



# CHEMISTRY BUILDING

1ST FLOOR RENOVATION

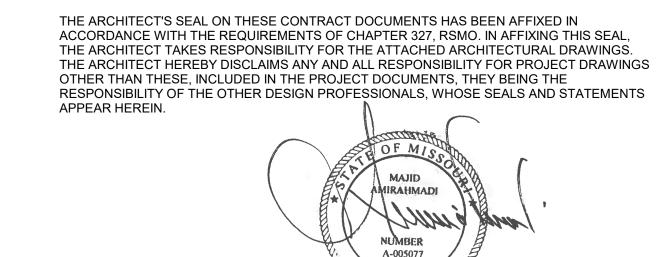
FOR THE CURATORS OF THE UNIVERSITY OF MISSOURI

ISSUED FOR CONSTRUCTION

09/26/2024

CP242331

INTERNATIONAL ARCHITECTS ATELIER



MAJID AMIRAHMADI, AIA
INTERNATIONAL ARCHITECTS ATELIER

THE ARCHITECT'S SEAL ON THESE CONTRACT DOCUMENTS HAS BEEN AFFIXED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 327, RSMO. IN AFFIXING THIS SEAL, THE ARCHITECT TAKES RESPONSIBILITY FOR THE ATTACHED ARCHITECTURAL DRAWINGS. THE ARCHITECT HEREBY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR PROJECT DRAWINGS OTHER THAN THESE, INCLUDED IN THE PROJECT DOCUMENTS, THEY BEING THE RESPONSIBILITY OF THE OTHER DESIGN PROFESSIONALS, WHOSE SEALS AND STATEMENTS APPEAR HEREIN.

MAJID AMIRAHMADI, AIA

# PROFESSIONAL DISCLAIMER | AA29

THE ELECTRICAL ENGINEER'S SEAL ON THESE CONTRACT DOCUMENTS HAS BEEN FIXED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 327, RSMO. IN AFFIXING THIS SEAL, THE ELECTRICAL ENGINEER TAKES RESPONSIBILITY FOR THE ATTACHED ELECTRICAL ENGINEERING DRAWINGS. THE ELECTRICAL ENGINEER HEREBY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR PROJECT DRAWINGS OTHER THAN THESE, INCLUDED IN THESE PROJECT DOCUMENTS, THEY BEING THE RESPONSIBILITY OF THE OTHER DESIGN PROFESSIONALS, WHOSE SEALS AND STATEMENTS APPEAR HEREIN.

PHILLIP PARRA, PE IMEG CORP.

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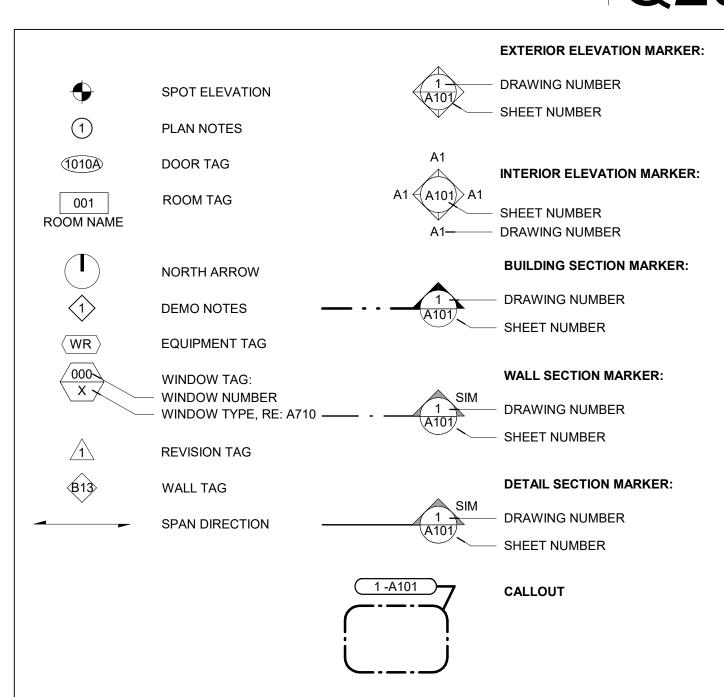
THE MECHANICAL AND PLUMBING ENGINEER'S SEAL ON THESE CONTRACT DOCUMENTS HAS BEEN AFFIXED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 327, RSMO. IN AFFIXING THIS SEAL, THE MECHANICAL AND PLUMBING ENGINEER TAKES RESPONSIBILITY FOR THE ATTACHED MECHANICAL AND PLUMBING ENGINEERING DRAWINGS. THE MECHANICAL AND PLUMBING ENGINEER HEREBY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR PROJECT DRAWINGS OTHER THAN THESE, INCLUDED IN THESE PROJECT DOCUMENTS, THEY BEING THE RESPONSIBILITY OF THE OTHER DESIGN PROFESSIONALS, WHOSE SEALS

BRUCE E. HART, PE

IMEG CORP.

AND STATEMENTS APPEAR HEREI

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### ARCHITECTURAL SYMBOLS

### ADDITIVE ALTERNATE #1

RENOVATE THE WEST PORTION OF THE FIRST FLOOR OF THE INTERIOR LOBBY OF THE CHEMISTRY TEACHING ADDITION. THIS WORK CONSISTS OF LIMITED WALL PARTITION DEMOLITION, NEW FINISH INSTALLATION, LIGHTING AND DIFFUSER REPLACEMENT, LIMITED ADJUSTMENTS TO THE EXISTING SPRINKLER HEADS TO ADAPT TO NEW CEILINGS, AND REPLACEMENT OF CONCEALED SPRINKLER COVER PLATES. LIFE SAFETY SYSTEMS WILL BE REPLACED AND NEW POWER AND DATA OUTLETS WILL BE PROVIDED. ALL AS INDICATED ON THE DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS.

### ADDITIVE ALTERNATE #2:

RENOVATE THE EAST PORTION OF THE FIRST FLOOR OF THE INTERIOR LOBBY OF THE CHEMISTRY TEACHING ADDITION. THIS WORK CONSISTS OF NEW FINISH INSTALLATION, LIGHTING REPLACEMENT, LIMITED ADJUSTMENTS TO THE EXISTING SPRINKLER HEADS TO ADAPT TO NEW CEILINGS, AND REPLACEMENT OF CONCEALED SPRINKLER COVER PLATES. LIFE SAFETY SYSTEMS WILL BE REPLACED AND NEW POWER OUTLETS WILL BE PROVIDED. ALL AS INDICATED ON THE DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS.

### ADDITIVE ALTERNATE #3:

SPECIFICATIONS.

PROVIDE (2) TWO NEW CUSTOM CASEWORK ELEMENTS IN THE FIRST FLOOR OF THE INTERIOR LOBBY OF THE CHEMISTRY TEACHING ADDITION. ALL AS INDICATED ON THE DRAWINGS AND DESCRIBED IN THE

### SHEET INDEX - GENERAL

G000 COVER SHEET
G001 GENERAL INFORMATION
G002 LIFE SAFETY PLAN / CODE ANALYSIS

### SHEET INDEX - ARCHITECTURAL

D101 1ST FLOOR DEMOLITION PLAN - BASE BID
D101.1 1ST FLOOR DEMOLITION PLAN - ALTERNATES
D401 1ST FLOOR DEMOLITION CEILING PLAN - BASE BID

1ST FLOOR DEMOLITION CEILING PLAN - ALTERNATES
DEMOLITION PHOTOGRAPHS
DEMOLITION PHOTOGRAPHS
WALL TYPES

01 WALL TYPES
01 1ST FLOOR PLAN - BASE BID
01.1 1ST FLOOR PLAN - ALTERNATES
01 1ST FLOOR CEILING PLAN - ALTERNATES

1ST FLOOR CEILING PLAN - BASE BID
1ST FLOOR CEILING PLAN - ALTERNATES
CEILING DETAILS
FINISH SCHEDULE & BASE BID INTERIOR ELEVATIONS
BASE BID INTERIOR ELEVATIONS & DETAILS
ALTERNATES INTERIOR ELEVATIONS & DETAILS

FINISH SCHEDULE & BASE BID INTERIOR ELEV.
BASE BID INTERIOR ELEVATIONS & DETAILS
ALTERNATES INTERIOR ELEVATIONS & DETAIL
INTERIOR DETAILS
BASE BID CASEWORK PLAN & DETAILS
BASE BID CASEWORK ELEVATIONS
BASE BID CASEWORK PLAN & DETAILS
BASE BID CASEWORK PLAN & DETAILS
BASE BID CASEWORK DETAILS

ALTERNATE #3 CASEWORK DETAILS

ALTERNATE #3 CASEWORK DETAILS

DOOR SCHEDULE & TYPES

SHEET INDEX - PLUMBING & MECHANICAL

M000 HVAC COVERSHEET

ME200 BASEMENT PLANS - VENTILATION AND ELECTRICAL
P101 LEVEL 01 DEMOLITION PLAN - PLUMBING
P201 LEVEL 01 PLAN - PLUMBING

P201.1 LEVEL 01 PLAN - PLUMBING - ALTERNATES
M101 LEVEL 01 DEMOLITION PLAN - PIPING
M111 LEVEL 01 DEMOLITION PLAN - VENTILATION
M111.1 LEVEL 01 DEMOLITION PLAN - VENTILATION - ALTERNATES
M211 LEVEL 01 PLAN - VENTILATION
M211.1 LEVEL 01 PLAN - VENTILATION - ALTERNATES
M400 HVAC DETAILS

TEMPERATURE CONTROL DETAILS

PLUMB. & VENT. SCHEDULES

### SHEET INDEX - ELECTRICAL

E000 ELECTRICAL COVERSHEET
E101 LEVEL 01 DEMOLITION PLAN - LIGHTING
E101.1 LEVEL 01 DEMOLITION PLAN - LIGHTING - ALTERNATES
E111 LEVEL 01 DEMOLITION PLAN - POWER AND SYSTEMS
E111.1 LEVEL 01 DEMOLITION PLAN - POWER AND SYSTEMS - ALTERNATES
E201 LEVEL 01 PLAN - LIGHTING
E201.1 LEVEL 01 PLAN - LIGHTING - ALTERNATES
E211 LEVEL 01 PLAN - POWER AND SYSTEMS

LEVEL 01 PLAN - POWER AND SYSTEMS - ALTERNATES

**ELECTRICAL DETAILS** 

**ELECTRICAL SCHEDULES** 

SHEET INDEX Y19

#### **DEFERRED SUBMITTAL ITEMS:**

DIGITAL, ADDRESSABLE FIRE ALARM SYSTEMS, RE: 283111 WET-PIPE SPRINKLER SYSTEMS, RE: 211313

#### PECIAL INSPECTIONS:

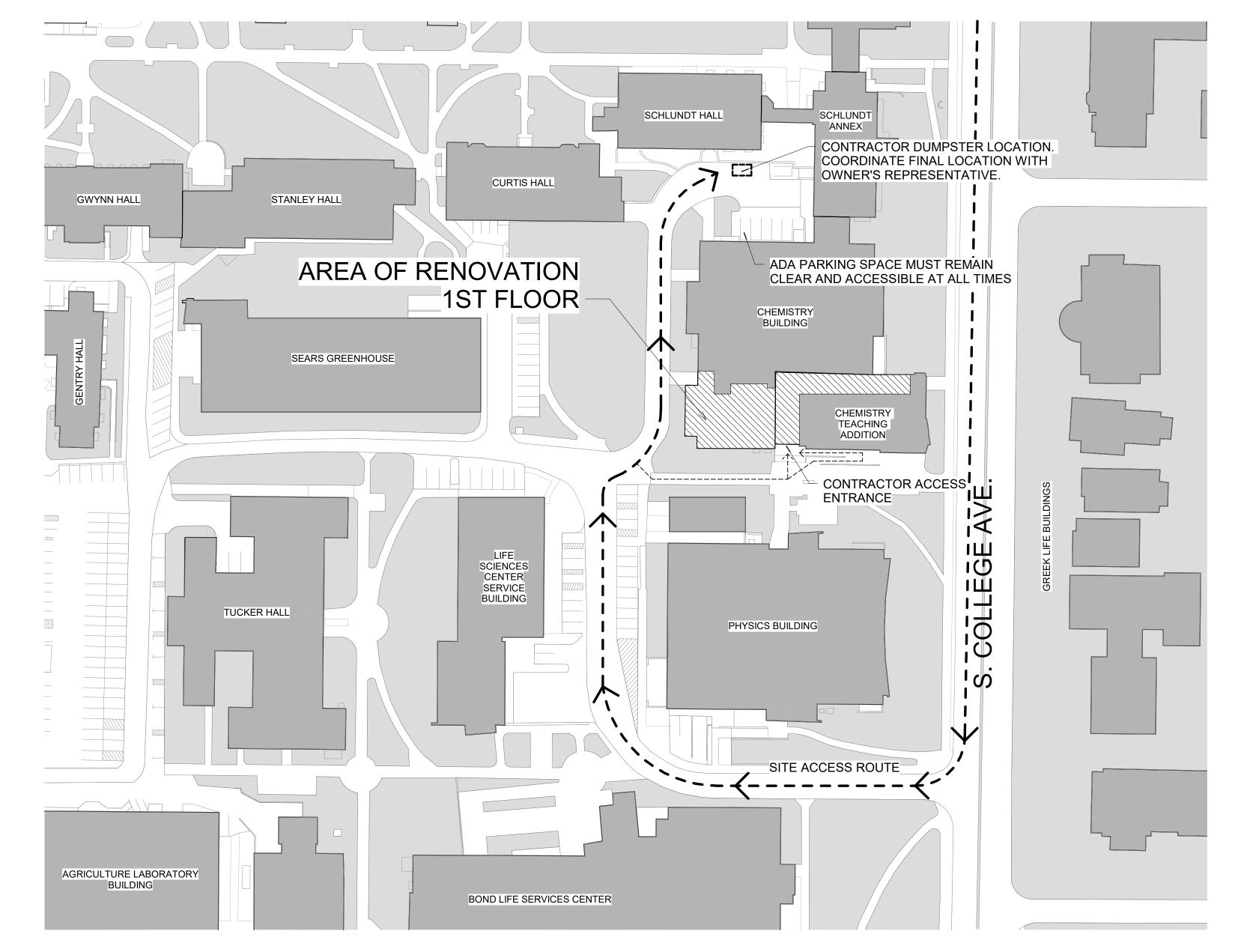
MINIMAL CLEARANCE OF INSTALLATION OF MECHANICAL AND ELECTRICAL EQUIPMENT, INCLUDING DUCT WORK, PIPING SYSTEMS, AND THEIR STRUCTURAL SUPPORTS AS REQUIRED BY SECTION 13.2.3 ASCE/SEI 7.

### DEFERRED SUB. & SPECIAL INSPECTIONS \

- ALL WORK SHALL COMPLY WITH FEDERALLY MANDATED ADA, ALL APPLICABLE CODES, AND STANDARDS.
   CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS. ANY DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND DRAWINGS SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ARCHITECT PRIOR TO CONSTRUCTION. ALL DIMENSIONS OF EXISTING CONSTRUCTION ARE TO PROVIDE THE CONTRACTOR WITH APPROXIMATE SIZES AND ARE NOT INTENDED TO BE USED FOR CONSTRUCTION PURPOSES. ALL DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
- CONTRACTOR SHALL USE EXTREME CARE AND TAKE PRECAUTION DURING CONSTRUCTION SO AS NOT TO DAMAGE EXISTING ADJACENT FACILITIES. ANY DAMAGE DONE TO EXISTING FACILITIES DURING CONSTRUCTION SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER WITHOUT ADDITIONAL COST TO THE OWNER.
- ALL DIMENSIONS ARE NOMINAL, AND ARE FINISH TO FINISH OR FACE UNLESS OTHERWISE NOTED.
- 5. UNLESS OTHERWISE NOTED, CONTRACTOR SHALL PATCH OR REPAIR, PAINT OR RESTORE AND REFINISH (AS APPLIES) ALL ADJACENT SURFACES AFFECTED BY NEW CONSTRUCTION OR DEMOLITION.
- 6. CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS, COORDINATE DUMPSTER LOCATION AND ACCESS WITH THE OWNER AS REQUIRED.
- 7. SHOULD ANY DOUBT OR QUESTION ARISE WITH RESPECT TO THE TRUE MEANING OF THE DRAWINGS OR SPECIFICATIONS, REFERENCE SHALL BE MADE TO THE ARCHITECT WHOSE DECISIONS THEREON SHALL BE FINAL AND CONCLUSIVE.
- 8. CONTRACTOR SHALL NOT ENGAGE IN ANY ACTIVITY WHICH MAY ENDANGER THE PUBLIC.
- 9. CONTRACTOR IS REQUIRED, PRIOR TO THE START OF CONSTRUCTION, TO SURVEY THE AREAS WHICH WOULD BE AFFECTED BY THE CONSTRUCTION FOR DOCUMENTATION OF EXISTING DAMAGES.
- 10. CONTRACTOR IS ALLOWED TO STORE MATERIALS ONLY IN DESIGNATED LOCATIONS AS APPROVED BY THE OWNER'S REPRESENTATIVE.
- CONTRACTOR IS REQUIRED TO PROVIDE EQUIPMENT AND TOOLS REQUIRED OR NECESSARY FOR THE OWNER, ARCHITECT, AND ENGINEER TO REVIEW THE CONSTRUCTION IN PROGRESS AND DURING INSPECTIONS.
- 12. CONTRACTOR IS RESPONSIBLE TO MAINTAIN AND PROTECT THE REQUIRED FIRE EXITS AND ROUTE TO THOSE EXITS AT ALL TIMES.
   13. THE BUILDING WILL BE OCCUPIED DURING THE CONSTRUCTION PERIOD AND ANY DISRUPTION TO NORMAL BUILDING OPERATIONS SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE AT LEAST 72 HOURS PRIOR TO COMMENCING WORK.
- 4. CONTRACTOR SHALL PROVIDE TEMPORARY LIGHTS DURING THE CONSTRUCTION OF THE PROJECT AS REQUIRED FOR THE SAFETY AND SECURITY OF THE PUBLIC FOR ALL AREAS AFFECTED BY CONSTRUCTION AS REQUIRED TO ACHIEVE MIN 1/2 FOOT CANDLE LIGHT LEVEL.
- 15. ALL FURNITURE AND EQUIPMENT NOT NOTED TO BE REMOVED BY CONTRACTOR ARE TO BE REMOVED BY OWNER PRIOR TO START OF CONSTRUCTION.

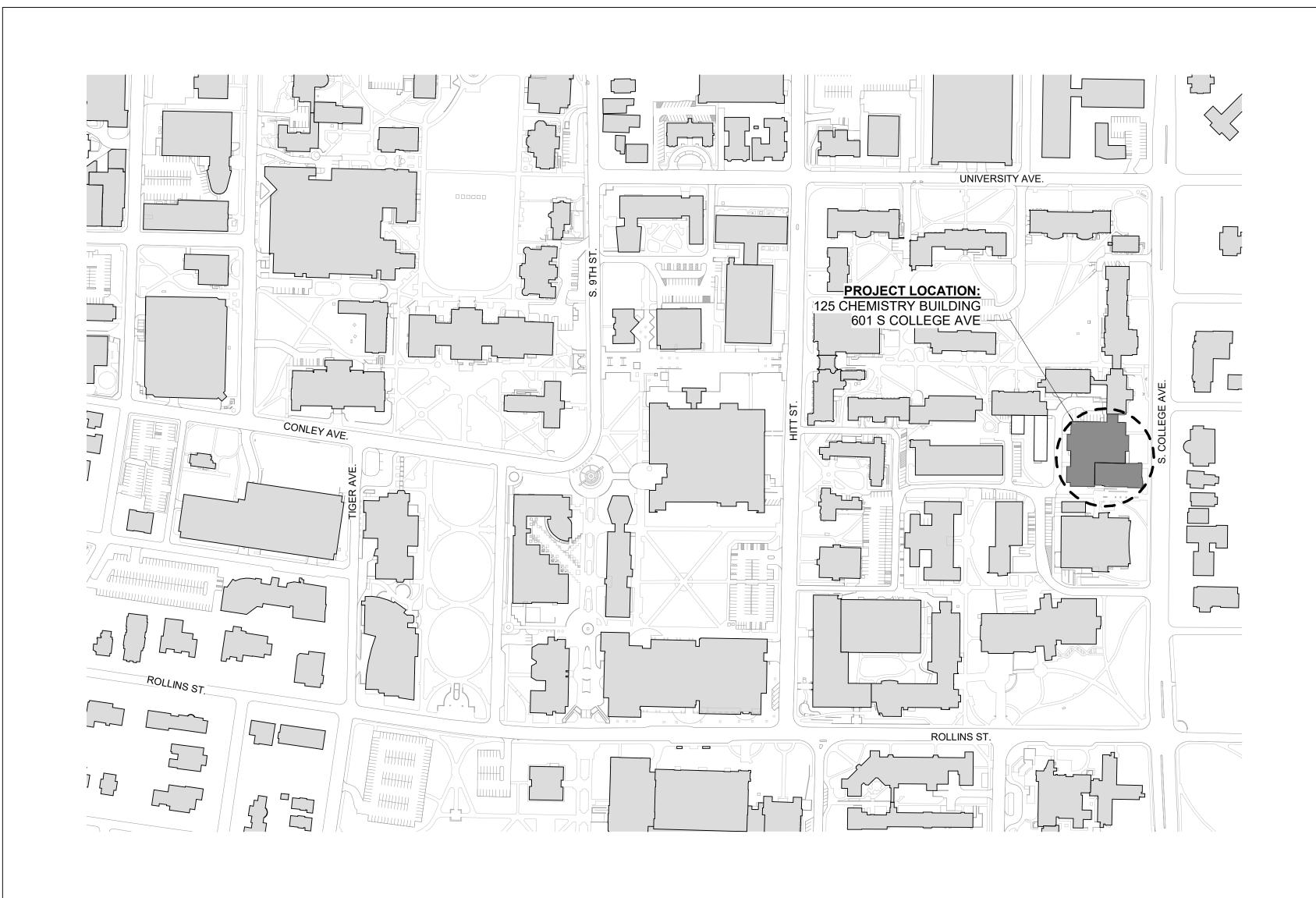
# GENERAL NOTES M19

- PRIOR TO COMMENCING DEMOLITION WORK, THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING UTILITIES AND MAKE PROVISION THAT NO INTERRUPTION OF SERVICES OCCUR TO OTHER BUILDING TENANTS. COORDINATE ANY SERVICE INTERRUPTIONS WITH OWNER.
- 2. ALL MATERIALS NOT REQUIRED TO BE REMOVED FOR THE EXECUTION OF THE PROJECT SHALL BE LEFT IN PLACE AND PROTECTED FROM DAMAGE DURING DEMOLITION. ANY ITEMS DAMAGED DURING DEMOLITION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- THE OWNER ASSUMES NO RESPONSIBILITY FOR ACTUAL CONDITIONS OF ITEMS TO BE DEMOLISHED.
- 4. CUT AND REMOVE/REPLACE ALL PORTIONS OF EXISTING CONSTRUCTION AS REQUIRED TO ALLOW ACCESS TO ITEMS NOTED FOR DEMOLITION AND FOR PROPER INSTALLATION OF NEW CONSTRUCTION.
- 5. AT ANY TIME DURING DEMOLITION, IF ANY CONTRACTOR DISCOVERS HAZARDOUS MATERIALS, STOP WORK AND NOTIFY THE OWNER AND ARCHITECT IMMEDIATELY.
- 6. LEAVE ALL MAJOR STRUCTURAL COLUMNS AND BEAMS UNDISTURBED. CONTRACTOR SHALL SURVEY THE CONDITION OF THE BUILDING TO DETERMINE WHETHER REMOVING ANY ELEMENT MIGHT RESULT IN STRUCTURAL DEFICIENCY OR UNPLANNED COLLAPSE OF ANY PORTION OF THE STRUCTURE REMAINING. IF ANY SUCH CONDITION EXISTS, OR RESULTS DURING THE PROCESS OF DEMOLITION, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AND ARCHITECT IMMEDIATELY.
- . ALL DASHED LINES ON DRAWINGS INDICATE ITEMS TO BE REMOVED, UNLESS NOTED OTHERWISE
- . ALL DEMOLITION MUST REMAIN INSIDE CONSTRUCTION LIMITS, UNLESS NOTED OTHERWISE.
- RETAIN AND PROTECT ALL SALVAGEABLE MATERIALS SELECTED BY OWNER AND ARCHITECT FOR REUSE ELSEWHERE.
  CONTRACTOR SHALL CATALOG ALL MATERIAL REMOVED FOR SALVAGE WITH ORIGINAL LOCATION AND LOCATION OF STORAGE. ALL
  SALVAGED MATERIALS SHALL BE CLEANED AND STORED IN A DRY PLACE ON THE SITE, ELEVATED OFF THE GROUND WITH
  ADEQUATE AIR FLOW AND PROTECTION FROM THE WEATHER AS NECESSARY.
- 10. NEATLY CUT OPENINGS AND HOLES PLUMB, SQUARE AND TRUE TO DIMENSIONS REQUIRED. USE CUTTING METHODS LEAST LIKELY TO DAMAGE CONSTRUCTION TO REMAIN/ADJOINING CONSTRUCTION.
- 11. CONTRACTORS SHALL COMPLETELY REMOVE ALL DEMOLISHED MATERIALS FROM SITE. ALL DEMOLISHED MATERIALS WILL BECOME PROPERTY OF THE CONTRACTOR UNLESS THEY ARE TO BE REUSED, OR AS OTHERWISE NOTED OR INSTRUCTED, AND TO BE DISPOSED OF LEGALLY. REMOVE DEBRIS, RUBBISH, AND OTHER MATERIALS DAILY FROM CONSTRUCTION SITE.
- 12. CONTRACTOR SHALL COORDINATE ALL DEMOLITION WORK REQUIRED FOR ONE TRADE WITH OTHER TRADES THAT WILL BE AFFECTED BY THAT WORK.



SITE ACCESS / STAGING PLAN SCALE: N.T.S. Q 1

VICINITY PLAN



BUILDING - 1ST FLOOR RENOVATION

FOR THE CURATORS OF

THE UNIVERSITY OF MISSOURI

ISSUED FOR CONSTRUCTION

**CHEMISTRY** 

INTERNATIONAL ARCHITECTS ATELIER

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1600 BALTIMORE AVE., SUITE 300

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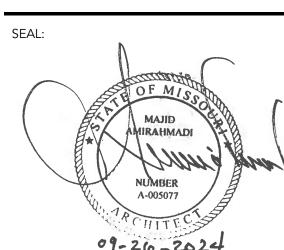
IMEG, CORP.

PH: 816.842.8437

125 CHEMISTRY BUILDING 601 S COLLEGE AVE COLUMBIA, MO 65211

DATE: 09/26/2024
PROJ. NO.: CP242331

DESIGNED BY: AA, IC
DRAWN BY: IC
CHECKED BY: AA
APPROVED BY: MA



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NO. REVISION SUBMISSION DATE

0 ISSUED FOR CONSTRUCTION 09/26/2024

GENERAL INFORMATION

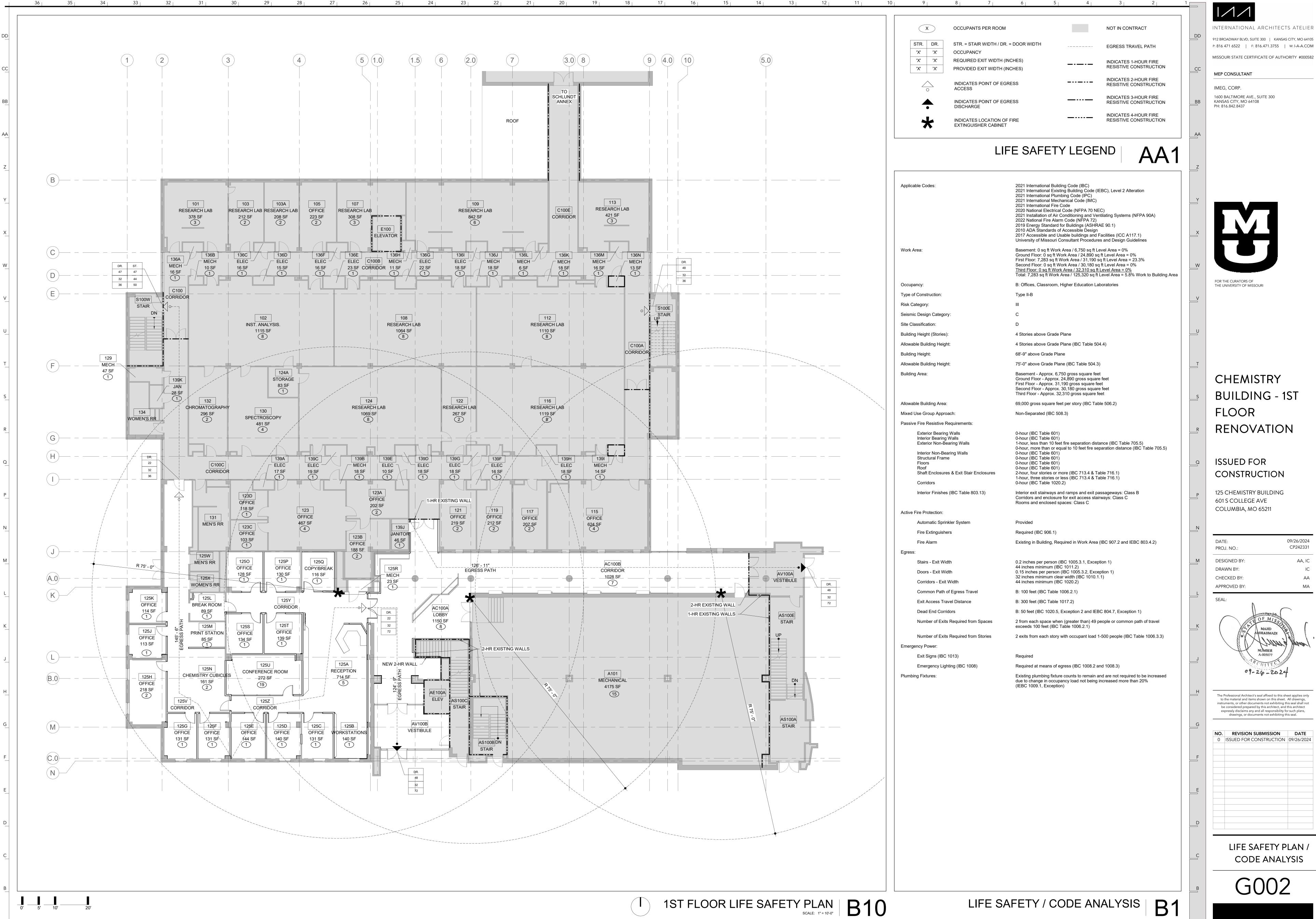
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GEN

GENERAL DEMOLITION NOTES

**D10** 

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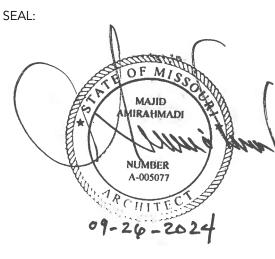
THE UNIVERSITY OF MISSOURI

CHEMISTRY BUILDING - 1ST **FLOOR** RENOVATION

ISSUED FOR CONSTRUCTION

125 CHEMISTRY BUILDING 601 S COLLEGE AVE COLUMBIA, MO 65211

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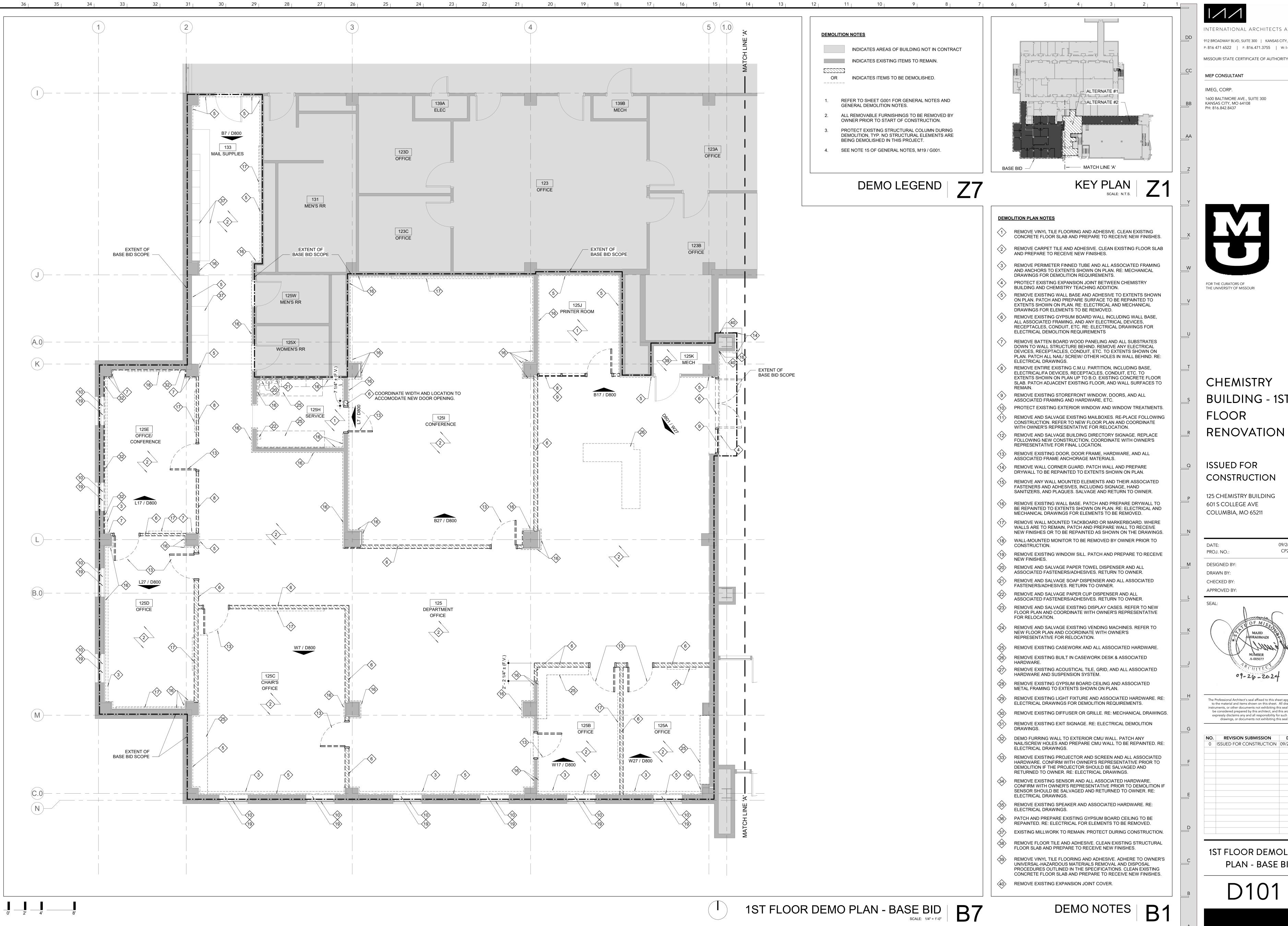


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LIFE SAFETY PLAN / CODE ANALYSIS

G002



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**CHEMISTRY** BUILDING - 1ST **FLOOR** 

