT FROM BREAKER TO UNIT. FIELD COORDINATE ACTUAL LOCATION OF UNIT PRIOR TO ROUGH-IN. NEW CIRCUIT BREAKER SHALL MATCH THE EXISTING BREAKER AIC RATING.
8. EVAPORATOR UNITS EVAP-1 AND EVAP-2, 208V, 1-PH, 0.2A, TO BE CIRCUITED FROM OUTDOOR UNIT CIRCUIT CU-2 (RC-34/36). ROUTE 3#12, #12G, 3/4"C FROM OUTDOOR UNIT VIA MOTOR RATED SWITCH. REFER TO MANUFACTURER'S WIRING INSTRUCTIONS FOR MORE INFORMATION BEFORE START OF WORK.
9. INSTALL NEW 2000KVA TRANSFORMER TO REPLACE THE EXISTING 2000KVA TRANSFORMER. PROVIDE ALL MATERIAL AND LABOR TO CONNECT THE NEW TRANSFORMER ASSEMBLY TO THE EXISTING PRIMARY AND SECONDARY SERVICES. COORDINATE THE WORK WITH THE OWNER FOR TIMING AND PHASING OF THE WORK IN ORDER TO MINIMIZE DISRUPTION OF SERVICE TO THE BUILDING. OBTAIN WRITTEN APPROVAL FROM THE OWNER AT MINIMUM OF FIVE BUSINESS DAYS PRIOR TO A SHUT DOWN OF SERVICE. SEE DRAWING B-E102 FOR ADDITIONAL DETAILS AND REQUIREMENTS.
10. NEW LOCATION OF RELOCATED EXISTING VENDING MACHINES, REFER TO B-ED101. EXTEND CIRCUIT TO NEW LOCATION. PROVIDE NEW OUTLETS. COORDINATE WITH OWNER FOR EXACT LOCATION BEFORE ROUGH IN.
11. NOT USED.
12. PROVIDE NEW TAP BOX AND TAP KIT FOR CONNECTION OF EXISTING BUSWAY FEEDING THE EXISTING MDP IN THE MECHANICAL ROOM AND THE NEW FEEDERS COMING FROM THE NEW TRANFORMER. FIELD VERIFY THE LOCATION OF THE EXISTING BUSWAY.
13. REMOVE EXISTING PRIMARY CABLES BETWEEN SWITCH A AND EXISTING TRANSFORMER. PRESERVE DUCTBANK IN GOOD AND SAFE CONDITION FOR REUSE AND EXTENSION TO SERVE THE NEW TRANSFORMER. REFERENCE DRAWING B-E102 AND B-E201 FOR ADDITIONAL REQUIREMENTS.
14. COORDINATE ROUTING OF UNDERGROUND WIRING WITH NEW EQUIPMENT AND EXISTING INSTALLATION.
15. TWO NEW 4" DUCT IN CONCRETE DUCTBANK TO MATCH EXISTING AND EXTEND TO NEW TRANSFORMER. FIELD VERIFY EXISTING DUCT QUANTITIES AND SIZES, MATCH EXISTING. REFERENCE DRAWING B-E201.

STATE OF TEXAS
JOSEPH D. CAMPOS
45513
REGISTERED
PROFESSIONAL ENGINEER

08/10/2017

DATE SIGNED:

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Registration No. F-001731
CEI Project Number D17-1263.00

TAS/ADA - FIRE MARSHAL DEFERRED MAINTENANCE PROJECTS FOR
MIDWESTERN STATE UNIVERSITY
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3410 TAFT BOULEVARD

DRAWN BY:

DATE: 15 MAY 2017

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 1	08/02/17
2	ADDENDUM 2	08/10/17

16782.00

B-E101

GENERAL NOTES
FIRE ALARM DEMOLITION

1. REMOVE EXISTING WORK AS REQUIRED TO CLEAR THE AREAS FOR THE NEW CONSTRUCTION.
2. ALL EQUIPMENT REMOVED THAT IS NOT BEING REUSED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE STORED OR DISPOSED OF AS DIRECTED.
3. EXISTING FIRE ALARM RACEWAY OR WIRING THAT IS NOT TO BE REUSED SHALL BE REMOVED BACK TO THE NEAREST ACTIVE JUNCTION BOX OR ACTIVE PULL BOX AND THE OPENINGS BLANKED. CONDUITS IN MASONRY SHALL BE CUT BELOW THE SURFACE AND THE MASONRY SURFACE PATCHED.
4. EXISTING FIRE ALARM RACEWAY OR WIRING THAT INTERFERES WITH THE NEW WORK SHALL BE RELOCATED AND REVISED AS REQUIRED TO ACCOMMODATE THE NEW WORK.
5. MAINTAIN THE FIRE ALARM PROTECTION FOR ALL AREAS DURING DEMOLITION AS REQUIRED BY THE AHJ.
6. REMOVE ALL EXISTING EQUIPMENT NOT REUSED OR NOT NECESSARY FOR THE COMPLETION OF THE WORK.
7. COORDINATE ALL DEMOLITION WORK WITH ALL TRADES.
8. PROVIDE FIRE STOPPING AT ALL UNUSED OR REMOVED CONDUIT PENETRATIONS THROUGH EXISTING FLOOR SLABS AND WALLS TO MAINTAIN CURRENT FIRE RATING AND INTEGRITY OF THE WALL OR FLOOR ASSEMBLY. USE U.L. LISTED METHODS AND MATERIALS.
9. REPAIR THE CEILINGS, WALLS AND FLOORS TO MATCH THE ADJACENT UNAFFECTED AREAS WHERE ITEMS ARE TO BE REMOVED AND NOT REPLACED.

GENERAL NOTES
FIRE ALARM
EXISTING CONDITIONS

1. THE EXISTING AREAS OF WORK ARE BASED UPON EXISTING CONSTRUCTION DOCUMENTS AND VISUAL SURVEY. THE DRAWINGS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW THE FULL SCOPE OF EXISTING CONDITIONS THAT MAY AFFECT THE WORK. A FIELD VISIT, PRIOR TO SUBMITTING A BID, IS REQUIRED TO CAREFULLY EXAMINE AND FIELD VERIFY THE EXISTING CONDITIONS. FIELD VERIFY THE QUANTITY AND LOCATION OF ALL EXISTING EQUIPMENT AND THE DIMENSIONS, ETC., PRIOR TO BID. PROVIDE ALL LABOR AND MATERIALS TO:
   A. MODIFY EXISTING CONDITIONS TO ACCOMMODATE THE NEW WORK.
   B. REPAIR OR REWORK EXISTING SYSTEMS TO REMAIN SO THEY COMPLY WITH CODE REQUIREMENTS AND OPERATE PROPERLY.
   C. COORDINATE THE WORK WITH ALL OTHER TRADES.
   D. PROVIDE A COMPLETE AND OPERATING INSTALLATION.
2. PREVENT DAMAGE TO EXISTING EQUIPMENT TO BE RELOCATED OR REUSED. WHERE DAMAGE OCCURS, REPLACE OR REPAIR THE EQUIPMENT TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST. THOROUGHLY CLEAN ALL ITEMS BEFORE REINSTALLATION.
3. PAINT, PATCH AND REPAIR ADJACENT AREAS THAT ARE AFFECTED BY THE WORK TO MATCH THE UNAFFECTED ADJACENT SURFACE.

FIRE ALARM DESIGN
AND INSTALLATION
GENERAL NOTES

1. THE FIRE ALARM DESIGN IS PERFORMANCE BASED. A COMPLETE FIRE ALARM SYSTEM SHALL BE DESIGNED AND SEALED BY A NICET LEVEL IV CERTIFIED DESIGNER. THE EXACT DEVICE LOCATIONS, NUMBER OF DEVICES, DEVICE TYPES, WIRING, POWER SUPPLIES, VOLTAGE DROP, CALCULATIONS, ETC., SHALL BE PROVIDED WITH SHOP DRAWINGS PREPARED BY THE LICENSED FIRE ALARM DESIGNER.
2. VISIT THE SITE PRIOR TO BID AND FIELD VERIFY EXISTING CONDITIONS. COORDINATE THE FIRE ALARM DESIGN AND INSTALLATION REQUIREMENTS WITH OTHER TRADES PRIOR TO BID AND DURING CONSTRUCTION. PROVIDE ALL LABOR MATERIALS REQUIRED FOR A COMPLETE CODE COMPLIANT FIRE ALARM SYSTEM.
3. PROVIDE THE DESIGN AND LAYOUT AND INSTALLATION OF A COMPLETE SYSTEM IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS (INCLUDING ADA, LIFE SAFETY AND ANY OTHER REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION). COORDINATE THE DESIGN WITH ALL THE CONTRACT DRAWINGS AND SPECIFICATIONS AND COORDINATE THE INSTALLATION WITH ALL TRADES TO PROVIDE A COMPLETE DESIGN AND INSTALLATION.
4. THE LICENSED FIRE ALARM DESIGNER SHALL SUBMIT DRAWINGS TO THE STATE FIRE MARSHAL'S OFFICE AND/OR AUTHORITY HAVING JURISDICTION FOR APPROVAL PRIOR TO SUBMITTING SHOP DRAWINGS TO ENGINEER.
5. REFERENCE MECHANICAL DRAWINGS FOR THE DESIGN AND INSTALLATION OF DUCT DETECTORS, FIRE/SMOKE DAMPERS AND CONTROL DAMPERS. COORDINATE THE ELECTRIC POWER AND CONTROL REQUIREMENTS WITH OTHER TRADES. PROVIDE A COMPLETE AND OPERATING SYSTEM. SEE MECHANICAL CONTROL DRAWINGS FOR ADDITIONAL INFORMATION.
6. COORDINATE THE DESIGN AND INSTALLATION OF ELECTRICAL POWER AND CONTROL REQUIREMENTS FOR FIRE DOORS WITH OTHER TRADES. PROVIDE A COMPLETE OPERATING SYSTEM.
7. VERIFY THE FINAL LOCATION OF THE FIRE ALARM CONTROL AND ANNUNCIATOR (WHERE REQUIRED) PANELS WITH THE LOCAL AUTHORITY HAVING JURISDICTION PRIOR TO ROUGH-IN. NOTIFY THE ENGINEER IF THE LOCATION VARIES FROM THE LOCATION SHOWN ON THE DRAWINGS. PROVIDE THE DESIGN, LABOR AND MATERIALS TO ACCOMMODATE A REVISED LOCATION.
8. COORDINATE THE LOCATION AND INSTALLATION OF THE ELECTRICAL POWER FOR ALL FIRE ALARM CONTROL PANELS AND RELATED DEVICES WITH THE OTHER TRADES. PROVIDE A COMPLETE OPERATING SYSTEM.
9. SEAL PENETRATIONS OF RATED WALLS WITH APPROVED FIRE CAULKING TO MAINTAIN THE FIRE RATING AND INTEGRITY OF THE WALL ASSEMBLY.
10. PENETRATIONS OF EXTERIOR WALLS AND ROOF DECK SHALL BE WEATHER TIGHT.
11. COORDINATE THE LOCATION/ROUGH-IN AND INSTALLATION OF CONDUITS, J-BOXES, BACK BOXES, ETC., WITH THE OTHER TRADES. PROVIDE A COMPLETE OPERATING SYSTEM.
12. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL SYSTEM PERFORMANCE REQUIREMENTS.
13. THE MOST STRINGENT REQUIREMENT SHALL GOVERN WHEN THERE ARE CONFLICTS BETWEEN THE SPECIFICATIONS AND DRAWINGS.

GENERAL NOTES
ELECTRICAL DEMOLITION

1. REMOVE EXISTING WORK AS INDICATED ON THE DRAWINGS OR AS REQUIRED TO CLEAR THE AREAS FOR THE NEW CONSTRUCTION.
2. ALL EQUIPMENT REMOVED THAT IS NOT TO BE REUSED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE STORED OR DISPOSED OF AS DIRECTED.
3. COMPLETELY REMOVE ELECTRICAL WORK SHOWN TO BE DEMOLISHED OR IS NOT REQUIRED. EXISTING RACEWAYS THAT ARE NOT TO BE REUSED SHALL BE REMOVED BACK TO THE NEAREST ACTIVE JUNCTION BOX OR ACTIVE PULL BOX AND THE OPENINGS BLANKED. CONDUITS IN MASONRY SHALL BE CUT BELOW THE SURFACE AND THE MASONRY SURFACES PATCHED.
4. DURING DEMOLITION WORK, MAINTAIN POWER TO ALL CIRCUITS THAT ARE TO REMAIN IN SERVICE.
5. REMOVE AND DISPOSE OF ALL EXISTING ELECTRICAL EQUIPMENT NOT REUSED OR NOT NECESSARY FOR THE COMPLETION OF THIS PROJECT.
6. COORDINATE ALL DEMOLITION WORK WITH ALL TRADES.
7. PROVIDE FIRE STOPPING AT ALL UNUSED OR REMOVED CONDUIT PENETRATIONS THROUGH EXISTING FLOOR SLABS AND WALLS TO MAINTAIN CURRENT FIRE RATING AND THE INTEGRITY OF THE WALL OR FLOOR ASSEMBLY. USE UL LISTED METHODS AND MATERIALS.
8. REPAIR (AS REQUIRED) THE CEILINGS, WALLS AND FLOORS TO MATCH THE SURROUNDING AREAS WHERE ITEMS ARE TO BE REMOVED AND NOT REPLACED.
9. VISIT THE SITE PRIOR TO BID AND FIELD VERIFY EXISTING CONDITIONS. NOTIFY THE ENGINEER WHERE EXISTING CONDITIONS ARE IN CONFLICT WITH THE CONSTRUCTION DOCUMENTS. COORDINATE THE ELECTRICAL DEMOLITION SCOPE OF WORK WITH THE OTHER TRADES AND INCLUDE ALL LABOR AND MATERIALS FOR A COMPLETE AND OPERATING INSTALLATION.

GENERAL NOTES EXISTING
ELECTRICAL CONDITIONS

1. THE EXISTING AREAS OF WORK, INCLUDING SITE UTILITIES SHOWN ON THE DRAWINGS, ARE BASED UPON EXISTING CONSTRUCTION DOCUMENTS AND VISUAL SURVEY. THE DRAWINGS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW THE FULL SCOPE OF EXISTING CONDITIONS THAT MAY AFFECT THE WORK. A FIELD VISIT, PRIOR TO SUBMITTING A BID, IS REQUIRED TO CAREFULLY EXAMINE AND FIELD VERIFY THE EXISTING CONDITIONS. FIELD VERIFY DIMENSIONS OF ALL EXISTING EQUIPMENT LOCATIONS AND THE DIMENSIONS OF SITE UTILITIES, ETC., PRIOR TO BID. PROVIDE ALL LABOR AND MATERIALS TO:
   A. MODIFY EXISTING CONDITIONS TO ACCOMMODATE THE NEW WORK.
   B. REPAIR OR REWORK EXISTING SYSTEMS TO REMAIN SO THEY COMPLY WITH CODE REQUIREMENTS AND OPERATE PROPERLY.
   C. COORDINATE THE WORK WITH ALL OTHER TRADES.
   D. PROVIDE A COMPLETE AND OPERATING INSTALLATION.
2. PREVENT DAMAGE TO EXISTING EQUIPMENT TO BE RELOCATED OR REUSED. WHERE DAMAGE OCCURS, REPLACE OR REPAIR THE EQUIPMENT TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST. THOROUGHLY CLEAN ALL ITEMS BEFORE REINSTALLATION.
3. PAINT, PATCH AND REPAIR ADJACENT AREAS THAT ARE AFFECTED BY THE WORK TO MATCH THE UNAFFECTED ADJACENT SURFACE.
4. CLEAN AND RELAMP ALL LIGHT FIXTURES THAT ARE TO BE RELOCATED OR REUSED.
5. NEATLY UPDATE EXISTING PANELBOARD SCHEDULES TO SHOW ALL CHANGES. PROVIDE A NEW TYPEWRITTEN SCHEDULE IF REQUIRED BY THE ENGINEER.
6. LOCATE ALL EXISTING UTILITIES PRIOR TO STARTING THE WORK. PROTECT EXISTING UTILITIES FROM DAMAGE.
7. RELOCATE EXISTING ELECTRICAL POWER OR LIGHTING EQUIPMENT OR SYSTEMS AS REQUIRED THAT INTERFERE WITH THE NEW WORK AND TO ACCOMMODATE THE WORK OF OTHER TRADES.
8. ELECTRICAL DEVICES, EQUIPMENT AND SYSTEMS LOCATED IN AREAS OUTSIDE THE AREA OF WORK SHALL REMAIN IN SERVICE UNLESS OTHERWISE NOTED. FURNISH AND INSTALL ACCESSIBLE JUNCTION BOXES AND REWORK EXISTING CIRCUITS AS REQUIRED TO MAINTAIN SERVICE CONTINUITY.
9. NEW CIRCUIT BREAKERS INSTALLED IN EXISTING PANELBOARDS SHALL BE OF THE SAME MANUFACTURER AND MATCH THE SHORT CIRCUIT RATING (AIC) AS THE PANELBOARD.

GENERAL ELECTRICAL
NOTES

1. THE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC. COORDINATE THE INSTALLATION OF THE ELECTRICAL SYSTEMS WITH THE OTHER TRADES. CORRECT INTERFERENCES AT NO ADDITIONAL COST.
2. COORDINATE THE FINAL LOCATION OF THE MECHANICAL, FIRE ALARM, FIRE SPRINKLER AND OTHER TRADES EQUIPMENT PRIOR TO ROUGH-IN. PROVIDE ALL LABOR AND MATERIALS FOR A COMPLETE INSTALLATION.
3. COORDINATE THE WORK, INCLUDING POWER OUTAGES, WITH THE OWNER'S OPERATIONS. MAINTAIN POWER TO ESSENTIAL SERVICES AT NO ADDITIONAL COST.
4. PROVIDE ADDITIONAL SUPPORT FOR ELECTRICAL EQUIPMENT AND RACEWAY TO PROVIDE A STRUCTURALLY SOUND INSTALLATION.
5. SEAL RACEWAY AND WIRING THAT ENTER CONDITIONED AREAS FROM NONCONDITIONED AREAS TO PROVIDE AN AIRTIGHT SEAL. USE U.L. LISTED MATERIALS AND METHODS.
6. ALL NEW DEVICES SHALL BE FLUSH MOUNTED UNLESS NOTED OTHERWISE.
7. SIZE ELECTRICAL GROUNDING CONDUCTORS PER THE NATIONAL ELECTRICAL CODE (NEC) 250-122.
8. EXISTING FLOOR, WALL OR CEILING AREAS THAT ARE MODIFIED SHALL BE REPAIRED/PATCHED AND PAINTED TO MATCH THE UNAFFECTED ADJACENT AREA.
9. THE USE OF ANY PROCESS OR MATERIAL CONTAINING ASBESTOS OR PCB IS PROHIBITED.
10. PROVIDE ALL LABOR, MATERIALS, TRANSPORT AND PROPER DISPOSAL OR RECYCLING OF ALL WASTE MATERIAL. UPON REQUEST, PROVIDE WRITTEN CERTIFICATION THAT THE DISPOSAL AND RECYCLING COMPLY WITH ALL FEDERAL, EPA, STATE AND LOCAL GOVERNMENT REGULATIONS.

1

STATE OF TEXAS
JOSEPH D. CAMPOS
45513
REGISTERED
PROFESSIONAL ENGINEER

08/10/2017

DATE SIGNED:

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TAS/ADA - FIRE MARSHAL DEFERRED MAINTENANCE PROJECTS FOR
MIDWESTERN STATE UNIVERSITY
WICHITA FALLS, TEXAS

3410 TAFT BOULEVARD

DRAWN BY:

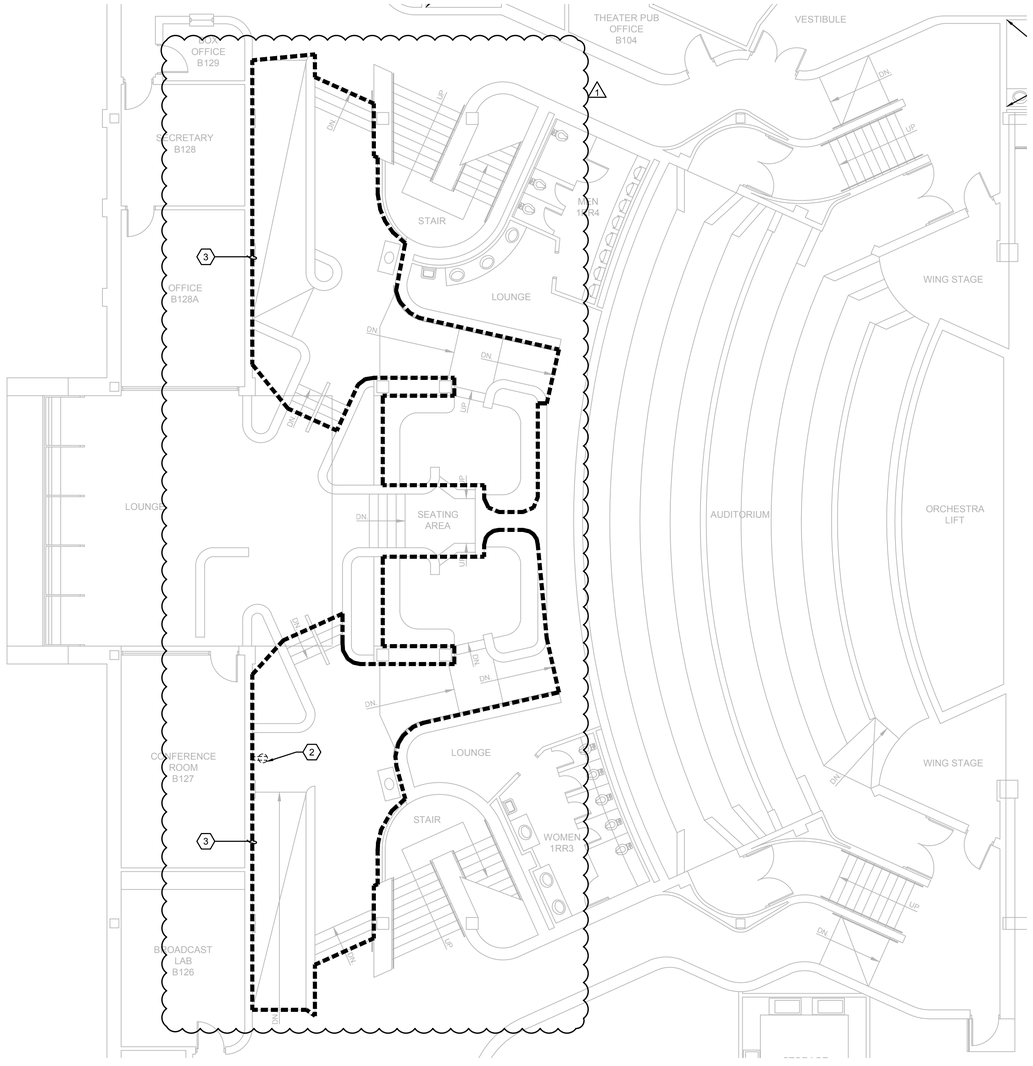
DATE: 15 MAY 2017

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	08/10/17

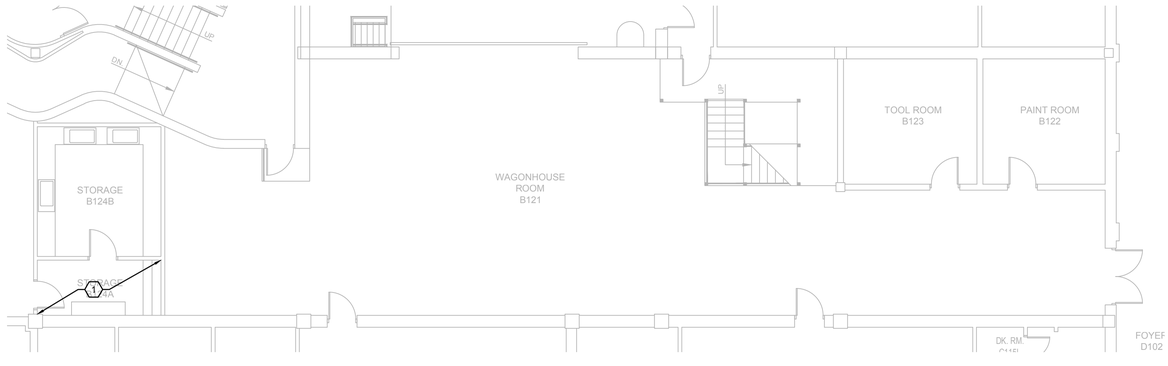
16782.00

E001



FAIN FINE ARTS - FIRST FLOOR - AREA 1D
ELECTRICAL DEMOLITION PLAN

1 / FF-ED102 SCALE: 1/8" = 1'-0"



FAIN FINE ARTS - FIRST FLOOR - AREA 1C
ELECTRICAL DEMOLITION PLAN

1 / FF-ED102 SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. REFER TO ARCHITECTURAL OVERALL FLOOR PLANS FOR LOCATIONS SCOPE OF WORK AREAS WITHIN THE BUILDING.

KEY NOTES (#)

1. REMOVE ALL LIGHTS IN THIS AREA. RETAIN CIRCUITING FOR RE-USE WITH NEW LIGHTS. FIELD COORDINATE THE EXTENT OF THE CEILING DEMO WITH ARCHITECT PRIOR TO DEMOLITION.
2. REMOVE EXISTING WIRING DEVICE. RETAIN CIRCUITING FOR RE-USE.
3. REFER TO ARCHITECTURAL PLANS FOR THE EXTENT OF DEMOLITION IN THIS AREA. FIELD VERIFY LOCATION AND QUANTITY OF ELECTRICAL RECEPTACLES IN THIS AREA. REMOVE ALL WALL MOUNTED RECEPTACLES, RETAIN BRANCH CIRCUITING FOR RE-USE, REFER TO FF-E102.

STATE OF TEXAS
JOSEPH D. CAMPOS
45513
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08/10/2017

DATE SIGNED:

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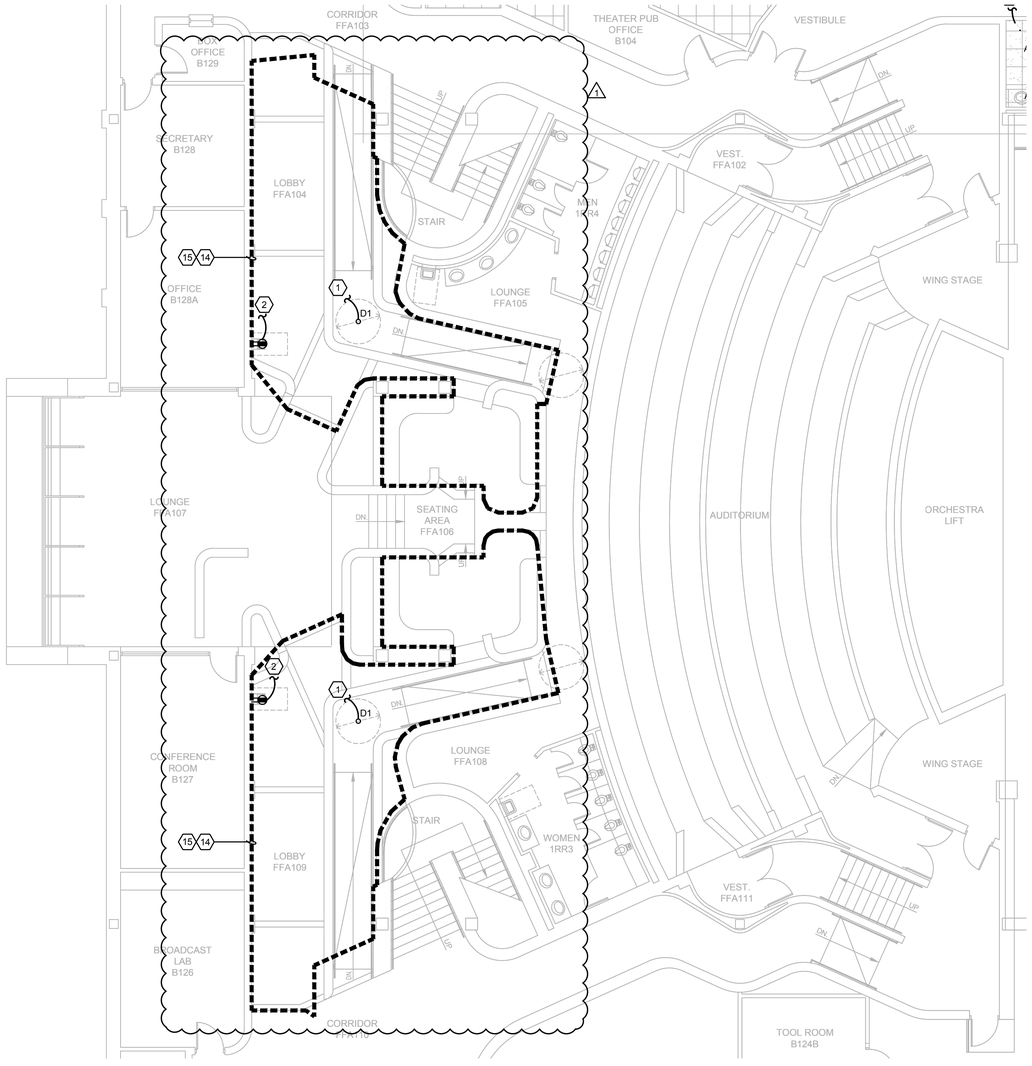
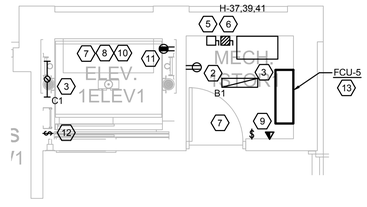


FAIN FINE ARTS - FIRST FLOOR - AREA 1D ELECTRICAL PLAN

1 / FF-E102 SCALE: 1/8" = 1'-0"



FAIN FINE ARTS - FIRST FLOOR ELECTRICAL ELEVATOR PLAN

3 / FF-E102 SCALE: 1/4" = 1'-0"

PANEL H (NEW)