ISSUED FOR CONSTRUCTION

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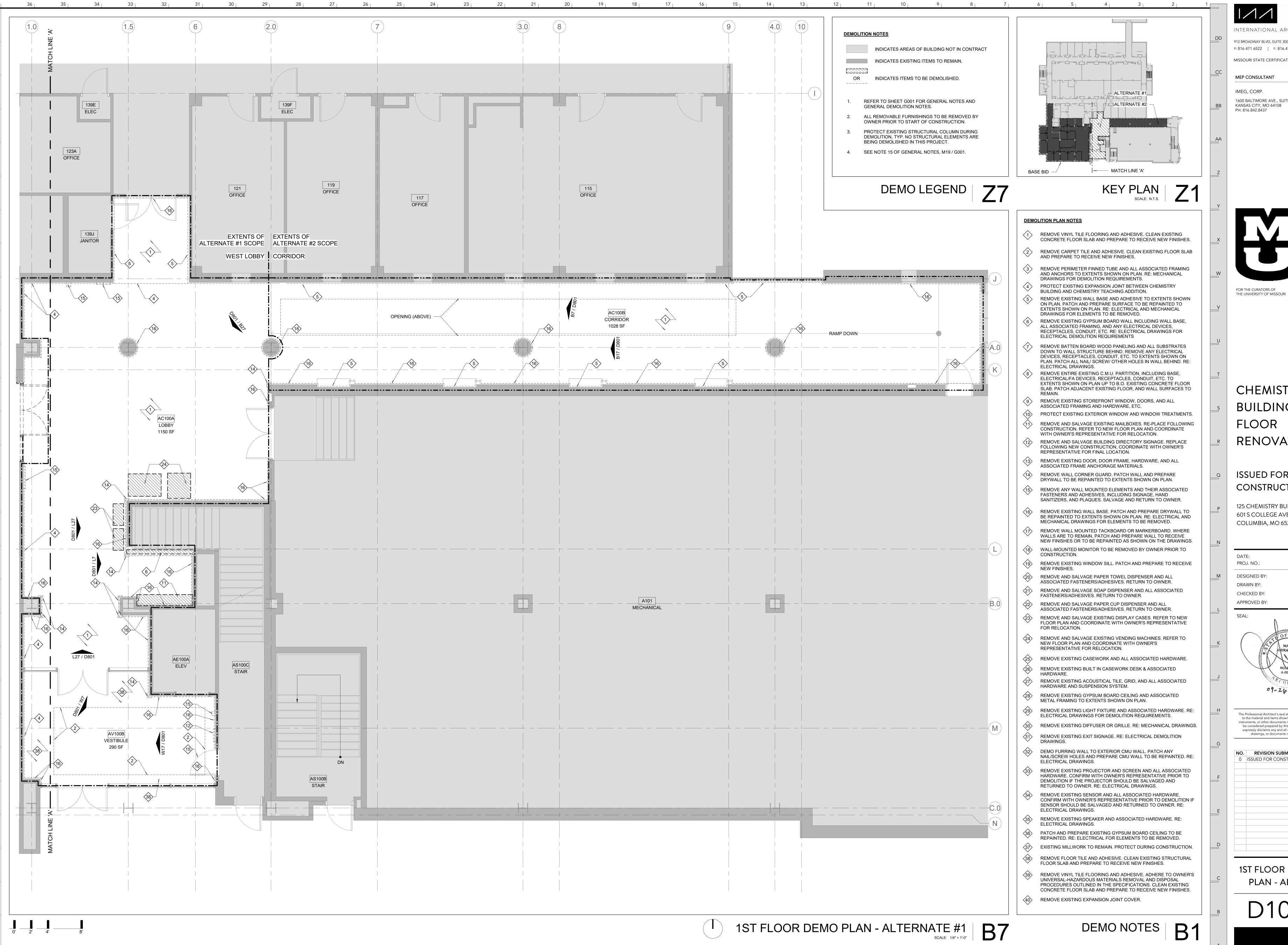
	DATE: PROJ. NO.:	09/26/2024 CP242331
1	DESIGNED BY:	AA, IC
	DRAWN BY:	IC
	CHECKED BY:	AA
	APPROVED BY:	MA



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1ST FLOOR DEMOLITION PLAN - BASE BID



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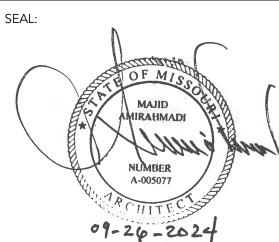


**CHEMISTRY** BUILDING - 1ST **FLOOR** RENOVATION

ISSUED FOR CONSTRUCTION

125 CHEMISTRY BUILDING 601 S COLLEGE AVE COLUMBIA, MO 65211

DATE:	09/26/2024
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APPROVED BY:	MA

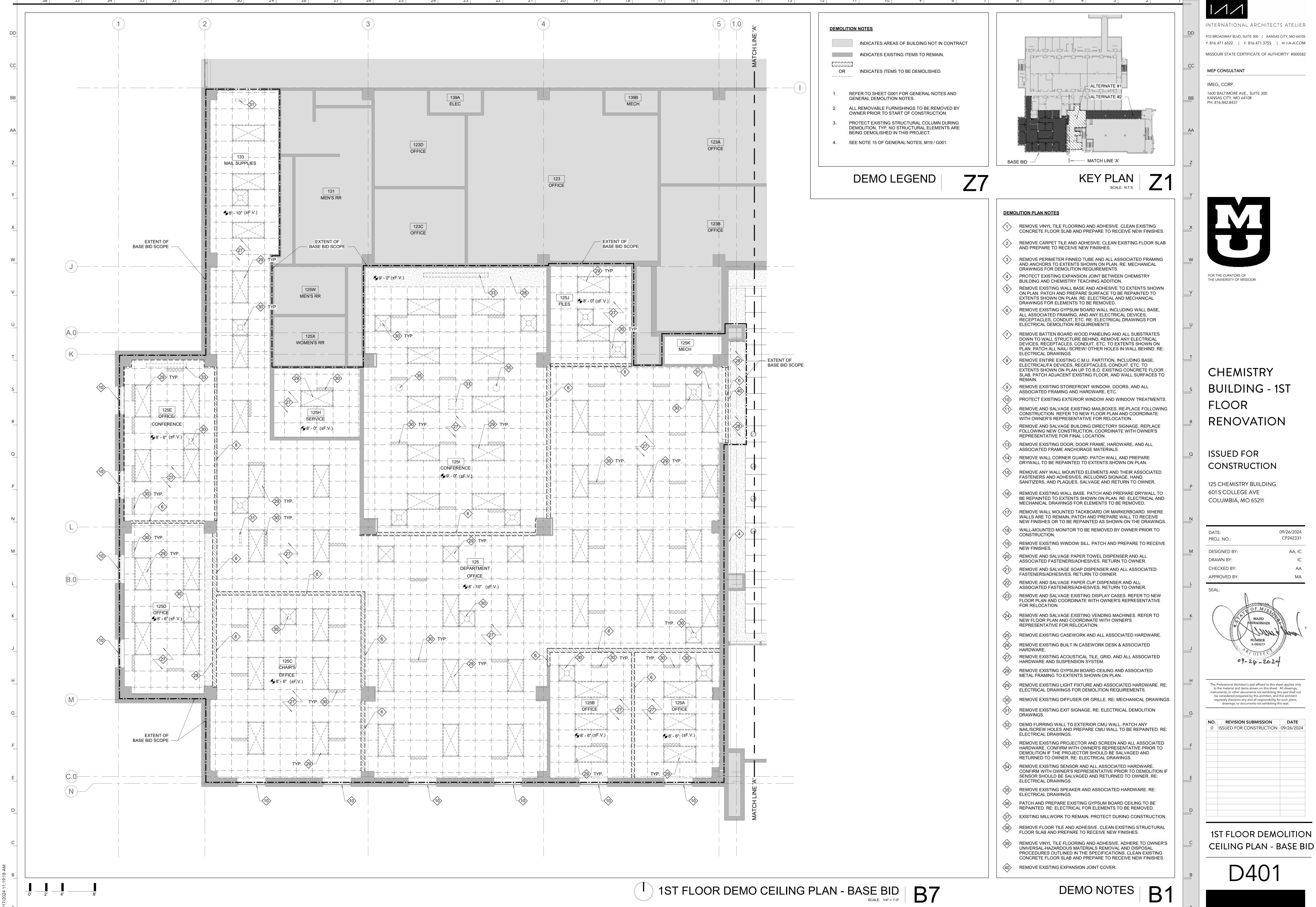


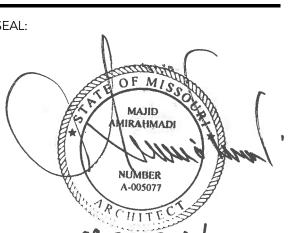
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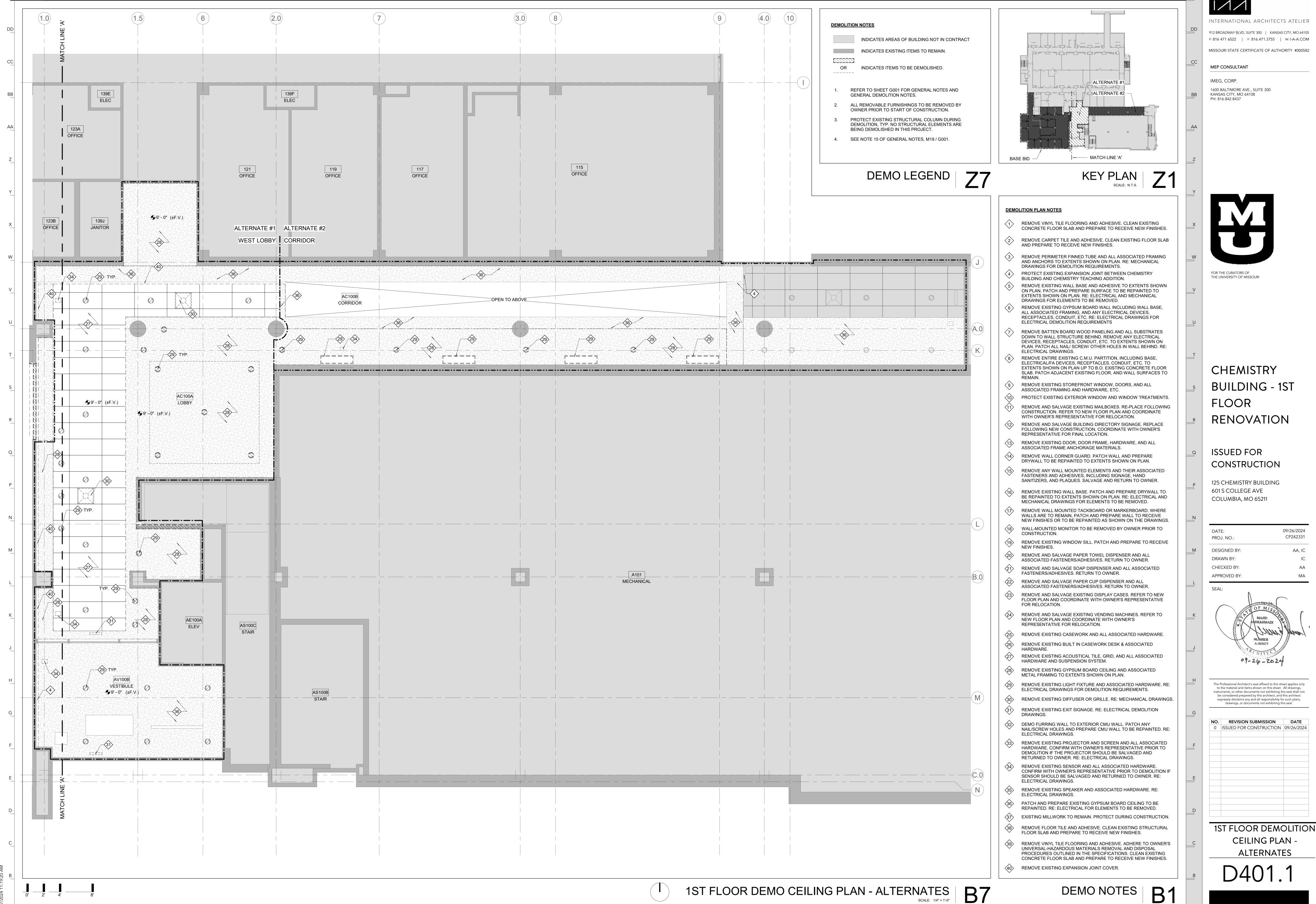
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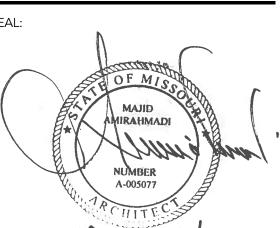
1ST FLOOR DEMOLITION PLAN - ALTERNATES

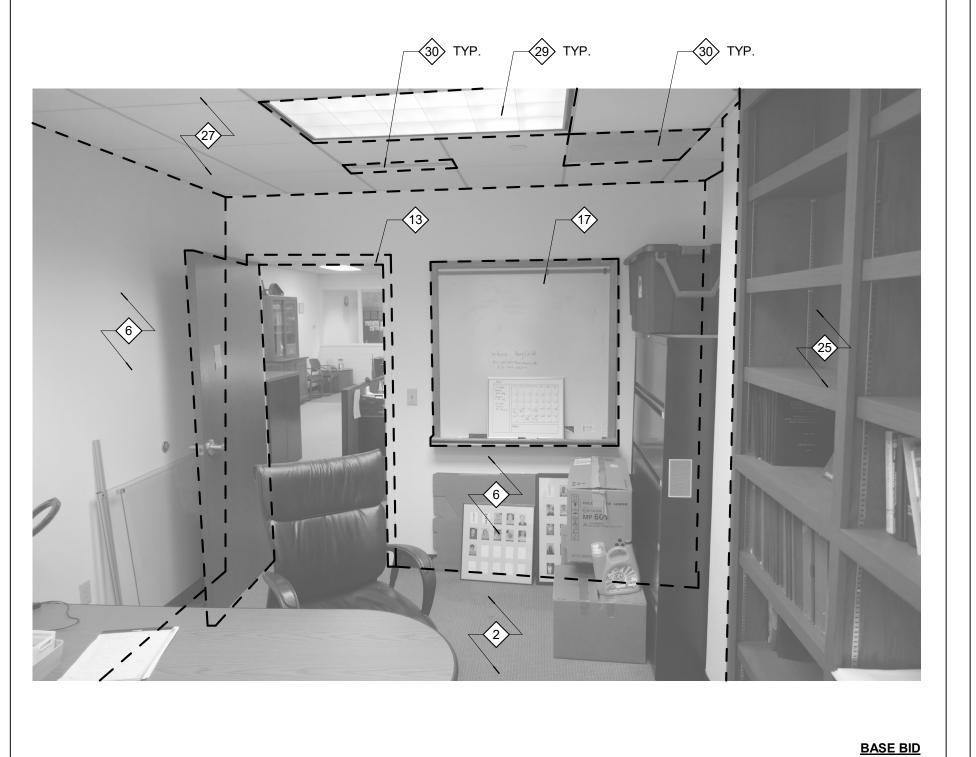
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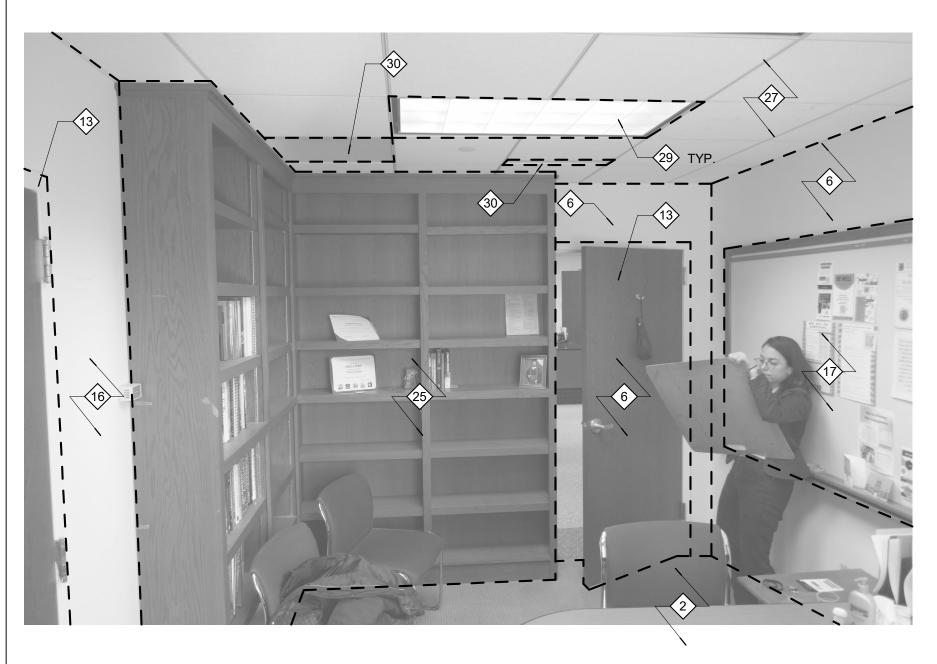


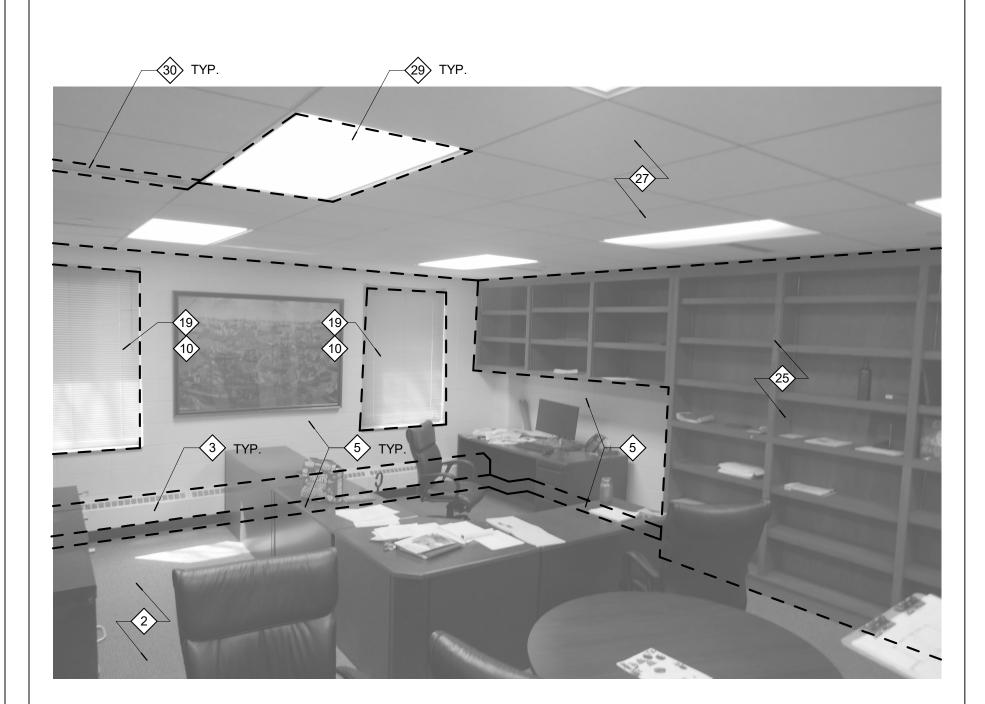












**DEMOLITION NOTES** 

**DEMOLITION PLAN NOTES** 

INDICATES AREAS OF BUILDING NOT IN CONTRACT

INDICATES EXISTING ITEMS TO REMAIN.

OR INDICATES ITEMS TO BE DEMOLISHED.

BEING DEMOLISHED IN THIS PROJECT.

4. SEE NOTE 15 OF GENERAL NOTES, M19 / G001.

AND PREPARE TO RECEIVE NEW FINISHES.

DRAWINGS FOR DEMOLITION REQUIREMENTS.

BUILDING AND CHEMISTRY TEACHING ADDITION.

DRAWINGS FOR ELEMENTS TO BE REMOVED.

ELECTRICAL DEMOLITION REQUIREMENTS

ELECTRICAL DRAWINGS.

NEW FINISHES.

GENERAL DEMOLITION NOTES.

REFER TO SHEET G001 FOR GENERAL NOTES AND

ALL REMOVABLE FURNISHINGS TO BE REMOVED BY OWNER PRIOR TO START OF CONSTRUCTION.

PROTECT EXISTING STRUCTURAL COLUMN DURING DEMOLITION, TYP. NO STRUCTURAL ELEMENTS ARE

REMOVE VINYL TILE FLOORING AND ADHESIVE. CLEAN EXISTING CONCRETE FLOOR SLAB AND PREPARE TO RECEIVE NEW FINISHES.

REMOVE CARPET TILE AND ADHESIVE. CLEAN EXISTING FLOOR SLAB

REMOVE PERIMETER FINNED TUBE AND ALL ASSOCIATED FRAMING AND ANCHORS TO EXTENTS SHOWN ON PLAN. RE: MECHANICAL

REMOVE EXISTING WALL BASE AND ADHESIVE TO EXTENTS SHOWN ON PLAN. PATCH AND PREPARE SURFACE TO BE REPAINTED TO EXTENTS SHOWN ON PLAN. RE: ELECTRICAL AND MECHANICAL

REMOVE EXISTING GYPSUM BOARD WALL INCLUDING WALL BASE, ALL ASSOCIATED FRAMING, AND ANY ELECTRICAL DEVICES, RECEPTACLES, CONDUIT, ETC. RE: ELECTRICAL DRAWINGS FOR

REMOVE BATTEN BOARD WOOD PANELING AND ALL SUBSTRATES

DEVICES, RECEPTACLES, CONDUIT, ETC. TO EXTENTS SHOWN ON PLAN. PATCH ALL NAIL/ SCREW/ OTHER HOLES IN WALL BEHIND. RE:

EXTENTS SHOWN ON PLAN UP TO B.O. EXISTING CONCRETE FLOOR SLAB. PATCH ADJACENT EXISTING FLOOR, AND WALL SURFACES TO

PROTECT EXISTING EXTERIOR WINDOW AND WINDOW TREATMENTS.

REMOVE AND SALVAGE EXISTING MAILBOXES. RE-PLACE FOLLOWING CONSTRUCTION. REFER TO NEW FLOOR PLAN AND COORDINATE

FOLLOWING NEW CONSTRUCTION, COORDINATE WITH OWNER'S REPRESENTATIVE FOR FINAL LOCATION.

REMOVE ANY WALL MOUNTED ELEMENTS AND THEIR ASSOCIATED

REMOVE EXISTING WALL BASE. PATCH AND PREPARE DRYWALL TO BE REPAINTED TO EXTENTS SHOWN ON PLAN. RE: ELECTRICAL AND

REMOVE WALL MOUNTED TACKBOARD OR MARKERBOARD. WHERE

WALLS ARE TO REMAIN, PATCH AND PREPARE WALL TO RECEIVE NEW FINISHES OR TO BE REPAINTED AS SHOWN ON THE DRAWINGS.

WALL-MOUNTED MONITOR TO BE REMOVED BY OWNER PRIOR TO

REMOVE AND SALVAGE PAPER TOWEL DISPENSER AND ALL ASSOCIATED FASTENERS/ADHESIVES. RETURN TO OWNER.

REMOVE AND SALVAGE PAPER CUP DISPENSER AND ALL ASSOCIATED FASTENERS/ADHESIVES. RETURN TO OWNER.

NEW FLOOR PLAN AND COORDINATE WITH OWNER'S

REPRESENTATIVE FOR RELOCATION.

HARDWARE AND SUSPENSION SYSTEM.

METAL FRAMING TO EXTENTS SHOWN ON PLAN.

FASTENERS/ADHESIVES. RETURN TO OWNER.

REMOVE AND SALVAGE SOAP DISPENSER AND ALL ASSOCIATED

REMOVE AND SALVAGE EXISTING DISPLAY CASES. REFER TO NEW FLOOR PLAN AND COORDINATE WITH OWNER'S REPRESENTATIVE

REMOVE AND SALVAGE EXISTING VENDING MACHINES. REFER TO

REMOVE EXISTING CASEWORK AND ALL ASSOCIATED HARDWARE.

REMOVE EXISTING ACOUSTICAL TILE, GRID, AND ALL ASSOCIATED

REMOVE EXISTING LIGHT FIXTURE AND ASSOCIATED HARDWARE. RE: ELECTRICAL DRAWINGS FOR DEMOLITION REQUIREMENTS.

REMOVE EXISTING DIFFUSER OR GRILLE. RE: MECHANICAL DRAWINGS.

NAIL/SCREW HOLES AND PREPARE CMU WALL TO BE REPAINTED. RE:

REMOVE EXISTING PROJECTOR AND SCREEN AND ALL ASSOCIATED

HARDWARE. CONFIRM WITH OWNER'S REPRESENTATIVE PRIOR TO

CONFIRM WITH OWNER'S REPRESENTATIVE PRIOR TO DEMOLITION IF

SENSOR SHOULD BE SALVAGED AND RETURNED TO OWNER. RE:

REMOVE EXISTING SPEAKER AND ASSOCIATED HARDWARE. RE:

PATCH AND PREPARE EXISTING GYPSUM BOARD CEILING TO BE REPAINTED. RE: ELECTRICAL FOR ELEMENTS TO BE REMOVED.

EXISTING MILLWORK TO REMAIN. PROTECT DURING CONSTRUCTION.

REMOVE FLOOR TILE AND ADHESIVE. CLEAN EXISTING STRUCTURAL

REMOVE VINYL TILE FLOORING AND ADHESIVE. ADHERE TO OWNER'S UNIVERSAL-HAZARDOUS MATERIALS REMOVAL AND DISPOSAL PROCEDURES OUTLINED IN THE SPECIFICATIONS. CLEAN EXISTING CONCRETE FLOOR SLAB AND PREPARE TO RECEIVE NEW FINISHES.

FLOOR SLAB AND PREPARE TO RECEIVE NEW FINISHES.

40 REMOVE EXISTING EXPANSION JOINT COVER.

DEMOLITION IF THE PROJECTOR SHOULD BE SALVAGED AND

REMOVE EXISTING SENSOR AND ALL ASSOCIATED HARDWARE.

RETURNED TO OWNER. RE: ELECTRICAL DRAWINGS.

ELECTRICAL DRAWINGS.

ELECTRICAL DRAWINGS.

REMOVE EXISTING EXIT SIGNAGE. RE: ELECTRICAL DEMOLITION

DEMO FURRING WALL TO EXTERIOR CMU WALL. PATCH ANY

REMOVE EXISTING BUILT IN CASEWORK DESK & ASSOCIATED

REMOVE EXISTING GYPSUM BOARD CEILING AND ASSOCIATED

REMOVE EXISTING WINDOW SILL. PATCH AND PREPARE TO RECEIVE

REMOVE EXISTING DOOR, DOOR FRAME, HARDWARE, AND ALL

REMOVE WALL CORNER GUARD. PATCH WALL AND PREPARE DRYWALL TO BE REPAINTED TO EXTENTS SHOWN ON PLAN.

FASTENERS AND ADHESIVES, INCLUDING SIGNAGE, HAND SANITIZERS, AND PLAQUES. SALVAGE AND RETURN TO OWNER.

MECHANICAL DRAWINGS FOR ELEMENTS TO BE REMOVED.

DOWN TO WALL STRUCTURE BEHIND. REMOVE ANY ELECTRICAL

REMOVE ENTIRE EXISTING C.M.U. PARTITION, INCLUDING BASE, ELECTRICAL/FA DEVICES, RECEPTACLES, CONDUIT, ETC. TO

REMOVE EXISTING STOREFRONT WINDOW, DOORS, AND ALL

WITH OWNER'S REPRESENTATIVE FOR RELOCATION.

ASSOCIATED FRAME ANCHORAGE MATERIALS.

ASSOCIATED FRAMING AND HARDWARE, ETC.

PROTECT EXISTING EXPANSION JOINT BETWEEN CHEMISTRY

125A OFFICE - DEMO PHOTO

125B OFFICE - DEMO PHOTO

**BASE BID** 

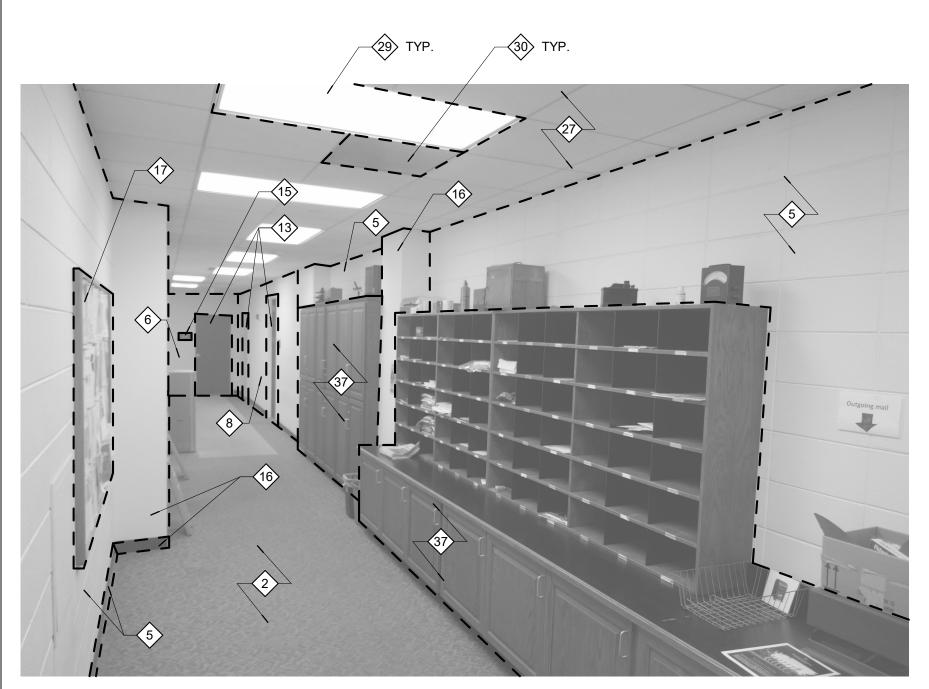
125C CHAIR'S OFFICE - DEMO PHOTO W7



125E OFFICE/CONFERENCE - DEMO PHOTO

125H SERVICE - DEMO PHOTO



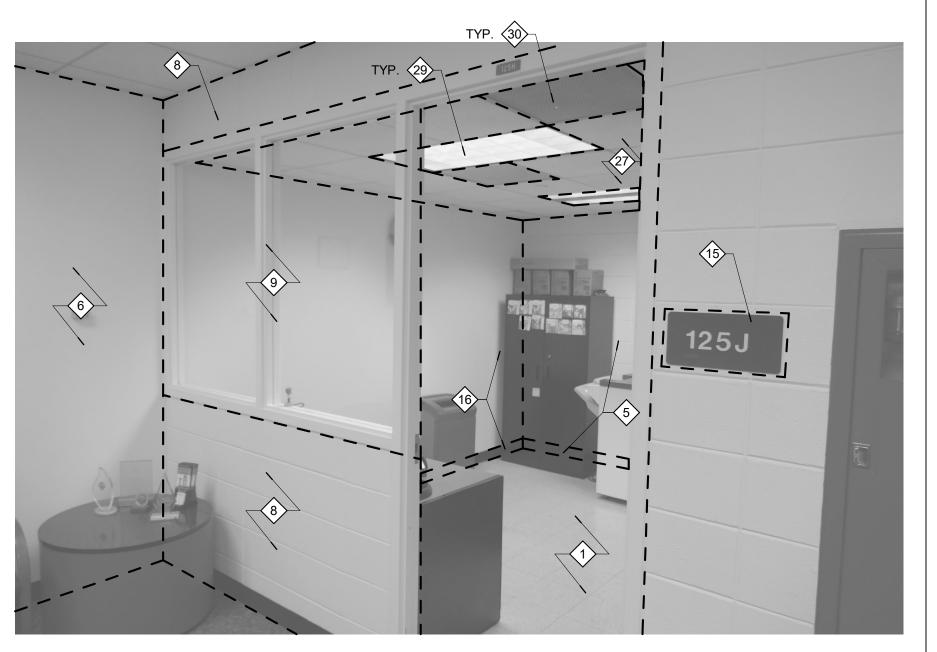


**BASE BID** 





125D OFFICE - DEMO PHOTO



BASE BID

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MEP CONSULTANT

IMEG, CORP. 1600 BALTIMORE AVE., SUITE 300 KANSAS CITY, MO 64108 PH: 816.842.8437



THE UNIVERSITY OF MISSOURI

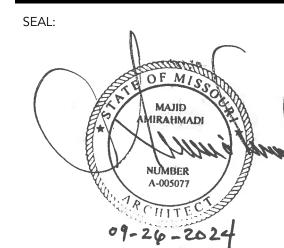
**CHEMISTRY** BUILDING - 1ST

**FLOOR** RENOVATION

ISSUED FOR CONSTRUCTION

125 CHEMISTRY BUILDING 601 S COLLEGE AVE COLUMBIA, MO 65211

DATE: PROJ. NO.:	09/26/2 CP242
DESIGNED BY: DRAWN BY:	AA
CHECKED BY: APPROVED BY:	



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drawings, or documents not exhibiting this seal.