S.C. RATING 22,000 AIC

480 Y/ 277 VOLT, 3 PHASE, 4 WIRE

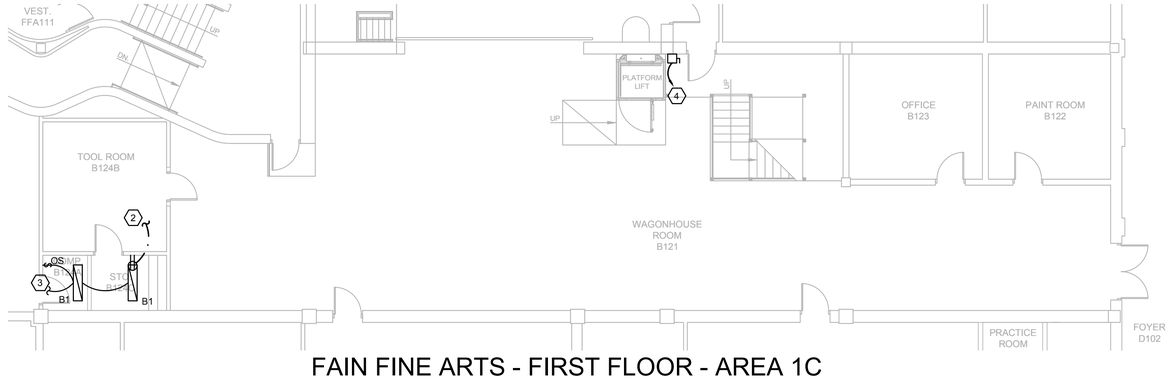
LOCATION: ELECTRICAL ROOM — 400 AMP M.L.O.
MOUNTING: SURFACE — 400 AMP BUS
FED FROM: PANEL HD — 100% NEUTRAL BUS

WIRE SIZE	CKT	DESCRIPTION	VA	A	P	PH	P	A	VA	DESCRIPTION	CKT	WIRE SIZE
	1		10000			A			10000		2	
E	3	(EX) HW PUMP	10000	50	3	B	3	50	10000	(EX) ORCHESTRA ELEVATOR	4	E
	5		10000			C			10000		6	
	7		5000			A					8	
E	9	(EX) VENTILATING FAN	5000	30	3	B	3	25		(NEW) CU-3	10	
	11		5000			C					12	
	13		2500			A			2500		14	
E	15	(EX) N. CONDENSATE PUMP	2500	20	3	B	3	20	2500	(EX) W. SUMP PUMP	16	E
	17		2500			C			2500		18	
	19		2500			A			2500		20	
E	21	(EX) S. CONDENSATE PUMP	2500	20	3	B	3	20	2500	(EX) E. SUMP PUMP	22	E
	23		2500			C			2500		24	
	25		2500			A	1	20		SPARE	26	
E	27	(EX) AIR COMPRESSOR	2500	20	3	B	1	20		SPARE	28	
	29		2500			C	1	20		SPARE	30	
	31	(EX) STAGE BSMT. LTS	1000	20	1	A	1	20		SPARE	32	
	33	(EX) MECH RM LTS.	1000	20	1	B	1			SPACE ONLY	34	
	35	SPARE		20	1	C	1			SPACE ONLY	36	
	37		10000			A			25000		38	
	39	(NEW) ELEVATOR	10000	60	3	B	3	125	25000	(EX) CHW PUMP	40	E
	41		10000			C			25000		42	
	43	SPACE ONLY			1	A	1			SPACE ONLY	44	
	45	SPACE ONLY			1	B	1			SPACE ONLY	46	
	47	SPACE ONLY			1	C	1			SPACE ONLY	48	
	49	SPACE ONLY			1	A	1			SPACE ONLY	50	
	51	SPACE ONLY			1	B	1			SPACE ONLY	52	
	53	SPACE ONLY			1	C	1			SPACE ONLY	54	
	55	SPACE ONLY			1	A	1			SPACE ONLY	56	
	57	SPACE ONLY			1	B	1			SPACE ONLY	58	
	59	SPACE ONLY			1	C	1			SPACE ONLY	60	

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	LAMP TYPE	LAMP COLOR TEMP	LAMP CRI	MOUNTING	ELECTRICAL VOLTS	ELECTRICAL VA	MANUFACTURER	CATALOG NUMBER	NOTES
A1	2X2 LENSED TROFFER	FLUORESCENT	4000K	85	RECESSED GRID	UNV	35	HEW	50G-S22-2-17-F-AF12125-UNV	
B1	1X4 SURFACE MOUNTED WRAP AROUND	FLUORESCENT	4000K	85	SURFACE	UNV	65	HEW	21-4-232-I-EB2-UNV	
C1	ELEVATOR PIT LIGHT	FLUORESCENT	4000K	85	SURFACE	UNV	65	HEW	93-4-232-A-EB2	3
D1	DOWNLIGHT	LED	4000K	85	RECESSED	UNV	25	HEW		4
X1	STANDARD LED EXIT SIGN	LED	N/A	N/A	SURFACE	UNV	10	HEW	EXIT-R-EM-WHT-SDT	1,2
E1	INTERIOR EMERGENCY WALL PACK	LED	N/A	N/A	SURFACE	UNV	10	HEW	EMER/LED-WHT-SDT	
F1	EXTERIOR WALL MOUNTED LIGHT	LED	6350K	N/A	WALL ABOVE DOOR	UNV	2.78	HEW	PGP-HTR	5

NOTES:
1. VERIFY MOUNTING, NUMBER OF FACES AND ARROW CONFIGURATION WITH PLANS PRIOR TO ORDERING FIXTURES.
2. VERIFY MOUNTING HEIGHT AND ORIENTATION WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.
3. WALL MOUNT IN ELEVATOR PIT.
4. FIELD COORDINATE MOUNTING OF DOWNLIGHT WITH ARCHITECT PRIOR TO ROUGH-IN.
5. PROVIDE FIXTURE WITH LOW TEMPERATURE EMERGENCY BALLAST AND INTEGRAL PHOTOCELL FOR ON/OFF CONTROL.



FAIN FINE ARTS - FIRST FLOOR - AREA 1C ELECTRICAL PLAN

2 / FF-E102 SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. REFER TO ARCHITECTURAL OVERALL FLOOR PLANS FOR LOCATIONS SCOPE OF WORK AREAS WITHIN THE BUILDING.

KEY NOTES (#)

1. MOUNT NEW RECESSED CAN LIGHT UNDERNEATH STAIR LANDING. CONNECT NEW LIGHTS TO EXISTING LIGHTING CIRCUIT AND LOCAL LIGHTING CONTROLS SERVING THIS AREA.
2. CONNECT NEW RECEPTACLE TO NEAREST EXISTING 120V RECEPTACLE CIRCUIT (16A LOAD MAX. PER 20A CIRCUIT).
3. CONNECT NEW LIGHTS TO EXISTING LIGHTING CIRCUIT SERVING THIS AREA (16A LOAD MAX. PER 20A CIRCUIT).
4. USE CIRCUIT LB7-104, PROVIDE 20A/1P CIRCUIT BREAKER TO SERVE VERTICAL PLATFORM LIFT. FIELD COORDINATE ALL CONNECTION REQUIREMENTS PRIOR TO ROUGH IN. PROVIDE ALL REQUIRED INTERCONNECTIONS BETWEEN LIFT POWER SUPPLY AND LIFT CONTROL PANEL. VERIFY WITH EQUIPMENT VENDOR THAT AN OPTIONAL DISCONNECTING MEANS IS INCLUDED WITH THE PLATFORM LIFT, OTHERWISE PROVIDE WITH AND LOCATE NEAR THE EQUIPMENT.
5. ELEVATOR CAB LIGHT DISCONNECT 20A.,1P.,120V. CIRCUIT BREAKERS MOUNTED IN NEMA-1 ENCLOSURE WITH HANDLE PADLOCK ATTACHMENT CAPABLE OF LOCKING BREAKER IN OPEN POSITION. USE CIRCUIT LB7-110, PROVIDE 20A/1P CB AND 2/12, 1#12G, 3/4"C.
6. 60A., 3 POLE, 480V. NEMA-1 ENCLOSURE FUSED AT (60 AMPS). ALL IN ONE ELEVATOR DISCONNECT SWITCH WITH BUILT IN SHUNT TRIP BY BUSSMANN. ROUTE TO NEW 60A/3P CIRCUIT BREAKER IN NEW PANEL 'H'.
7. COORDINATE LOCATIONS OF ALL EQUIPMENT IN ELEVATOR EQUIPMENT ROOM WITH ELEVATOR SHOP DRAWINGS PRIOR TO ROUGH-IN.
8. CONNECT EMERGENCY SHUT-DOWN OF ELEVATOR AS REQUIRED. SEQUENCE EQUIPMENT TO SHUT-DOWN THE ELEVATOR BY SMOKE DETECTORS WHEN REQUIRED.
9. TELEPHONE FOR ELEVATOR CAB. CONNECT AS REQUIRED.
10. CONTRACTOR SHALL REFERENCE ELEVATOR SPECIFICATIONS. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELEVATOR MANUFACTURER PRIOR TO ROUGH-IN. FAILURE TO COORDINATE REQUIREMENTS WILL NOT RESULT IN ADDITIONAL COMPENSATION BEING PROVIDED TO THE CONTRACTOR.
11. PROVIDE WP/GFI RECEPTACLE LOCATED IN ELEVATOR PIT, FOR CONNECTION OF ELEVATOR PIT SUMP PUMP (SP-1). USE CIRCUIT LB7-106, WITH 2#10,#10G, 3/4"C, PROVIDE 20A/1P CB AT PANEL.
12. MOUNT LIGHT SWITCH FOR PIT LIGHTS NEXT TO LADDER INTO PIT.
13. FCU, 208V, 1-PH, 0.2A. USE CIRCUIT LB7-99/101, PROVIDE 20A/2P BREAKER IN PANEL AND ROUTE 2#12, #12G, 3/4" CONDUIT FROM BREAKER TO UNIT. COORDINATE WITH EQUIPMENT INSTALLER FOR LOCATIONS AND REQUIREMENTS.

1 14. INSTALL NEW RECEPTACLES ALONG NEW WALLS, REFER TO FF-ED102. THE QUANTITY OF THE NEW RECEPTACLES TO BE INSTALLED SHALL BE EQUAL TO THE QUANTITY THAT WAS REMOVED. LOCATE THE NEW RECEPTACLES ON THE NEW WALLS AS CLOSE AS POSSIBLE TO THE ORIGINAL LOCATION, FACING THE SAME ORIENTATION, AND TO BE MOUNTED AT 18" AFF AND/OR RAMP. REUSE EXISTING CIRCUIT EXTENDED TO NEW LOCATION.

15. COORDINATE WITH ARCHITECT AND GENERAL CONTRACTOR FOR ANY ADJUSTMENT AND RELOCATION OF LIGHTING FIXTURES IN THIS AREA.

STATE OF TEXAS — JOSEPH D. CAMPOS — 43513 — REGISTERED PROFESSIONAL ENGINEER

08/10/2017

DATE SIGNED:

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MIDWESTERN STATE UNIVERSITY

WICHITA FALLS, TEXAS

3410 TAFT BOULEVARD

DRAWN BY:

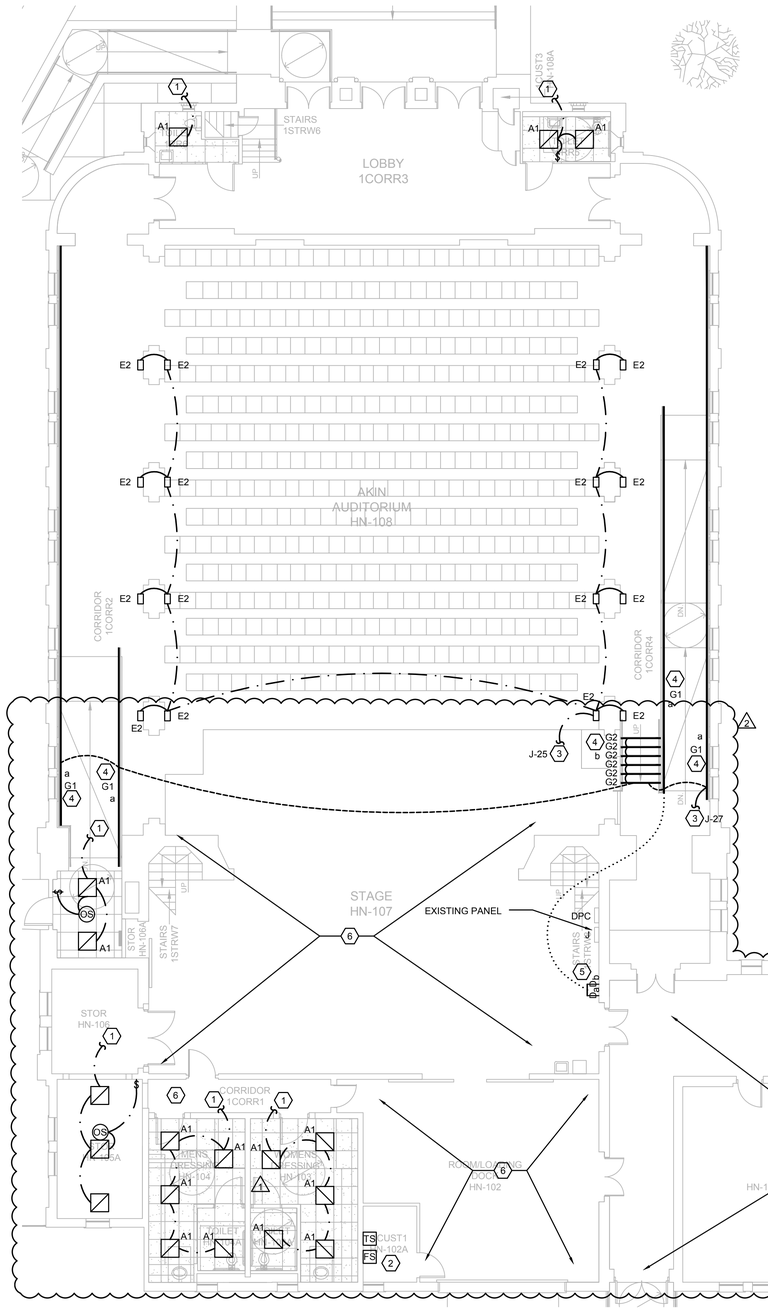
DATE: 15 MAY 2017

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	08/10/17

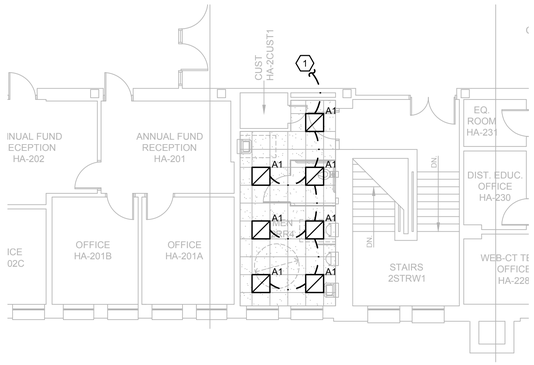
16782.00

FF-E102



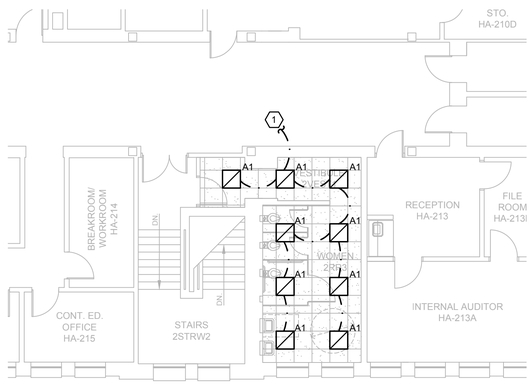
1 H-E101 — HARDIN ADMIN BUILDING - FIRST FLOOR - AREA 1B & 1A ELECTRICAL PLAN

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



2 H-E101 — HARDIN ADMIN BUILDING - SECOND FLOOR - AREA 2B ELECTRICAL PLAN

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



4 H-E101 — HARDIN ADMIN BUILDING - SECOND FLOOR - AREA 2C ELECTRICAL PLAN

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

GENERAL NOTES

1. REFER TO ARCHITECTURAL OVERALL FLOOR PLANS FOR LOCATIONS SCOPE OF WORK AREAS WITHIN THE BUILDING.
2. EMERGENCY AND EXIT LIGHTS SHALL BE CIRCUITED AHEAD OF ANY SWITCHING DEVICE.

KEY NOTES (#)

1. CONNECT NEW LIGHTS TO EXISTING LIGHTING CIRCUIT SERVING THIS AREA.
2. NEW FIRE ALARM DEVICE. CONNECT TO EXISTING FIRE ALARM SYSTEM. VERIFY LOCATION WITH AHJ PRIOR TO INSTALLATION.
3. HOMERUN CIRCUIT TO PANEL "J", USE AVAILABLE SPACE.PROVIDE 20A/1P CIRCUIT BREAKER , USE 2#12, 1#12G, 3/4"C.
4. NEW DIMMABLE 0-10V LED AISLE AND STEP LIGHTING (TYPE G1 & G2) TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATION, PROVIDE ALL NECESSARY MATERIALS FOR A COMPLETE OPERATING SYSTEM. COORDINATE WITH ARCHITECT FOR LOCATION AND DETAILS. AISLE LIGHTING G1 TO BE CONTROLLED BY DIMMER ZONE "a", STEP LIGHTING G2 TO BE CONTROLLED BY DIMMER ZONE "b".
5. PROVIDE TWO ZONE WALL DIMMING STATION COMPATIBLE WITH FIXTURES G1 AND G2. DIMMING WALL STATION TO BE EQUAL TO GANGED (TWO) NXSW-ORLO AND NX CONTROLLER NXRC-2RD-UNV, HUBBELL NX SERIES NETWORKED LIGHTING CONTROLS. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR MORE DETAILS.
6. REMOVE ALL LIGHTS IN THIS AREA AND STORE THEM DURING CONSTRUCTION FOR RE-INSTALLATION AFTER THE SPRINKLER PIPING HAS BEEN INSTALLED. COORDINATE REMOVAL AND RE-INSTALLATION WITH FIRE PROTECTION CONTRACTOR. REFER TO SECTION 260112 "INTERDISCIPLINARY COORDINATION FOR CONNECTION AND RECONNECTION OF OTHER EQUIPMENT. MAKE NECESSARY ADJUSTMENT TO THE WIRING SUCH AS EXTENDING THE CIRCUIT AND ADDING WIRING DEVICES AS ROUTING MAY BE AFFECTED BY THE FIRE PROTECTION INSTALLATION.

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	LAMP			MOUNTING	ELECTRICAL		MANUFACTURER	CATALOG NUMBER	NOTES
		TYPE	COLOR TEMP	CRI		VOLTS	VA			
A1	2X2 LENSED TROFFER	FLUORESCENT	4000K	85	RECESSED GRID	UNV	35	HEW	50G-S22-2-17-F-AF12125-UNV	
G1	LED PATHWAY, AISLE LIGHTING	LED	N/A	N/A	FLOOR	12V	1.8/FT	CALIFORNIA ACCENT LTG. INC.	AIL1800-4"-LED- -SLC	PROVIDE DIMMABLE DRIVER, 120V
G2	CARPETED STEP LIGHT	LED	N/A	N/A	FLOOR	12V	1.8/FT	CALIFORNIA ACCENT LTG. INC.	STL6125-4-LED-_-SL	PROVIDE DIMMABLE DRIVER, 120V
E2	EMERGENCY LED SCONCE	LED	6350K	N/A	WALL	120V	2.78	DUAL LITE	PGZ	NORMAL OFF, EMERGENCY ON

GENERAL NOTES:
1. FOR EXIT LIGHTS, VERIFY MOUNTING, NUMBER OF FACES AND ARROW CONFIGURATION WITH PLANS PRIOR TO ORDERING FIXTURES.
2. VERIFY MOUNTING HEIGHT AND ORIENTATION WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.
3. COORDINATE AND VERIFY FIXTURE/LAMP COLOR AND FINISH WITH ARCHITECT.
4. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH ARCHITECT PRIOR TO ROUGH-IN
5. PROVIDE LIGHTING FIXTURE/ASSEMBLY COMPLETE WITH HARDWARE, CONNECTORS, DRIVERS, ETC. NECESSARY FOR A SATISFACTORY AND WORKABLE INSTALLATION.
6. INSTALL PER MANUFACTURER'S RECOMMENDATION.

JOSEPH D. CAMPOS
45513
REGISTERED
PROFESSIONAL ENGINEER
STATE OF TEXAS
08/10/2017

DATE SIGNED:

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TAS/ADA - FIRE MARSHAL DEFERRED MAINTENANCE PROJECTS FOR
MIDWESTERN STATE UNIVERSITY
3410 TAFT BOULEVARD
WICHITA FALLS, TEXAS

DRAWN BY:

DATE: 15 MAY 2017

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 1	08/02/17
2	ADDENDUM 2	08/10/17

16782.00

H-E101

GENERAL NOTES

(NOT ALL NOTES APPLY TO EACH SHEET)

A. REFER TO SYMBOL LEGEND AND GENERAL NOTES.

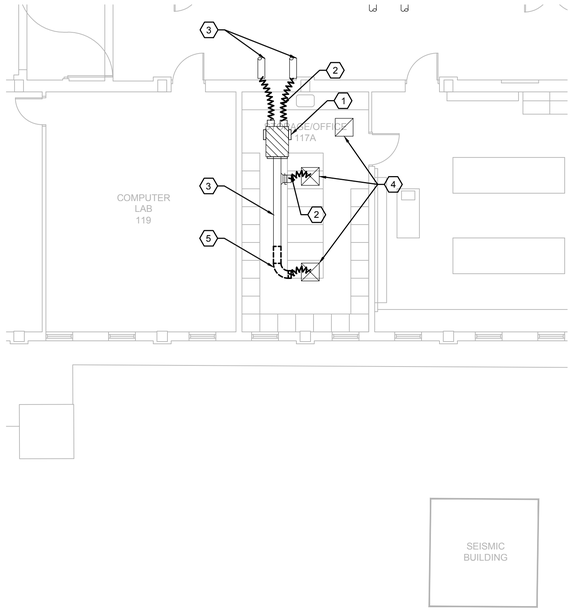
B. REFER TO SPECIFICATIONS.

C. REFER TO ARCHITECTURAL OVERALL FLOOR PLANS FOR LOCATIONS SCOPE OF WORK AREAS WITHIN THE BUILDING.

KEY NOTES (#)

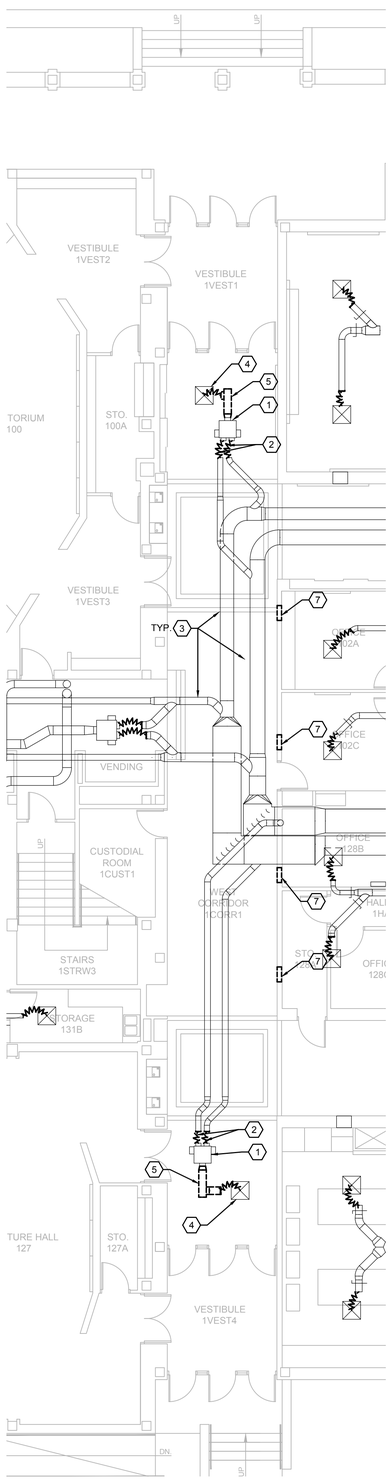
(NOT ALL NOTES APPLY TO EACH SHEET)

1. EXISTING DUAL DUCT MIXING BOX TO REMAIN.
2. REMOVE EXISTING FLEX DUCT.
3. EXISTING DUCTWORK TO REMAIN.
4. EXISTING SUPPLY DIFFUSER/RETURN GRILLE TO BE REMOVED AND REUSED UNLESS DAMAGED. IF DAMAGED REPLACE WITH DIFFUSER/GRILL OF SAME SIZE, MANUFACTURER, MODEL AND COLOR.
5. DEMOLISH EXISTING DUCTWORK TO THE EXTENT SHOWN IN PLANS.
6. EXISTING FLOOR HATCH TO ACCESS THE CRAWLSPACE/BASEMENT AREA BELOW. DO NOT DEMOLISH THIS ACCESS DOOR.
7. REMOVE AND DISPOSE OF EXISTING RETURN AIR TRANSFER DUCT AND GRILLE. CONTRACTOR SHALL INSPECT FULL WALL AND ADDRESS ANY ADDITIONAL TRANSFERS NOT SHOWN ON THIS PLAN. COORDINATE WITH SHEET B-M101 FOR TRANSFERS TO REMAIN.



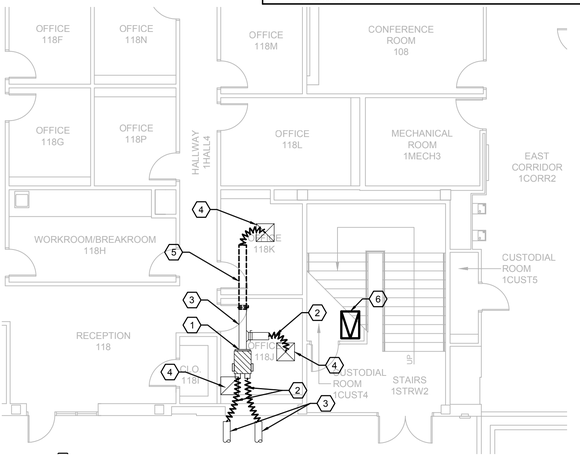
1 B-MD101 BOLIN SCIENCE HALL - FIRST FLOOR - AREA 1A MECHANICAL DEMOLITION PLAN

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



4 B-MD101 BOLIN SCIENCE HALL - FIRST FLOOR - AREA 1C MECHANICAL DEMOLITION PLAN

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



2 B-MD101 BOLIN SCIENCE HALL - FIRST FLOOR - AREA 1B MECHANICAL DEMOLITION PLAN

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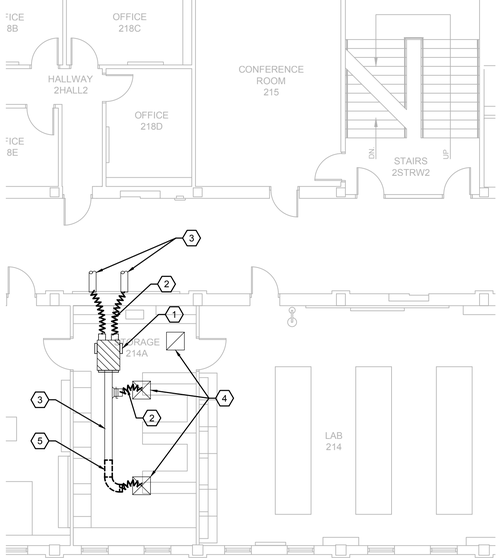
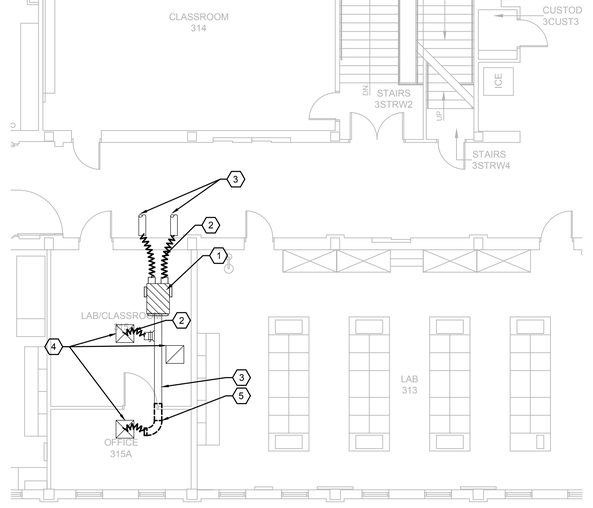


3 B-MD101 BOLIN SCIENCE HALL - SECOND FLOOR - AREA 2A MECHANICAL DEMOLITION PLAN

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



5 B-MD101 BOLIN SCIENCE HALL - THIRD FLOOR - AREA 3A MECHANICAL DEMOLITION PLAN

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

FRED C. CRABTREE, JR. 109799 LICENSED PROFESSIONAL ENGINEER

08/10/2017

DATE SIGNED:

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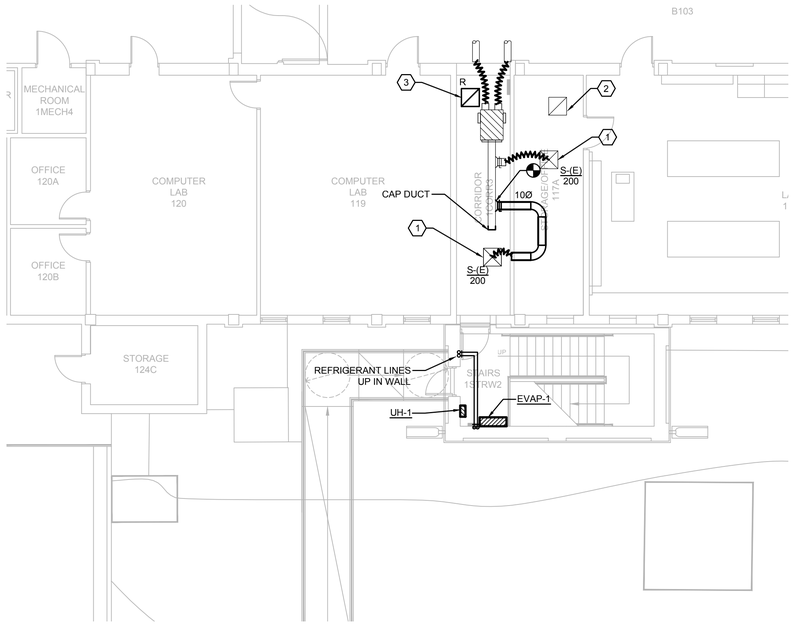
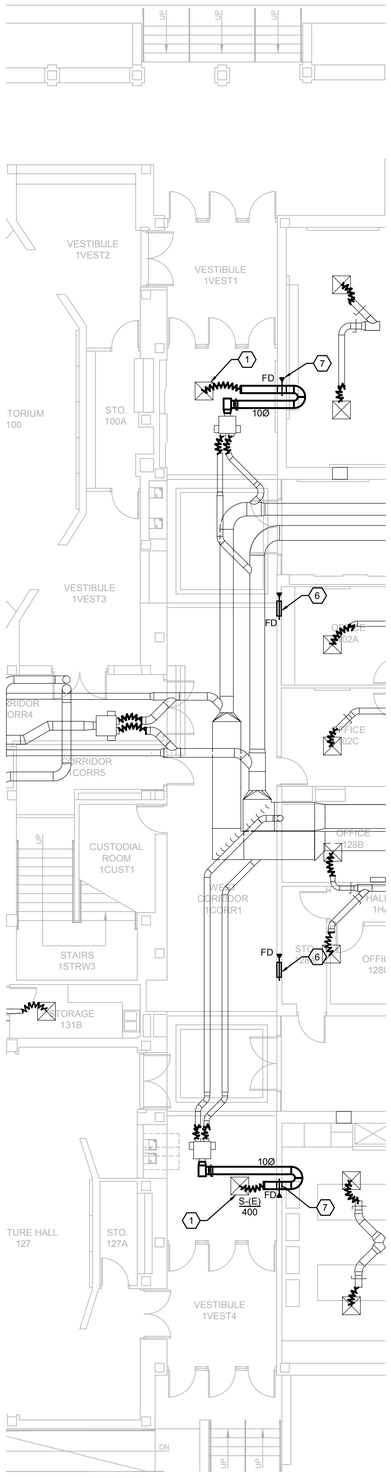
B-MD101