NO.	REVISION SUBMISSION	DATE
0	ISSUED FOR CONSTRUCTION	09/26/2024

DEMOLITION **PHOTOGRAPHS** 

D800

133 MAIL SUPPLIES - DEMO PHOTO

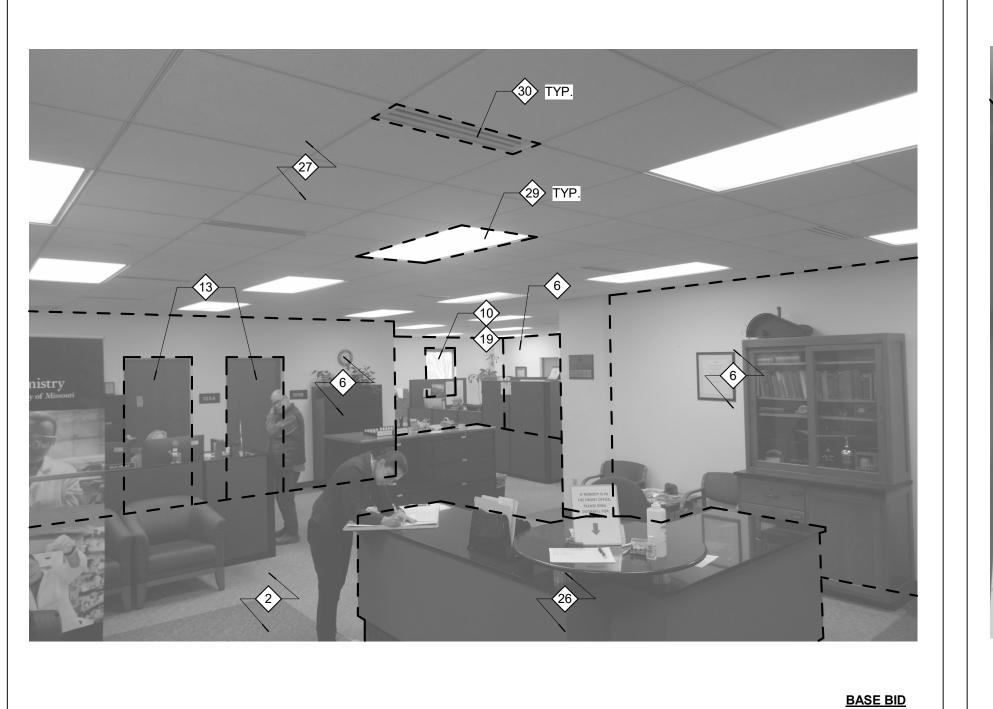
**DEMO NOTES** 

125I CONFERENCE - DEMO PHOTO B27

BASE BID

125J FILES - DEMO PHOTO

**B**1



PATCH/INFILL AREA OF DEMO'D CARPET TO BE LEVEL WITH CONCRETE FLOOR SLAB PRIOR TO INSTALLATION OF NEW WALK-OFF CARPET

ALTERNATE #1

125 OFFICE - DEMO PHOTO 1

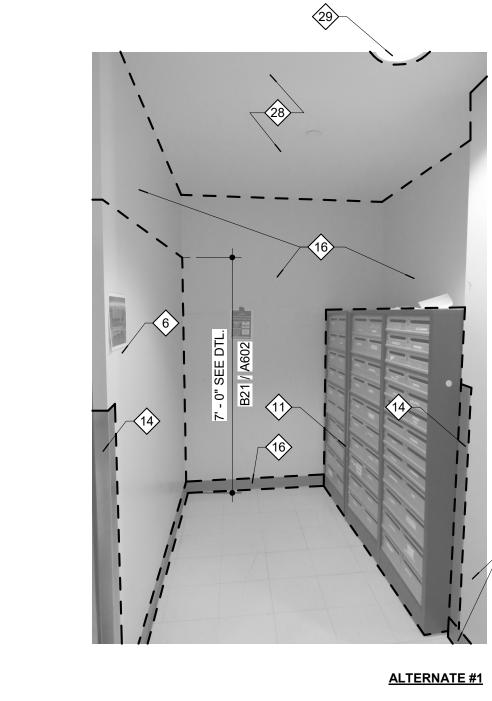
AC100A LOBBY - DEMO PHOTO 1 L27

AV100B VESTIBULE - DEMO PHOTO 1

**ALTERNATE #1** 

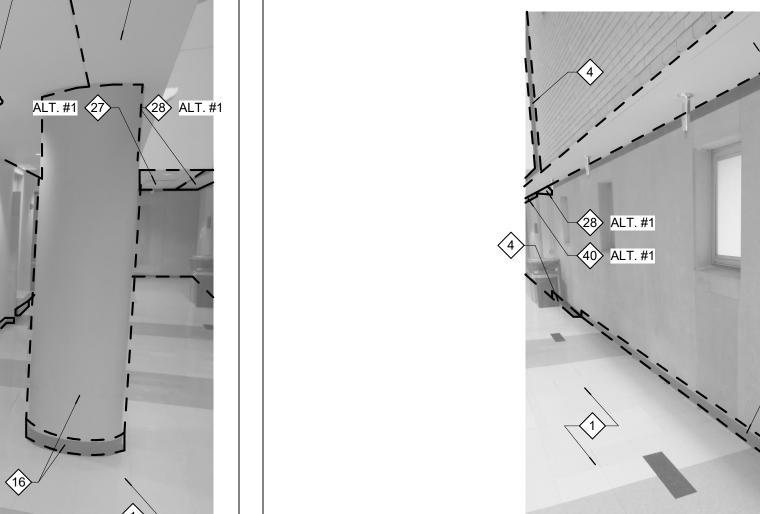
AV100B VESTIBULE - DEMO PHOTO 2





AC100A LOBBY - DEMO PHOTO 2 L17

AC100A LOBBY - DEMO PHOTO 3



**ALTERNATE #2** 

DEMO NOTES

PHOTOGRAPHS

D801

DEMOLITION

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NO. REVISION SUBMISSION DATE 0 ISSUED FOR CONSTRUCTION 09/26/2024

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MISSOURI STATE CERTIFICATE OF AUTHORITY #000582

FOR THE CURATORS OF

THE UNIVERSITY OF MISSOURI

**CHEMISTRY** 

**FLOOR** 

ISSUED FOR

601 S COLLEGE AVE

**DESIGNED BY:** 

CHECKED BY:

APPROVED BY:

SEAL:

DRAWN BY:

CONSTRUCTION

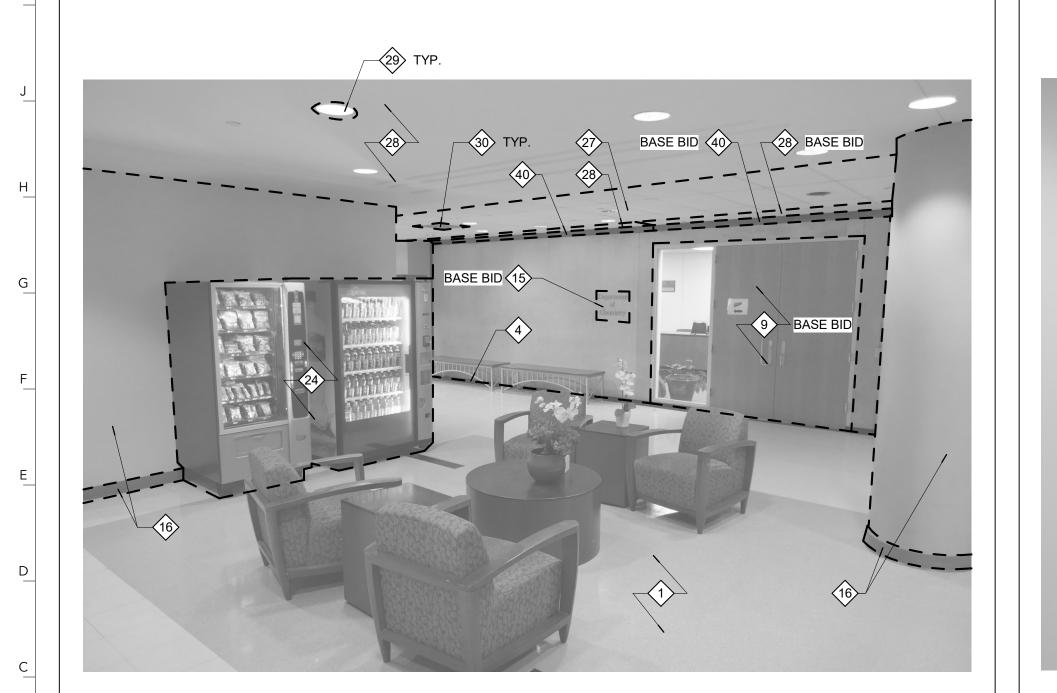
125 CHEMISTRY BUILDING

09/26/2024

CP242331

BUILDING - 1ST

RENOVATION



AC100A LOBBY - DEMO PHOTO 4 B27

ALTERNATE #1

**ALTERNATE #1** 

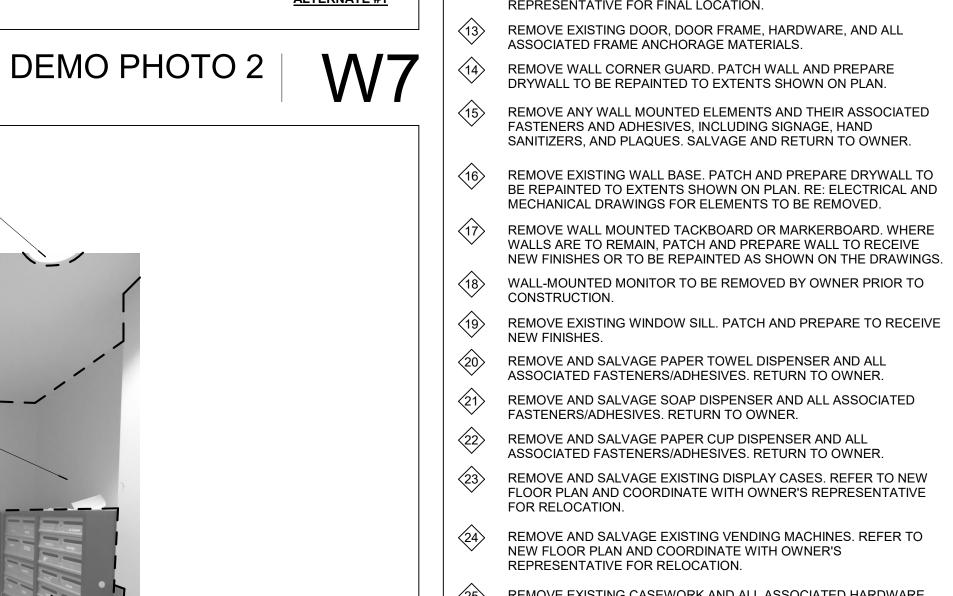
AC100B CORRIDOR - DEMO PHOTO 1

B17

ALTERNATE #2

AC100B CORRIDOR - DEMO PHOTO 2 B7

**B**1



COLUMBIA, MO 65211 PROJ. NO.:

REMOVE EXISTING EXIT SIGNAGE. RE: ELECTRICAL DEMOLITION DEMO FURRING WALL TO EXTERIOR CMU WALL. PATCH ANY

ELECTRICAL DRAWINGS. REMOVE EXISTING PROJECTOR AND SCREEN AND ALL ASSOCIATED

REMOVE EXISTING SENSOR AND ALL ASSOCIATED HARDWARE CONFIRM WITH OWNER'S REPRESENTATIVE PRIOR TO DEMOLITION IF SENSOR SHOULD BE SALVAGED AND RETURNED TO OWNER. RE: ELECTRICAL DRAWINGS.

REMOVE EXISTING SPEAKER AND ASSOCIATED HARDWARE. RE: ELECTRICAL DRAWINGS.

PATCH AND PREPARE EXISTING GYPSUM BOARD CEILING TO BE

EXISTING MILLWORK TO REMAIN. PROTECT DURING CONSTRUCTION.

FLOOR SLAB AND PREPARE TO RECEIVE NEW FINISHES.

REMOVE VINYL TILE FLOORING AND ADHESIVE. ADHERE TO OWNER'S UNIVERSAL-HAZARDOUS MATERIALS REMOVAL AND DISPOSAL PROCEDURES OUTLINED IN THE SPECIFICATIONS. CLEAN EXISTING CONCRETE FLOOR SLAB AND PREPARE TO RECEIVE NEW FINISHES.

CONCRETE FLOOR SLAB AND PREPARE TO RECEIVE NEW FINISHES. MEP CONSULTANT REMOVE CARPET TILE AND ADHESIVE. CLEAN EXISTING FLOOR SLAB AND PREPARE TO RECEIVE NEW FINISHES. IMEG, CORP. 1600 BALTIMORE AVE., SUITE 300 REMOVE PERIMETER FINNED TUBE AND ALL ASSOCIATED FRAMING KANSAS CITY, MO 64108 AND ANCHORS TO EXTENTS SHOWN ON PLAN. RE: MECHANICAL PH: 816.842.8437 DRAWINGS FOR DEMOLITION REQUIREMENTS. PROTECT EXISTING EXPANSION JOINT BETWEEN CHEMISTRY BUILDING AND CHEMISTRY TEACHING ADDITION. REMOVE EXISTING WALL BASE AND ADHESIVE TO EXTENTS SHOWN ON PLAN. PATCH AND PREPARE SURFACE TO BE REPAINTED TO EXTENTS SHOWN ON PLAN. RE: ELECTRICAL AND MECHANICAL DRAWINGS FOR ELEMENTS TO BE REMOVED. REMOVE EXISTING GYPSUM BOARD WALL INCLUDING WALL BASE, ALL ASSOCIATED FRAMING, AND ANY ELECTRICAL DEVICES, RECEPTACLES, CONDUIT, ETC. RE: ELECTRICAL DRAWINGS FOR ELECTRICAL DEMOLITION REQUIREMENTS REMOVE BATTEN BOARD WOOD PANELING AND ALL SUBSTRATES DOWN TO WALL STRUCTURE BEHIND. REMOVE ANY ELECTRICAL DEVICES, RECEPTACLES, CONDUIT, ETC. TO EXTENTS SHOWN ON PLAN. PATCH ALL NAIL/ SCREW/ OTHER HOLES IN WALL BEHIND. RE: ELECTRICAL DRAWINGS. REMOVE ENTIRE EXISTING C.M.U. PARTITION, INCLUDING BASE, ELECTRICAL/FA DEVICES, RECEPTACLES, CONDUIT, ETC. TO EXTENTS SHOWN ON PLAN UP TO B.O. EXISTING CONCRETE FLOOR SLAB. PATCH ADJACENT EXISTING FLOOR, AND WALL SURFACES TO REMOVE EXISTING STOREFRONT WINDOW, DOORS, AND ALL

REMOVE VINYL TILE FLOORING AND ADHESIVE. CLEAN EXISTING

**DEMOLITION PLAN NOTES** 

REMOVE AND SALVAGE EXISTING MAILBOXES. RE-PLACE FOLLOWING CONSTRUCTION. REFER TO NEW FLOOR PLAN AND COORDINATE WITH OWNER'S REPRESENTATIVE FOR RELOCATION. REMOVE AND SALVAGE BUILDING DIRECTORY SIGNAGE. REPLACE FOLLOWING NEW CONSTRUCTION, COORDINATE WITH OWNER'S

PROTECT EXISTING EXTERIOR WINDOW AND WINDOW TREATMENTS.

REPRESENTATIVE FOR FINAL LOCATION. REMOVE EXISTING DOOR, DOOR FRAME, HARDWARE, AND ALL

ASSOCIATED FRAMING AND HARDWARE, ETC.

ASSOCIATED FRAME ANCHORAGE MATERIALS. REMOVE WALL CORNER GUARD. PATCH WALL AND PREPARE DRYWALL TO BE REPAINTED TO EXTENTS SHOWN ON PLAN.

REMOVE ANY WALL MOUNTED ELEMENTS AND THEIR ASSOCIATED FASTENERS AND ADHESIVES, INCLUDING SIGNAGE, HAND SANITIZERS, AND PLAQUES. SALVAGE AND RETURN TO OWNER.

REMOVE EXISTING WALL BASE. PATCH AND PREPARE DRYWALL TO BE REPAINTED TO EXTENTS SHOWN ON PLAN. RE: ELECTRICAL AND MECHANICAL DRAWINGS FOR ELEMENTS TO BE REMOVED.

REMOVE WALL MOUNTED TACKBOARD OR MARKERBOARD. WHERE WALLS ARE TO REMAIN, PATCH AND PREPARE WALL TO RECEIVE NEW FINISHES OR TO BE REPAINTED AS SHOWN ON THE DRAWINGS.

REMOVE AND SALVAGE PAPER TOWEL DISPENSER AND ALL

REMOVE AND SALVAGE SOAP DISPENSER AND ALL ASSOCIATED

REMOVE AND SALVAGE PAPER CUP DISPENSER AND ALL ASSOCIATED FASTENERS/ADHESIVES, RETURN TO OWNER.

REMOVE AND SALVAGE EXISTING VENDING MACHINES. REFER TO NEW FLOOR PLAN AND COORDINATE WITH OWNER'S

REMOVE EXISTING CASEWORK AND ALL ASSOCIATED HARDWARE.

REMOVE EXISTING BUILT IN CASEWORK DESK & ASSOCIATED REMOVE EXISTING ACOUSTICAL TILE, GRID, AND ALL ASSOCIATED

HARDWARE AND SUSPENSION SYSTEM. REMOVE EXISTING GYPSUM BOARD CEILING AND ASSOCIATED

METAL FRAMING TO EXTENTS SHOWN ON PLAN. REMOVE EXISTING LIGHT FIXTURE AND ASSOCIATED HARDWARE. RE:

ELECTRICAL DRAWINGS FOR DEMOLITION REQUIREMENTS. REMOVE EXISTING DIFFUSER OR GRILLE. RE: MECHANICAL DRAWINGS.

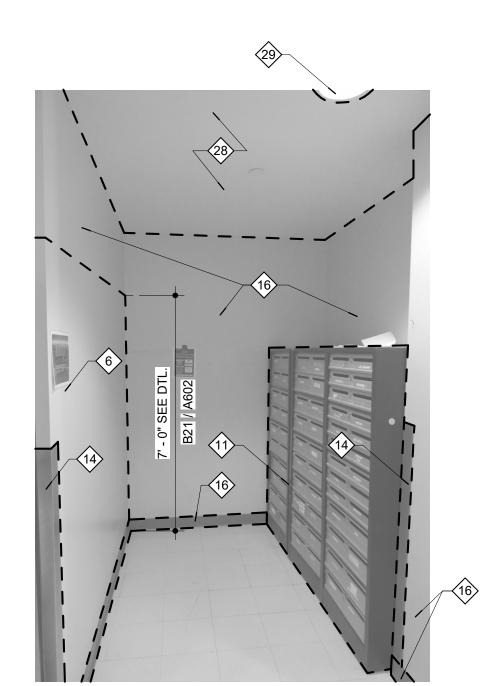
NAIL/SCREW HOLES AND PREPARE CMU WALL TO BE REPAINTED. RE:

HARDWARE. CONFIRM WITH OWNER'S REPRESENTATIVE PRIOR TO DEMOLITION IF THE PROJECTOR SHOULD BE SALVAGED AND RETURNED TO OWNER. RE: ELECTRICAL DRAWINGS.

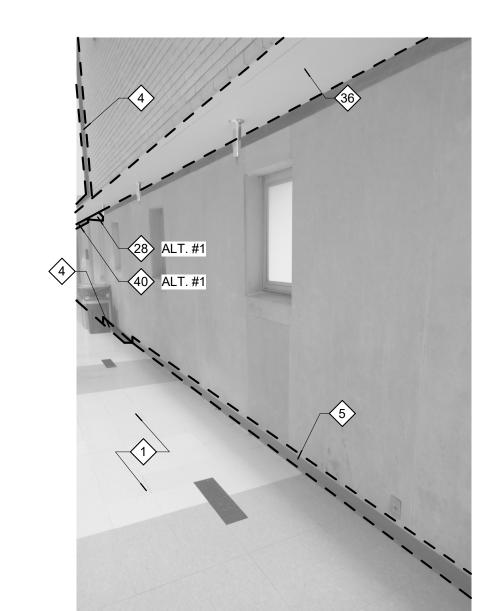
REPAINTED. RE: ELECTRICAL FOR ELEMENTS TO BE REMOVED.

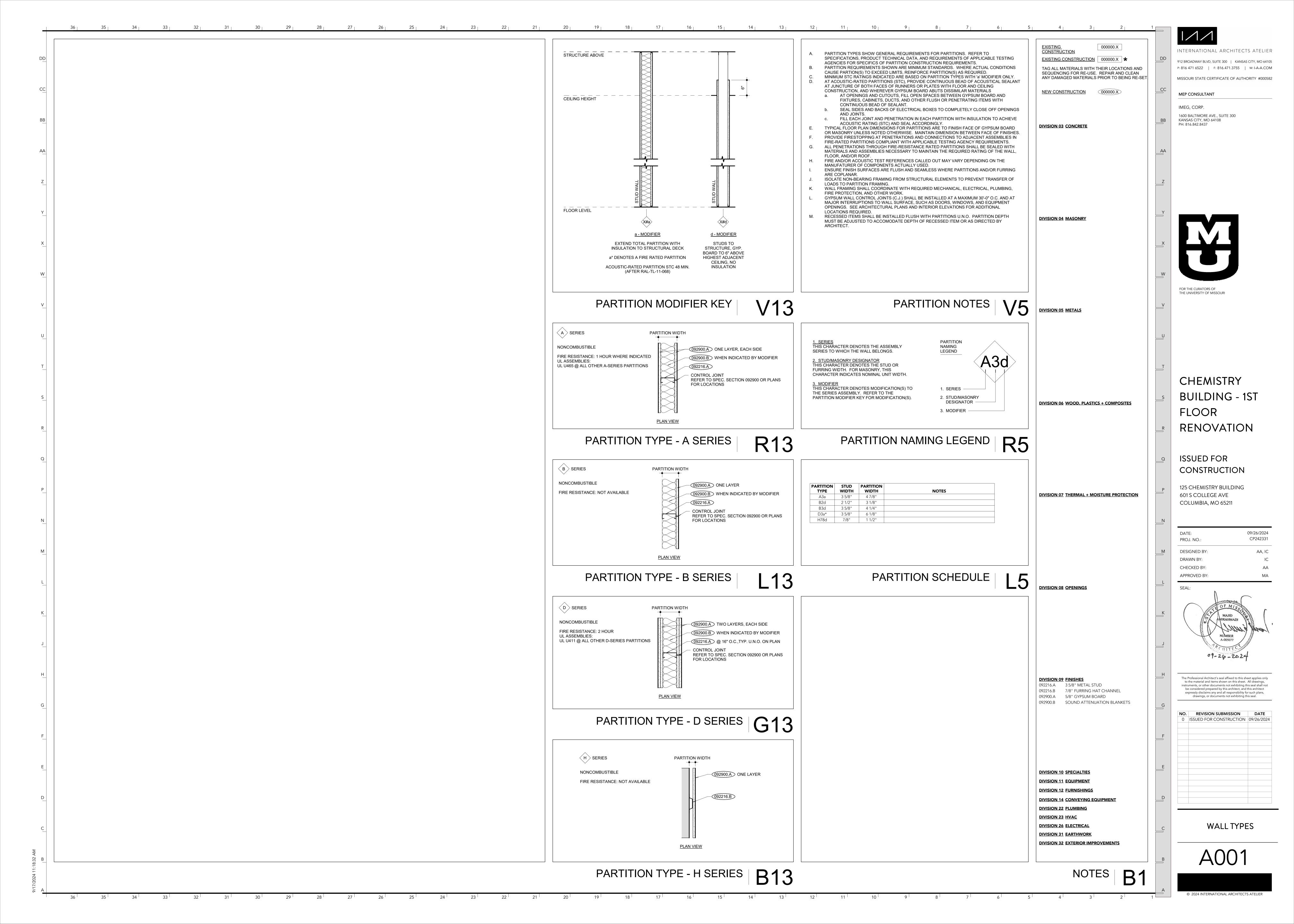
REMOVE FLOOR TILE AND ADHESIVE. CLEAN EXISTING STRUCTURAL

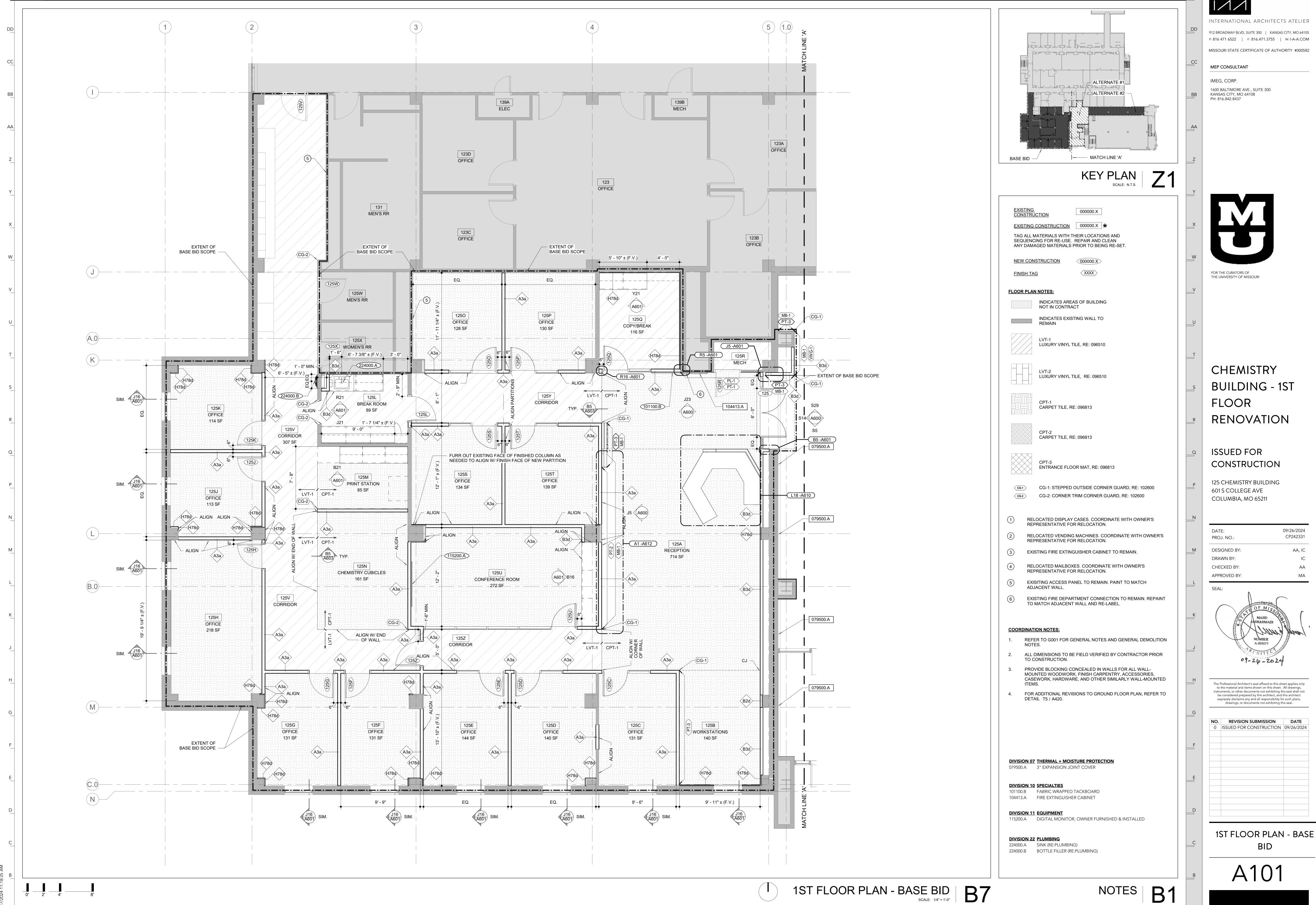
(40) REMOVE EXISTING EXPANSION JOINT COVER.