1



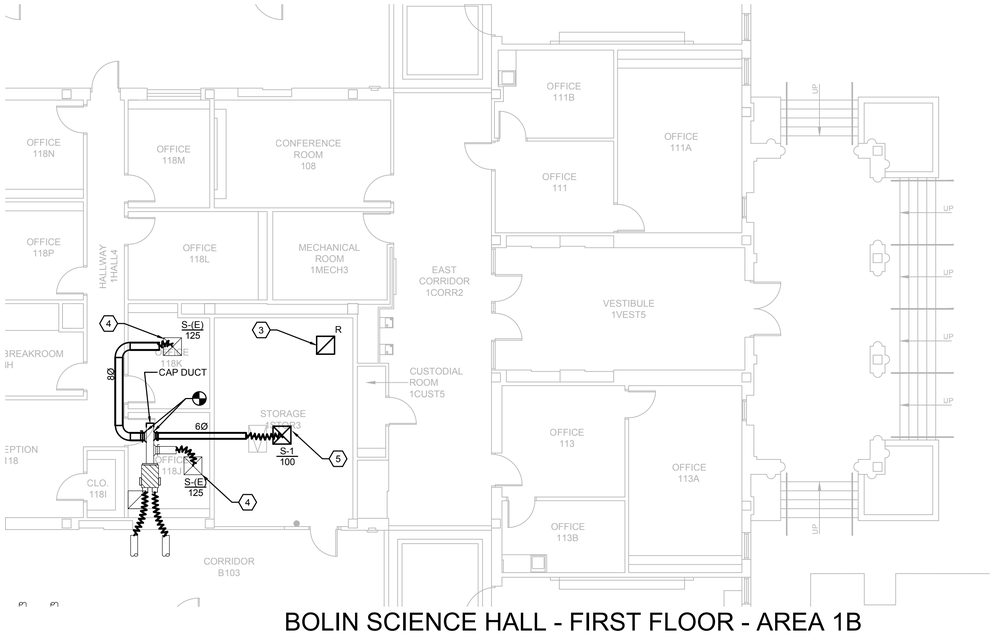
BOLIN SCIENCE HALL - FIRST FLOOR - AREA 1A MECHANICAL PLAN

1 / B-M101 SCALE: 1/8" = 1'-0"



BOLIN SCIENCE HALL - FIRST FLOOR - AREA 1C MECHANICAL DEMOLITION PLAN

3 / B-M101 SCALE: 1/8" = 1'-0"



BOLIN SCIENCE HALL - FIRST FLOOR - AREA 1B MECHANICAL PLAN

2 / B-M101 SCALE: 1/8" = 1'-0"

GENERAL NOTES

(NOT ALL NOTES APPLY TO EACH SHEET)

A. REFER TO SYMBOL LEGEND AND GENERAL NOTES.

B. REFER TO SPECIFICATIONS.

C. REFER TO ARCHITECTURAL OVERALL FLOOR PLANS FOR LOCATIONS SCOPE OF WORK AREAS WITHIN THE BUILDING.

KEY NOTES (#)

(NOT ALL NOTES APPLY TO EACH SHEET)

1. RELOCATE SUPPLY DIFFUSER AND BALANCE AS SHOWN ON PLAN. INSTALL NEW DIFFUSER IF THE ONE REMOVED FROM DEMOLITION IS DAMAGED. REFER TO DEMOLITION NOTES. COORDINATE LOCATION OF DIFFUSER WITH CEILING PLANS AND OTHER TRADES. REBALANCE EXISTING DUAL DUCT MIXING BOX AS REQUIRED.
2. RELOCATE RETURN AIR GRILLE. INSTALL NEW RETURN GRILLE IF THE ONE REMOVED FROM DEMOLITION IS DAMAGED. REFER TO DEMOLITION NOTES. COORDINATE LOCATION OF GRILLE WITH CEILING PLANS AND OTHER TRADES.
3. NEW RETURN AIR GRILLE. COORDINATE LOCATION WITH CEILING PLANS AND OTHER TRADES. ENSURE RETURN AIR HAS A FREE PATH OUT OF THE NEW ROOM, IF NOT PROVIDE RETURN AIR BOOT AS REQUIRED.
4. REBALANCE EXISTING SUPPLY DIFFUSER SHOWN ON PLAN.
5. NEW SUPPLY DIFFUSER, BALANCE AS SHOWN ON PLAN. COORDINATE LOCATION OF DIFFUSER WITH CEILING PLANS AND OTHER TRADES. RE-BALANCE EXISTING DUAL DUCT MIX BOX AS NEEDED.
6. INSTALL NEW FIRE DAMPER IN RETURN AIR DUCT, SIMILAR TO RUSKIN DIBD20G, 20X10. AND RETURN GRILLE SIMILAR TO TITUS 355RL, 20X10. PROVIDE ACCESS DOOR TO FIRE DAMPER IF INSTALLED IN A HARD CEILING AREA.
7. INSTALL 10" ROUND FIRE DAMPER SIMILAR TO RUSKIN FDR25 WITH ACCESS DOOR SIMILAR TO RUSKIN MODEL ADR1 FOR RESETTING THE FIRE DAMPER. PROVIDE ACCESS DOOR TO DUCTWORK IF FIRE DAMPER IS INSTALL IN A HARD CEILING AREA.

FRED C. CRABTREE, JR. 109799 LICENSED PROFESSIONAL ENGINEER
08/10/2017
DATE SIGNED:

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16782.00

B-M101

ELEVATOR SUMP PUMP SYSTEM

GENERAL

THE CONTRACTOR SHALL FURNISH AND INSTALL A PARKUSA ELEVADER MODEL ELV-100 COMPLETE PUMP, SEPARATOR, AND CONTROL AND ALARM SYSTEM AS SHOWN ON THE DRAWINGS. PUMP(S) SHALL BE PROVIDED FOR EACH ELEVATOR HOISTWAY.

THE SYSTEM SHALL BE CAPABLE OF PUMPING ALL WATER & FLUIDS AUTOMATICALLY FROM THE ELEVATOR PIT AS REQUIRED BY TDLR (TEXAS DEPARTMENT OF LICENSING AND REGULATION) ELEVATOR RULES AND ASME A17.1/CSA B44 SAFETY CODE FOR ELEVATORS AND ESCALATORS, 2007, SECTION 2.2.2.5. THE SYSTEM SHALL FUNCTION AUTOMATICALLY TO REMOVE WATER AND FLUIDS FROM THE PIT AUTOMATICALLY WITHOUT ANY HUMAN INTERVENTION. SYSTEMS THAT DO NOT REMOVE ALL THE FLUID INCLUDING OIL ARE NOT COMPLIANT AND WILL NOT BE ACCEPTED.

AN OIL-WATER SEPARATOR OR EQUIVALENT PROTECTION SHALL BE USED TO TREAT OILY WASTEWATER AUTOMATICALLY FROM THE ELEVATOR PIT PRIOR TO DISCHARGE INTO THE PUBLIC SANITARY SEWER AS REQUIRED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) AND LOCAL PLUMBING CODES. PUMPING INTO THE STORM SEWER IS NOT PERMITTED. SYSTEMS THAT DO NOT REMOVE THE OIL WILL NOT BE ACCEPTED.

SUMP PUMP

A SUBMERSIBLE SUMP PUMP IS LOCATED IN THE SUMP AREA OF THE ELEVATOR (REFER TO PLAN DRAWINGS). THE SUMP PUMP SHALL BE AS SPECIFIED ON THE SCHEDULE, HEAVY DUTY SUBMERSIBLE TYPE, CAPABLE OF PUMPING WATER, WATER/OIL AND OIL AT A MINIMUM CAPACITY OF 50 GPM @ 23' TDH, (3000 GPH AS PER ASME A17.1 SECTION 2.2.2.5 (2007). THE PUMP SHALL BE CONSTRUCTED AND TESTED TO MEET UL 778 STANDARDS AND SHALL INCLUDE THERMAL OVERLOAD PROTECTION. REFER TO THE SCHEDULE FOR CAPACITY AND ELECTRICAL REQUIREMENTS. THE PUMP SHALL BE CAPABLE OF OPERATING WITH THE WATER LEVEL COVERING ONLY 50% OF THE MOTOR CASING AND SHALL OPERATE AUTOMATICALLY EITHER CONTINUOUSLY OR INTERMITTENTLY AS REQUIRED BY THE ON-OFF FLOAT SWITCH CONTROL. THE PUMP SHALL HAVE A SIZE 1-1/4" MINIMUM DISCHARGE CONNECTION. THE MOTOR HOUSING AND FASTENING BOLTS SHALL BE CONSTRUCTED OF 304 STAINLESS STEEL AND HAVE CARBON CERAMIC SEALS. THE PUMP SHALL HAVE A SEMI-OPEN, NON-CLOGGING VORTEX IMPELLER AND SHALL BE DESIGNED FOR FLOOR MOUNTING COMPLETE WITH SUPPORT LEGS. A STAINLESS CHAIN SHALL BE PROVIDED FOR EASY MAINTENANCE.

OIL/WATER SEPARATOR

THE SEPARATOR IS LOCATED EITHER FREESTANDING; OR RECESSED ON FLOOR NEAR THE SHAFT; OR LOCATED OUTDOORS BURIED BELOW GRADE. REFER TO THE SCHEDULE FOR CAPACITY AND SIZE REQUIREMENTS. THE SEPARATOR UNIT IS RATED FROM 50 TO 200 GPM DEPENDING ON THE QUANTITY OF ELEVATOR SHAFTS TO BE SERVED, 50 GPM OR 3000 GPH AS PER ASME A17.1 SECTION 2.2.2.5 (2007). THE OIL/WATER SEPARATOR SHALL BE A PRE-ENGINEERED ENHANCED GRAVITY SEPARATOR CAPABLE OF TREATING WASTEWATER DISCHARGE FREE OF PETROLEUM HYDROCARBONS, CONCENTRATION OF LESS THAN 100 PARTS PER MILLION. OPERATING RANGE OF THE INFLUENT IS 40°F TO 180°F AND AMBIENT AIR TEMPERATURE FROM 0°F TO 140°F. THE SPECIFIC GRAVITY OF THE OILS AT THESE OPERATING TEMPERATURES IS .70 TO .95. THE SEPARATOR SHALL DESIGNED TO WITHSTAND STATIC AND DYNAMIC HYDRAULIC LOADINGS WHILE EMPTY AND DURING OPERATION. THE TANK SHALL BE CONSTRUCTED OF 4500 PSI PRECAST CONCRETE CONFORMING TO ASTM C-913 FOR TANKS, WEIRS, FLOW DISTRIBUTORS, AND ENERGY DISSIPATER DEVICES. ALL INTERNAL COMPONENTS SHALL CONSIST OF CORROSION RESISTANT MATERIALS OR BE EPOXY COATED. ALL WELDING SHALL BE ACCORDANCE WITH AWA D1.1 TO PROVIDE WATERTIGHT VESSEL THAT WILL NOT WARP OR DEFORM EXCESSIVELY UNDER LOAD. MANWAY ACCESS COVER SHALL BE H-20 TRAFFIC DUTY ,BOLTED AND GASKETED. THE SEPARATOR SHALL UTILIZE COALESCING MEDIA FABRICATED OF CALCIUM CARBONATE-FILLED OLEOPHILLIC POLYPROPYLENE PLASTIC MATERIAL AND ASSEMBLED INTO MODULES WITH 304 STAINLESS STEEL MATERIALS. MEDIA ASSEMBLY SHALL BE SELF-CLEANING AND REMOVABLE.

CONTROL SYSTEM

THE CONTROL SYSTEM SHALL CONSIST OF FLOAT SENSORS AND A SINGLE CONTROL PANEL (NEMA 4X WEATHERPROOF) THAT IS WALL MOUNTED NEAR THE ELEVATOR SHAFT. THE CONTROL PANEL SHALL BE CONSTRUCTED AND TESTED TO MEET UL508 STANDARDS AND SHALL BE HOUSED IN A WEATHERPROOF NEMA 4X ELECTRICAL ENCLOSURE WITH A WIRING TERMINAL STRIP FOR FIELD WIRING TO THE J-BOX IN THE HOISTWAY.

THE CONTROL PANEL SHALL HAVE THE FOLLOWING FUNCTIONS:

A. OPERATES THE SUMP PUMP, "ON/OFF" DEPENDING ON SHAFT WATER LEVELS. THE PANEL SHALL HAVE A "HAND-OFF-AUTO" SWITCH, A "PUMP RUN" LIGHT, AND AUXILIARY CONTACTS FOR A BAS SYSTEM.

B. INDICATES "SUMP HIGH LEVEL" OF THE ELEVATOR SHAFT. IN THE EVENT OF PUMP MALFUNCTION, THE PANEL SHALL HAVE A "SUMP HIGH LEVEL" ILLUMINATED RED LIGHT AND HIGH DECIBEL WARNING HORN, A "SILENCE" SWITCH AND AUXILIARY DRY CONTACTS FOR BAS SYSTEM.

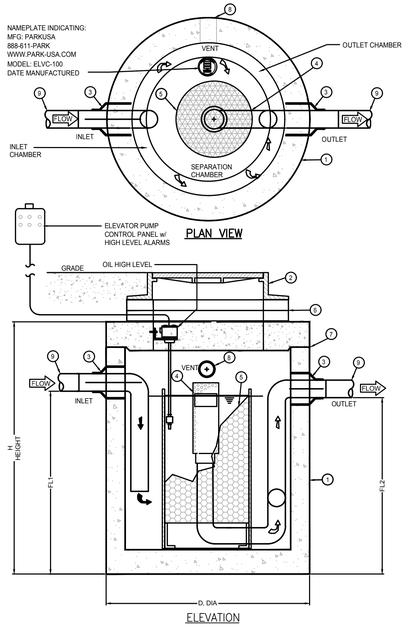
C. INDICATES "HIGH OIL LEVEL" OF THE SEPARATOR. IN THE EVENT OF A HIGH ACCUMULATION OF OIL IN THE SEPARATOR, THE PANEL SHALL HAVE A "SEPARATOR HIGH LEVEL" ILLUMINATED RED LIGHT & HIGH DECIBEL WARNING HORN, A "SILENCE" SWITCH, AND AUXILIARY DRY CONTACTS FOR BAS SYSTEM. NOTE: THE PRESENCE OF OIL DOES NOT PREVENT THE PUMP FROM OPERATING.

THE PANEL ALSO INCLUDES A SEPARATE OVER-CURRENT RELAY AND FIELD ADJUSTABLE MOTOR OVERLOAD HAVING A RANGE OF 5 TO 15 AMPS, FACTORY SET AT 8 AMPS FOR THIS PUMP APPLICATION. THE CONTROL PANEL SHALL HAVE A COMBINATION MANUAL "RESET/PUSH" TO TEST SWITCH FOR MOTOR OVERLOAD WITH BOTH AUTOMATIC, MANUAL RESET AND CONTROL DIAGNOSTICS. THE CONTROL SYSTEM MUST BE FACTORY SET FOR AUTOMATIC OVERLOAD RESTART.

THE CONTROL SYSTEM SHALL INCLUDE THREE FIELD ADJUSTABLE FLOAT SWITCHES LOCATED IN THE SUMP; PUMP OFF, PUMP ON, AND HIGH LEVEL. PROVIDE A FACTORY PREWIRED NEMA 6P WATER TIGHT JUNCTION BOX WITH A DIN RAIL MOUNTED WIRING TERMINAL STRIP. PROVIDE FACTORY INSTALLED WIRING OF PUMP AND FLOATS INTO A NEMA 6P JUNCTION BOX. ALL CABLES BETWEEN THE PUMP AND JUNCTION BOX SHALL BE A MAXIMUM OF 6' LONG PER NEC 2008. THE CABLE SHALL BE HEAVY USAGE, WATER TIGHT AND OIL RESISTANT. THE FLOATS AND OIL SENSING PROBE SHALL BE FACTORY MOUNTED ON THE PUMP HOUSING. ALL CABLE ENTRIES INTO THE J-BOX FROM THE PUMP PIT SHALL HAVE NEMA 6P WATER TIGHT CORD GRIPS. THE OIL SENSING PROBE IS TO BE FACTORY MOUNTED AND POSITIONED WITHIN THE SEPARATOR AND FACTORY TESTED AS A COMPLETE SYSTEM.

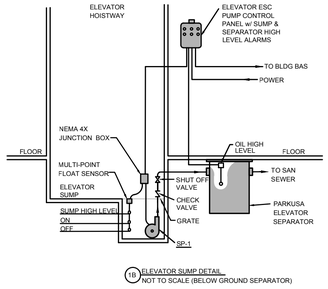
ACCEPTABLE MANUFACTURERS:

PARKUSA ELEVADER SYSTEM, OR ENGINEERED PRE-APPROVED EQUAL, PROVIDED ALL OF THE SPECIFICATIONS ARE MET.

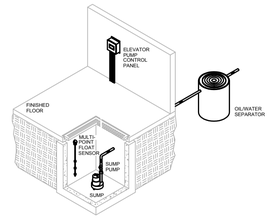


1 ELEVATOR SUMP SYSTEM

SCALE: NONE



1B ELEVATOR SUMP DETAIL
NOT TO SCALE (BELOW GROUND SEPARATOR)



NOTES

1. SEPARATOR BASIN, PRECAST CONCRETE w/ INTERIOR EPOXY LINER & EXTERIOR VAPOR BARRIER
2. CAST/STEEL, HINGED, DUCTILE IRON ACCESS COVER WITH NEOPRENE GASKET, H-20 TRAFFIC RATED
3. RESILIENT RUBBER CONNECTION
4. OIL/STOP-FLOW AUTOMATIC SHUT-OFF VALVE AT OUTLET PIPING
5. OLEOPHILLIC COALESCING PLATE PACK TO SEPARATE OIL & SOLIDS
6. EXTENSION RINGS AS REQUIRED
7. JOINTS SEALED WATER-TIGHT WITH OIL RESISTANT GASKET
8. VENT - NPT HALF CPLG
9. PIPING BY OTHERS

2 ELEVATOR SUMP PUMP SEPARATOR DETAIL

SCALE: NONE

ELEVATOR SUMP SYSTEM SCHEDULE

SYSTEM MODEL		SEPARATOR DATA								SUBMERSIBLE PUMP DATA (SP-1)						
SYSTEM SIZE	ELEVATORS	SEPARATOR MODEL	FLOW CAP GPM	TOTAL CAPACITY	OIL STG CAPACITY	DIA O	HEIGHT H	INLET FL1	OUTLET FL2	FLOW CAP GPM	TDH	DISCH SIZE	RPM	HP	VOLT/PH	MANUF./MODEL
ELVC-100	1	EC-100	50	100 GAL	50 GAL	44"	54"	39"	36"	50	12'	1 1/4"	1750	.50	115/1	ZOELLER/ 153

NOTES:

1. REFERENCE STRUCTURAL DRAWINGS FOR ELEVATOR SUMP BASIN SIZE.

PLUMBING EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL NUMBER	SPECIFICATION
GCO	GROUND CLEANOUT	JOSAM	S-7008-Z-CL	COATED CAST IRON FLOOR CLEANOUT. INTERNAL GASKETED ABS CLEANOUT PLUG. NO-HUB CONECTION AND ADJUSTABLE. ABS HOUSING WITH SPECIAL DUTY SCORIATED SECURED ROUND CAST IRON TOP.
FS-1	FLOOR SINK	JOSAM	49300	CAST IRON WITH ACID RESISTING INTERIOR, DOUBLE DRAINAGE FLANGE, WEEP HOLES, BOTTOM OUTLET. SQUARE TOP ALUMINUM INTERNAL DOME STRAINER AND CAST IRON NON TRAFFIC,ACID RESISTING,ANTI-TILTING HALF (1/2) GRATE. POVIDE WITH TRAP GUARD.
HD-1	HUB DRAIN	-	-	CAST IRON SOIL PIPE INCREASER FITTING. HUB TO BE ONE SIZE LARGER THAN SPIGOT END.POVIDE WITH AIR GAP JOSAM 889000 AND TRAP GUARD.
DS-1	DOWNSPOUT NOZZLE	J.R.SMITH	FIG. #1770	DOWNSPOUT NOZZLE CAST BRONZE BODY AND FLANGE. MOUNT 12 INCHES ABOVE THE FINISH GRADE. PROVIDE CONCRETE SPLASH BLOCK IF NEEDED.
RD/OD	ROOF DRAIN/ OVERFLOW DRAIN	J.R. SMITH	FIG. #1800	DUCO CAST IRON BODIES WITH COMBINED FLASHING CLAMP AND GRAVEL STOPS FOR ROOF DRAIN, AND COMBINED FLASHING CLAMP AND GRAVEL STOPS WITH 3.5" HIGH INTERNAL WATER DAM. STANDPIPE FOR OVERFLOW DRAIN. DECK PLATE WITH SECURITY HOLES. BOTH DRAINS WITH CAST IRON DOMES.
NFHB-1	NON- FREEZEE ROOF HOSE BIB	WOODFORD	MODEL SRH-MS	NON-FREEZE ROOF POST HYDRANT TYPE WITH GALVANIZED CASING AND ADJUSTABLE FLOW LEVEL LOCK HANDLE WITH DECK FLANGE AND UNDER DECK CLAMP. 3/4" HOSE ADAPTER PROVIDE WITH INTEGRAL BACKFLOW PREVENTER.

PLUMBING FIXTURE SCHEDULE ⚠1

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL NUMBER	SPECIFICATION	FIXTURE CONNECTIONS: CW	HW	WASTE	VENT
WC-1	WATER CLOSET	AMERICAN STANDARD	AFWALL EL #2257.001	1.28 GALLON PER FLUSH ELONGATED BOWL TOP SPUD VITREOUS CHINA WATER CLOSETWITH OPEN FRONT WHITE SEAT CHURCH MODEL 9500 SSC. FURNISH WATER CLOSET COMPLETE WITH SLOAN VALVE ROYAL 111-1.28 MANUAL FLUSH VALVE, EXPOSED FLUSH VALVE. PROVIDE JOSAM FLOOR MOUNTED CAST IRON SUPPORT.	1"	-	4"	2"
WC-1H	WATER CLOSET (ADA COMPLIANT)	AMERICAN STANDARD	AFWALL EL #2257.001	1.28 GALLON PER FLUSH ELONGATED BOWL TOP SPUD VITREOUS CHINA WATER CLOSETWITH OPEN FRONT WHITE SEAT CHURCH MODEL 9500 SSC. FURNISH WATER CLOSET COMPLETE WITH SLOAN VALVE ROYAL 111-1.28 MANUAL FLUSH VALVE, EXPOSED FLUSH VALVE. PROVIDE JOSAM FLOOR MOUNTED CAST IRON SUPPORT. MOUNT AT HANDICAPPED HEIGHT AS REQUIRED BY TEXAS ACCESIBILITY STANDARDS AND ADA REQUIREMENTS.	1"	-	4"	2"
UR-1	URINAL	AMERICAN STANDARD	WASHBROOK 6590.125	VITREOUS CHINA WASHOUT LOW CONSUMPTION 0.125 GALLON PER FLUSH URINALWITH 3/4 INCH TOP SPUD, 2 INCH FEMALE THREADED OUTLET. TWO WALL HANGERS MOUNTED ON STRUCTURAL STEEL SUPPORTS ANCHORED TO FLOOR. FURNISH URINAL COMPLETE WITH SLOAN REGAL 186-0.125 EXPOSED FLUSH VALVE AND FLOOR MOUNTED CAST IRON SUPPORTS SIMILAR TO JOSAM PRO-SET UPRIGHTS.	3/4"	-	2"	1 1/2"
UR-1H	URINAL (ADA COMPLIANT)	AMERICAN STANDARD	WASHBROOK 6590.125	VITREOUS CHINA WASHOUT LOW CONSUMPTION 0.5 GPF URINAL WITH 3/4 INCH TOP SPUD, 2 INCH FEMALE THREADED OUTLET. TWO WALL HANGERS MOUNTED ON STRUCTURAL STEEL SUPPORTS ANCHORED TO FLOOR. FURNISH URINAL COMPLETE WITH SLOAN REGAL 186-0.125 EXPOSED FLUSH VALVE. PROVIDE FLOOR MOUNTED CAST IRON SUPPORTS SIMILAR TO JOSAM PRO-SET UPRIGHTS. MOUNT AT HANDICAPPED HEIGHT AS REQUIRED BY TEXAS ACCESIBILITY STANDARDS AND ADA REQUIREMENTS.	3/4"	-	2"	1 1/2"
L-1	LAVATORY (ADA COMPLIANT)	AMERICAN STANDARD	LUCERNE 0355.012	SINGLE BOWL LAVATORY, WALL HUNG, 20 -1/2" X 18-1/4", WHITE VITREOUS CHINA, FAUCET HOLES 4" ON CENTER, FRONT OVERFLOW. PROVIDE WITH DELTA FAUCET MODEL 505 LF , 0.5 GPM AERATOR, SINGLE HANDLE . PROVIDE LAVATORY WITH STRAINER McGUIRE 155WC, P-TRAP McGUIRE 8872,SUPPLIES McGUIRE 2165 LK. PROVIDE WITH THERMOSTATIC MIXING VALVE ZURN ZW3870XL1 OR EQUAL, CARRIER SIMILAR TO WADE W320-M36.MOUNT AT HANDICAPPED HEIGHT AS REQUIRED BY TEXAS ACCESIBILITY STANDARDS AND ADA REQUIREMENTS.	1/2"	1/2"	1 1/2"	1 1/2"
L-1H	LAVATORY (ADA COMPLIANT)	AMERICAN STANDARD	LUCERNE 0355.012	SINGLE BOWL LAVATORY, WALL HUNG, 20 -1/2" X 18-1/4", WHITE VITREOUS CHINA, FAUCET HOLES 4" ON CENTER, FRONT OVERFLOW. PROVIDE WITH DELTA FAUCET MODEL 505 LF , 0.5 GPM AERATOR, SINGLE HANDLE . PROVIDE LAVATORY WITH STRAINER McGUIRE 155WC, P-TRAP McGUIRE 8872,SUPPLIES McGUIRE 2165 LK. PROVIDE WITH THERMOSTATIC MIXING VALVE ZURN ZW3870XL1 OR EQUAL, CARRIER SIMILAR TO WADE W320-M36. MOUNT AT HANDICAPPED HEIGHT AS REQUIRED BY TEXAS ACCESIBILITY STANDARDS AND ADA REQUIREMENTS.	1/2"	1/2"	1 1/2"	1 1/2"
L-2H	LAVATORY (ADA COMPLIANT)	AMERICAN STANDARD	PIAZZA 0478.803	WHITE VITREOUS CHINA COUNTERTOP LAVATORY WITH OVAL BASIN, FAUCET HOLES 4" ON CENTER,AND FRONT OVERFLOW. PROVIDE WITH DELTA FAUCET MODEL 505 LF , 0.5 GPM AERATOR, SINGLE HANDLE . GRID DRAIN, P-TRAP AND STOPS. MOUNT AT HANDICAPPED HEIGHT AS REQUIRED BY TEXAS ACCESIBILITY STANDARDS AND ADA REQUIREMENTS.	1/2"	-	1 1/2"	1 1/2"
EWC-1	ELECTRIC WATER COOLER (ADA COMPLIANT)	ELKAY	SWIRLFLO EDFPBM117RAC	BOTTLE FILLING STATION AND SINGLE COOLER. WATER FILTER SYSTEM, ANTI-MICROBIAL SAFETY BUBBLER, FRONT PUSH BUTTON. PROVIDE STOP AND P-TRAP. INSULATE WASTE PIPING WITH 1/2" FLEXIBLE ELASTOMERIC INSULATION	1/2"	-	1 1/2"	1 1/2"
EWC-2	ELECTRIC WATER COOLER	ELKAY	EZH20 LZSBWSLP	BOTTLE FILLING STATION AND SINGLE COOLER. WATER FILTER SYSTEM, ANTI-MICROBIAL SAFETY BUBBLER, FRONT PUSH BUTTON. PROVIDE STOP AND P-TRAP. INSULATE WASTE PIPING WITH 1/2" FLEXIBLE ELASTOMERIC INSULATION. MOUNT AT NORMAL HEIGHT.	1/2"	-	1 1/2"	1 1/2"
EWC-3	ELECTRIC WATER COOLER (ADA COMPLIANT)	ELKAY	EZH20 LZSBWSLP	BOTTLE FILLING STATION AND SINGLE COOLER. WATER FILTER SYSTEM, ANTI-MICROBIAL SAFETY BUBBLER, FRONT PUSH BUTTON. PROVIDE STOP AND P-TRAP. INSULATE WASTE PIPING WITH 1/2" FLEXIBLE ELASTOMERIC INSULATION. MOUNT AT HANDICAPPED HEIGHT AS REQUIRED BY TEXAS ACCESIBILITY STANDARDS AND ADA REQUIREMENTS.	1/2"	-	1 1/2"	1 1/2"
SH-1H	SINGLE SHOWERSTALL ADA	-	REFER TO ARCHITECTURAL PLANS	PROVIDE SHOWER STALL WITH VALVE DELTA R10000-UNBX, TRIM VALVE DELTA T17T097 AND HAND HELD SHOWER HEAD DELTA RP99234HDF-1.5 AT 1.5 GPM. 60" FLEXIBLE STAINLESS STEEL HOSE WITH DUAL CHECK VALVES FOR BACKFLOW PROTECTION. SHOWER STALL TO COMPLY WITH TEXAS ACCESIBILITY STANDARDS AND ADA REQUIREMENTS.	1/2"	1/2"	2"	2"

FRED C. CRABTREE, JR. 109799 LICENSED PROFESSIONAL ENGINEER
08/10/2017

DATE SIGNED:

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CEI Project Number D17-1263.00

TAS/ADA - FIRE MARSHAL DEFERRED MAINTENANCE PROJECTS FOR
MIDWESTERN STATE UNIVERSITY
WICHITA FALLS, TEXAS
3410 TAFT BOULEVARD

DRAWN BY:

DATE: 15 MAY 2017

REVISIONS

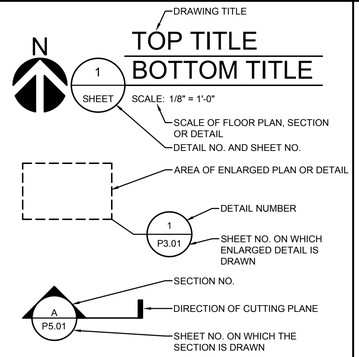
NO.	DESCRIPTION	DATE
⚠1	ADDENDUM 2	08/10/17