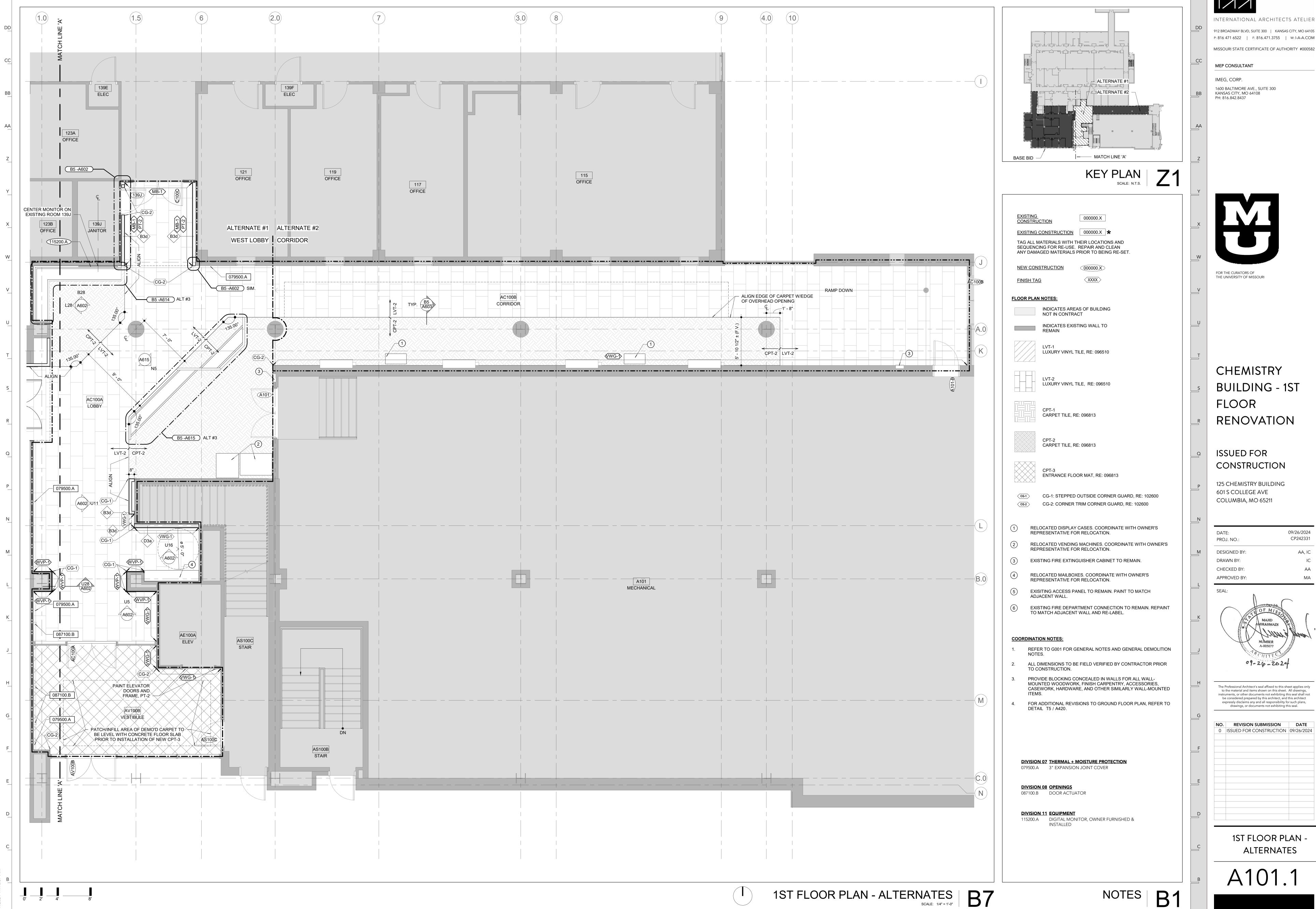






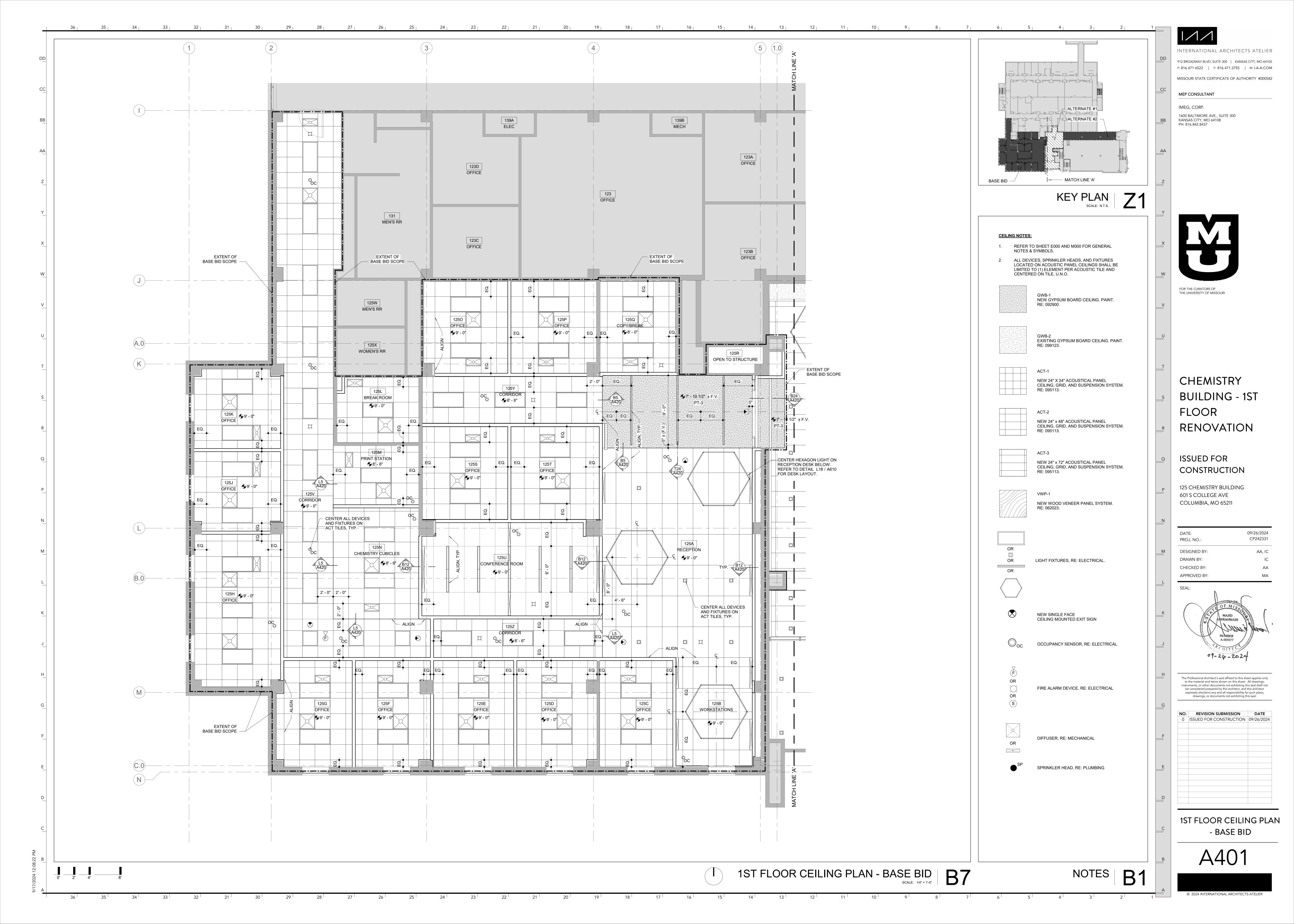


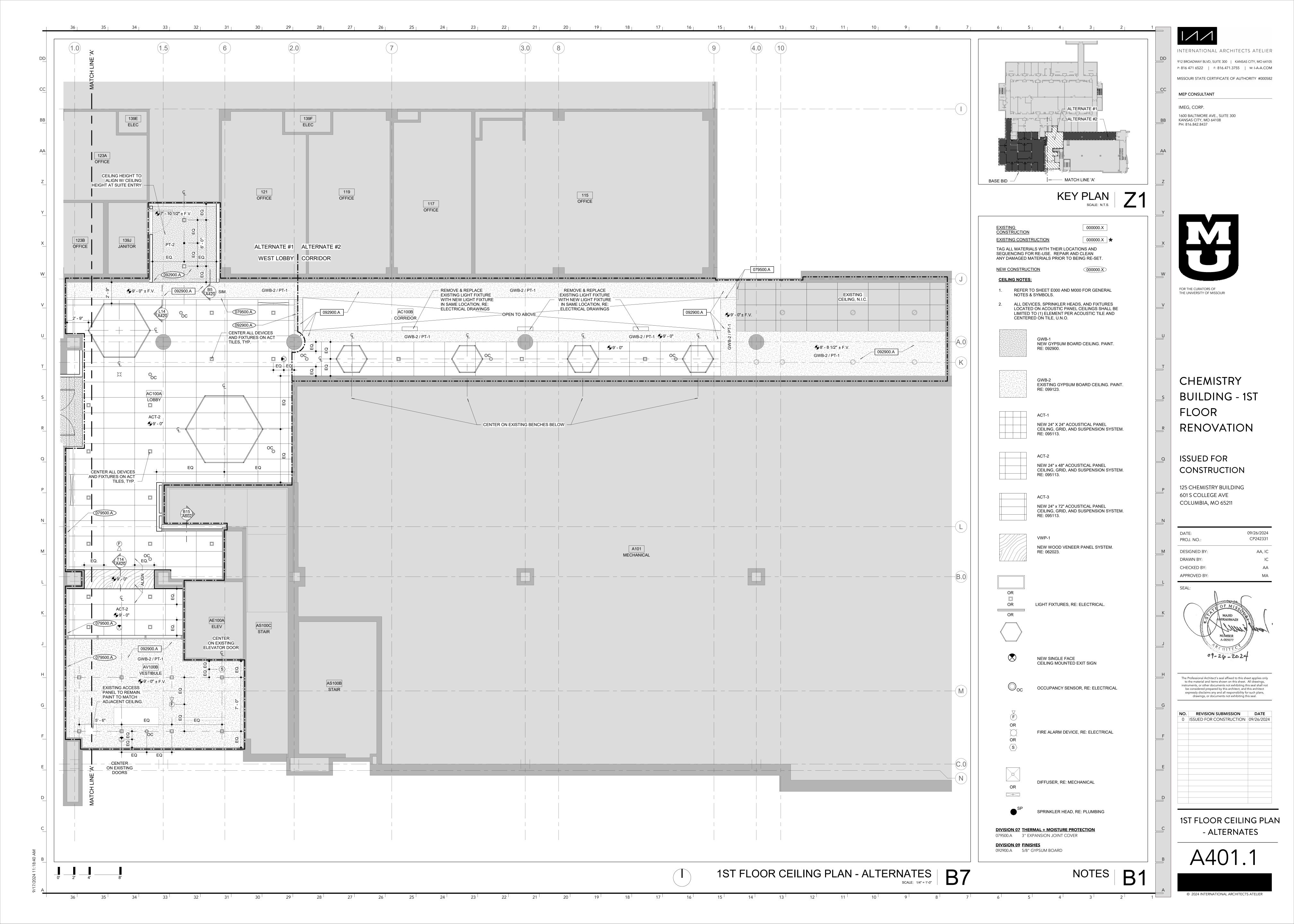


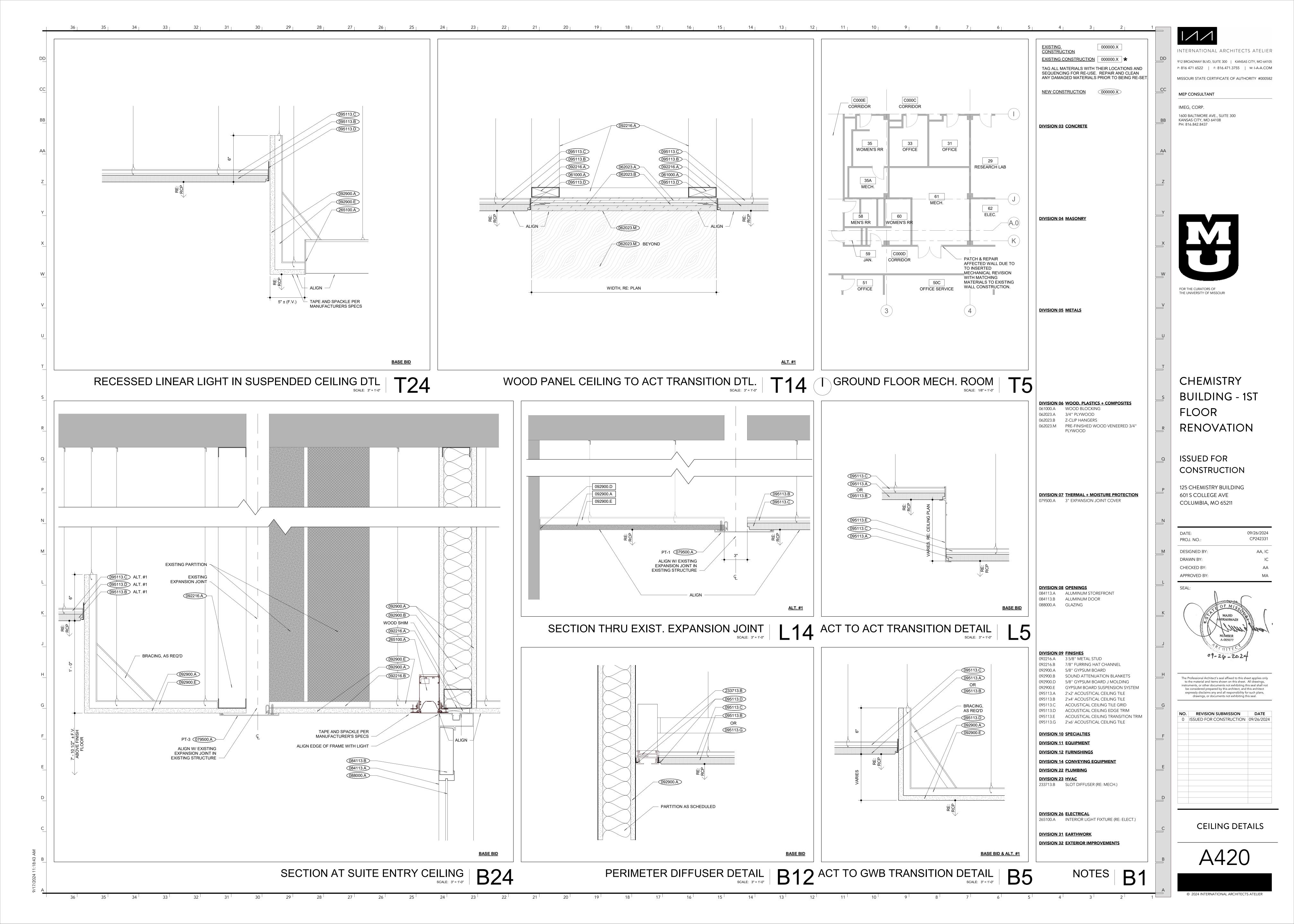


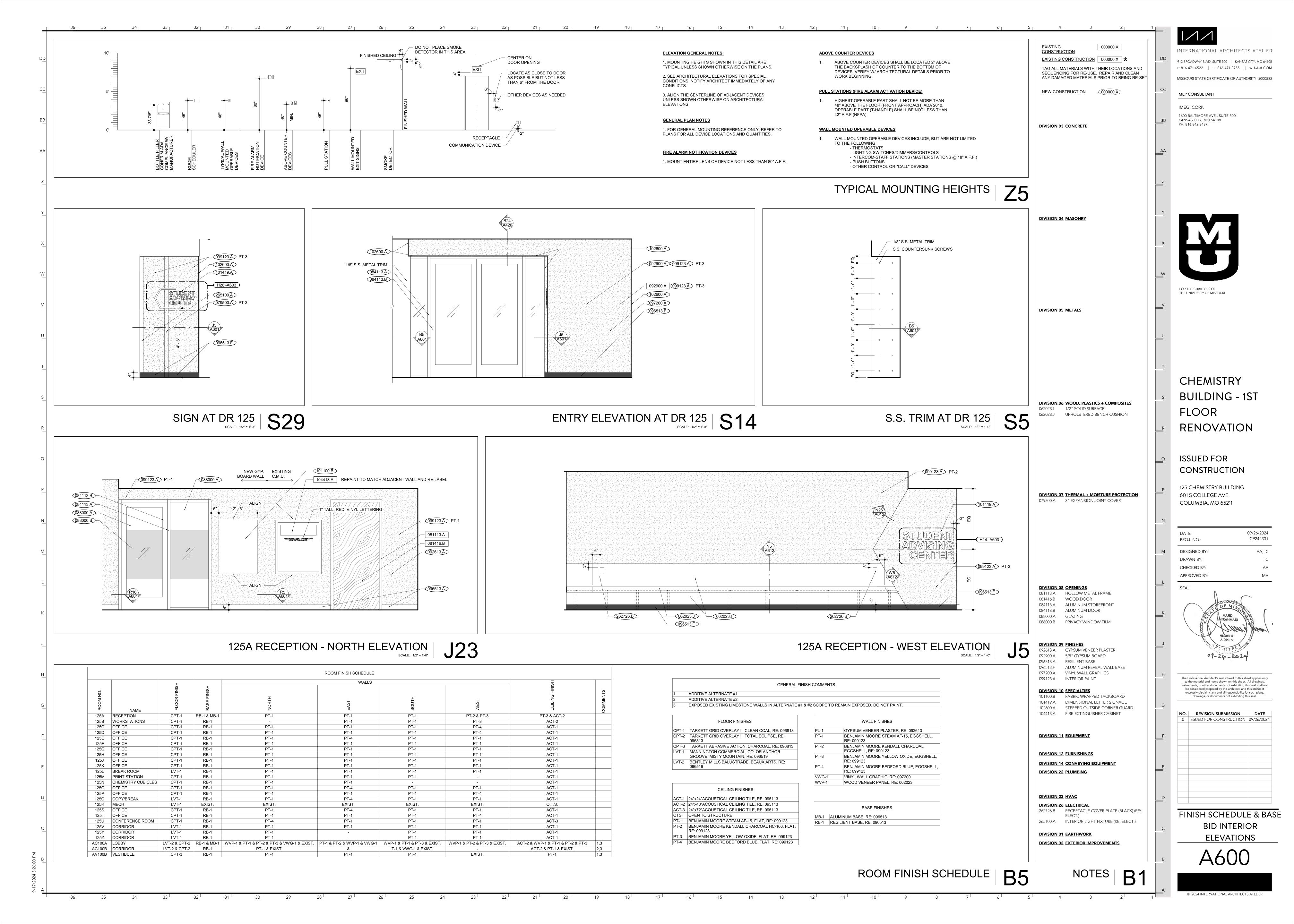
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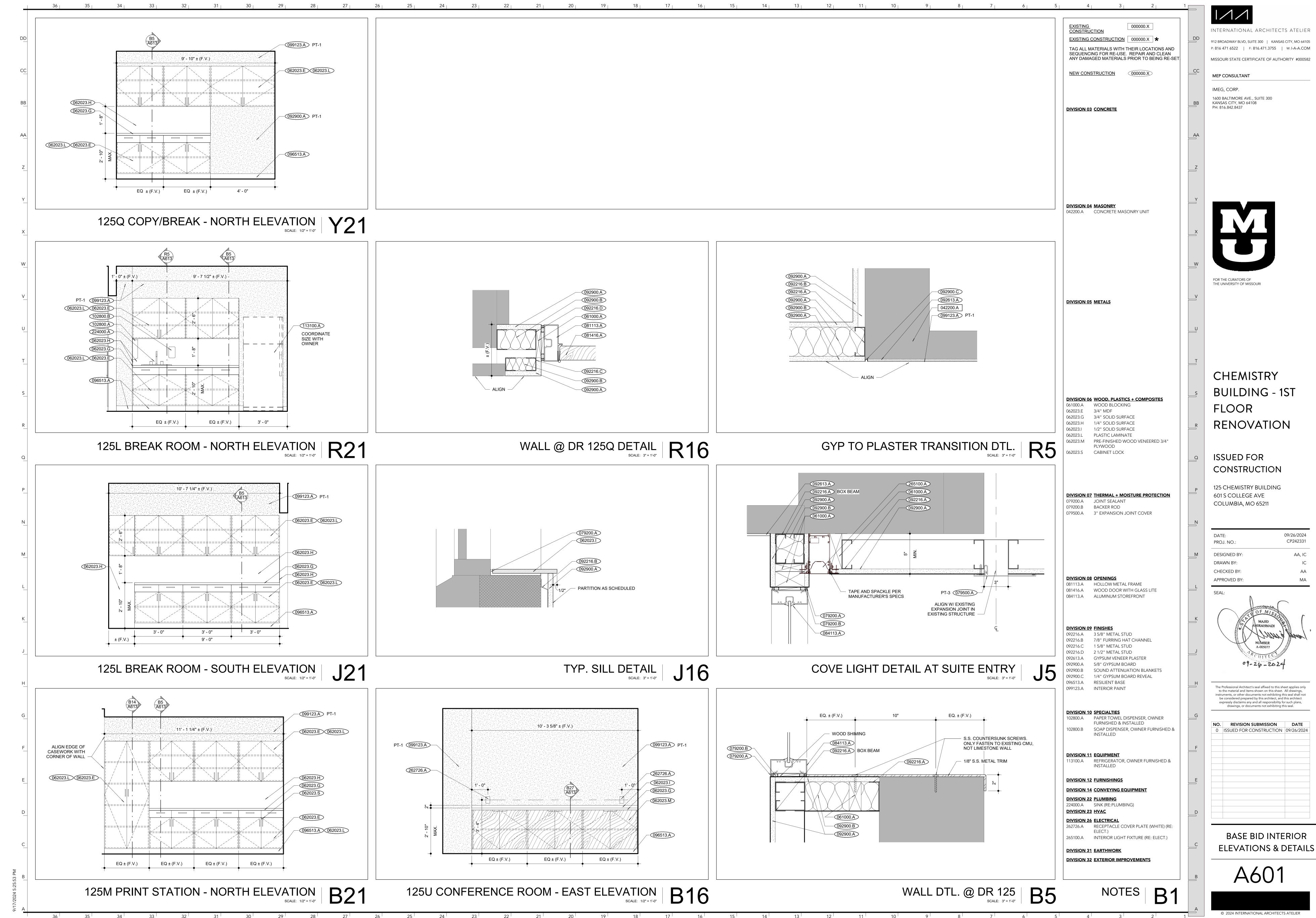
09/26/2024 CP242331