16782.00

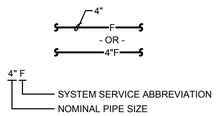
P003

FIRE PROTECTION SYMBOL LEGEND

GRAPHIC SYMBOLS



PIPING DESIGNATIONS



MISCELLANEOUS SYMBOLS

XXX-1	EQUIPMENT DESIGNATION
	SINGLE LINE PIPE BREAK
	DOUBLE LINE PIPE BREAK
	STANDARD BREAK
1	KEYED NOTE
1	REVISION DELTA
	POINT OF DISCONNECTION
	POINT OF CONNECTION (NEW TO EXISTING)
	NEW ITEMS (PIPING/EQUIPMENT)
	EXISTING ITEMS TO REMAIN
	EXISTING ITEMS TO BE DEMOLISHED
	LIMIT OF EXISTING ITEMS TO BE REMOVED
	NEW CONNECTION TO EXISTING ITEM
(N)	NEW ITEM (NOTATION SHOWN AS NECESSARY FOR CLARIFICATION)
(E)	EXISTING ITEM TO REMAIN (NOTATION SHOWN AS NECESSARY FOR CLARIFICATION)
(F)	FUTURE ITEM (NOTATION SHOWN AS NECESSARY FOR CLARIFICATION)
(R)	EXISTING ITEM TO BE RELOCATED (NOTATION SHOWN AS NECESSARY FOR CLARIFICATION)
(D)	EXISTING ITEM TO BE DEMOLISHED (NOTATION SHOWN AS NECESSARY FOR CLARIFICATION)

PIPE & FITTING SYMBOLS

DOUBLE LINE	SINGLE LINE	DESCRIPTION
		PIPE
		DIRECTION OF FLOW / SLOPE
		PIPING WITH INSULATION (WHEN SHOWN FOR CLARITY)
		UNION
		GENERIC FLEXIBLE COUPLING (REFER TO SPECIFICATIONS)
		ELBOW, 45 DEGREE (LONG RADIUS UON)
		ELBOW, 90 DEGREE (LONG RADIUS UON)
		ELBOW, 90 DEGREE - CHANGE IN DIRECTION TOWARD VIEWER
		ELBOW, 90 DEGREE - CHANGE IN DIRECTION AWAY FROM VIEWER
		TEE FITTING
		TEE FITTING, BRANCH TOWARD VIEWER
		TEE FITTING, BRANCH AWAY FROM VIEWER
		LATERAL
		REDUCER - CONCENTRIC
		REDUCER - ECCENTRIC
		CAP
		ANCHOR
		STRAINER - "Y" TYPE WITH BLOW DOWN
		PRESSURE GAUGE WITH GAUGE COCK
		PUMP, ARROW INDICATES FLOW

NOTE:
WELDED FITTINGS ARE SHOWN FOR DOUBLE LINE PIPING.
FITTINGS WITH OTHER END CONDITIONS ARE SIMILAR.

EQUIPMENT

FDC	SIAMESE FIRE DEPARTMENT CONNECTION (ON BUILDING)
FDC	SIAMESE FIRE DEPARTMENT CONNECTION (FREESTANDING)
PIV	POST INDICATOR VALVE
	WET FIRE SPRINKLER SYSTEM RISER

VALVE SYMBOLS

DOUBLE LINE	SINGLE LINE	DESCRIPTION
		OS&Y GATE VALVE
		BUTTERFLY VALVE
		BALL VALVE
		CHECK VALVE
		BACKFLOW PREVENTER
		PRESSURE REDUCING VALVE
		PREACTION VALVE
		DELUGE VALVE
		ALARM CHECK VALVE
		DRY PIPE VALVE
		CONTROL VALVE W/ TAMPER SWITCH
T	T	TAMPER SWITCH
F	F	FLOW SWITCH

NOTE:
WELDED FITTINGS ARE SHOWN FOR DOUBLE LINE PIPING.
FITTINGS WITH OTHER END CONDITIONS ARE SIMILAR.

SPRINKLERS

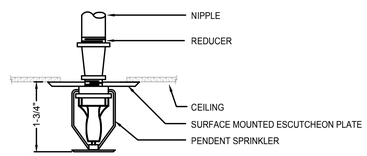
○	UPRIGHT
◎	CONCEALED
●	PENDENT
⊙	PENDENT RECESSED
⊘	PENDENT EXTENDED COVERAGE
▽	HORIZONTAL SIDEWALL

HATCH DESIGNATIONS

REFER TO PLANS FOR ADDITIONAL INFORMATION

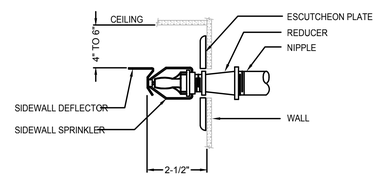
- WET PIPE SPRINKLER SYSTEM
- DRY SPRINKLER SYSTEM
- CLEAN AGENT SYSTEM
- PREACTION SYSTEM

THIS IS A STANDARD LEGEND SHEET. SOME INFORMATION ON THIS SHEET MAY NOT NECESSARILY APPLY TO THIS PROJECT.



PENDENT SPRINKLER DETAIL

NOT TO SCALE



SIDEWALL SPRINKLER DETAIL

NOT TO SCALE

FIRE PROTECTION GENERAL NOTES

1. PRIOR TO SUBMITTING A BID, THE FIRE PROTECTION SYSTEM CONTRACTOR SHALL VISIT THE JOB SITE AND VERIFY EXACT LOCATIONS OF UTILITIES IN FIELD, ALL EXISTING BUILDING CONDITIONS AND THAT NO WORK WILL BE REQUIRED OUTSIDE OF THE AREAS OF WORK SHOWN ON THE DRAWINGS.
2. THE FIRE PROTECTION SYSTEM CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND VERIFYING A CURRENT WATER FLOW TEST AND PRESSURE DATA, THE DESIGN OF SHOP DRAWINGS AND, IF REQUIRED, PERFORMING HYDRAULIC CALCULATIONS. CONTRACTOR SHALL PROVIDE ALL WORK CUSTOMARILY INCLUDED IF NOT SPECIFICALLY CALLED FOR ON THE PLANS. PROVIDE ALL NECESSARY INFORMATION REGARDING THE EXISTING FIRE PROTECTION SYSTEM ON THE PLANS TO MAKE ALL CONDITIONS CLEAR. THE INSTALLATION AND DESIGN SHALL COMPLY WITH NFPA 13, LATEST EDITION AND ALL OTHER CITY, COUNTY AND STATE REGULATIONS.
3. THE FIRE PROTECTION SYSTEM CONTRACTOR SHALL SUBMIT THE SHOP DRAWINGS (WHICH SHALL INDICATE DESIGN CRITERIA USED TO ESTABLISH DESIGN DENSITIES I.E. OCCUPANCY USE, OCCUPANCY CLASSIFICATION, TYPE OF COMMODITY, COMMODITY CLASSIFICATION, STORAGE CONFIGURATION, MAXIMUM AVAILABLE HEIGHT FOR STORAGE, AND APPROPRIATE CODE REFERENCES), MANUFACTURER'S SPECIFICATIONS AND HYDRAULIC CALCULATIONS, IF REQUIRED, TO THE LOCAL AUTHORITY HAVING JURISDICTION FOR REVIEW, APPROVAL AND PERMITTING PRIOR TO INSTALLATION OR MODIFICATION OF THE AUTOMATIC SPRINKLER SYSTEM. ALL DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY THE FIRE PROTECTION SYSTEM CONTRACTOR'S REGISTERED FIRE PROTECTION ENGINEER. THE ARCHITECT SHALL RECEIVE TWO COPIES OF THE SHOP DRAWINGS, MANUFACTURER'S SPECIFICATIONS AND REQUIRED HYDRAULIC CALCULATIONS FOR THEIR RECORDS.
4. THE FIRE PROTECTION SYSTEM CONTRACTOR SHALL VERIFY INSTALLATIONS AND OBSTRUCTIONS OF ALL TRADES AND SHALL COORDINATE ALL FIRE PROTECTION WORK WITH OTHER TRADES, NEW AND EXISTING, AND ROUTE PIPING TO AVOID INTERFERENCES.
5. THE FIRE PROTECTION SYSTEM CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES, PERMITS AND INSPECTIONS REQUIRED TO PERFORM THE WORK DESCRIBED IN THE CONTRACT DOCUMENTS AND SHOP DRAWINGS.
6. THE FIRE PROTECTION SYSTEM CONTRACTOR, PER NFPA 13, LATEST EDITION, SHALL PERFORM ALL REQUIRED ACCEPTANCE TESTS, COMPLETE THE CONTRACTOR'S MATERIAL AND TEST CERTIFICATES, AND FORWARD THE CERTIFICATES TO THE AUTHORITY HAVING JURISDICTION PRIOR TO ASKING FOR APPROVAL OF THE INSTALLATION.
7. THE FIRE PROTECTION SYSTEM CONTRACTOR, AFTER EXAMINATION OF ALL EXISTING CONDITIONS, PLANS AND SPECIFICATIONS, SHALL INCLUDE ALL COSTS NECESSARY FOR ALTERATION, MODIFICATIONS, AND/OR ADDITIONS TO THE FIRE SPRINKLER SYSTEM NECESSARY TO MAKE THE COMPLETE AND FINISHED INSTALLATION IN ALL ASPECTS. IT IS THE INTENT THAT ALL COSTS FOR THE WORK REQUIRED BE IN THE BID OF THIS TRADE.
8. ALL MATERIAL (SPRINKLER HEADS, PIPING, FITTINGS, ETC.) SHALL BE IN CONFORMANCE WITH NFPA 13, LATEST EDITION, AND ALL OTHER APPLICABLE CODES.
9. ALL SHUTDOWNS OF THE EXISTING FIRE SPRINKLER SYSTEM TO PERFORM THE WORK UNDER THIS CONTRACT SHALL BE COORDINATED WITH THE BUILDING OWNER/ENGINEERING DEPARTMENT TO MINIMIZE OR AVOID INCONVENIENCE TO THE BUILDING TENANTS.
10. THE SPRINKLER HEADS SHOWN ON THE DRAWING ARE FOR REFERENCE ONLY. MORE HEADS MAY BE NECESSARY FOR THE DESIGN TO COMPLY WITH ALL CODES AND STANDARDS. ALL SPRINKLER HEADS SHALL BE CENTERED IN BOTH DIRECTIONS OF THE ACOUSTICAL TILE. PROVIDE ARMOVERS OR SWING JOINTS AS REQUIRED.
11. THE METHODS OF HANGING PIPE, HEADERS AND BRANCHES SHALL BE APPROVED BY NFPA 13, LATEST EDITION. ALL PIPING SHALL BE FIRMLY ANCHORED AND SUPPORTED TO PREVENT SWAY AND VIBRATION THE ENTIRE LENGTH. PROVIDE DETAIL AND INDICATE TYPE OF HANGER TO BE INSTALLED FOR THE FIRE PROTECTION SYSTEM PIPING.
12. PROVIDE FIRE RATED SLEEVES AND UL LISTED FIRESTOPPING AT ALL PENETRATIONS OF SMOKE/FIRE WALLS, CEILINGS, ROOFS, ETC. FLASH AND COUNTER FLASH ROOF PENETRATIONS.
13. INDICATE CENTER TO CENTER DIMENSIONS, PIPE CUT LENGTHS AND NOMINAL PIPE DIAMETERS ON ALL PIPING.
14. REFER TO AND COORDINATE WITH THE ARCHITECTURAL REFLECTED CEILING PLANS FOR CEILING TYPES, HEIGHTS AND OTHER CEILING MOUNTED DEVICES. THE OWNER AND THE ARCHITECT RESERVE THE RIGHT TO MODIFY HEAD LOCATIONS TO CREATE AN AESTHETIC DESIGN.
15. ROUTE ALL PIPING CONCEALED ABOVE CEILINGS, WITHIN WALLS, IN MECHANICAL ROOMS, OR IN CHASES EXCEPT AS SPECIFICALLY NOTED.
16. COORDINATE LOCATION OF ANY NEW OR RELOCATED SIAMESE CONNECTIONS WITH ARCHITECT, SITE LAYOUT, AND FIRE DEPARTMENT. PROVIDE REMOTE SIAMESE CONNECTIONS AS REQUIRED FOR FIRE DEPARTMENT ACCESS FROM DRIVE.
17. LOCATION OF NEW OR RELOCATED INSPECTORS TEST STATIONS, ISOLATION VALVES AND DRAIN DOWN VALVES SHALL BE COORDINATED AS TO MINIMIZE PLACEMENT OF THESE DEVICES INSIDE TENANT SPACES. PROVIDE DRAIN DOWN VALVES FOR ANY AND ALL TRAPPED SECTION OF PIPING PER NFPA 13, LATEST EDITION. WHERE VALVES ARE REQUIRED IN TENANT SPACES, LOCATE IN A SERVICE OR STORAGE AREA. EACH SPRINKLER ZONE IS TO HAVE DRAIN DOWN VALVES CONFIGURED SO AS TO ALLOW ATTACHMENT OF A DRAIN HOSE. ALL DISCHARGE SHALL BE ARRANGED TO MINIMIZE DAMAGE TO THE BUILDING. ALL DRAIN PIPING SHALL BE GALVANIZED. PROVIDE ACCESS PANELS TO ANY VALVES ABOVE NON-ACCESSIBLE CEILING AND IN CHASES. ALL DRAIN DOWN VALVES AND INSPECTOR'S TEST STATION VALVES SHALL BE CHAINED AND PADLOCKED.
18. ALL ISOLATION VALVES SHALL BE SUPERVISED. PROVIDE TAMPER SWITCHES ON ALL CONTROL VALVES. COORDINATE WITH FIRE ALARM CONTRACTOR.
19. SPRINKLER HEADS MOUNTED LESS THAN 7 FEET ABOVE FINISHED FLOOR SHALL BE PROTECTED WITH A WIRE CAGE TYPE GUARD.
20. SPRINKLER CONTRACTOR SHALL INSTALL AND ACTIVATE THE ENTIRE SPRINKLER SYSTEM PRIOR TO THE ISSUANCE OF THE SUBSTANTIAL COMPLETION.
21. ALL FIRE PROTECTION SYSTEMS SHALL BE TESTED AS REQUIRED PER NFPA 13, LATEST EDITION AND LOCAL AUTHORITY HAVING JURISDICTION BEFORE ANY SYSTEMS ARE CONCEALED.
22. CONTRACTOR SHALL CONDUCT HYDROSTATIC TESTS IN COMPLIANCE WITH NFPA 13, LATEST EDITION (TWO HOUR AT 200 PSI OR 100 PSI OVER NORMAL SYSTEM PRESSURE MINIMUM). PIPING SUBJECT TO FREEZING DURING TEST PERIOD SHALL BE TESTED WITH COMPRESSED AIR.
23. CERTIFICATES OF APPROVAL OF INSTALLATION SHALL BE OBTAINED FROM THE AUTHORITY HAVING JURISDICTION AND FORWARDED TO THE OWNER.
24. THE FINAL INSPECTION AND APPROVAL OF THE FIRE PROTECTION SYSTEM SHALL BE BY THE LOCAL FIRE MARSHAL.
25. AFTER TESTS ARE CONDUCTED AND ANY REPAIRS COMPLETED, COMPLETELY FLUSH THE PIPING SYSTEMS WITH WATER UNTIL DISCHARGE SHOWS NO DISCOLORATION.
26. ALL BRANCH PIPING CONNECTIONS SHALL BE MADE AT THE TOP OR SIDE OF THE MAIN. BOTTOM CONNECTIONS ARE NOT ACCEPTABLE.
27. CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR FOR REMOVAL OF HVAC DIFFUSERS/GRILLES, LIGHTING, FIRE ALARM, ETC. TYPE DEVICES TO ALLOW FOR INSTALLATION OF FIRE PROTECTION SYSTEM. (1)

FRED C. CRABTREE, JR.
109799
LICENSED PROFESSIONAL ENGINEER
08/10/2017
DATE SIGNED:

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CEI Project Number D17-1263.00

TAS/ADA - FIRE MARSHAL DEFERRED MAINTENANCE PROJECTS FOR
MIDWESTERN STATE UNIVERSITY
3410 TAFT BOULEVARD
WICHITA FALLS, TEXAS

DRAWN BY:

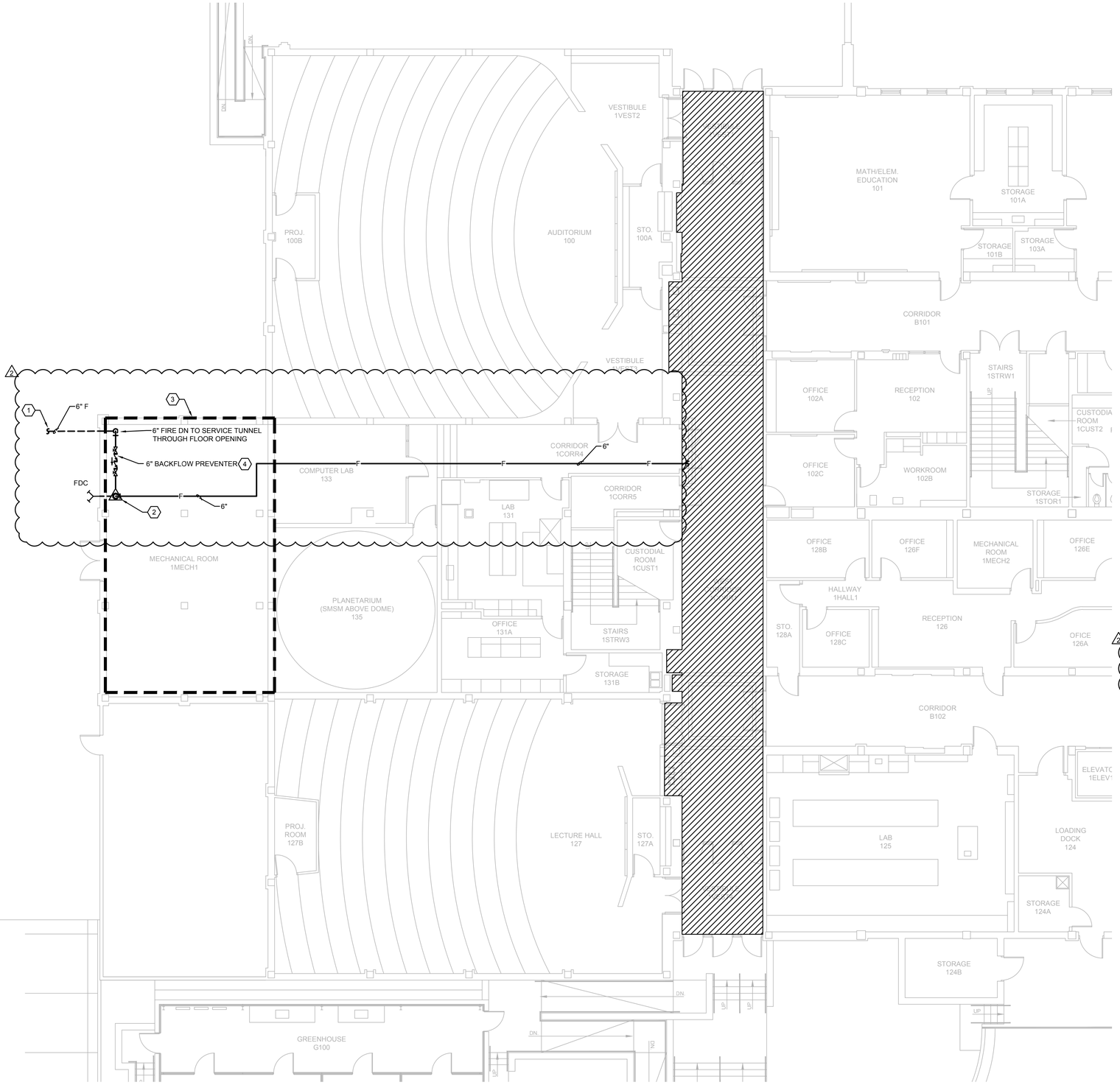
DATE: 15 MAY 2017

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	08/10/17

16782.00

FP001



BOLIN SCIENCE HALL - FIRST FLOOR - AREA 1C
FIRE PROTECTION PLAN

1 / B-FP101 SCALE: 1/8" = 1'-0"

GENERAL NOTES

(NOT ALL NOTES APPLY TO EACH SHEET)

A. REFER TO SYMBOL LEGEND AND GENERAL NOTES.

B. REFER TO SPECIFICATIONS.

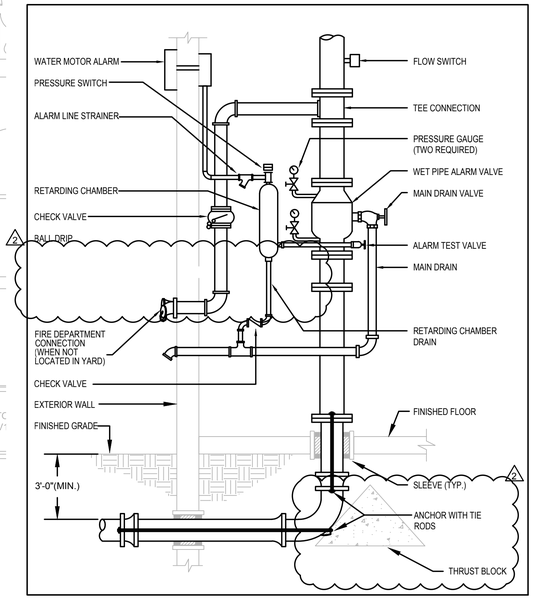
C. REFER TO ARCHITECTURAL OVERALL FLOOR PLANS FOR LOCATIONS SCOPE OF WORK AREAS WITHIN THE BUILDING.

KEY NOTES (#)

(NOT ALL NOTES APPLY TO EACH SHEET)

1. CONNECT NEW 6" FIRE LINE TO MAIN WATER SERVICE LINE . INSULATE THIS NEW FIRE LINE WITH 2" ARMAFLEX CLOSED CELL FOAM INSULATION INSIDE THE SERVICE TUNNEL, APPROXIMATELY 100 FT. REFER TO SHEET B-E101 FOR ELECTRICAL INFORMATION. FIELD VERIFY EXACT LOCATION OF THE EXISTING WATER MAIN. CONTRACTOR TO COORDINATE EXACT LOCATION OF TIE-INS WITH MSU STAFF.
2. NEW FIRE 6" RISER TO SERVE CORRIDOR 1CORR1 AND FUTURE EXPANSION OF THE FIRE SPRINKLER COVERAGE IN THE BUILDING. REFER TO DETAIL 2/B-FP101. THE LOCATION OF THE FIRE RISER IN THIS SPACE IS DIAGRAMMATIC IN NATURE AND CONTRACTOR HAS OPTION TO ALTER FIRE RISER LOCATION IN THIS SPACE AS NEEDED.
3. PER FIRE PROTECTION GENERAL NOTES ON SHEET FP001, CONTRACTOR TO COORDINATE FIRE PROTECTION PIPE ROUTING WITH EXISTING FIELD CONDITIONS (EQUIPMENT, DUCTS,PIPE, SPACE RESTRICTIONS,ETC). THE PIPE ROUTING IN THIS SPACE IS DIAGRAMMATIC IN NATURE AND CONTRACTOR HAS OPTION TO ALTER ROUTING IN THIS SPACE AS NEEDED.
4. HORIZONTAL BACKFLOW PREVENTOR SHOWN FOR DIAGRAMMATIC PURPOSES. RECOMMEND USING VERTICAL BACKFLOW PREVENTOR DUE TO SPACE CONSTRAINTS.

WET TYPE SPRINKLER SYSTEM.



2 TYPICAL FIRE RISER DETAIL

SCALE: NONE

FRED C. CRABTREE, JR. 109799 LICENSED PROFESSIONAL ENGINEER
08/10/2017

DATE SIGNED:

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CEI Project Number D17-1263.00

TAS/ADA - FIRE MARSHAL DEFERRED MAINTENANCE PROJECTS FOR
MIDWESTERN STATE UNIVERSITY
WICHITA FALLS, TEXAS
3410 TAFT BOULEVARD

DRAWN BY:

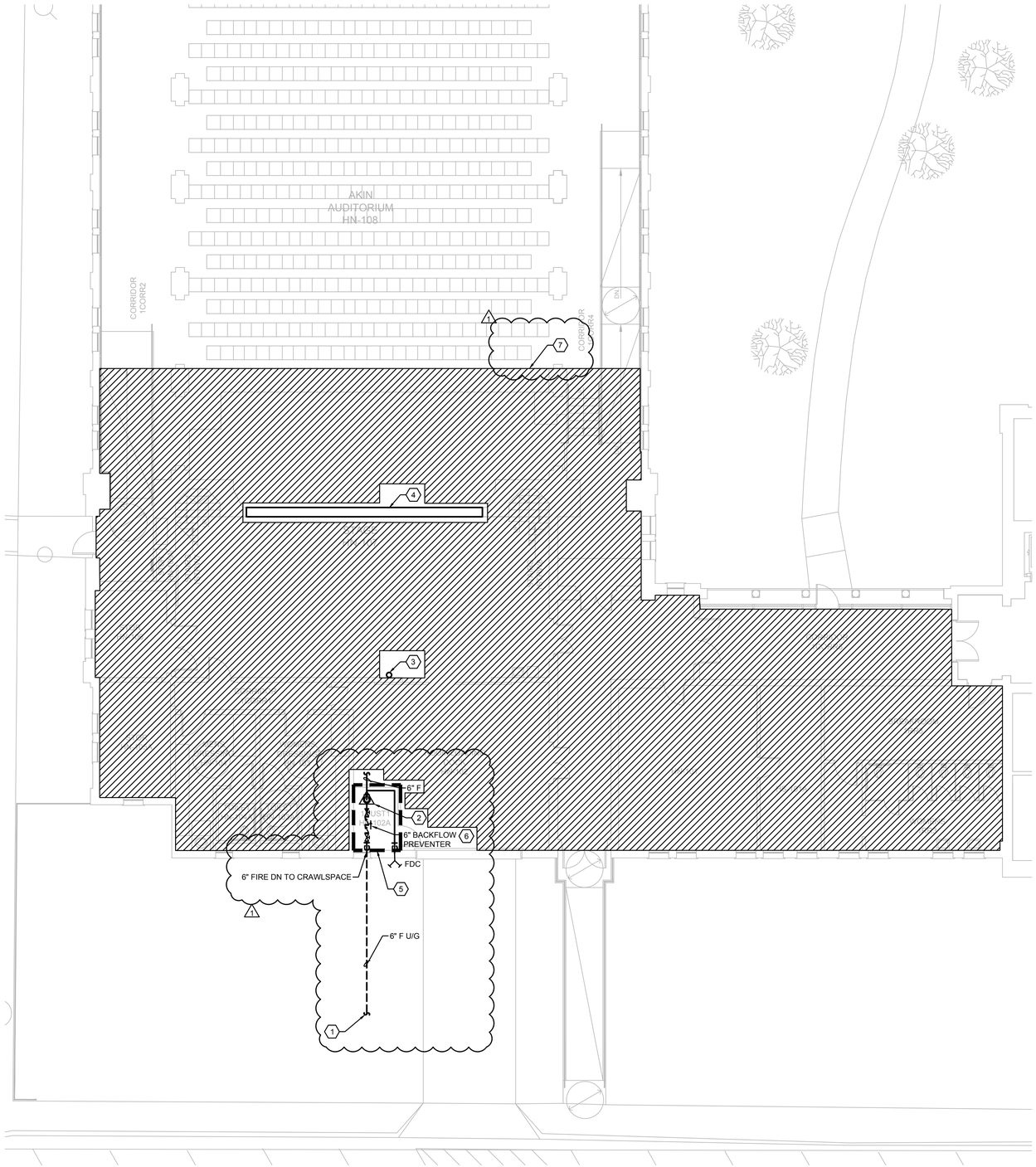
DATE: 15 MAY 2017

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 1	08/02/17
2	ADDENDUM 2	08/10/17

16782.00

B-FP101



HARDIN ADMIN BUILDING - FIRST FLOOR - AREA 1A
FIRE PROTECTION PLAN

1
H-FP101

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

GENERAL NOTES

(NOT ALL NOTES APPLY TO EACH SHEET)

A. REFER TO SYMBOL LEGEND AND GENERAL NOTES.

B. REFER TO SPECIFICATIONS.

C. REFER TO ARCHITECTURAL OVERALL FLOOR PLANS FOR LOCATIONS SCOPE OF WORK AREAS WITHIN THE BUILDING.

KEY NOTES (#)

(NOT ALL NOTES APPLY TO EACH SHEET)

1. CONNECT NEW 6" FIRE LINE TO MAIN WATER SERVICE LINE. FIELD VERIFY EXACT LOCATION OF SAID EXISTING WATER MAIN. CONTRACTOR TO COORDINATE EXACT LOCATION OF TIE-INS WITH MSU STAFF.
2. NEW FIRE 6" RISER TO SERVE AREA NOTED. REFER TO DETAIL 2/B-FP101. THE FIRE RISER LOCATION IN THIS SPACE IS DIAGRAMMATIC IN NATURE AND CONTRACTOR HAS OPTION TO ALTER LOCATION OF THE FIRE RISER IN THIS SPACE AS NEEDED.
3. 2 1/2 FIRE DOWN FOR SERVE HOSE BOX. CONNECT TO FIRE SPRINKLER PIPE SERVING THAT AREA. CONTRACTOR TO CONSULT WITH LOCAL FIRE DEPARTMENT FOR REQUIRED HOSE BOX TYPE AND APPROVED MANUFACTURERS.
4. INSTALL NEW WATERFALL CURTAIN AT PROSCENIUM OPENING.
5. PER FIRE PROTECTION GENERAL NOTES ON SHEET FP001, CONTRACTOR TO COORDINATE FIRE PROTECTION PIPE ROUTING WITH EXISTING FIELD CONDITIONS (EQUIPMENT, DUCTS,PIPE, SPACE RESTRICTIONS,ETC). THE PIPE ROUTING IN THIS SPACE IS DIAGRAMMATIC IN NATURE AND CONTRACTOR HAS OPTION TO ALTER ROUTING IN THIS SPACE AS NEEDED.
6. HORIZONTAL BACKFLOW PREVENTOR SHOWN FOR DIAGRAMMATIC PURPOSES. RECOMMEND USING VERTICAL BACKFLOW PREVENTOR DUE TO SPACE CONSTRAINTS.
7. PROVIDE FIRE SPRINKLER SYSTEM FOR AREA UNDERNEATH THE STAGE AS PART OF **ALTERNATE #2.**

WET TYPE SPRINKLER SYSTEM.

FRED C. CRABTREE, JR.
109799
LICENSED PROFESSIONAL ENGINEER
08/10/2017

DATE SIGNED:

HPA
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