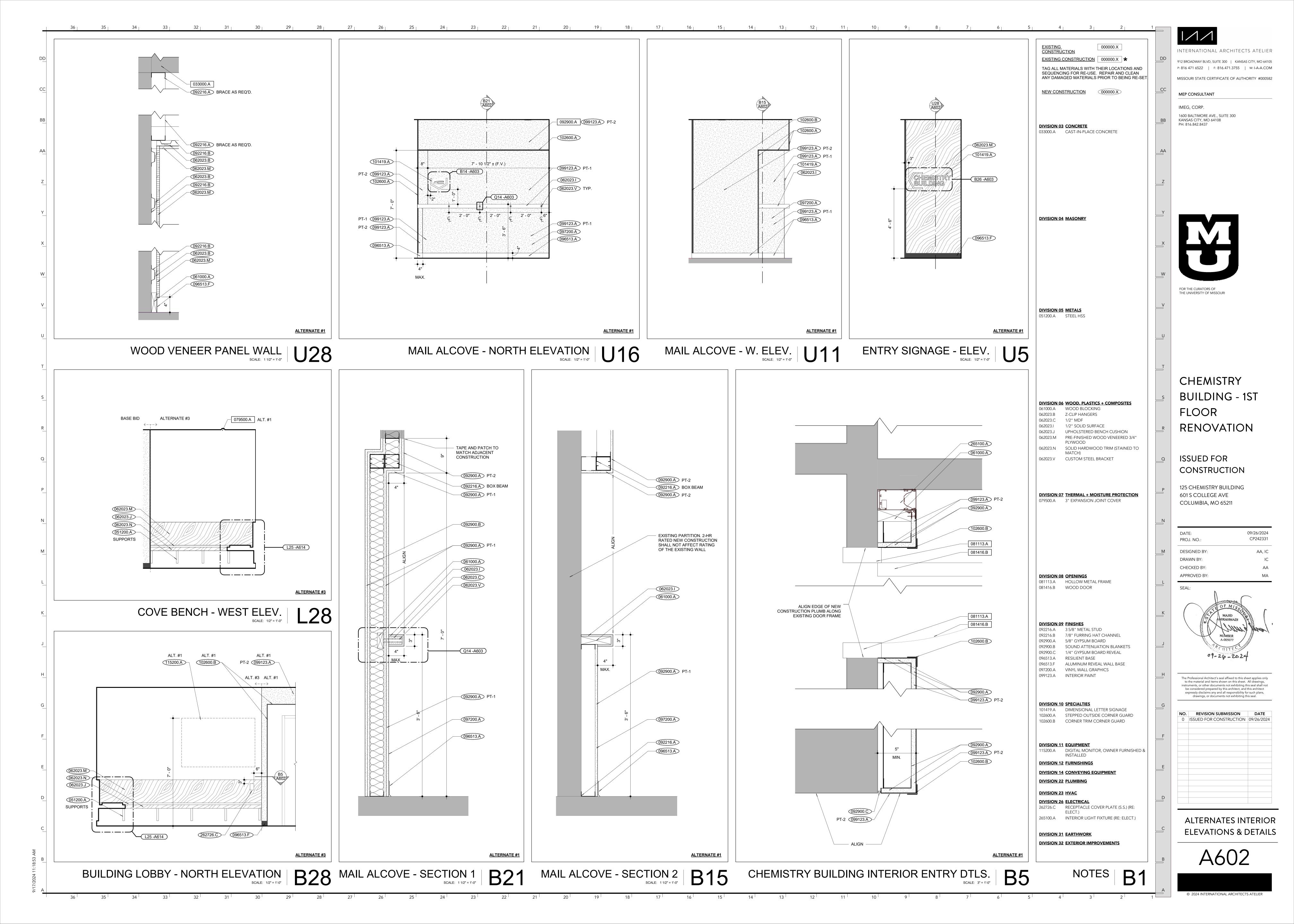


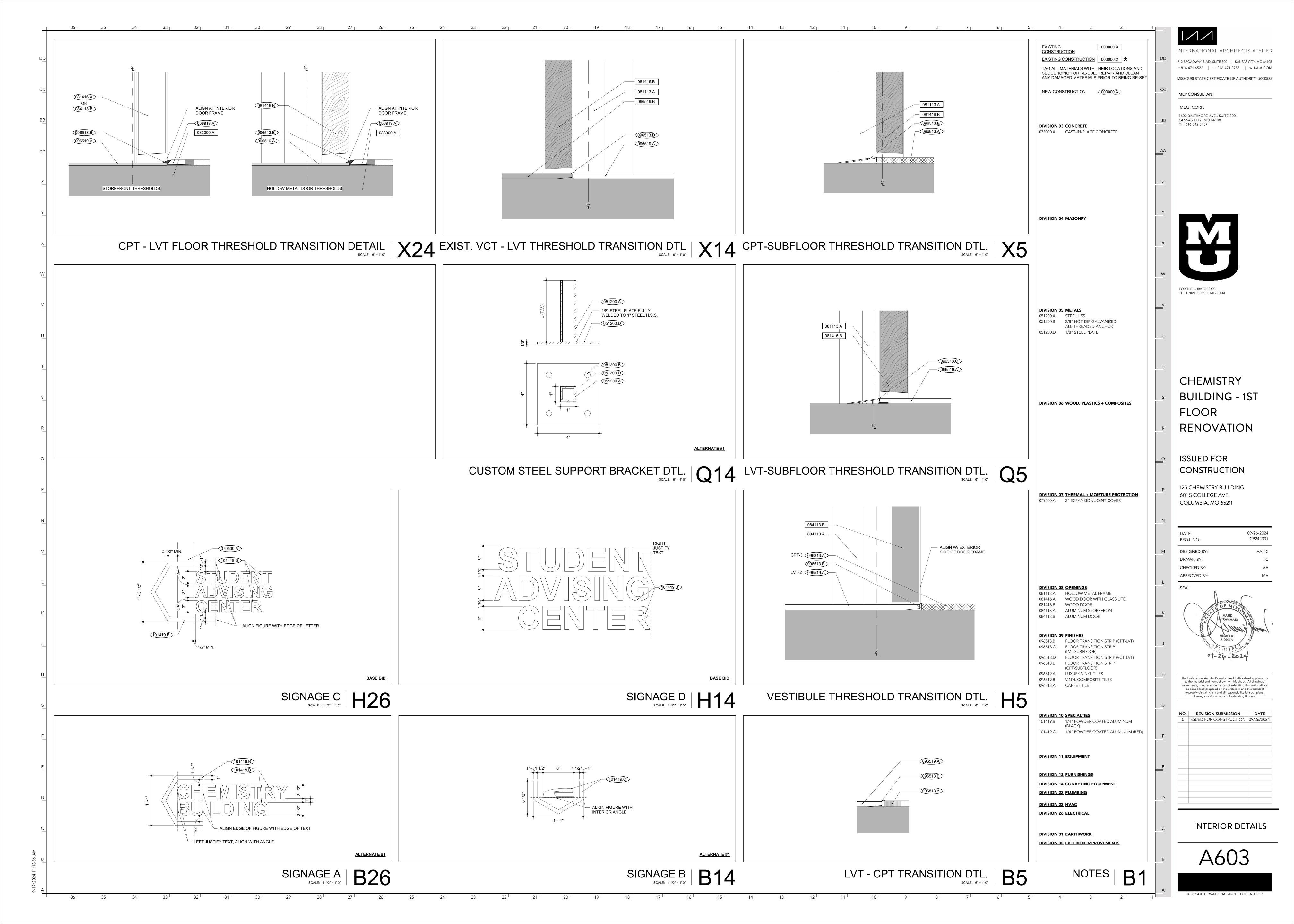


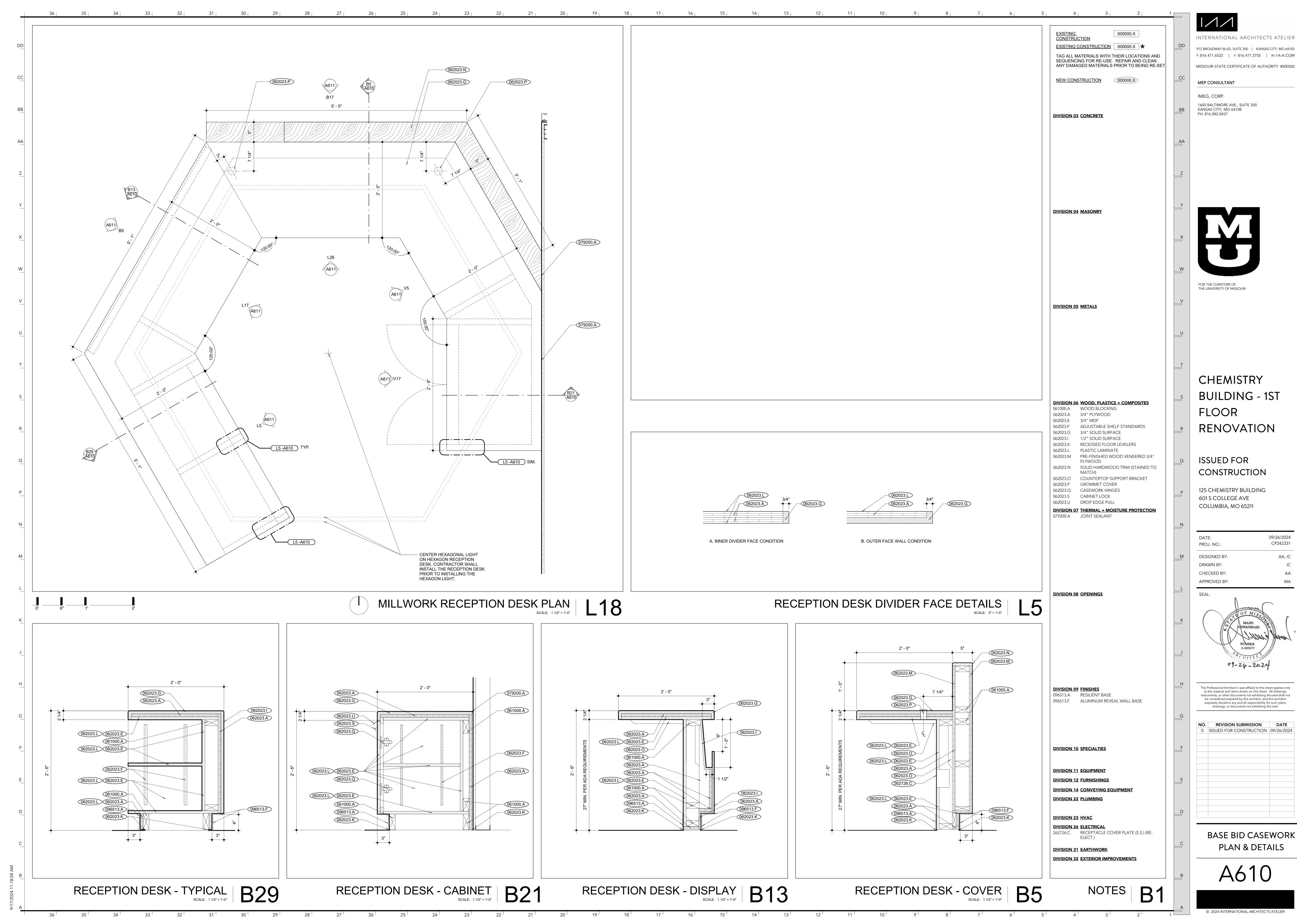




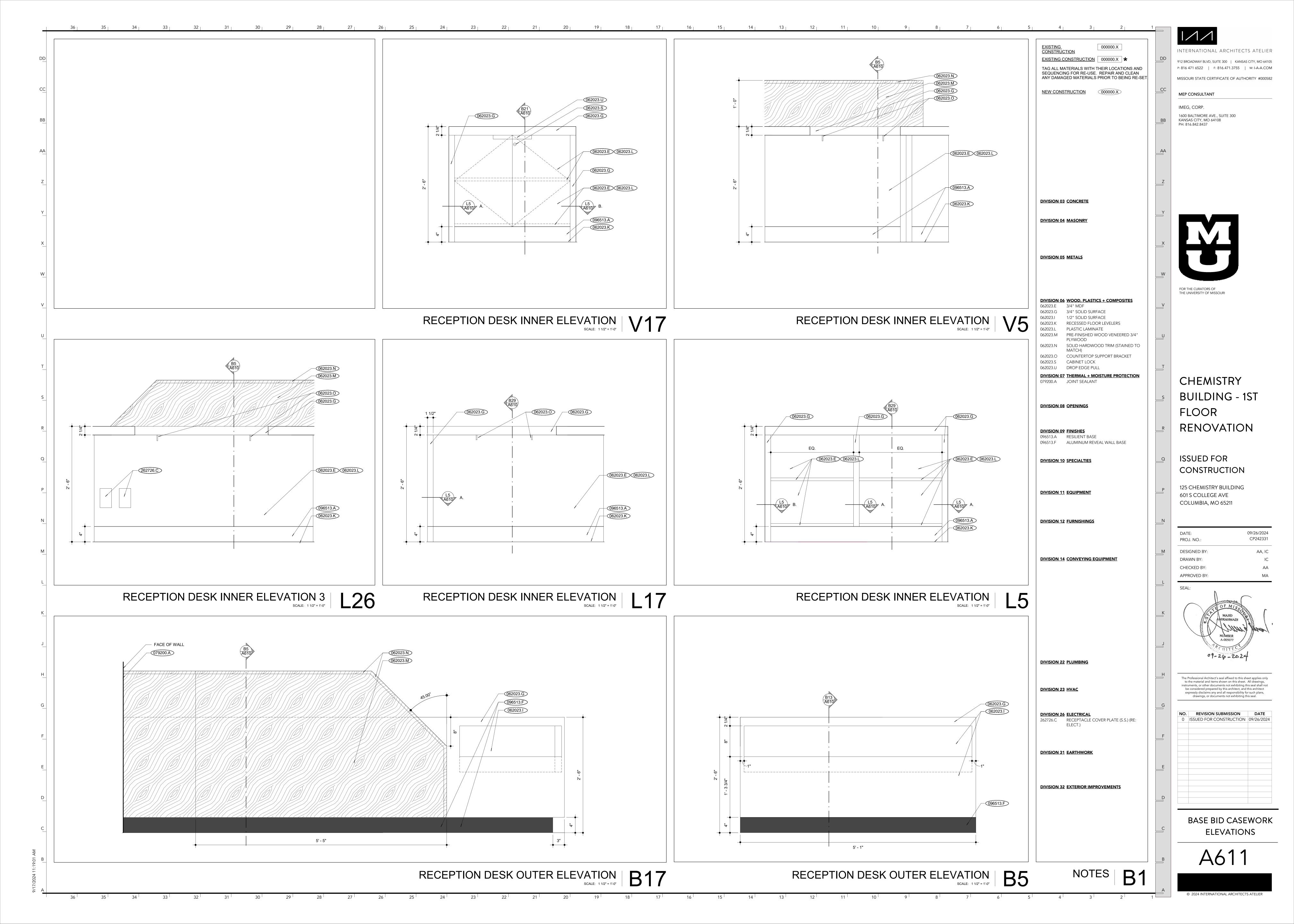


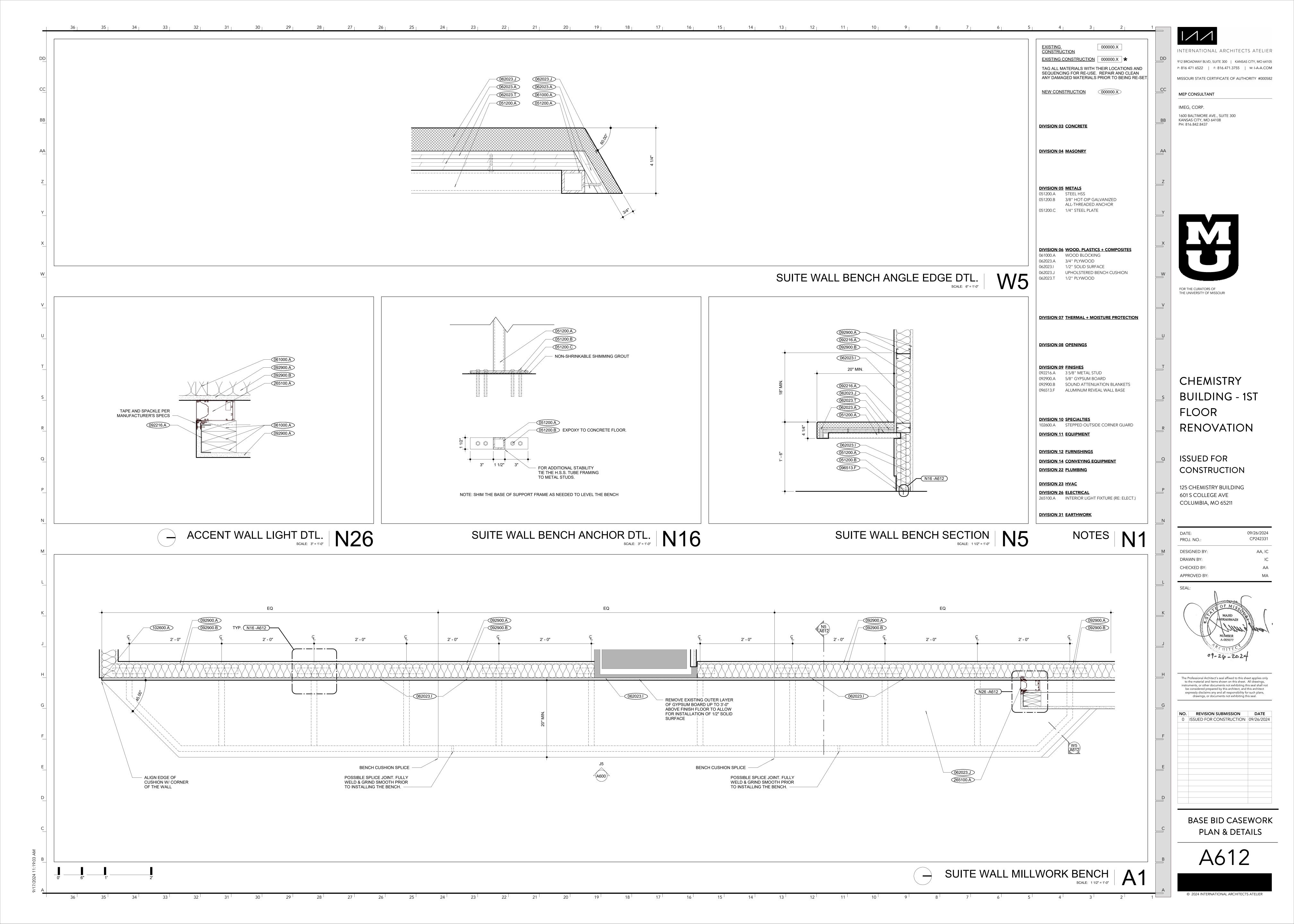


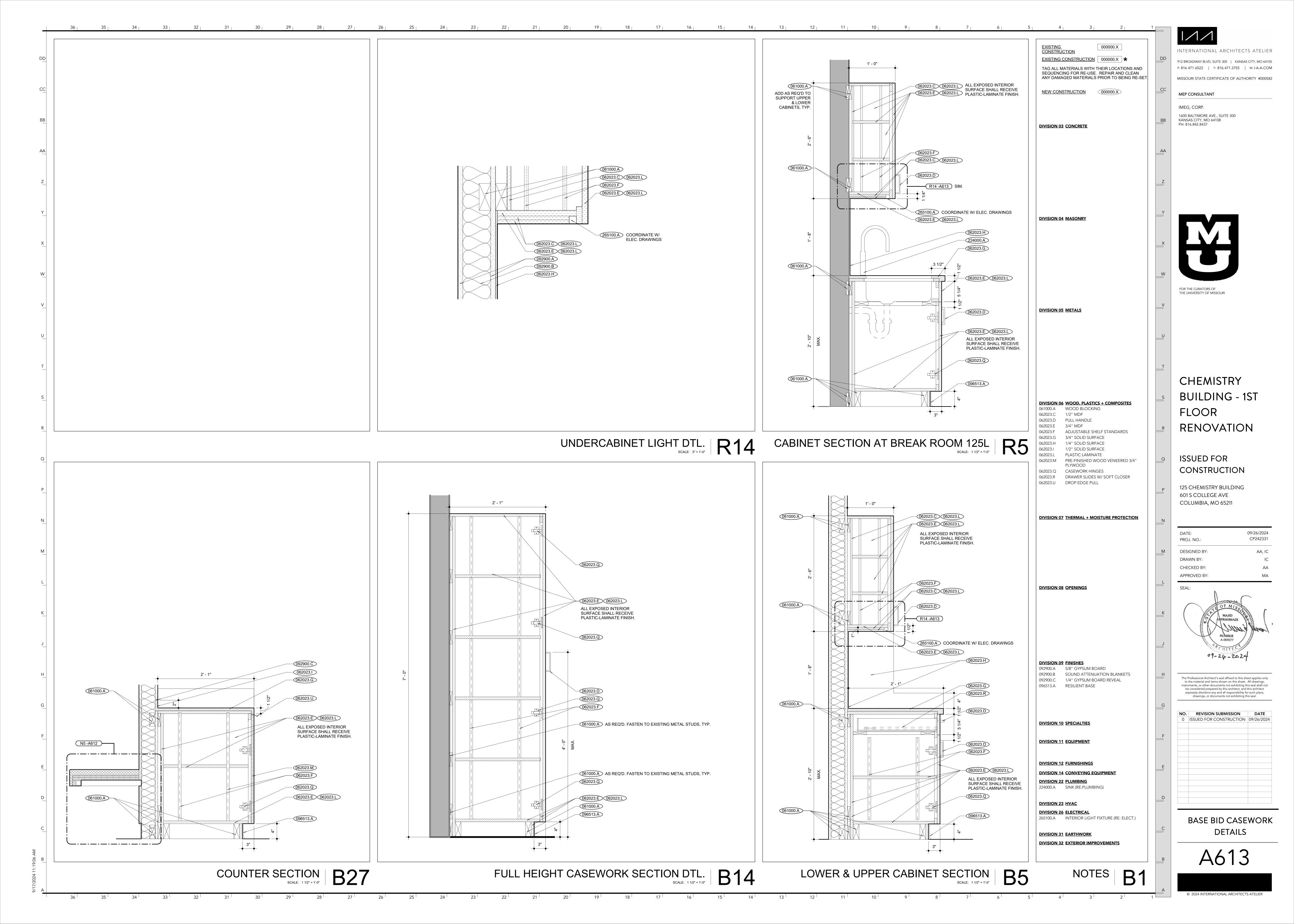


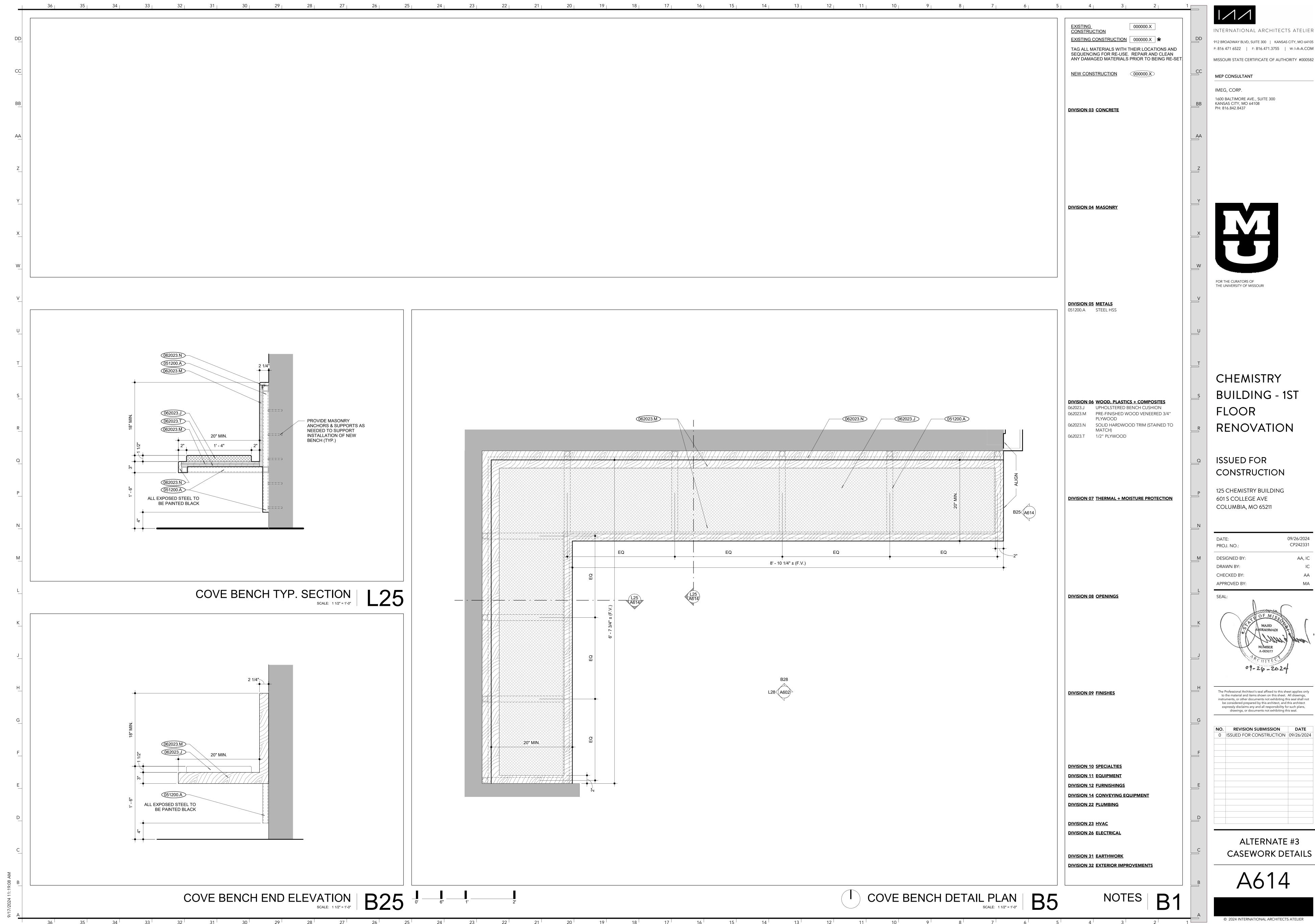






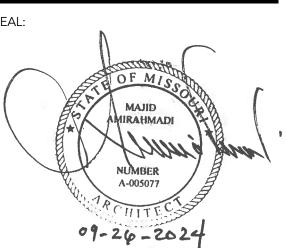


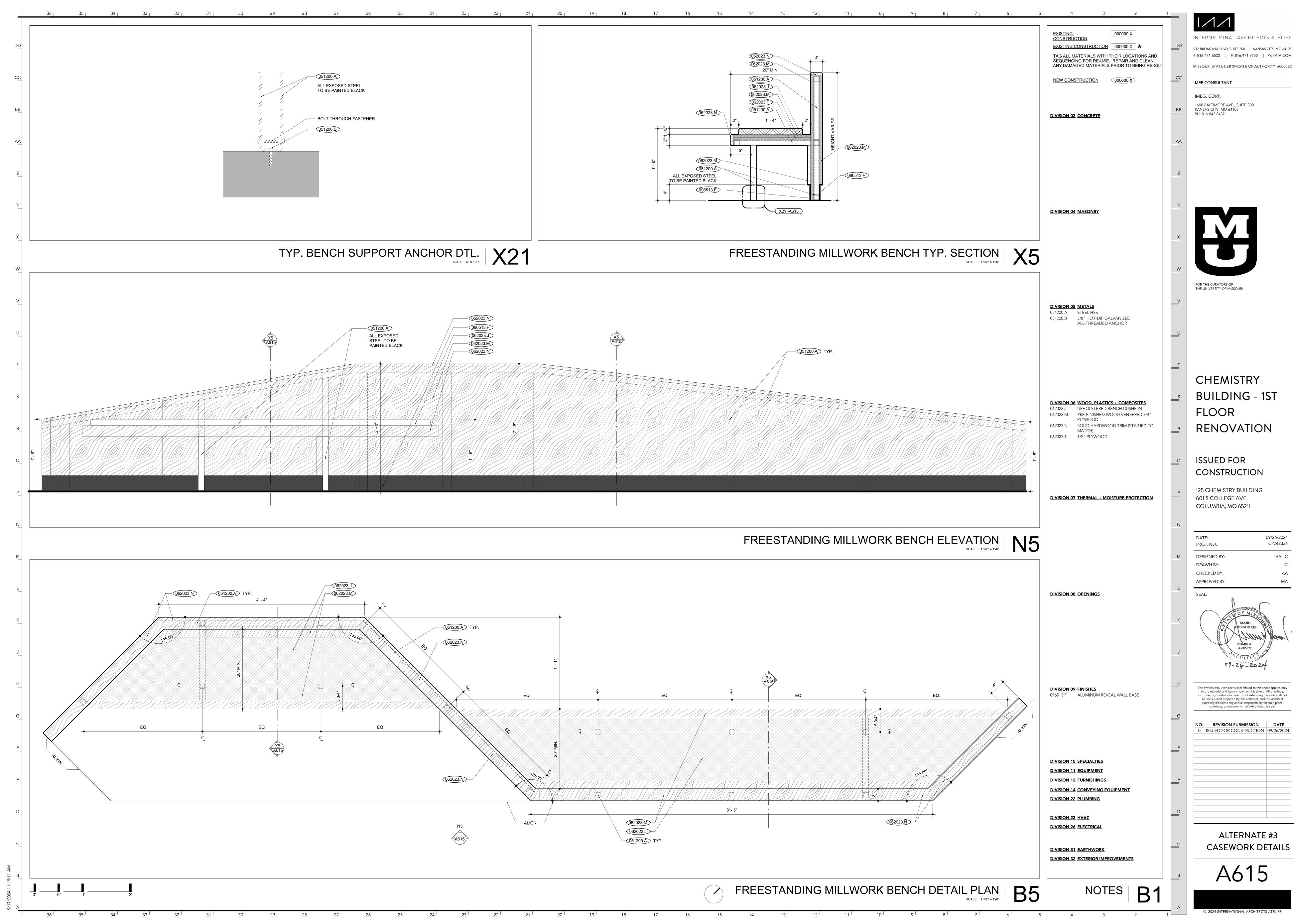




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> 09/26/2024 CP242331

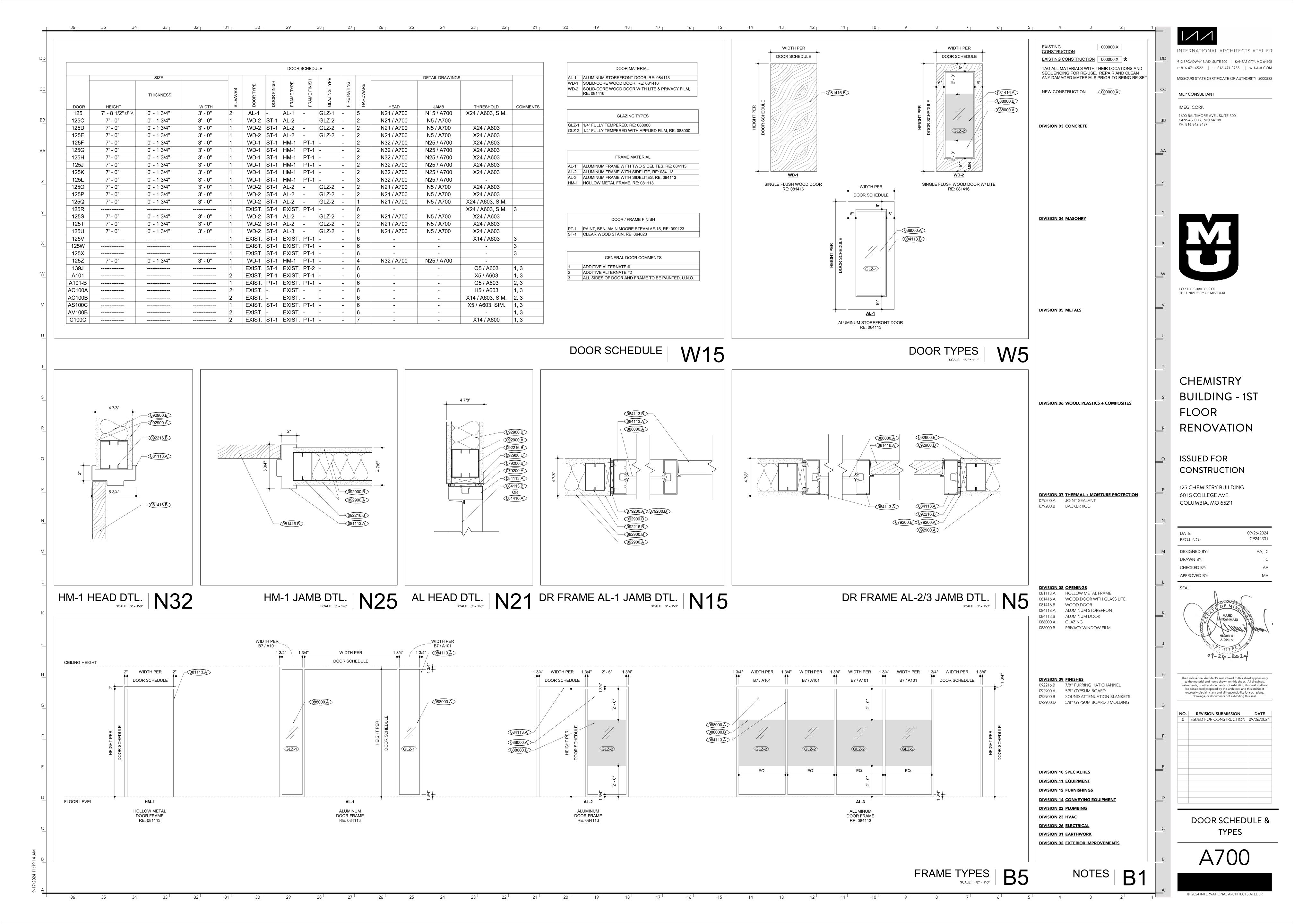


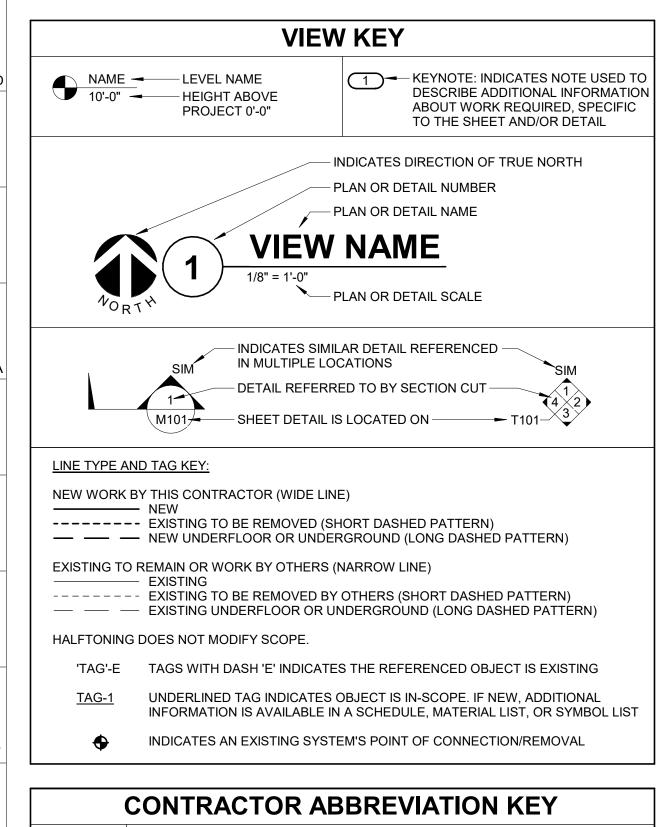


DATE: PROJ. NO.:	09/26/2024 CP242331
DESIGNED BY:	AA, IC
DRAWN BY:	IC
CHECKED BY:	AA
APPROVED BY:	MA
SEAL:	



0 ISSUED FOR CONSTRUCTION 09/26/2024





**DESCRIPTION:** 

**CONSTRUCTION MANAGER** 

**ELECTRICAL CONTRACTOR** 

**GENERAL CONTRACTOR** 

HEATING CONTRACTOR

MECHANICAL CONTRACTOR

VENTILATION CONTRACTOR

C.M.

G.C.

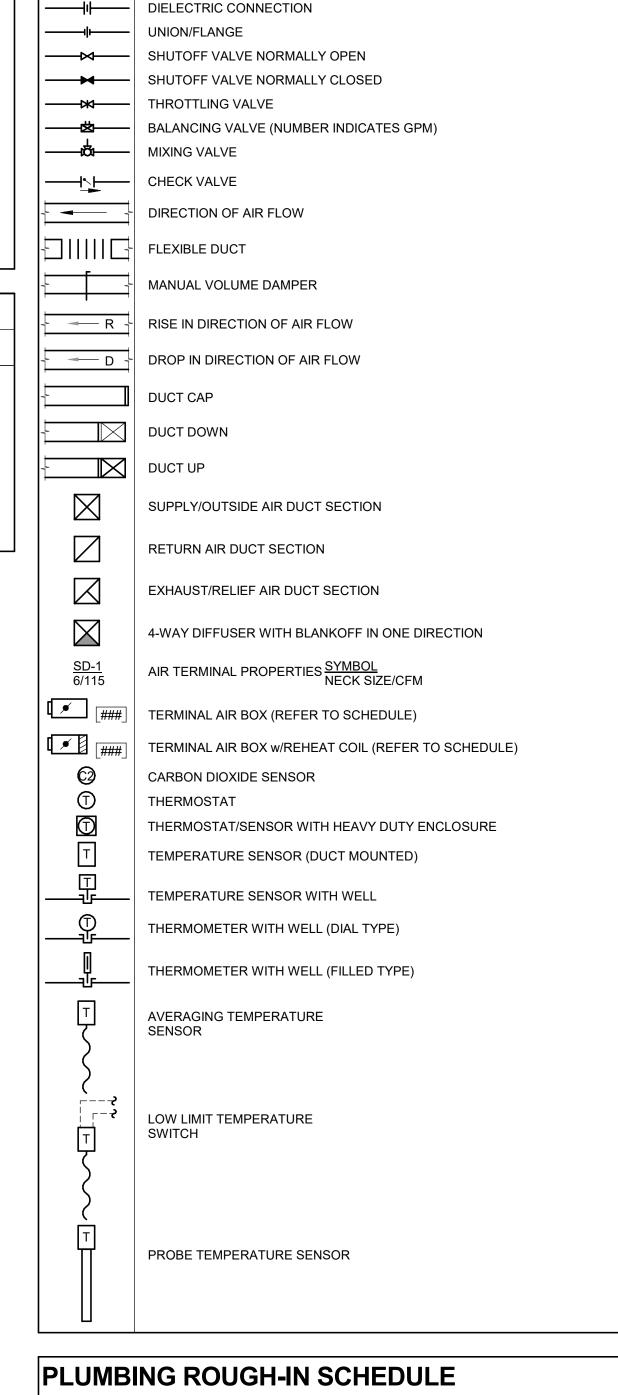
H.C.

T.C.C.

V.C.

ASBESTOS ABATEMENT CONTRACTOR

TEMPERATURE CONTROLS CONTRACTOR



MECHANICAL SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL: DESCRIPTION:

----CW---- COLD WATER - POTABLE

----HW----- HOT WATER - POTABLE

——HWR—— HEATING WATER RETURN

——HWS—— | HEATING WATER SUPPLY

PIPE UP OR UP/DOWN

PITCH PIPE IN DIRECTION

**ROUTE TO DRAIN** 

DIRECTION OF FLOW IN PIPE

----STS---- STORM DRAINAGE (SECONDARY)

——SAN—— SANITARY DRAINAGE

——ST—— STORM DRAINAGE

──V── VENT

PIPE CAP

PIPE DOWN

----HWC---- HOT WATER CIRCULATING - POTABLE

PLUMBING ROUGH-IN SCHEDULE						
NOTES: (APPLIES TO ALL PLUMBING FIXTURES LISTED BELOW.  1) SIZES SHOWN ARE MINIMUMS. LARGER SIZES SHOWN ON THE DRAWING SHALL DICTATE THE ROUGH-IN SIZE.  2) SANITARY RISERS UP IN WALL TO FIXTURES SHALL BE A MINUMUM OF 2".  3) DOMESTIC WATER BRANCH PIPING OUTSIDE OF THE WALL/CHASE SHALL BE A MINIMUM OF 3/4" UNLESS NOTED OTHERWISE. ONLY THE FINAL RISE-DROP SHALL BE SMALLER.  4) FINAL SANITARY SIZE SHALL MATCH P-TRAP SIZE (REFER TO MATERIAL LIST).						
TAG NAME	DESCRIPTION	TRAP	COLD WATER	HOT WATER	SANITARY	VENT
BF-1	ELECTRIC WATER COOLER		1/2"	-	1 1/2"	1 1/2"

UB-1 REFRIGERATOR

ABBR:	DESCRIPTION:
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
C	COMMON
CFSD	CONTROL/FIRE/SMOKE DAMPER
CO	CLEANOUT
DN	DOWN
DPG (0-2")	DIFFERENTIAL PRESSURE GAUGE (RANGE)
DPS	DIFFERENTIAL PRESSURE SWITCH
EA	EXHAUST/RELIEF AIR
ECFSD	EXISTING CONTROL FIRE SMOKE DAMPER
EFD	EXISTING FIRE DAMPER
EFSD	EXISTING FIRE SMOKE DAMPER
EP	ELECTRICAL TO PNEUMATIC VALVE
ESD	EXISTING SMOKE DAMPER
FD	FIRE DAMPER
FMCS	FACILITY MANAGEMENT AND CONTROL SYSTEM
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FSD	FIRE/SMOKE DAMPER
I.E.	INVERT ELEVATION (FOR REFERENCE ONLY)
MA	MIXED AIR
MV	MIXING VALVE
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
OA	OUTSIDE AIR
PS	PRESSURE SWITCH
RA	RETURN AIR
SA	SUPPLY AIR
SCCR	SHORT CIRCUIT CURRENT RATING
SD	SMOKE DAMPER
TD	TRANSFER DUCT
TYP	TYPICAL
UC-1	DOOR UNDERCUT BY OTHERS (1" TYPICAL)
UON	UNLESS OTHERWISE NOTED
VAV	VARIABLE AIR VOLUME

### **MECHANICAL RENOVATION NOTES:**

- THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.
- EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD
  SURVEYS EXISTING BUILDING DOCUMENTS AND STAFF VERIEY EXISTING CONDITIONS AND
- SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.
- 2. NOT ALL EXISTING DUCTWORK AND PIPING IS SHOWN. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. NOTIFY ENGINEER OF ANY CONFLICTS WITH NEW WORK.
- 3. FIELD VERIFY THE AVAILABLE CLEARANCES FOR DUCTWORK AND PIPING BEFORE FABRICATION. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD

  1. FIELD VERIFY THE AVAILABLE CLEARANCES FOR DUCTWORK AND PIPING BEFORE FABRICATION. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD.
- CONDITIONS.

  4. EACH CONTRACTOR SHALL FIELD VERIFY ACCESSIBILITY TO THE AREA OF THEIR WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO BIDDING IF OTHER UTILITIES ARE
- REQUIRED TO BE REMOVED OR RELOCATED TO ALLOW ACCESS TO THEIR AREA OF WORK.

  5. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CUTTING, REMOVAL AND PATCHING OF ROOFS, WALLS, AND FLOORS ASSOCIATED WITH WORK BY ALL CONTRACTORS.
- CONTRACTORS SHALL NOTIFY THE GC OF AFFECTED AREAS PRIOR TO BIDDING.

  6. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS, CEILING TILES, AND CEILING GRIDS ASSOCIATED WITH AREAS OF WORK BY ALL CONTRACTORS. NOTIFY THE GENERAL CONTRACTOR OF AFFECTED AREAS PRIOR TO
- 7. WHERE EXISTING MECHANICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, PIPING, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS. OR REWORK EXISTING MECHANICAL
- DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING MECHANICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.

  8. PROVIDE TEMPORARY CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. MAINTAIN ACCESS TO EXISTING MECHANICAL INSTALLATIONS THAT
- REMAIN ACTIVE.
  9. OBTAIN PERMISSION FROM OWNER BEFORE SHUTTING DOWN ANY SYSTEM FOR ANY
- REASON. MAINTAIN SERVICE TO ALL COMPONENTS THAT ARE TO REMAIN UNTIL NEW SYSTEMS ARE INSTALLED.

  10. MAINTAIN EXISTING SYSTEM IN SERVICE UNTIL NEW SYSTEM IS COMPLETE AND READY FOR TIE IN AND SWITCHOVER, DRAIN SYSTEM ONLY TO MAKE SWITCHOVERS AND
- CONNECTIONS. OBTAIN PERMISSION FROM OWNER BEFORE PARTIALLY OR COMPLETELY DRAINING SYSTEM. MAKE CHANGEOVER TO NEW SYSTEMS WITH MINIMUM OUTAGE.

  11. DISCONNECT AND REMOVE MECHANICAL DEVICES AND EQUIPMENT SERVING EQUIPMENT THAT HAS BEEN REMOVED.

### **PLUMBING GENERAL NOTES:**

- THE SYMBOLS AND THE MATERIAL LIST ARE FOR THE CONVENIENCE OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY QUANTITIES AND FURNISH ALL MATERIALS REQUIRED FOR FULLY OPERATIONAL SYSTEMS, WHETHER SPECIFIED OR NOT.
   CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE, BUT ARE GIVEN AS AN AID TO THE CONTRACTOR AND TO INDICATE THE QUALITY REQUIRED. CONTRACTOR IS RESPONSIBLE FOR A COMPLETE DESCRIPTION OF MATERIAL ON THESE DRAWINGS AND IN THE SPECIFICATIONS BEFORE ORDERING. THE DESCRIPTION OF THE MATERIAL TAKES PRECEDENCE OVER THE CATALOG NUMBER. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN.
- CONTRACTOR SHALL VERIFY THAT FIXTURES SUPPLIED ARE APPROVED PER ALL APPLICABLE STATE, LOCAL AND GOVERNING AUTHORITIES.
   ALL FIXTURES SHALL CONFORM TO FEDERAL ACT S.3874 REDUCTION OF LEAD IN DRINKING
- ALL FIXTURES SHALL CONFORM TO FEDERAL ACT S.3874 REDUCTION OF LEAD IN DRINKIN WATER.
   REFER TO THE PLUMBING ROUGH-IN SCHEDULE FOR THE SIZES OF BRANCH PIPES TO PLUMBING FIXTURES.
- 6. EXISTING CONDITIONS ON DEMOLITION PLANS ARE PROVIDED TO INDICATE THE GENERAL SCOPE OF ITEMS TO BE REMOVED. REFER TO SPECIFICATION SECTION 22 05 05 FOR ADDITIONAL DEMOLITION INFORMATION.
- P.C. SHALL CUT AND PATCH EXISTING AS REQUIRED FOR NEW OR DEMOLITION WORK UNLESS NOTED OTHERWISE. REFER TO SPECIFICATION SECTION 22 05 05 FOR ADDITIONAL INFORMATION.

#### TAB PRE-DEMOLITION NOTES

- BEFORE ANY DEMOLITION WORK IS BEGUN A COMPLETE AIR BALANCE TEST SHALL BE PERFORMED BY THE TESTING, ADJUSTING AND BALANCING (TAB) CONTRACTOR ON EXISTING AIR HANDLERS AND EXHAUST FANS SERVING THE AREAS AFFECTED BY CONSTRUCTION. EQUIPMENT TO BE DEMOLISHED DOES NOT REQUIRE TESTING. PROVIDE AIR BALANCE TESTING ONLY ON EQUIPMENT THAT WILL CONTINUE TO BE USED TO SERVE RENOVATED AREAS AFTER THE CONSTRUCTION PHASE IS COMPLETED.
   PROVIDE DUCT TRAVERSE READINGS AT LOCATIONS DESIGNATED ON THE DRAWINGS BY THE "AIRFLOW MEASUREMENT SYMBOL". THOSE MEASUREMENTS SHALL BE INCLUDED IN THE PRE DEMOLITION REPORT AND SHALL BE DESIGNATED WITH THE IDENTIFIER AS MARKED ON THE DRAWINGS. READINGS SHALL BE DESIGNATED WITH THE ROOM NAME AND NUMBER AS MARKED ON THE DRAWINGS. IF FLOOR PLANS DO NOT HAVE UNIQUE ROOM NAMES AND NUMBERS, TAB CONTRACTOR SHALL INCLUDE FLOOR PLAN WITH UNIQUE NUMBER DESIGNATIONS ASSIGNED TO READINGS THAT MATCH THOSE USED IN THE FINAL PRE-DEMOLITION REPORT. DRAWINGS THAT ARE HAND-MARKED WITH RED INK ARE ACCEPTABLE, PROVIDED THEY ARE LEGIBLE.
- 3. IN THE EVENT A DUCT TRAVERSE LOCATION AS MARKED ON THIS PLAN IS INACCESSIBLE FOR MEASUREMENT, THE TAB CONTRACTOR SHALL PERFORM THE TRAVERSE AT AN ALTERNATE LOCATION OR SHALL TAKE MULTIPLE DUCT TRAVERSES AND/OR READINGS AS REQUIRED TO DETERMINE THE AIRFLOW READING WHERE THE DUCT TRAVERSE SYMBOL IS SHOWN. IN THE EVENT TRAVERSES ARE TAKEN AT ALTERNATE LOCATION(S), TAB CONTRACTOR SHALL INCLUDE A DRAWING THAT SHOWS THE LOCATIONS WHERE THE ACTUAL MEASUREMENTS WERE TAKEN.
- TAKE A DUCT STATIC PRESSURE READING AT EACH LOCATION WHERE A DUCT TRAVERSE READING IS TAKEN AND INCLUDE IN THE FINAL PRE-DEMOLITION TAB REPORT.
   TAB CONTRACTOR SHALL COMPILE AND SUBMIT FOUR COPIES OF THE FINAL PRE-DEMOLITION REPORT WITHIN 10 WORKING DAYS AFTER THE FIELD MEASUREMENTS ARE COMPLETED. FINAL TAB REPORT SHALL BE SUBMITTED FOR REVIEW TO THE ARCHITECT/ENGINEER. TESTING SHALL INCLUDE ALL ITEMS REQUIRED IN THE SPECIFICATIONS.
- 6. TAB CONTRACTOR SHALL PROVIDE DUCT TRAVERSE READINGS AT LOCATIONS
  DESIGNATED ON THE DRAWINGS BY THE "AIRFLOW MEASUREMENT SYMBOL". THOSE
  MEASUREMENTS SHALL BE INCLUDED IN THE POST-CONSTRUCTION REPORT AND SHALL BE
  DESIGNATED WITH THE IDENTIFIER AS MARKED ON THE CONSTRUCTION DRAWINGS. GRILLE
  AND DIFFUSER READINGS SHALL BE DESIGNATED WITH THE ROOM NAME AND NUMBER AS
  MARKED ON THE DRAWINGS. IF THE DRAWINGS DO NOT HAVE UNIQUE ROOM NAMES AND
  NUMBERS, TAB CONTRACTOR SHALL INCLUDE FLOOR PLANS WITH UNIQUE NUMBER
  DESIGNATIONS ASSIGNED TO TRAVERSES, GRILLES, AND DIFFUSERS THAT MATCH THOSE
  USED IN THE FINAL PRE-DEMOLITION REPORT. SIMILAR ROOM NAMES, NUMBERS, OR
  DESIGNATIONS SHALL BE USED TO SIMPLIFY THE CROSS-REFERENCING OF READINGS
- TAKEN BETWEEN PRE-DEMOLITION AND POST-CONSTRUCTION REPORTS.

  7. BALANCING CONTRACTOR SHALL PRE-BALANCE ALL EXISTING SYSTEMS TO REMAIN PER SPECIFICATION SECTION 23 05 93. BALANCE READINGS WILL BE REQUIRED AT AIR OUTLETS AND DUCT TRAVERSES TO VERIFY EXISTING AIRFLOW TO UNAFFECTED SPACES.

### TAB POST-CONSTRUCTION NOTES:

- AFTER CONSTRUCTION ACTIVITIES ARE COMPLETE, TESTING, ADJUSTING (TAB) AND BALANCING CONTRACTOR SHALL REBALANCE AIR HANDLING UNITS AND EXHAUST FANS AS REQUIRED TO ACHIEVE THE NEW AIRFLOW VALUES SHOWN ON THE CONSTRUCTION DRAWINGS.
- 2. AREAS SERVED BY THIS EQUIPMENT WHICH WERE NOT RENOVATED SHALL BE RE-BALANCED TO THE AIRFLOW RATES MEASURED BEFORE THE RENOVATION OCCURRED
- (REFER TO THE FINAL PRE- DEMOLITION REPORT).

  3. IF DUCT TRAVERSE LOCATION AS MARKED ON THE DRAWINGS IS INACCESSIBLE FOR MEASUREMENT, THE TAB CONTRACTOR SHALL PERFORM THE TRAVERSE AT AN ALTERNATE LOCATION OR SHALL TAKE MULTIPLE DUCT TRAVERSES AND/OR GRILLE READINGS AS REQUIRED TO DETERMINE THE FLOW RATE. IN THE EVENT TRAVERSES ARE TAKEN AT AN ALTERNATE LOCATION(S), TAB CONTRACTOR SHALL INCLUDE A DRAWING THAT SHOWS THE
- LOCATIONS WHERE THE ACTUAL MEASUREMENTS WERE TAKEN.

  4. A DUCT STATIC PRESSURE READING SHALL BE TAKEN AT EACH LOCATION WHERE A DUCT TRAVERSE READING IS TAKEN AND SHALL BE INCLUDED IN THE FINAL POST-CONSTRUCTION
- TAB REPORT.
  5. TAB CONTRACTOR SHALL COMPILE AND SUBMIT COPIES OF THE FINAL POST-

SPECIFICATIONS.

CONSTRUCTION TAB REPORT AS REQUIRED BY SECTION 23 05 93.

6. THE FINAL POST CONSTRUCTION REPORT SHALL INCLUDE ALL ITEMS REQUIRED IN THE

### PIPING GENERAL NOTES:

 THE SIZE OF BRANCH PIPING TO TERMINAL HEATING DEVICES AND COILS SHALL BE 3/4" UNLESS NOTED OTHERWISE.
 PIPE DRAIN LINES FROM EQUIPMENT TO NEAREST FLOOR DRAIN.

### **VENTILATION GENERAL NOTES:**

- 1. UNLESS NOTED OTHERWISE, THE SIZE OF EACH BRANCH DUCT TO A VARIABLE AIR VOLUME BOX (VAV) SHALL MATCH THE INLET SIZE UNLESS THE BRANCH IS GREATER THAN 6 FEET IN
- LENGTH, IN WHICH CASE THE BRANCH DUCT SHALL BE SIZED AT A PRESSURE DROP OF 0.07" W.C. PER 100' OF DUCTWORK.

  2. UNLESS NOTED OTHERWISE, THE SIZE OF EACH BRANCH DUCT TO AN AIR TERMINAL SHALL
- MATCH THE INLET SIZE.

  3. ALIGN TEMPERATURE SENSORS WITH LIGHT SWITCHES AND WHEN IN CLOSE PROXIMITY TO
- PROVIDE ACCESS DOORS AT ALL DUCT MOUNTED EQUIPMENT.
   EXISTING AIR INLET AND OUTLET CFM SHOWN ON DRAWINGS ARE FROM EXISTING
- DRAWINGS, AND ARE FOR REFERENCE ONLY. CONTRACTOR SHALL USE PRE-BALANCE VALUES, AND NOT EXISTING CFM SHOWN ON DRAWINGS.

  6. CONTRACTOR MAY REUSE PORTIONS OF EXISTING DUCT PROVIDED SIZES AND PRESSU
- 6. CONTRACTOR MAY REUSE PORTIONS OF EXISTING DUCT PROVIDED SIZES AND PRESSURE CLASSES ARE CORRECT, DUCT IS THOROUGHLY CLEANED AND FREE OF DEFECTS, AND ALL TRANSVERSE JOINTS, LONGITUDINAL SEAMS, AND DUCT WALL PENETRATIONS ARE SEALED AS SPECIFIED FOR NEW DUCTWORK.

#### TEMPERATURE CONTROL GENERAL NOTES:

 REFER TO EQUIPMENT SCHEDULES TO CROSS REFERENCE WHICH CONTROL DIAGRAMS APPLY TO WHICH ITEMS OF EQUIPMENT. REFER TO VAV SCHEDULES FOR TEMP SENSOR REQUIREMENTS FOR EACH VAV.

### MECHANICAL GENERAL NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.

- 1. DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING
- CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.

  2. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR
- 3. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER REFORE PROCEEDING.

PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.

- OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.

  4. REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER
- ACCESS.

  5. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR
- EXPENSE TO OTHERS.

  6. EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF
- 7. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
- 8. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH
- IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE GC FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE GC OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
   SEAL ALL FLOOR AND WALL PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE. PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE
- SEALED AIRTIGHT WITH WATERPROOFING MATERIALS RECOMMENDED BY MANUFACTURER FOR OUTDOOR USE.

  11. CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL,
- PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE
  TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS
- WHERE PIPES AND DUCTS ARE SHOWN TO PENETRATE FLOORS, PROVIDE SLEEVED OPENINGS WITH THE TOP EDGE RAISED ABOVE FLOOR SURFACE IN ACCORDANCE WITH ALL RELEVANT SPEC SECTIONS. SEAL SLEEVE PERIMETER TO BE WATERTIGHT.
   EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY AMONG DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND
- PIPING, DUCTWORK, ETC.

  14. DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.

  15. MAINTAIN A MINIMUM WORKING CLEARANCE OF 3'-6" IN FRONT OF ALL ELECTRICAL EQUIPMENT REQUIRING MAINTENANCE, INSPECTION, AND TESTING INCLUDING BUT NOT LIMITED TO PANELS, DISTRIBUTION PANELS, SWITCHBOARDS, MOTOR CONTROL CENTERS,

REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS,

TRANSFORMERS, EQUIPMENT DISCONNECTS AND STARTERS.

16. DO NOT SUPPORT EQUIPMENT, PIPING, OR DUCTWORK FROM METAL DECKING OR OTHER NON-STRUCTURAL BUILDING ELEMENTS. ANCHORS EMBEDDED IN CONRETE SHALL BE

CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.



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PROJECT #23005076.01

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FOR THE CURATORS OF THE UNIVERSITY OF MISSOURI

CHEMISTRY
BUILDING - 1ST
FLOOR
RENOVATION

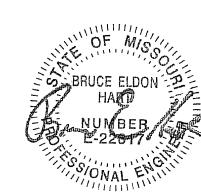
## ISSUED FOR CONSTRUCTION

125 CHEMISTRY BUILDING 601 COLLEGE AVE COLUMBIA, MO 65211

DATE: 09/26/2024
PROJ. NO.: CP242331

DESIGNED BY: IN
DRAWN BY: IN
CHECKED BY: SGB
APPROVED BY: SGB

SEAL:



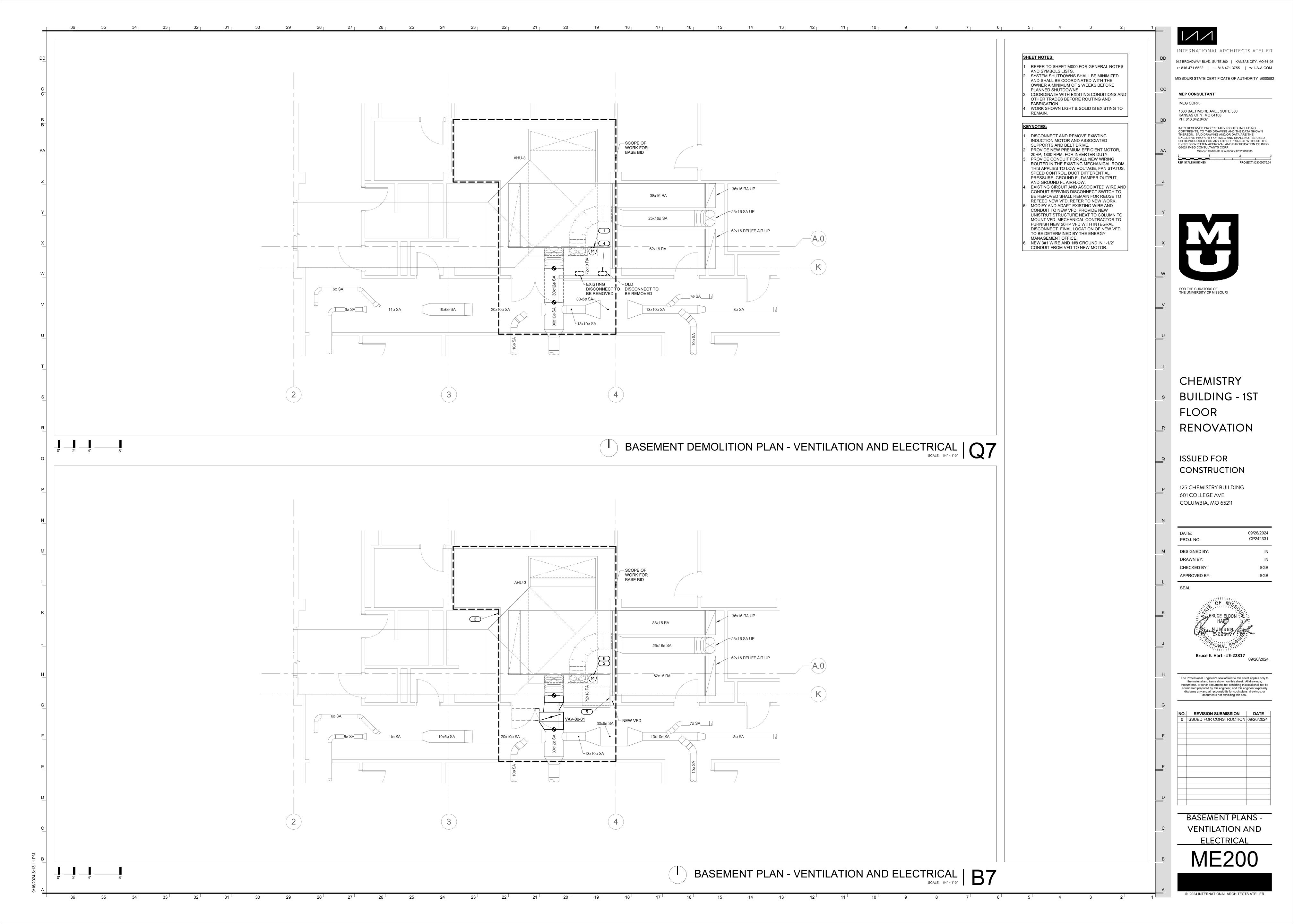
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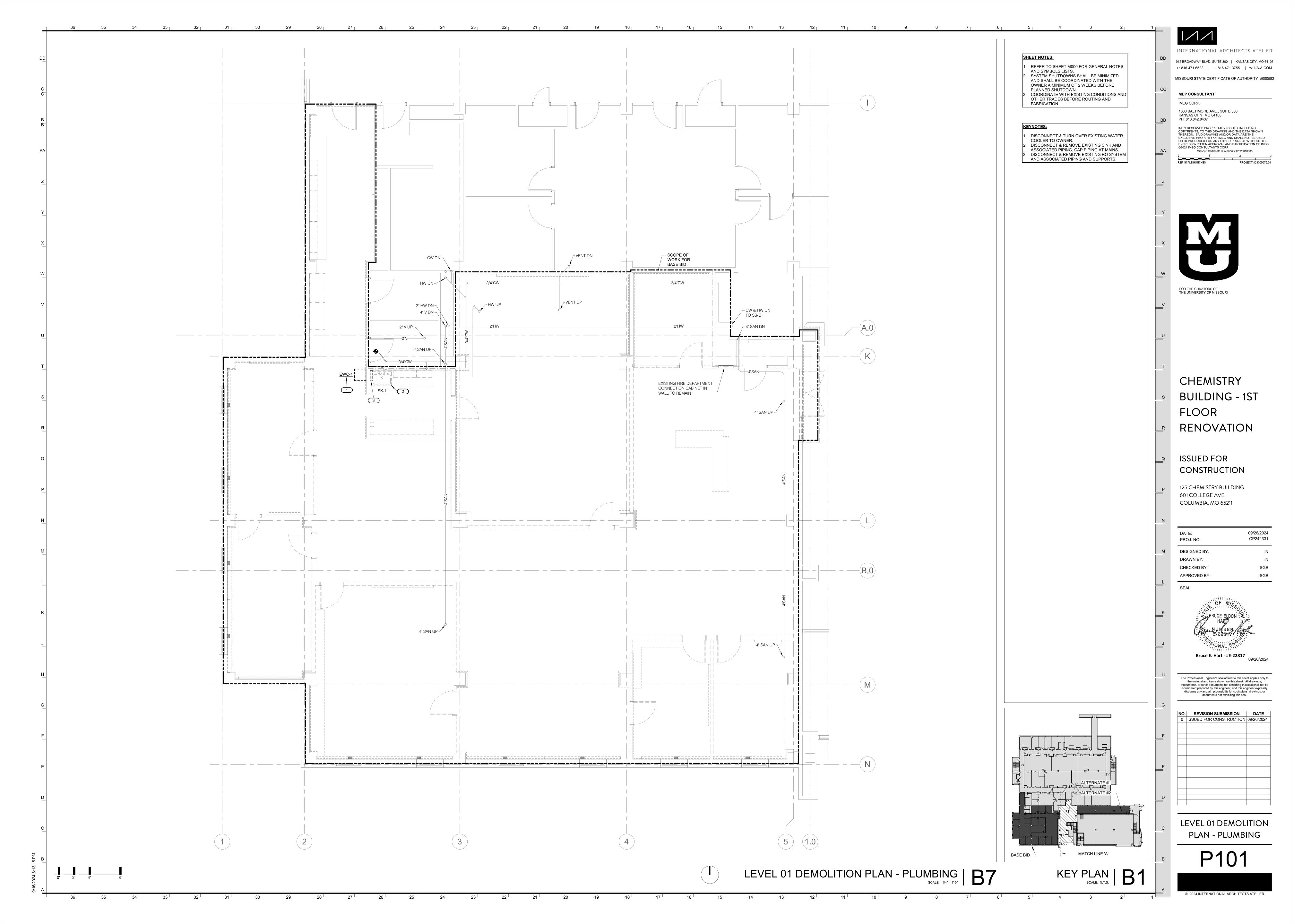
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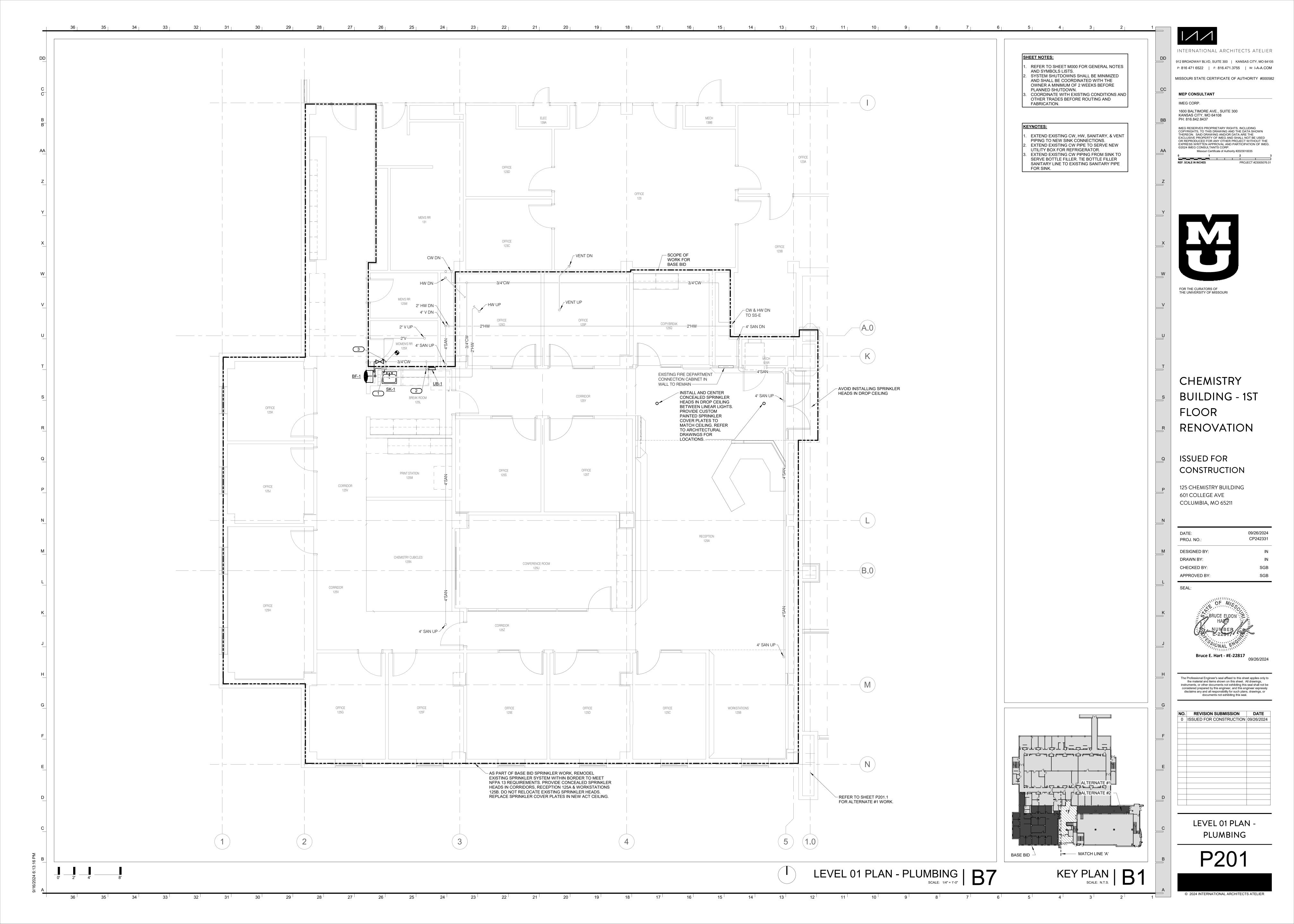
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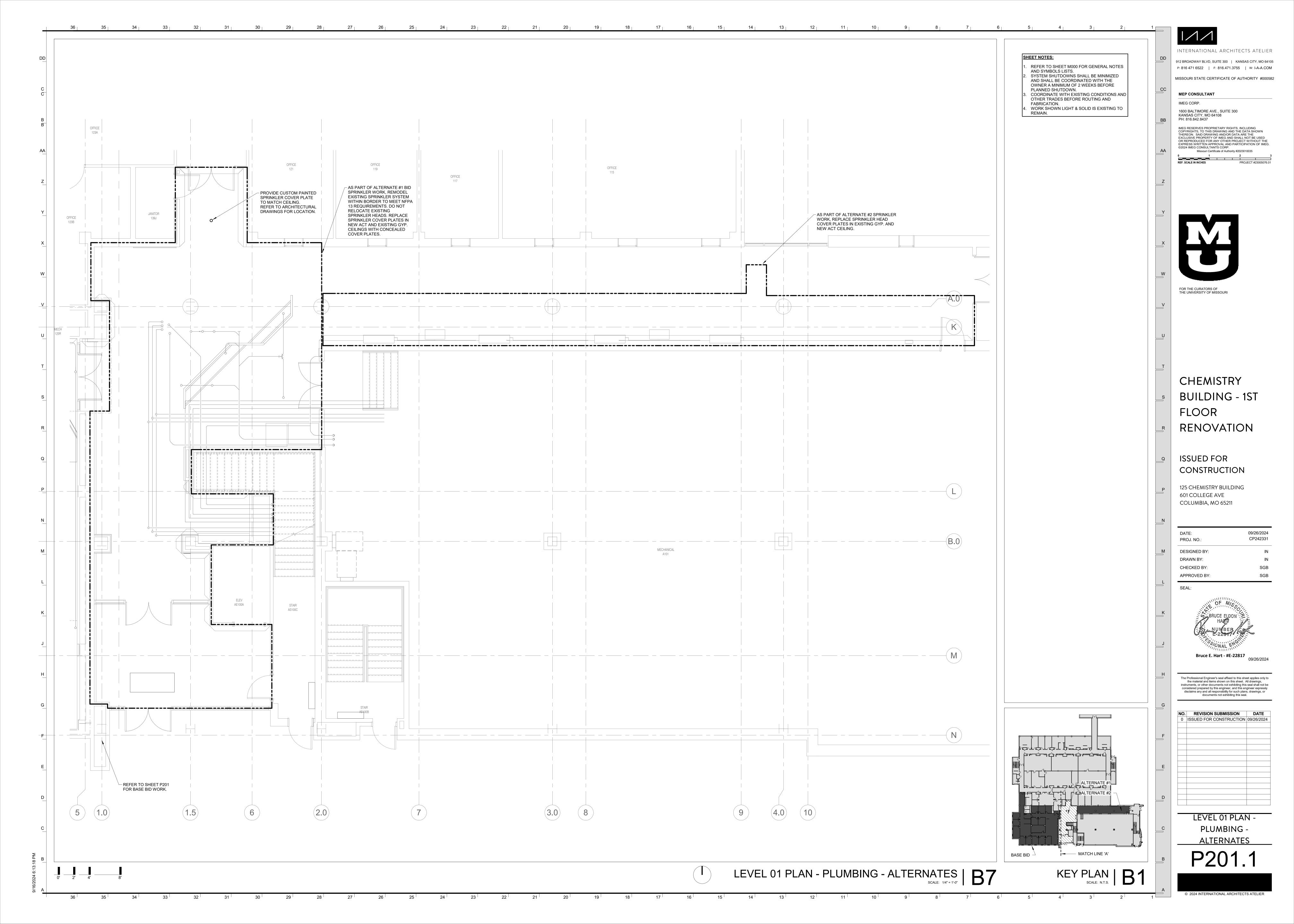
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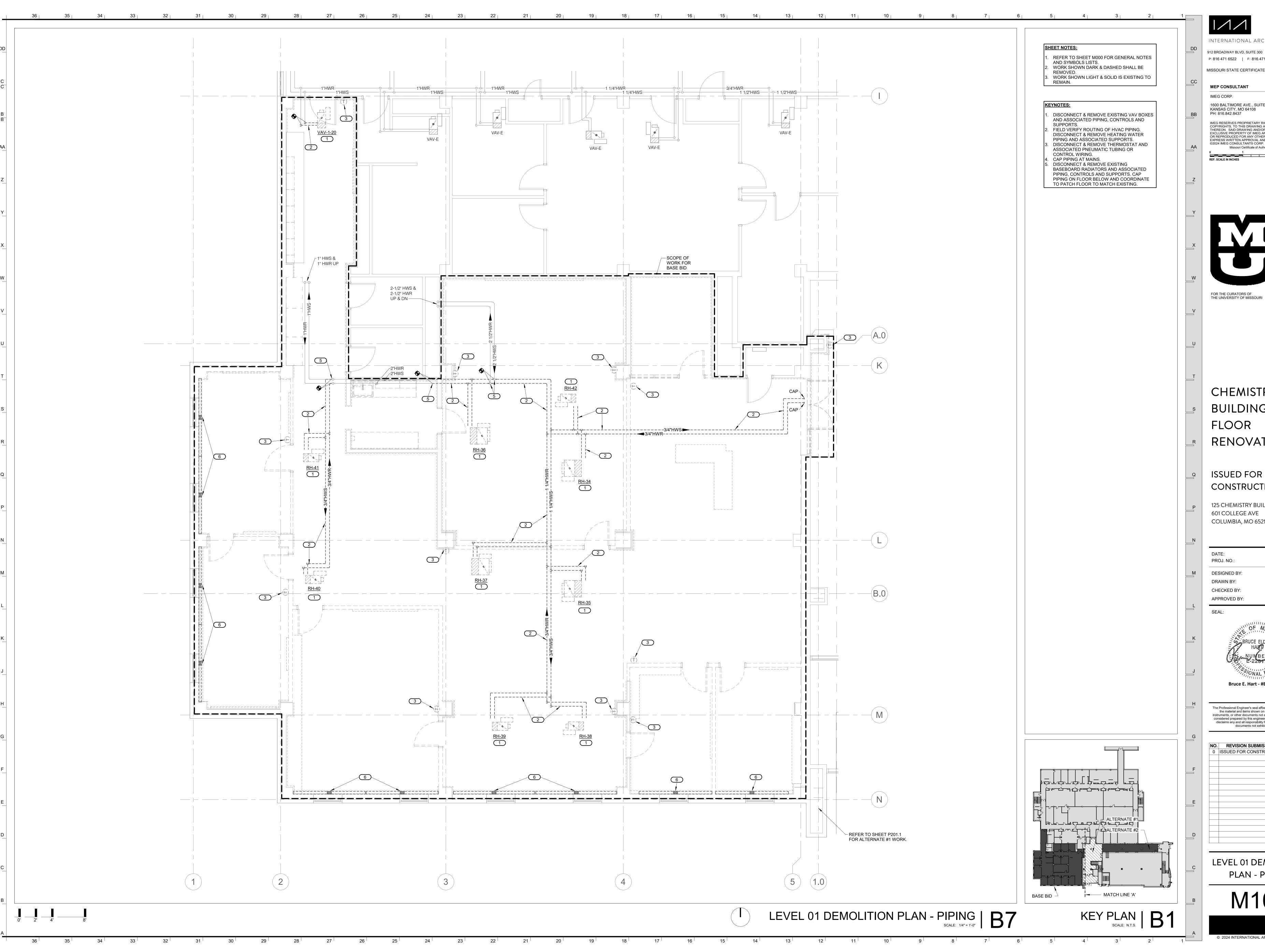
MECHANICAL COVERSHEET











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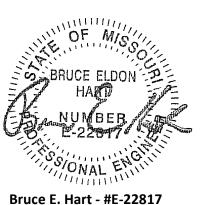


**CHEMISTRY BUILDING - 1ST FLOOR** RENOVATION

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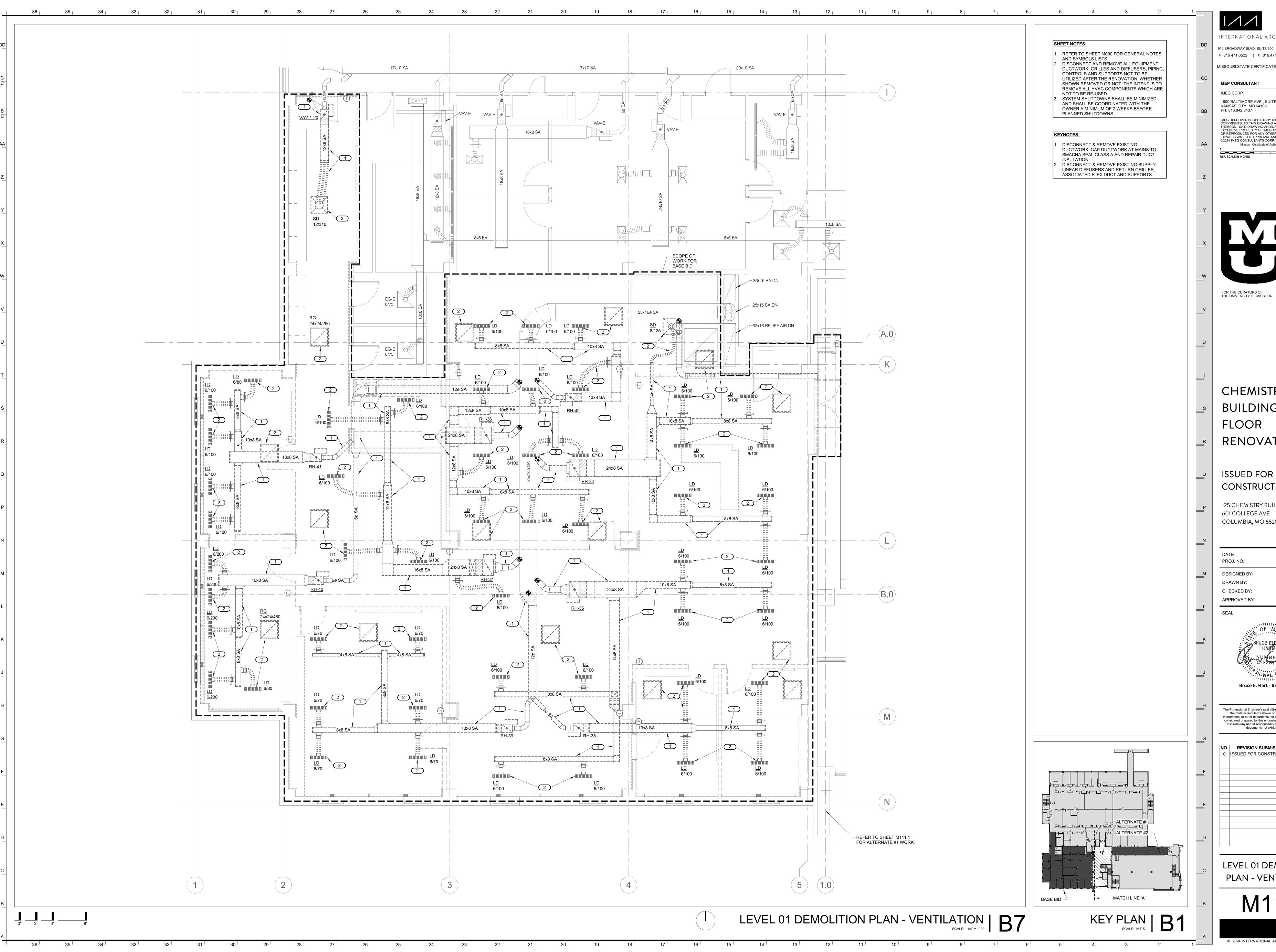
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LEVEL 01 DEMOLITION PLAN - PIPING



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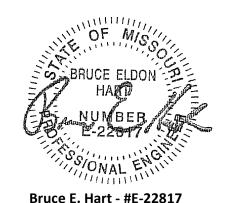


**CHEMISTRY** BUILDING - 1ST **FLOOR** RENOVATION

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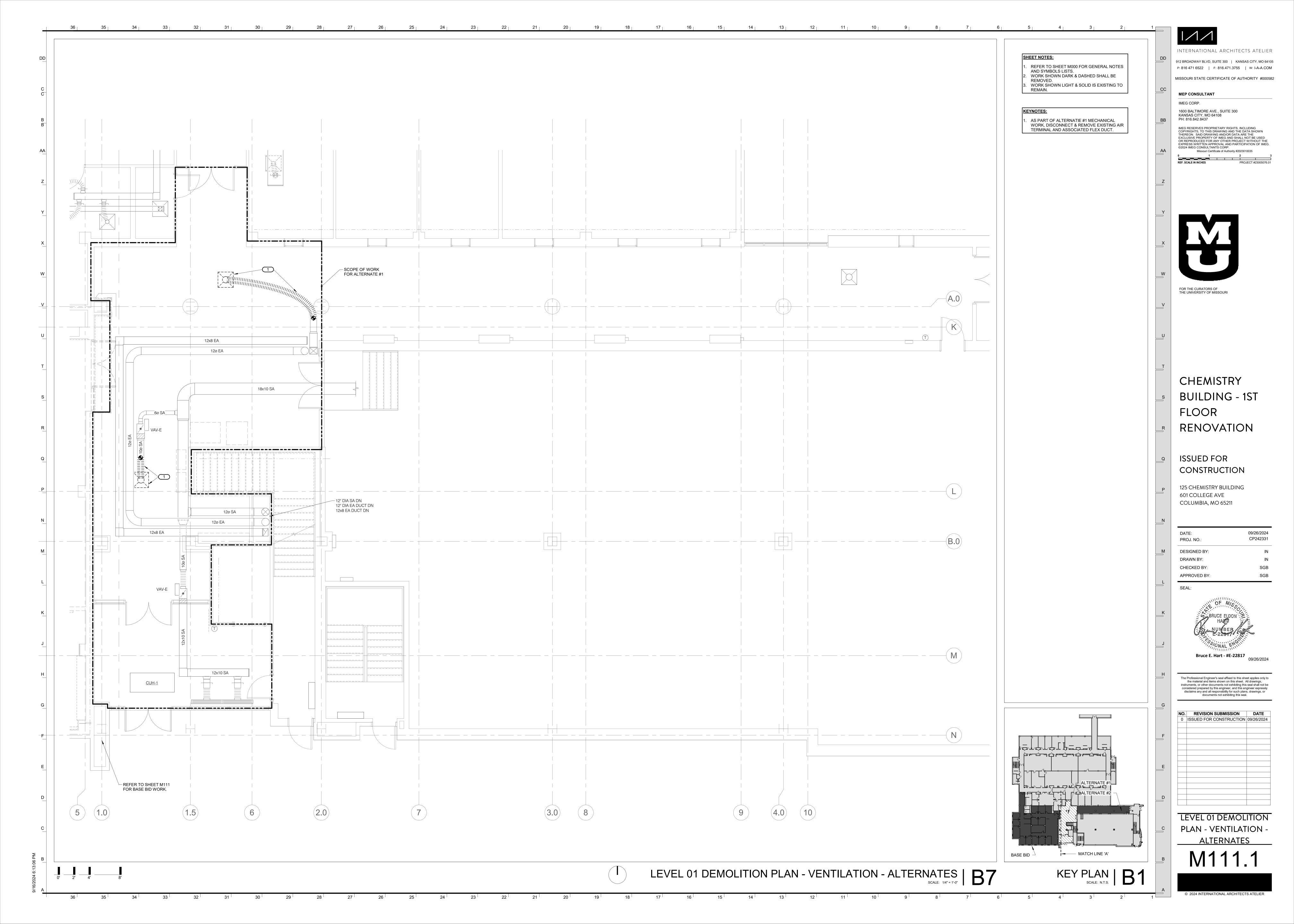
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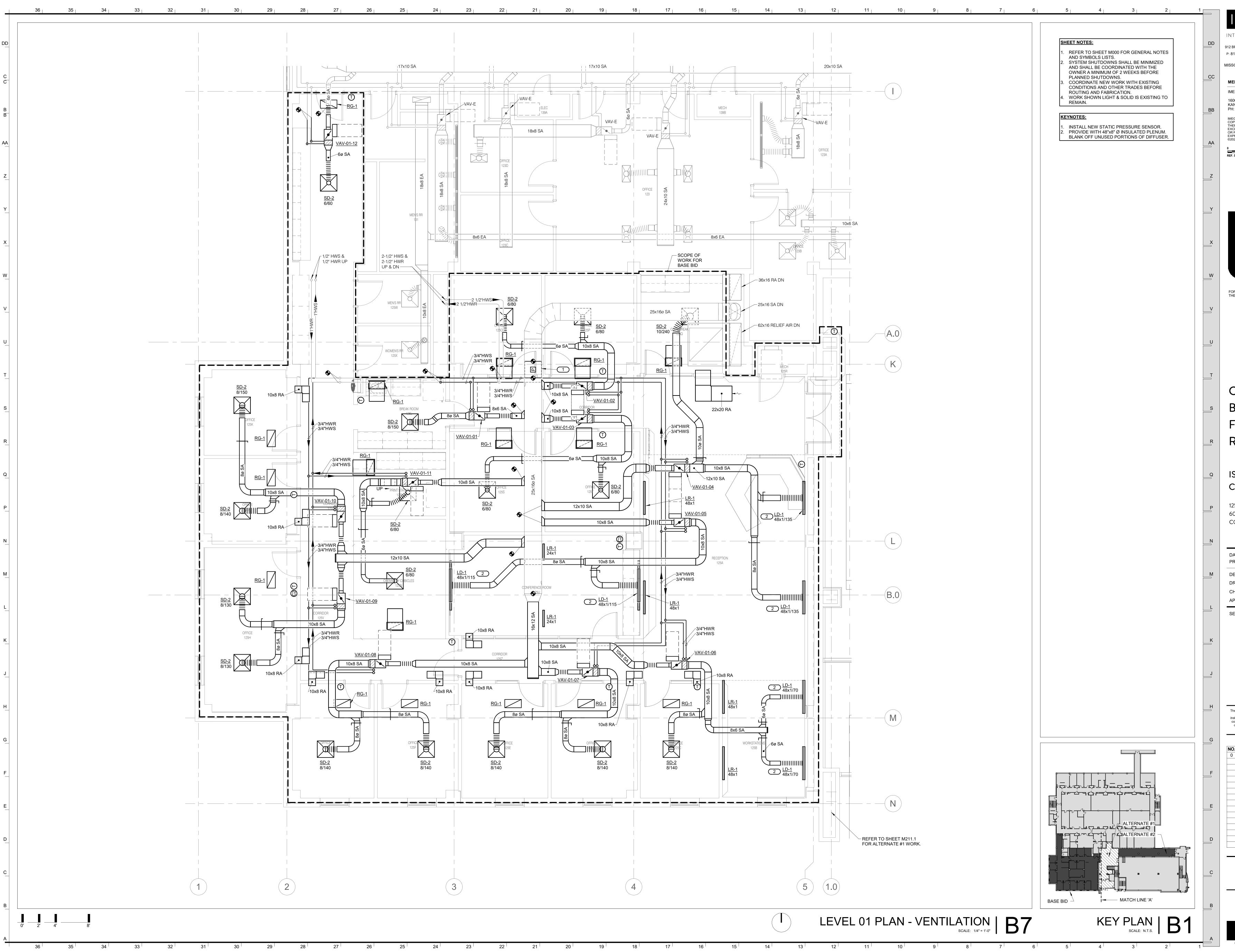


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LEVEL 01 DEMOLITION PLAN - VENTILATION





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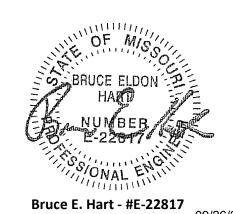


**CHEMISTRY BUILDING - 1ST FLOOR** RENOVATION

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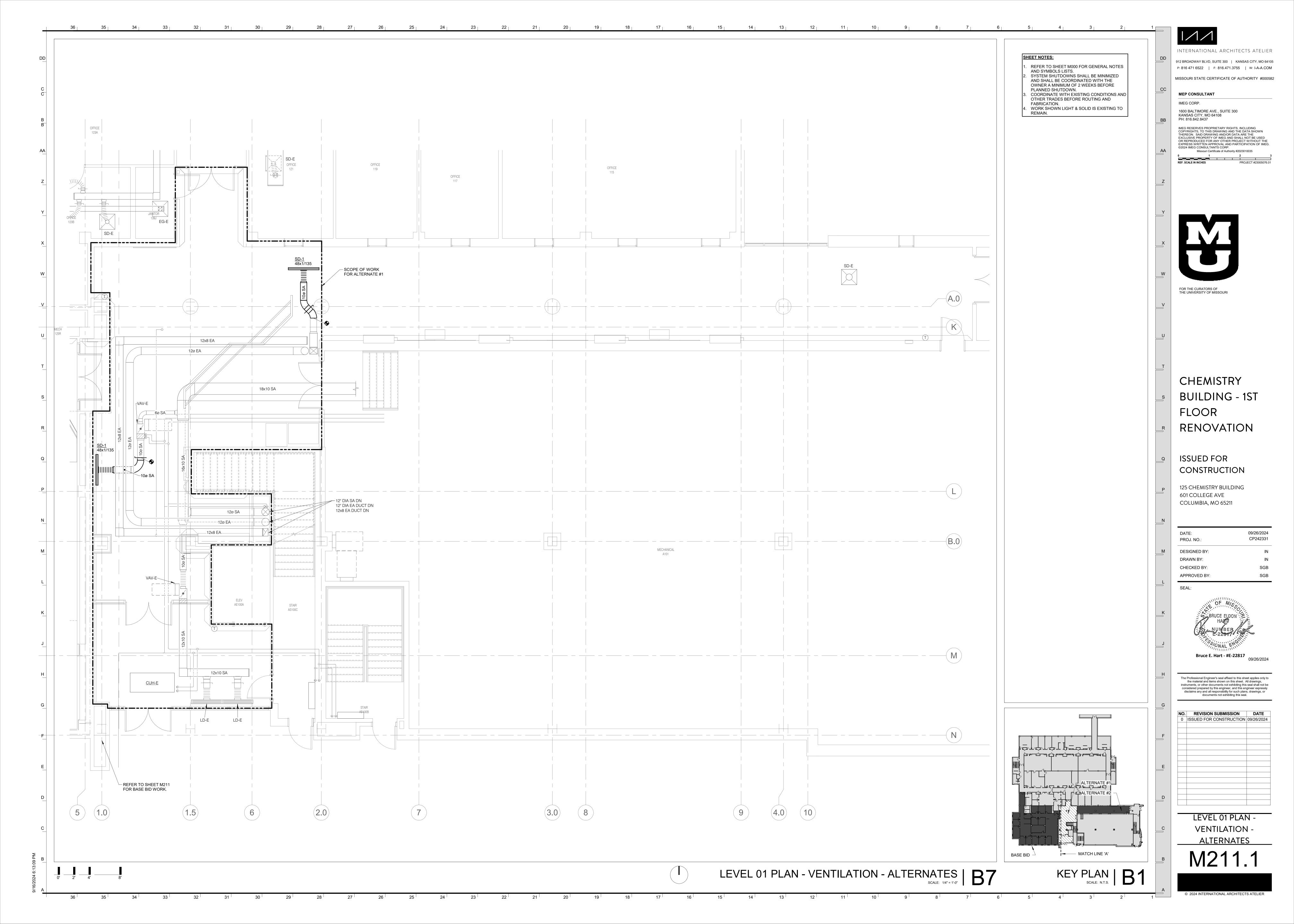
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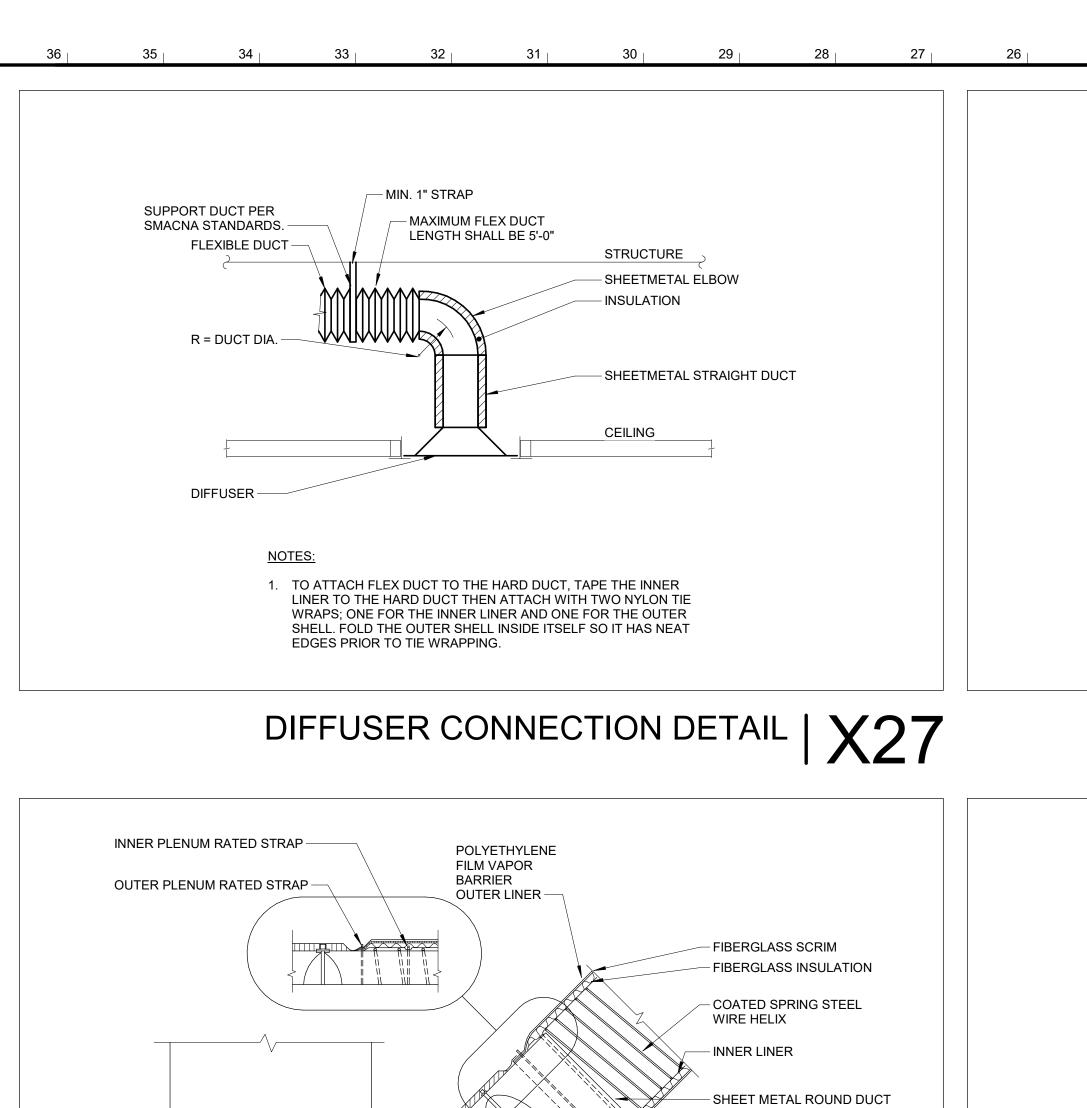


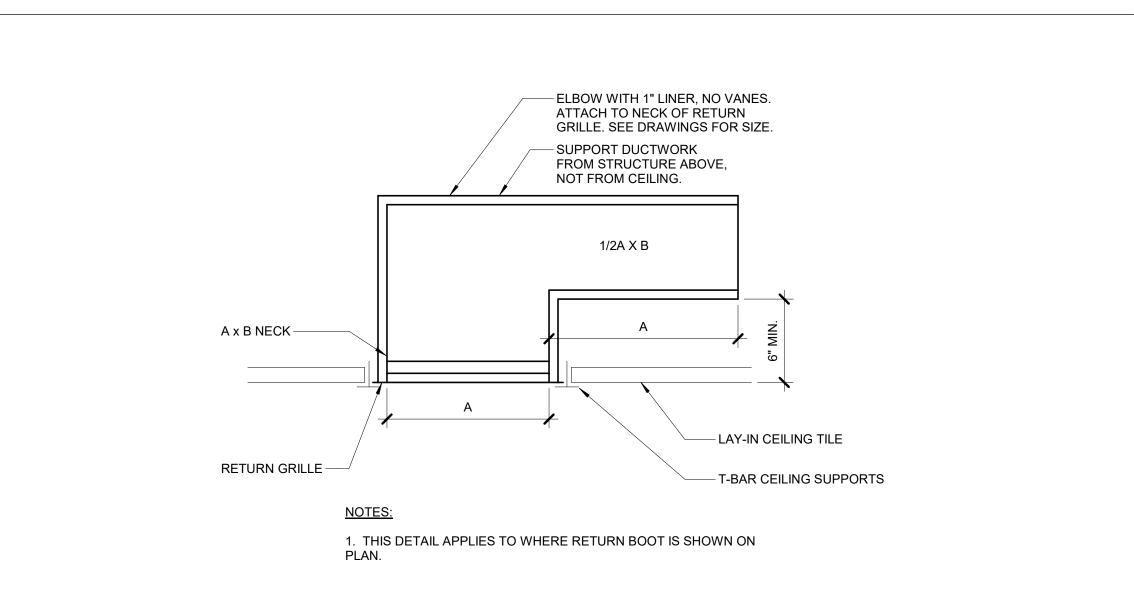
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LEVEL 01 PLAN -VENTILATION







**45 DEGREE** 

NOTES:

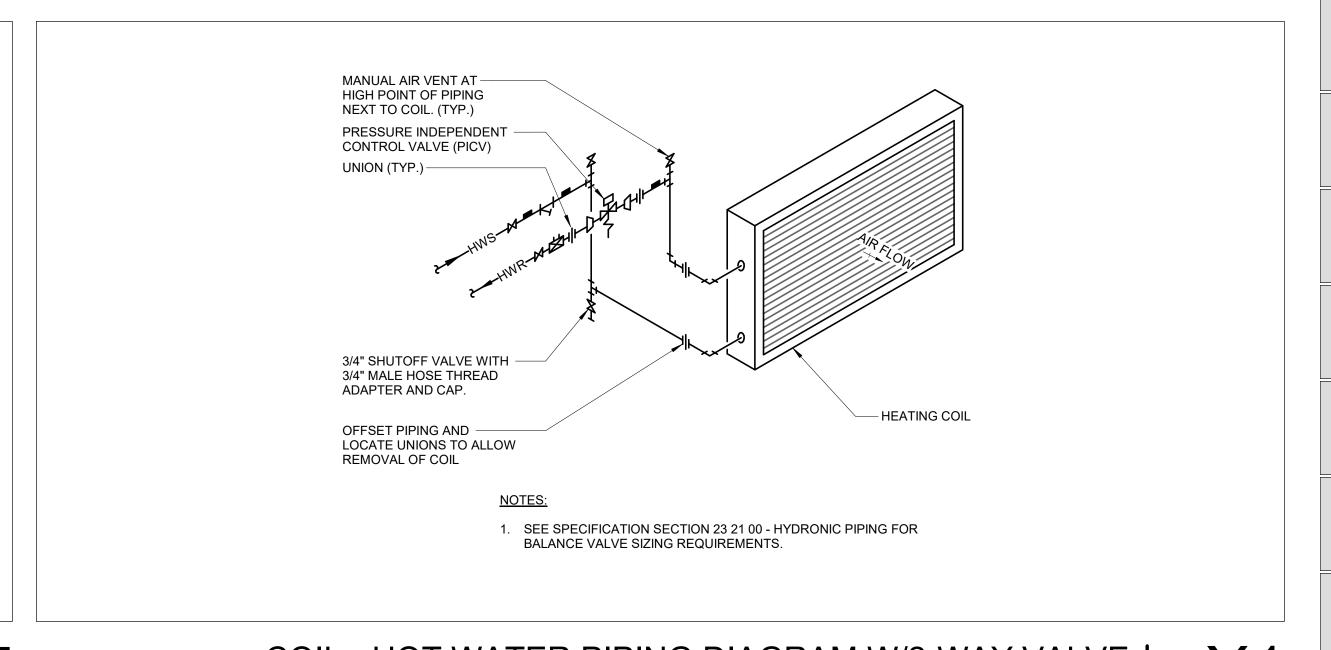
(L = 4" OR W/4; WHICHEVER IS LARGER)

4"W.G. AND OVER.

1. DO NOT USE CONNECTIONS WITH SCOOPS.

2. FIT ALL CONNECTIONS TO AVOID VISIBLE OPENINGS AND

SECURE THEM SUITABLY FOR THE PRESSURE CLASS.

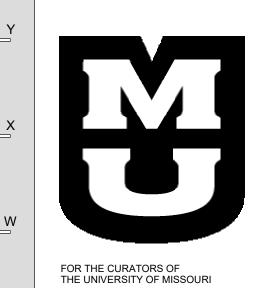




DUCT CONNECTION

45 DEGREE LEAD IN





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- SEE DRAWINGS FOR BOOT **RETURN AIR BOOT SHALL HAVE 1"** LOCATIONS AND SIZES DUCT LINING AND NO TURNING LINE OF SIGHT IS NOT TO PASS THROUGH INSIDE OF BOOT ELBOW —

FLEXIBLE DUCT CONNECTION DETAIL | Q27

MAIN DUCT

SHEET METAL 7

- DUCT TAPE WRAPPING

REINFORCED TAPE

- FIBERGLASS-

- DAMPER CONTROL-LOCKING QUADRANT

FIBERGLASS-REINFORCED TAPE

ROUND HAND DAMPER

- WRAP OUTSIDE OF DUCT

WITH INSULATION





**FLOOR** 

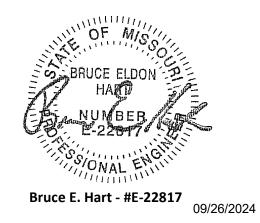
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**CHEMISTRY** 

BUILDING - 1ST

RENOVATION

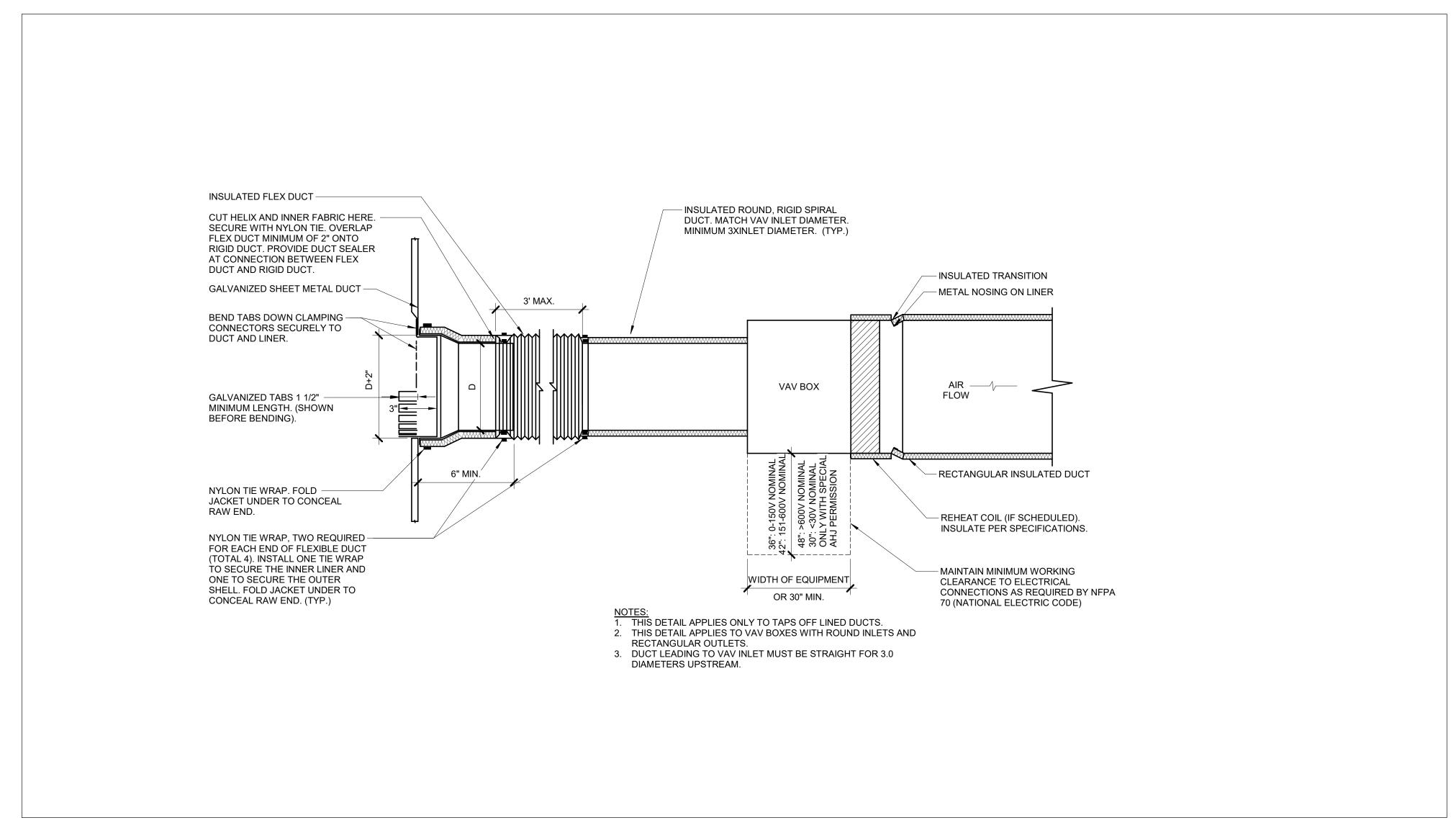
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	CHECKED BY:	SG
	APPROVED BY:	SG
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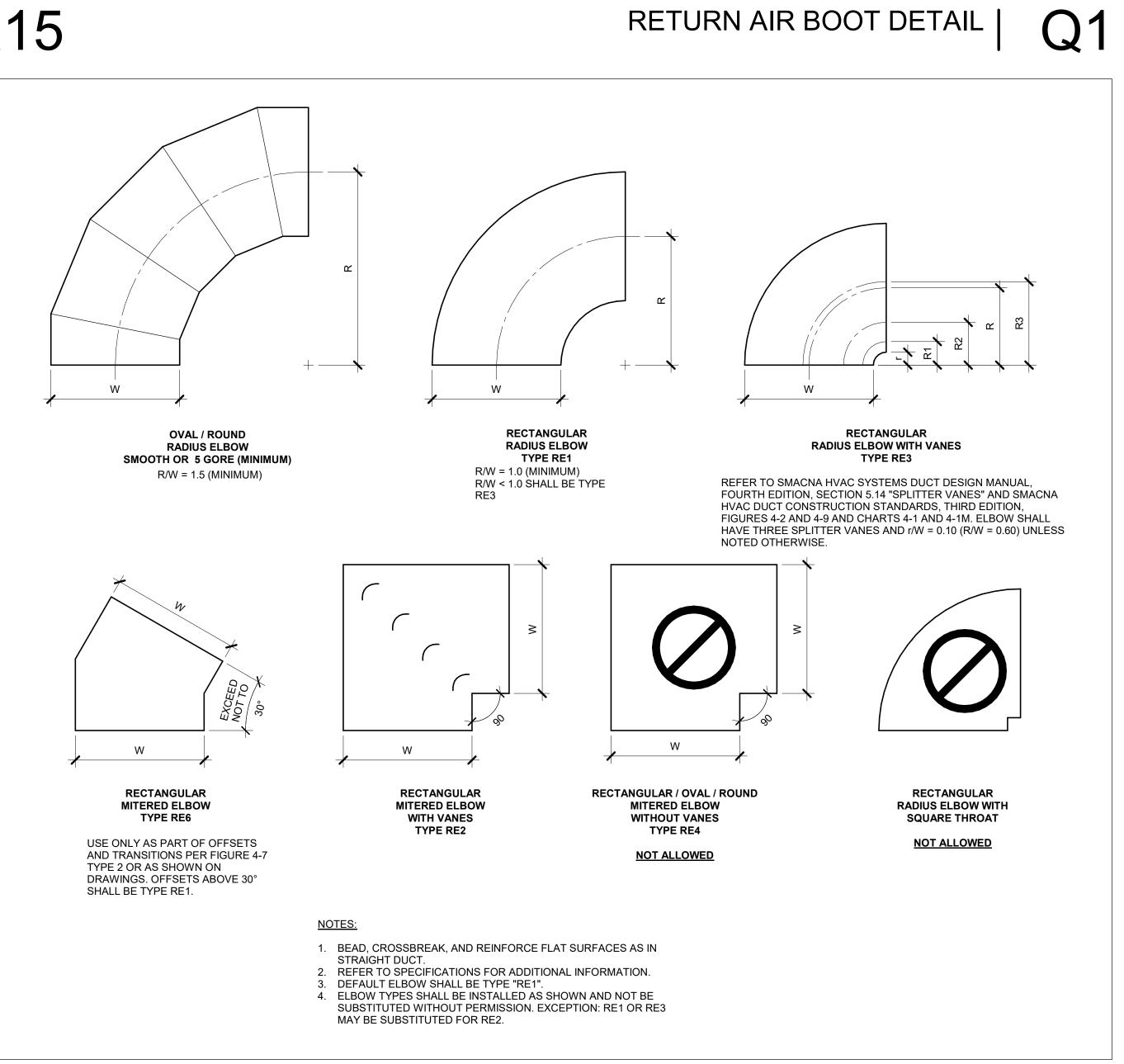


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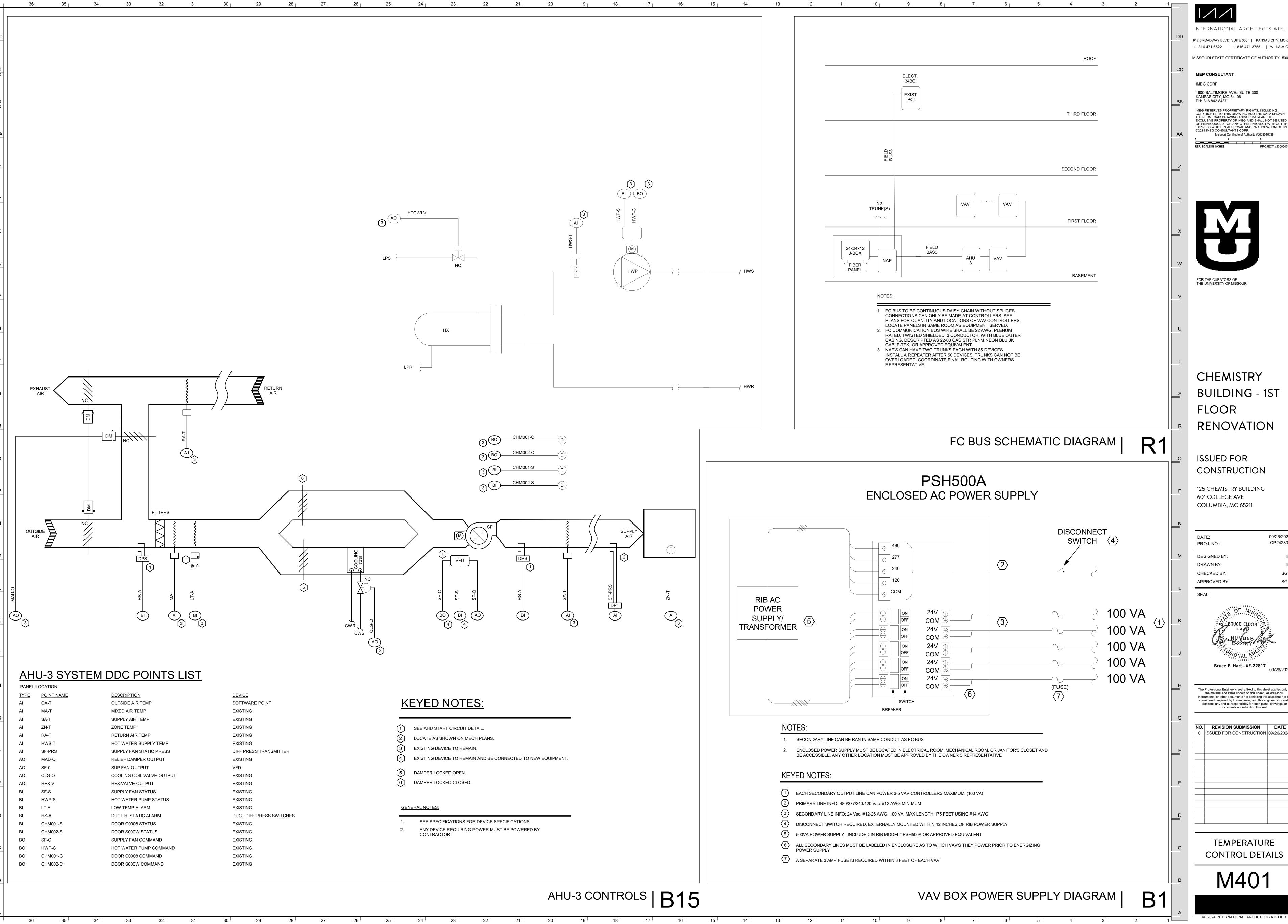
**HVAC DETAILS** 





VAV BOX - SINGLE DUCT - LINED | B15

DUCT - ELBOW CONSTRUCTION |



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> **CHEMISTRY** BUILDING - 1ST **FLOOR** RENOVATION

ISSUED FOR CONSTRUCTION

125 CHEMISTRY BUILDING 601 COLLEGE AVE COLUMBIA, MO 65211

<b>N</b>		
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NO. REVISION SUBMISSION DATE 0 ISSUED FOR CONSTRUCTION 09/26/2024

**TEMPERATURE** CONTROL DETAILS

ASSAME AREASERDED NO. 50. 50. 50. 50. 50. 50. 50. 50. 50. 50	Company   Mark   Mile	## WARD ## A PROPERTY ON A PROPERTY OF THE PRO	AG NAME	RESSURE INDEPENDENT CONTROL VALVE (P	,		CFM	EATING HEATIN		TING COI	IL (NOTES		MIN. INLET	CONTROL SENS	SOR TYPE		MODEL		
Comparison   Com	Column	Comparison   Com	/AV-00-01	GROUND FLOOR	<b>MAX.</b> 5100	MIN.	<b>MIN. MA</b> 5100	AX. CFM CF	<b>FM EAT °F</b> 55.0	-459.7	°F 	GPM S	SIZE (IN.) DIA 24"x16"	L TYPE (NOTE 3) (N	OTE 4)	TITUS	(NOTES 1, 2	NOTES	1, 2
STATEMENT   STAT	Column   C	The content of the	/AV-01-02 /AV-01-03	1250 AND 125P OFFICES 125S AND 125T OFFICES	160 160	0	50 50	120 5 120 5	0 55.0 0 55.0	90.0 90.0	180 180	0.3	6"	VAV VAV	2	TITUS TITUS	DESV DESV	1, 2, 3, 4 1, 2, 3, 4	, 5, 6, & 7 , 5, 6, & 7
Company   Comp	Control   Cont	Compared	'AV-01-05	125U CONFERENCE ROOM	230	0	70	175 7	0 55.0	90.0	180	0.3	6"	VAV	2	TITUS	DESV	1, 2, 3, 4	, 5, 6, & 7
Month   Mont	March   Color   Colo	Month   Mont	/AV-01-07 /AV-01-08	125D AND 125E OFFICES 125F AND 125G OFFICES	280 280	0	85 85	210 8 210 8	5 55.0 5 55.0	95.0 95.0	180 180	0.5 0.5	6"	VAV VAV	2 2	TITUS TITUS	DESV DESV	1, 2, 3, 4 1, 2, 3, 4	, 5, 6, & 7 , 5, 6, & 7
Linear Diffusion School   10   10   10   10   10   10   10   1	The control of the	Linear Diffusion Science   10	'AV-01-10	125J AND 125K OFFICES	290	0	90	220 9	0 55.0	95.0	180	0.5	6"	VAV	2	TITUS	DESV	1, 2, 3, 4	, 5, 6, & 7
PIPE INSULATION SCHEDULE (HVAC)	Company   Comp	Part	'AV-01-12	125V CIRCULATION		0	50						6"	VAV	2				
Property of the Control of the Con	The content of the	Common for found at the first firs			HEDULE														
TAO NUMBER   SATERIAN   SATERIA	Table   Marina   Stormach   Sto	TAN HOME   MATERIA   1.07 WOTH   10.0 E 9.075   STREET   MATERIAL STATE		1.CONTRACTOR SHALL DETERMINE PROPER 2.PROVIDE WITH CONCEALED FASTENERS.		CH CEILING CONST	RUCTION.												
The content of the	The content of the	The content of the			PLENU			JM CONTRO	L DAMP	ER									
ART TERMINAL SCHEDULE  NOTE: 100765 1	ART TERMINAL SCHEDULE  VIDE  STORY OF THE ST	ART TERMINAL SCHEDULE  VOICE  1. SOUTH CONTROL OF SHALL SET VIOLENCE AND COMET NOT THE TOTAL COMET NOT THE		LD-1 ALUMINUM 1"	1 Yes	FIBER FRE	E SEE DW	VG. Yes	No	RED	BORDER	11	BLACK	TITUS	FL-10			NOTES	
HELP   CONTINUED DE LA BANCE POPULATION OF THE AUTORITATION ATTEMBRED STREET OF THE CONTINUED STREET	HELD STATES CONTINUED IN A STATE AND	Victor		LIV-1 ALOWINOW 1	,		1	1	1		BONDER		BLACK	11100	1 12-10	NOTE 1, 2 & 3			
Part   10   Company   Co	Part   In Commission   Set   Part	PART				NOTES:													
PIECE IN THE REPORT OF THE REP	Total	PIPE INSULATION SCHEDULE (HVAC)											BE NECK SIZ		HERWISE.				
## 20 2 ASA PLOUE LAYER STEEL WHITE OF THIS OWN MOTES 42    PLUMBING MATERIAL LIST   FOR UNIX   DESCRIPTION   DESC	STOCK   MARCH   PLACE   LAVIN   STEEL   LAVI	## 20 2 20-04 PRADUE LAYAN STEEL WHITE NO. 17-04 CHE WITE STEEL STEEL LAYAN STEEL DESCRIPTION AND THE LAYAN STEELS AND THE STE				NAME (N	OTE 2)		(NOTE 1)				DAMP REQUI	PER RED MANUFACTU				NOTES	
THE MARKE DESCRIPTION SCHEDULE (HVAC)  BY DOTTE FILLING STATION FERCESCO WORLD SERVICE OPENIND WITH CLOSED AND ADMITTANCE OF THE CONTROL OF T	THE MARKET BEST DOTTED SERVICE OF PROTECTION OF THE CONTROL SERVICE OF PROTECTION OF THE CONTROL SERVICE OF THE CO	THE SAME DESCRIPTION SCHOOL BY THE PROPERTY OF THE PROPERTY OF THE SAME SHARE																	
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PIPE INSULATION SCHEDULE (HVAC)  CENTAN NOTE:  MATERIAL PROCESS OF STRUCKER AND STR	PROVIDED ITS STANDARD STREET STANDARD STANDARD CONTRIBUTION OF	PIPE INSULATION SCHEDULE (HVAC)  PIPE INSULATION SCHEDULE (HVAC)  CENTRAL PRODUCE (2 pm n) to be placed and country in the April of Basis (2 p												BOTTLE FILLING ST	ATION - RECE	SSED MOUNTED,		ED WITH	ELECTRIC WATER COOLER
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TANK SHALL RE ITSTED TO TO SERSE.  HICKORD REQUIRED AS IN A BARRY WHICH, OLD REMAKER  HICKORD REQUIRED AS IN A BARRY WHICH, OLD REMAKER  WATER QUITET SHALL SET AS ADVANCIAN GOODE TINNEED FLOOR IN  COMPUNION AS THAN AS ADMANDATE.  SINCE THE ASSET SHALL SHALL REPORT SHALL SET OF CHARLES ASSET SHALL SH	I FAME SHALL BE ITSTED TO TO SERVED.  IN FICE CIRCLE PROJECTION IN SHALL SHAP THE PROJECT PROJ	TARK SHALL BE TESTED TO 29 FIND.  IN ECTION A PROLIPHORA FOR HAND WHITE GOLD HANDER  WATER CRITETY BULL BE AT 36 MANUBURG ADDIE TRANSED FLOOR IN COMPLIANCE WITH LITER AND ATTRIBUTE COMPLIANCE AND CENTRAL BE AT 36 MANUBURG ADDIE TRANSED FLOOR IN COMPLIANCE WITH LITER AND ATTRIBUTE COMPLIANCE AND CENTRAL BEAUTY FLOOR IN THE AND CENTRAL BEAUTY FLOOR I												CONNECTIONS, AD	COMPLIANT,	CONFORMS TO T	HE LATEST ANSI A	A117.1 AND	
WHEN COURS THAT IS AND THAT AND THE PROTECT OF THAT OF THAT AND TH	WHITE OUTLE SHALLS AT SET PAYMENT AND ATMOSPHED FLOOR IN ODDING WHITE HALLS AT SET PAYMENT AND ATMOSPHED FLOOR IN ODDING WHITE HALLS SHEEL JOINT AND ATMOSPHED FLOOR IN SOUTH AND ATMOSPHED FLOOR IN SHEEL COLOR PROBLEM, 16 AUGIST THE AS IN SHEEL THE SHEEL SHEEL YEAR OF THE PROBLEM SHEEL SHEEL OF THE PROBLEM SHEEL SHEEL OF THE PROBLEM SHEEL SH	WHERE QUITES THALL BY AT SAMPHING ABOVE FRENCHED FLOOR IN COMPINION TO THE STATE OF THIS ABOVE AND ASSESSMENT OF THIS ASSESSMEN															°F TO 50°F AT 90°F	AMBIENT.	
COMPLANCE WITH LATEST AND STANDARDS.  SHY. STINLESS STEEL 22 1/2 (SIGETO SIGE) 15 1/2 (PIROTH TO SACI) QUERAL.  SHY. STINLESS STEEL 22 1/2 (SIGETO SIGE) 15 1/2 (PIROTH TO SACI) QUERAL.  SHY. STINLESS STEEL 22 1/2 (SIGETO SIGE) 15 1/2 (PIROTH TO SACI) QUERAL.  SHY. STINLESS STEEL 22 1/2 (SIGETO SIGE) 15 1/2 (PIROTH TO SACI) QUERAL.  SHY. STINLESS STEEL 22 1/2 (SIGETO SIGE) 15 1/2 (PIROTH TO SACI) QUERAL.  SHY. STINLESS STEEL 22 1/2 (SIGETO SIGE) 15 1/2 (PIROTH TO SACI) QUERAL.  SHY. STINLESS STEEL COLD STEEL GRID STRANGE.  SHY. STINLESS STEEL COLD STRANGE.  SHY. STINLESS STEEL GRID STRANGE.  SHY. STINLESS STEEL GRID STRANGE.  SHY. STANDARD SHY. SHOW SHY OF SACIO STRANGE.  SHY. STANDARD SHY. SHOW SHY OF SACIO STRANGE.  SHY. STANDARD SHY. SHY. SHY. SHY. SHY. SHY. SHY. SHY.	COMPLANCE WITH LATEST AND STANDARDS  SKY.  SINK. ACCESSING ELDERMONINT, 18 GAUGE 1YPE 301 SINK. ELRAY STANLESS STEEL, 22 LC; SIGNOTO BIOLY, 18 1/21 PICTORYTO BACK, OVERAL LCCTALLOST, 18 1/21 PICTOR	SRI SIR ACCESSIONED LOCATION CONTINUENT, 18 GAUGE TYPE 301 SIRK- ELKAY STANLESS STELL, 22 1/2 SIGNED COMPATINENT, 18 GAUGE TYPE 301 SIRK- ELKAY STANLESS STELL, 22 1/2 SIGNED COMPATINENT, 18 GAUGE TYPE 301 SIRK- ELKAY STANLESS STELL, 22 1/2 SIGNED CONTINUENT CONTIN														,			
PIPE INSULATION SCHEDULE (HVAC)  GINERA NOTES  UBSIL 178 SIGN FRANCE HANDLE HAN	PIPE INSULATION SCHEDULE (HVAC)    Upt   Unity or   Unity or   Upt	PIPE INSULATION SCHEDULE (HVAC)    Upt											CIV 4	COMPLIANCE WITH	LATEST ADA	STANDARDS.			CINIZ FLIZAV
PIPE INSULATION SCHEDULE (HVAC)  GINERAL NOTE:  IN THE PROPERTY OF SOME STALLESS STEEL CORD STRAMERS  GONDATE LOTTON, CHROME-PLATED FRISH, MOMINAL UP HIGH-RISE SWINGS  SHOUTH, CERAMIC CARRENGE, MOMINA IN PRACE HIGHER DWN SPRAY HIGHER  SHOW THAT ALERATOR STREAM IS SPRAY SELECTOR, LEVER HANDLE.  MAKINAH FLOY TO BE 2 OF DRIN DOUBLE HIGHER YEAR SHALL COMELY WITH HEAD TO STREAM IS SPRAY SELECTOR, LEVER HANDLE.  MAKINAH FLOY TO BE 2 OF DRIN DOUBLE HIGHER YEAR SHALL COMELY WITH HEAD THE SHALL COME SHALL SH	PIPE INSULATION SCHEDULE (HVAC)  SERVING NOTE: A PROPERTIES AND SCHEDULE (HVAC	PIPE INSULATION SCHEDULE (HVAC)  GINERAL NOTE: A SPRICE HORSE FAILED STREAM FOR A STANLESS STEEL, GRID STRAMER  GINERAL SHAPE AND A SAME HANDE A BUILD READ HILL DOWN SPRAY HOSE SYNING SHOULD CHROME-FAILED FRIESH HOMINAL IT HIS HIGH-RISE SYNING SHOULD CHROME-FAILED FRIESH HOMINAL HIS HIGH-RISE SYNING SHOULD CHROME-FAILED FRIESH HOMINAL HIS HIGH-RISE SYNING SHOULD CHROME HEAD HILL DOWN SPRAY HOSE WITH AGENCY STREAM SPRAY SHELD CRI, EXTER HANDLE.  MARKINAH FLOW TO BE 27 GRAIN O GOAD HILL FAILED FRASS HALL COMEY WITH HELD AND A SAME HANDLE SHOULD CHROME HEAD HILL DOWN SPRAY HOSE AND A SAME HANDLE SHELD CRITICAL HILL SHOULD HEAD HEAD HE SHOULD HEAD HEAD HE SHOULD HEAD HEAD HEAD HEAD HEAD HEAD HEAD HEA											5K-1	STAINLESS STEEL, SIZE, 21" x 17" x 5-1/	22-1/2" (SIDE- <sup>-</sup> 2" DEEP BOW	TO-SIDE) x 18-1/2" _, COMPLETELY U	(FRONT-TO-BACK) JNDERCOATED, 3-	) OVERALL -1/2"	(ECTRUAD211755)
CONSTRUCTION, CHROME-PLATED BRISH, NOMINAL 10* HIGH-RISE SWING SHOUT, CERAMOR, 24* READ ON ADMINAL 9* READ OF LILD GOWN SPINAL 10* HIGH-RISE SWING SHOUT, CERAMOR, 24* READ ON ADMINAL 9* READ OF LILD GOWN SPINAL 10* HIGH-RISE SWING SWING SWIND SPINAL SPIRAL 10* HIGH-RISE SWING SWIND SWIND SPIRAL SPIRAL SWING SWING SWIND SPIRAL SWING SW	CONSTRUCTION, CHROME, PLATED FINISH, NOMINAL 10° HIGH-RISE SWING SPOUT CERAMOR, PLATED FINISH, NOMINAL 10° HIGH-RISE SWING SPOUT CERAMOR, PLATED SPOUT CARL DOWN SPRAY SELECTOR, LEVER MARKE.  MARAMIM IL CON TO BE 2.2 GM IN COMPILATION IN THE INTERPOLICY ACT OF 2003 AND ASMEDIANES TRANSPARE AND ASMEDIANES STRUCKED SPOUT OF 2003 AND ASME	CONSTRUCTION, CHROME, PLATED FINISH, NOMINAL 10° HIGH-RSS SWING SPOUT, CERAMOR, CARRIDIDE, MONINAL SPEACH, PULL LOWN SIPPAY HOSE WITH AIRCROTH STRUAM, SPRAY SELECTOR, LIVER HANDLE MARMAMIL HOW, TO BE 2.2 GWN HO ORDERLANCE WITH HE BERRY POLICY ACT OF 2005 AND ASSESSABLES, CARRIDARD A 172, 18 THE ABURCET SHALL COMPLY WITH AS HEADHER) ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRASS TAU PIECE ACCESSABLES, OFFSET, 11,117, TO AUGE QUIRMER, PLATED SRA												PERFORATED TYPE	304 STAINLE	SS STEEL GRID ST	TRAINER.		
MAXIMUM FLOW TO BE 22 GPM IN COMPLIANCE WITH ENERGY POLICY ACT OF 2005 AND ASNEARING STANDARD AT 12 B. IN FAUCE TRAIL CONFTY WITH PART AND ASNEARING STANDARD AT 12 B. IN FAUCE TRAIL CONFTY WITH PART AND PART 12 B. IN FAUCE TRAIL CONFTY WITH PART AND PART 12 B. IN FAUCE TRAIL CONFTY WITH PART AND PART 12 B. IN FAUCE TRAIL CONFTY WITH PART AND PART 12 B. IN FAUCE TRAIL CONFTY WITH PART AND PART 14 B. IN FAUCE TRAIL PART 14 B. SET CONFT PART 14 B. S	MAXIMUM FLOW TO BE 22 GPM IN COMPILIANCE WITH ENERCY POLICY ACT OF 2005 AND ASNEAMOR TO \$12.05. MIT, FAUCET SHALL CONFTY WITH ENERCY POLICY ACT OF 2005 AND ASNEAMOR STATUS BY AND FLOWER PSTRETCH DEVOICE AND ESCULTOR-FOR HITE FROM THE FEBRUARY OF \$387.05. MINED BY AND FLOWER PSTRETCH DEVOICE AND ESCULTOR-FOR HITE FROM THE FEBRUARY OF	MAXIMUM FLOW TO BE 2.2 GPM IN COMPLIANCE WITH ENERGY POLICY ACT OF 2005 AND ARMEANS IS TAILOURG AT 12 ft. IM. FAUCE: SPALL COMPLY WITH EAST OF 2005 AND ARMEANS IS TAILOURGE RESTRICTURE PROVIDE RESTRICTURE P												CONSTRUCTION, CH SPOUT, CERAMIC C	HROME-PLATE ARTRIDGE, N	ED FINISH, NOMINA OMINAL 8" REACH,	AL 10" HIGH-RISE S , PULL DOWN SPR		
FEDERAL ACT 3:3974, PROVIDE RESTRICTIVE DEVICE AND ESCUTIONEON PLATE AS REQUIRED.  ACCESSORIES - OFFSET 1-112" 17 CAUGE OHROME-PLATED BRASS TAIL-PIECE AND PITTAR DURATEEN-TURN BALL VALVE YITTER BRASS TAIL-PIECE AND PITTAR DURATEEN TO PREVENTE ON COLD SUPPLY LINES (844) WITH 38666 OUT ALL THE PROVIDED BELOW AND THE PLANTED AS FACE AS	FEDERAL ACT S. 3974. PROVIDE RESTRICTIVE DEVICE AND ESCUTCHEON PLATE A REQUIRED.  ACCESSORIES - O FFSET 1-112" 17 CAUGE OHROME-PLATED BRASS TAIL-PIECE AND PTTARE OUR ATTER-TURNS BLAY WAVE TYPE 39 OF HOROME-PLATED BRASS TAIL-PIECE AND PTTARE OUR ACT S. 172" 17 CAUGE OHROME-PLATED BRASS TAIL-PIECE AND PTTARE OUR ACT S. 172" 17 CAUGE OHROME-PLATED BRASS TAIL-PIECE AND PTTARE OUR ACT S. 172" 17 CAUGE OHROME-PLATED BRASS TAIL-PIECE AND PTTARE OUR ACT S. 172" 17 CAUGE OHROME-PLATED BRASS TAIL-PIECE AND PTTARE OUR ACT S. 172" 17 CAUGE OHROME-PLATED BRASS TAIL-PIECE AND PTTARE OUR ACT S. 172" 17 CAUGE OHROME-PLATED BRASS TAIL-PIECE AND PTTARE OUR ACT S. 172" 17 TO 4.15" 17 OF 4.75" 47 TO 4.75" 18 PT O. 172" 18 PT O	FEDERAL ACT 3.3974. PROVIDE RESTRICTIVE DEVICE AND ESCUTCHEON PLATE AS REQUIRED.  ACCESSORIES OFFSET 1.1/2" 17 CAUSE: OHROME-PLATED BRASS TAIL-PIECE AND PITTARY OUR YEAR PLATED SOFT COPPER SUPPLY (INSEX) ANGLE SUPPLIES WITH STOPS, CHROME-PLATED BRASS TAIL-PIECE AND PITTARY OUR TEST.  UB-1. UTILITY BOY. LUNDARTED TAIL MANDED STEEL (BUY CRAY (BIM875AB), OA OUT OUT OF THE COLUMN TO A CAUSE OFF COPPER SUPPLY (INSEX) OUT OUT OUT OF THE COLUMN TEST.  UB-1. UTILITY BOY. LUNDARTED TAIL MANDED SOFT COPPER SUPPLY (INSEX) OUT												MAXIMUM FLOW TO	BE 2.2 GPM II	N COMPLIANCE W	ITH ENERGY POLI		
AND P-TRAP, QUARTER-TURB BALL VALVE TYPE 38° CHROME-PLATED BRASS ANGE SUPPLUS WITH STOPS, CHROME-PLATED STEEL.  UB-1 UTILITY BOX - UNPAINTED CALVANUZED STEEL OR WHITE PAINTED STEEL.  US UP GRAY (BIMBYSAB), OA SANGE SUPPLUS WITH 140° COMPRESSION OUTLET, INTRECAL WATER HAMMER ARRESTOR. PROVIDE A 6 FOOT STAINLESS STEEL FLEXIBLE HOSE FOR CONNECTION TO EQUIPMENT.  WATTS '98D' BACK FLOW PREVENTER ON COLD SUPPLY, ADAPTER AND PITTINGS AS REQUIRED FOR FINAL CONNECTION TO EQUIPMENT.  WATTS '98D' BACK FLOW PREVENTER ON COLD SUPPLY, ADAPTER AND PITTINGS AS REQUIRED FOR FINAL CONNECTION TO EQUIPMENT.  WATTS '98D' BACK FLOW PREVENTER ON COLD SUPPLY, ADAPTER AND PITTINGS AS REQUIRED FOR FINAL CONNECTION TO EQUIPMENT.  WATTS '98D' BACK FLOW PREVENTER ON COLD SUPPLY, ADAPTER AND PITTINGS AS REQUIRED FOR FINAL CONNECTION TO EQUIPMENT.  WATTS '98D' BACK FLOW PREVENTER ON COLD SUPPLY, ADAPTER AND PITTINGS AS REQUIRED FOR FINAL CONNECTION TO EQUIPMENT.  WATTS '98D' BACK FLOW PREVENTER ON COLD SUPPLY, ADAPTER AND PITTINGS AS REQUIRED FOR FINAL CONNECTION TO EQUIPMENT.  WATTS '98D' BACK FLOW PREVENTER ON COLD SUPPLY, ADAPTER AND PITTINGS AS REQUIRED FOR FINAL CONNECTION TO EQUIPMENT.  WATTS '98D' BACK FLOW PREVENTER ON COLD SUPPLY, ADAPTER AND PITTINGS AS REQUIRED FOR FINAL CONNECTION TO EQUIPMENT.  WATTS '98D' BACK FLOW PREVENTER ON COLD SUPPLY, ADAPTER AND PITTINGS AS REQUIRED FOR FINAL CONNECTION TO EQUIPMENT.  WATTS '98D' BACK FLOW PREVENTER ON COLD SUPPLY AND PITTINGS AS REQUIRED FOR FINAL CONNECTION TO EQUIPMENT.  WATTS '98D' BACK FLOW PREVENTER ON COLD SUPPLY AND PITTINGS AS REQUIRED FOR FINAL CONNECTION TO EQUIPMENT.  WATTS '98D' BACK FLOW PITTINGS AS REQUIRED FOR FINAL CONNECTION TO EQUIPMENT.  WATTS '98D' BACK FLOW PITTINGS AS REQUIRED FINAL PITTINGS AS REQUIRED FOR FINAL CONNECTION TO EQUIPMENT.  WATTS '98D' BACK FLOW PITTINGS AS REQUIRED FOR FINAL PITTINGS AS REQUIRED F	AND P-TRAP, QUARTER-TURN BALL VALVE TYPE 38° CHROME-PLATED BRASS ANGE SUPPLIES WITH STOPS, CHROME-PLATED STEEL.  UB-1 UTILITY BOX - UNPAINTED CALL/VANUZED STEEL OR WHITE PAINTED STEEL.  UB-1 UTILITY BOX - UNPAINTED CALL/VANUZED STEEL OR WHITE PAINTED STEEL.  UB-1 UTILITY BOX - UNPAINTED CALL/VANUZED STEEL OR WHITE PAINTED STEEL.  UB-1 UTILITY BOX - UNPAINTED CALL/VANUZED STEEL OR WHITE PAINTED STEEL.  UB-1 UTILITY BOX - UNPAINTED CALL/VANUZED STEEL OR WHITE PAINTED STEEL.  UB-1 UTILITY BOX - UNPAINTED CALL/VANUZED STEEL OR WHITE PAINTED STEEL.  UB-1 UTILITY BOX - UNPAINTED STEEL.  UB-1 UTILITY BOX - UNPAINTED CALL/VANUZED STEEL OR WHITE PAINTED STEEL.  UB-1 UTILITY BOX - UNPAINTED STEEL.  UB-1 UTILITY BOX - UNPAINTED STEEL.  UB-1 UTILITY BOX - UNPAINTED CALL/VANUZED STEEL OR WHITE PAINTED STEEL.  UB-1 UTILITY BOX - UNPAINTED STEEL OR WHITE PAINTED STEEL.  UB-1 UTILITY BOX - UNPAINTED STEEL OR WHITE PAINTED STEEL.  UB-1 UTILITY BOX - UNPAINTED STEEL OR WHITE PAINTED STEEL.  UB-1 UTILITY BOX - UNPAINTED STEEL OR WHITE PAINTED STEEL.  UB-1 UTILITY BOX - UNPAINTED STEEL OR WHITE PAINTED STEEL OR WH	AND P-TRAP, QUARTER-TURN BALL VALVE TYPE 38" CHROME-P-LATED BRASS. ANGE SUPPLIES WITH STOPS, CHROME-P-LATED BRASS. ANGE SUPPLIES WITH STOPS, CHROME-P-LATED BRASS. ANGE SUPPLIES WITH STOPS, CHROME-P-LATED STEEL. UB-1 UTILITY BOX. UNPAINTED CALVANUZED STEEL OR WHITE PAINTED STEEL. STEEL FLEXIBLE HOSE FOOR CONNECTION TO EQUIPMENT.  WATTS "9BD" BACK FLOW PREVENTER ON COLD SUPPLY. ADAPTER AND FITTINGS AS REQUIRED FOR FINAL CONNECTION TO EQUIPMENT.  WATTS "9BD" BACK FLOW PREVENTER ON COLD SUPPLY. ADAPTER AND FITTINGS AS REQUIRED FOR FINAL CONNECTION TO EQUIPMENT.  PIPE INSULATION SCHEDULE (HVAC)  GENERAL NOTES: 1. REFER TO THE SPECIFICATIONS FOR TYPE DESCRIPTIONS AND JACKETING REQUIREMENTS. VALUES LISTED BELOW ARE BASED ON ASHRAE/JECC REQUIREMENTS. 2. TYPE 8 INSULATION IS NOT ALLOWED IN NON-AIR CONDITIONED SPACES, SUCH AS MECHANICAL ROOMS, EXTERIOR, ATTICS, ETC. 3. TYPE 8 INSULATION GREATER THAN 1" THICK SHALL BE INSTALLED USING MULTIPLE LAYERS OF AN TOP THE ASTALLED USING MULTIPLE LAYERS OF AST OF 1" "WITH STAGGERED SEAMS. 4. TYPE 64" "SAULA BE INSTALLED IN TWO (2) 2" LAYERS WITH STAGGERED SEAMS. 5. TYPE 64" SHOULA BE INSTALLED IN TWO (2) 2" LAYERS WITH STAGGERED SEAMS. 6. PROVIDE RIGID INSERT AT HANGESS. BITHER PRE-MANUFACTURED COUPLINGS (REFER TO PIPE HANGER AND SUPPORTS SPECIFICATIONS) OR TYPE C. D. OR E INSULATION. SEE SPEC. FOR MORE DETAILS. 7. DIRECT BUIRED PIPING SHALL ONLY USE TYPE C OR TYPE E REDUCTION IN THICKNESS PER DEPINAL BE ALLOWED PER ASHBAREJECC AS APPLICABLE.  PIPE SYSTEM  INSULATION TYPE  INSULATION THICKNESS PER NOMINAL PIPE OR TUBE SIZE  NOTES  NOTES  NOTES  HWR - HEATING WATER RETURN A (GISEPI), C (CIGIGIA) 15" 12" 2" 2"  VIEW 2" 2"  VIEW 2" 2"  VIEW 2" 2"  VIEW 3" 1" TO 5 4" 4" 4" TO 5 4" 4" 4" TO 5 4" 4" 4" TO 5 4" 5" 2"  VIEW 2" 2"  VIEW 3" 1" TO 5 4" 4" 4" TO 5 4" 4" 4" TO 5 4" 5" 2"  VIEW 3" 1" TO 5 4" 4" 4" TO 5 4" 5" 2"  VIEW 3" 1" TO 5 4" 4" 4" TO 5 4" 5" 2"  VIEW 3" 1" TO 5 4" 4" 4" TO 5 4" 5" 2"  VIEW 4" 1" TO 5 4" 4" 4" 1" TO 5 4" 5" 2"  VIEW 4" 1" TO 5 4" 5" 1" 5 5" 1" 5 4"  VIEW 5"												FEDERAL ACT S.387					
PIPE INSULATION SCHEDULE (HVAC)  General Notes:  1. Refer to the specifications for type descriptions and Jacketing requirements. Values listed below are based on Ashrae/iecc Requirements.  2. Type a insulation is not allowed in non-air conditioning general hand "That and that all et installed using Multiple Layers of a '4' or 1' with 1' and conditions. Or type C, do re insulation. See Spec. For More details.  7. Direct Buinser hand "The Remains Handers, either pre-manuratured courses for direct buriled piping is allowed piping shall cond. Use type or type e. Rounded to not yet the remains of the province of the pr	### PIPE INSULATION SCHEDULE (HVAC)    General Notes: 1. Refer to the specifications for type descriptions and Jacketing requirements. Values listed below are based on ashrae/iecc requirements. 2. Type a insulation sport allowed in non-air conditions departed in those instituted bising multiple layers of a 2 state. 3. Type 6 insulation geater than "Thick shall be installed bising multiple layers of a 2 state. 3. Type 6 is not allowed in through the preventage of the preventag	PIPE INSULATION SCHEDULE (HVAC)  GENERAL NOTES:  1. REFER TO THE SPECIFICATIONS FOR TYPE DESCRIPTIONS AND JACKETING REQUIREMENTS. VALUES LISTED BELOW ARE BASED ON ASHRAE/IECC REQUIREMENTS.  2. TYPE A INSULATION IS NOT ALLOWED IN NON-AIR CONDITIONED SPACES, SUCH AS MECHANICAL BOOKS, EXTERIOR, ATTICS, ETC.  3. TYPE B INSULATION IS ROTT ALLOWED IN NON-AIR CONDITIONED SPACES, SUCH AS MECHANICAL BOOKS, EXTERIOR, ATTICS, ETC.  4. TYPE E INSULATION IS RETURN AIR PLENUMS, UNLESS LISTED AND LABELED AS 25/50 RATED PER ASTM EBA/LU/23  5. TYPE 64 "SHALL BE INSTILLED USING MULTIPLE LAYERS OF 34/4" OF 1" "WITH STAGGERED SEAMS.  6. PROVIDE RIGID INSERT AT HANGERS, EITHER PRE-MANUFACTURED COURINGS (REFER TO PIPE HANGER AND SULVAINED PIPING SHALLED.  INSULATION TYPE COURS ON THE PRE-MANUFACTURED COURINGS (REFER TO PIPE HANGER AND SULVAINED PIPING SHALLED.  INSULATION THICKNESS PER NOMINAL PIPE OR TUBE SIZE  NOTES  NOTES  NOTES  NOTES  NOTES  NOTES  NOTES												AND P-TRAP, QUAR	TER-TURN BA	LL VALVE TYPE 3/8	8" CHROME-PLATE	ED BRASS	
PIPE INSULATION SCHEDULE (HVAC)  GENERAL NOTES:  1. REFER TO THE SPECIFICATIONS FOR TYPE DESCRIPTIONS AND JACKETING REQUIREMENTS. VALUES LISTED BELOW ARE BASED ON ASHRAE/IECC REQUIREMENTS.  2. TYPE A INSULATION ROTALLOWED IN NON-AIR CONDITIONED SPACES, SUCH AS MECHANICAL ROOMS, EXTERIOR, ATTICS, ETC.  3. TYPE B INSULATION IS NOT ALLOWED IN NON-AIR CONDITIONED SPACES, SUCH AS MECHANICAL ROOMS, EXTERIOR, ATTICS, ETC.  4. TYPE E IS NOT ALLOWED IN PETURN AIR PLENUMS, UNLESS LISTED AND LABELED AS 25/50 RATED PER ASTM E84/UL723  5. TYPE G 4" SHALL BE INSTALLED IN THO (2) 2" LAYERS WITH STAGGERED SEAMS.  6. PROVIDE RIGID INSERT AT HANGERS, EITHER PRE-MANGETURED COULDINGS (REFER TO PIPE HANGER AND SUPPORTS SPECIFICATIONS) OR TYPE C, D, OR E INSULATION. SEE SPEC. FOR MORE DETAILS.  7. DIRECT BUIRED PIPING SHALL ONLY USE TYPE C OR TYPE E. REDUCTION IN THICKNESS FOR DIRECT BUIRED PIPING IS ALLOWED PER ASHRAE/JECC AS APPLICABLE.  PIPE SYSTEM  INSULATION TYPE  INSULATION THICKNESS PER NOMINAL PIPE OR TUBE SIZE  NOTES  NOTES  HWR - HEATING WATER RETURN  A (GISFBI), C (CelGIa)  1.5" 1.5" 1.5" 1.5" 1.5" 10.4" 4" 10.5" 1.5" 2" 2" 2" 2" 2" 2" 2" 2" 2" 2" 2" 2" 2"	PIPE INSULATION SCHEDULE (HVAC)  GENERAL NOTES:  1. REFER TO THE SPECIFICATIONS FOR TYPE DESCRIPTIONS AND JACKETING REQUIREMENTS. VALUES LISTED BELOW ARE BASED ON ASHRAE/IECC REQUIREMENTS.  2. TYPE A INSULATION IS NOT ALLOWED IN NON-AIR CONDITIONED SPACES, SUCH AS MECHANICAL ROOMS, EXTERIOR, ATTICS, ETC.  3. TYPE B INSULATION IS NOT ALLOWED IN RETURN AIR PIENDIMS, UND LABLED AS 25/50 RATED PER ASTM E84/UL723  4. TYPE IS INSULATION IS NOT ALLOWED IN PIENDIMS, UND LABLED AS 25/50 RATED PER ASTM E84/UL723  5. TYPE G 4" SYHALL BE INSTALLED IN TWO (2).2" LAYERS WITH STAGGERED SEAMS.  6. PROVIDE RIGIO INSERT AT HANGERS, EITHER PRE-MANGATURED COLUNIOS (REFER TO PIPE HANGER AND SUPPORTS SPECIFICATIONS) OR TYPE C, D, OR E INSULATION. SEE SPEC. FOR MORE DETAILS.  7. DIRECT BUIRED PIPING SHALL ONLY USE TYPE C OR TYPE E. REDUCTION IN THICKNESS FOR DIRECT BURIED PIPING IS ALLOWED PER ASHRAE/IECC AS APPLICABLE.  PIPE SYSTEM  INSULATION TYPE  INSULATION THICKNESS PER NOMINAL PIPE OR TUBE SIZE  NOTES  HWR - HEATING WATER RETURN  A (GISFDI), C (CelGia)  1.5" 1.5" 1.5" 1.5" 1.5" 1.5" 1.5" 1.5"	PIPE INSULATION SCHEDULE (HVAC)  GENERAL NOTES:  1. REFER TO THE SPECIFICATIONS FOR TYPE DESCRIPTIONS AND JACKETING REQUIREMENTS. VALUES LISTED BELOW ARE BASED ON ASHRAE/IECC REQUIREMENTS.  2. TYPE A INSULATION SPORT THICK SHALL BE INSTALLED USING MULTIPLE LAYERS OF 3/4* OR 1* WITH STAGGERED SEAMS.  4. TYPE E IS NOT ALLOWED IN RETURN AIR PLENUMS, UND LABLELD AS 25/50 RATED PER ASTM E84/UL723  5. TYPE G 4* SHALL BE INSTALLED IN TWO (2) 2" LAYERS WITH STAGGERED SEAMS.  6. PROVIDE RIGID INSERT AT HANGER'S. FITHER PRE-AMAGICAL GROENED, SEAMS.  7. DIRECT BUIRED PIPING SHALL ONLY USE TYPE C OR TYPE E. REDUCTION IN THICKNESS FOR DIRECT BURIED PIPING IS ALLOWED PER ASHRAE/IECC AS APPLICABLE.  PIPE SYSTEM INSULATION TYPE (BISOLATION TYPE CORTYPE E. REDUCTION IN THICKNESS FOR DIRECT BURIED PIPING IS ALLOWED PER ASHRAE/IECC AS APPLICABLE.  NOTES  NOTES  NOTES  1.5* 1.5* 2" 2" 2" 2" 2" 2" 2" 2" 2" 2" 2" 2" 2"											UB-1	UTILITY BOX - UNPA	INTED GALVA	NIZED STEEL OR '	WHITE PAINTED S	TEEL	GUY GRAY (BIM875AB), OA <sup>-</sup> (39140 WITH 38686
FITTINGS AS REQUIRED FOR FINAL CONNECTION TO EQUIPMENT.  PIPE INSULATION SCHEDULE (HVAC)  GENERAL NOTES:  1. REFER TO THE SPECIFICATIONS FOR TYPE DESCRIPTIONS AND JACKETING REQUIREMENTS. VALUES LISTED BELOW ARE BASED ON ASHRAE/JECC REQUIREMENTS.  2. TYPE A INSULATION IS NOT ALLOWED IN NON-AIR CONDITIONED SPACES, SUCH AS MECHANICAL ROOMS, EXTERIOR, ATTICS, ETC.  3. TYPE B INSULATION GREATER THAN 1" THICK SHALL BE INSTALLED USING MULTIPLE LAYERS OF 3/4" OR 1" WITH STAGGERED SEAMS.  4. TYPE B IS NOT ALLOWED IN RETURN AIR PLENDMS, UNLESS LISTED AND LABELED AS 25/50 PATED PER ASTM E84/UT.23  5. TYPE G 4" SHALL BE INSTALLED IN TWO (2) 2" LAYERS WITH STAGGERED SEAMS.  6. PROVIDE RIGID INSERT AT HANGERS, EITHER PRAMUPLACTIZED COUPLINGS (REFER TO PIPE HANGER AND SUPPORTS SPECIFICATIONS) OR TYPE C, D, OR E INSULATION. SEE SPEC. FOR MORE DETAILS.  7. DIRECT BUIRED PIPING SHALL ONLY USE TYPE C OR TYPE E. REDUCTION IN THICKNESS FOR DIRECT BURIED PIPING IS ALLOWED PER ASHRAE/JECC AS APPLICABLE.  PIPE SYSTEM  INSULATION TYPE  INSULATION THICKNESS PER NOMINAL PIPE OR TUBE SIZE  NOTES  HWR - HEATING WATER RETURN  A (GISFbr), C (CelGla)  1.5" 1.5" 2" 2" 2" 2" 2"	FITTINGS AS REQUIRED FOR FINAL CONNECTION TO EQUIPMENT.  PIPE INSULATION SCHEDULE (HVAC)  GENERAL NOTES:  1. REFER TO THE SPECIFICATIONS FOR TYPE DESCRIPTIONS AND JACKETING REQUIREMENTS. VALUES LISTED BELOW ARE BASED ON ASHRAE/JECC REQUIREMENTS.  2. TYPE A INSULATION IS NOT ALLOWED IN NON-AIR CONDITIONED SPACES, SUCH AS MECHANICAL ROOMS, EXTERIOR, ATTICS, ETC.  3. TYPE B INSULATION GREATER THAN 1" THICK SHALL BE INSTALLED USING MULTIPLE LAYERS OF 3/4" OR 1" WITH STAGGERED SEAMS.  4. TYPE G IS NOT ALLOWED IN RETURN AIR PLENUMS, UNLESS LISTED AND LABELED AS 25/50 PATED PER ASTM E84/UT23  5. TYPE G 4" SHALL BE INSTALLED IN TWO (2)" LAYERS WITH STAGGERED SEAMS.  6. PROVIDE RIGID INSERT AT HANGERS, EITHER PRE-MANUFACTURES (REFER TO PIPE HANGER AND SUPPORTS SPECIFICATIONS) OR TYPE C, D, OR E INSULATION. SEE SPEC. FOR MORE DETAILS.  7. DIRECT BUIRED PIPING SHALL ONLY USE TYPE C OR TYPE E. REDUCTION IN THICKNESS FOR DIRECT BURIED PIPING IS ALLOWED PER ASHRAE/JECC AS APPLICABLE.  PIPE SYSTEM  INSULATION TYPE  INSULATION THICKNESS PER NOMINAL PIPE OR TUBE SIZE  NOTES  HWR - HEATING WATER RETURN  A (GISFBY), C (CelGIa)  1.5" 1.5" 2" 2" 2" 2" 2" 2"	FITTINGS AS REQUIRED FOR FINAL CONNECTION TO EQUIPMENT.  PIPE INSULATION SCHEDULE (HVAC)  GENERAL NOTES:  1. REFER TO THE SPECIFICATIONS FOR TYPE DESCRIPTIONS AND JACKETING REQUIREMENTS. VALUES LISTED BELOW ARE BASED ON ASHRAE/IECC REQUIREMENTS.  2. TYPE A INSULATION IS NOT ALLOWED IN NON-AIR CONDITIONED SPACES, SUCH AS MECHANICAL ROOMS, EXTERIOR, ATTICS, ETC.  3. TYPE B INSULATION GREATER THAN 1" THICK SHALL BE INSTALLED USING MULTIPLE LAYERS OF 3/4" OR 1" WITH STAGGERED SEAMS.  4. TYPE E IS NOT ALLOWED IN RETURN AIR PLENUMY, SULESS LISTED AND LABELED AS 2550 PARTED PER ASTM E64/UT23  5. TYPE G 4" SHALL BE INSTALLED IN TWO (2)" LAYERS WITH STAGGERED SEAMS.  6. PROVIDE RIGID INSERT AT HANGERS, EITHER PRE-MANUFACTURES (REFER TO PIPE HANGER AND SUPPORTS SPECIFICATIONS) OR TYPE C, D, OR E INSULATION. SEE SPEC. FOR MORE DETAILS.  7. DIRECT BUIRED PIPING SHALL ONLY USE TYPE C OR TYPE E. REDUCTION IN THICKNESS FOR DIRECT BURIED PIPING IS ALLOWED PER ASHRAE/IECC AS APPLICABLE.  PIPE SYSTEM  INSULATION TYPE  INSULATION THICKNESS PER NOMINAL PIPE OR TUBE SIZE  NOTES  HWR - HEATING WATER RETURN  A (GISFby), C (CelGia)  1.5" 1.5" 2" 2" 2" 2"																T STAINLESS	FACEPLATE)
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6. PROVIDE RIGID INSERT AT HANGERS, EITHER PRE-MANUFACTURED COUPLINGS (REFER TO PIPE HANGER AND SUPPORTS SPECIFICATIONS) OR TYPE C, D, OR E INSULATION. SEE SPEC. FOR MORE DETAILS. 7. DIRECT BUIRED PIPING SHALL ONLY USE TYPE C OR TYPE E. REDUCTION IN THICKNESS FOR DIRECT BURIED PIPING IS ALLOWED PER ASHRAE/IECC AS APPLICABLE.  PIPE SYSTEM  INSULATION TYPE  INSULATION THICKNESS PER NOMINAL PIPE OR TUBE SIZE  4" 1" TO < 1.5" 1.5" TO < 4" 4" TO < 8" ≥ 8"  HWR - HEATING WATER RETURN  A (GISFbr), C (CeIGIa)  1.5" 1.5" 2" 2" 2" 2"	6. PROVIDE RIGID INSERT AT HANGERS, EITHER PRE-MANUFACTURED COUPLINGS (REFER TO PIPE HANGER AND SUPPORTS SPECIFICATIONS) OR TYPE C, D, OR E INSULATION. SEE SPEC. FOR MORE DETAILS. 7. DIRECT BUIRED PIPING SHALL ONLY USE TYPE C OR TYPE E. REDUCTION IN THICKNESS FOR DIRECT BURIED PIPING IS ALLOWED PER ASHRAE/IECC AS APPLICABLE.  PIPE SYSTEM  INSULATION TYPE    INSULATION THICKNESS PER NOMINAL PIPE OR TUBE SIZE	6. PROVIDE RIGID INSERT AT HANGERS, EITHER PRE-MANUFACTURED COUPLINGS (REFER TO PIPE HANGER AND SUPPORTS SPECIFICATIONS) OR TYPE C, D, OR E INSULATION. SEE SPEC. FOR MORE DETAILS. 7. DIRECT BUIRED PIPING SHALL ONLY USE TYPE C OR TYPE E. REDUCTION IN THICKNESS FOR DIRECT BURIED PIPING IS ALLOWED PER ASHRAE/IECC AS APPLICABLE.  PIPE SYSTEM  INSULATION TYPE    INSULATION THICKNESS PER NOMINAL PIPE OR TUBE SIZE		3. TYPE B INSU 4. TYPE E IS NO	LATION GREATER THAN T OT ALLOWED IN RETURN	1" THICK SHALL BE I AIR PLENUMS, UNLE	NSTALLED USIN ESS LISTED AND	G MULTIPLE LAYE LABELED AS 25/5	RS OF 3/4" OR	1" WITH S	STÄGGERE		S.						
INSULATION TYPE	FIPE SYSTEM	FIPE SYSTEM		6. PROVIDE RIC	SID INSERT AT HANGERS.	, EITHER PRE-MANU	FACTURED COL	JPLINGS (REFER T							_ATION. SEE S	SPEC. FOR MORE	DETAILS.		
									TYPE		< 1"	1" T	O < 1.5"   1.5					NOTES	
								121						2" 2"	2"				

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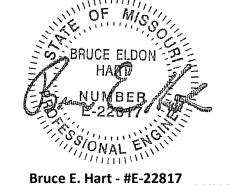
CHEMISTRY
BUILDING - 1ST
FLOOR
RENOVATION

ISSUED FOR CONSTRUCTION

125 CHEMISTRY BUILDING 601 COLLEGE AVE COLUMBIA, MO 65211

DATE: PROJ. NO.:	09/26/2024 CP242331
DESIGNED BY:	IN
DRAWN BY:	IN
CHECKED BY:	SGB
APPROVED BY:	SGB

OF MI

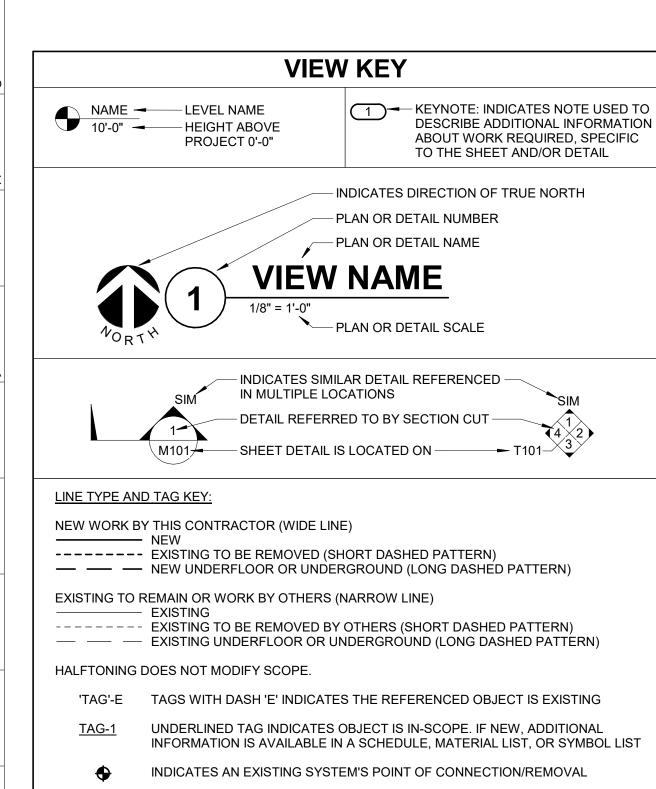


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PLUMB. & VENT. SCHEDULES

ME600



	ELE	CTRICAL	SYMBOL LIST		
SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:	SYMBOL:	
COMMON AND SEQUENCE OF OPERATION SUBSCRIPTS			SUBSCRIPTS: TYPE / PROGRAMMING  WG = WIRE GUARD IS REQUIRED W = WEATHERPROOF A = ATRIUM CA = CLEAN AGENT SYSTEM CR = COMPUTER ROOM E = ELEVATOR RECALL D = HVAC CONTROL DH = DOOR HOLD RELEASE DIPS = DUAL INTERLOCK PREACTION SYS FD = FIRE DOOR RELEASE MP = MEDICAL PROCEDURE S = SLEEPING / PATIENT ROOM SW = STAIRWELL # = 15, 30, 75, 110, 177 CANDELA RATING CD = CANDELA RATING SELECTED BY NICET DESIGNER		<u>FI</u>
þ D	FACP-#	28 31 00	FIRE ALARM CONTROL PANEL		
\$# \$\tag{T}\$	<u>FAA-#</u> <u>FA-120</u>	28 31 00 28 31 00	FIRE ALARM ANNUNCIATOR  FIRE ALARM SMOKE DETECTOR,  CEILING OR WALL MOUNT		
, and the second			BLANK - PHOTOELECTRIC AT = ATTIC (LOCATED IN) BR = BEAM RECEIVER BT = BEAM TRANSMITTER CO = COMBINATION SMOKE / CARBON MONOXIDE COH = COMBINATION SMOKE / CARBON MONOXIDE / HEAT COS = COMBINATION SMOKE / CARBON MONOXIDE / STROBE H = COMBINATION SMOKE / HEAT DETECTOR		<u>P.</u> <u>P.</u> <u>M.</u> //
;; (s)	FA-122	28 31 00	ION = IONIZATION TYPE ID = IN DUCT DETECTOR SA = STAND ALONE WITH SOUNDER SB = SOUNDER BASE SV = STAND ALONE WITH SOUNDER AND 177 CANDELA STROBE FIRE ALARM DUCT SMOKE DETECTOR		I
	<u></u>	25 5 7 55	# = EQUIP OR SYSTEM		DS-#
H)# TH	<u>FA-140</u>	28 31 00	FIRE ALARM HEAT DETECTOR  BLANK = COMBINATION RATE OF RISE / FIXED TEMP AT = ATTIC (LOCATED IN)		<u> </u>
			F = FIXED TEMP  RC = RATE COMPENSATED  X - EXPLOSION PROOF		
F	<u>FA-130</u>	28 31 00	FIRE ALARM MANUAL PULL STATION	SYMBOL:	
FT	FA-131	28 31 00	FIRE ALARM MANUAL PULL STATION W/ COVER	<b>⊕</b> <b>₩</b>	<u> </u>
gg	<u>FA-200</u>	28 31 00	FIRE ALARM VISUAL ALARM DEVICE, CEILING	G	REC

OR WALL MOUNT

# = CANDELA RATING.

OR WALL MOUNTED

# = CANDELA RATING

# = CANDELA RATING

28 31 00 FIRE ALARM REMOTE INDICATOR

28 31 00 FIRE ALARM REMOTE INDICATOR

28 31 00 FIRE ALARM FLOW SWITCH TO

28 31 00 FIRE ALARM TAMPER SWITCH TO

28 31 00 FIRE ALARM ADDRESSABLE

28 31 00 FIRE ALARM ADDRESSABLE

MONITOR MODULE

CONTROL MODULE

28 31 00 FIRE ALARM DOOR HOLD DEVICE

HOLD DEVICE

CONNECTION

28 31 00 FIRE ALARM DOOR HOLD DEVICE

28 31 00 FIRE ALARM ISOLATION MODULE

WALL MOUNTED

M = MINI-HORN

28 31 00

FA-211

FA-241

FA-242

FA-260

FA-261

FA-161

FA-271

FA-270

RI

FS

TS

MM

CM

IM

28 31 00 AUDIO HORN/CHIME ALARM DEVICE, CEILING

S = SLEEPING / PATIENT ROOM

28 31 00 AUDIO (SPEAKER) ALARM DEVICE, CEILING OR

28 31 00 COMBINATION AUDIO (VOICE) AND VISUAL

MONITOR SPRINKLER SYSTEM

MONITOR SPRINKLER SYSTEM

PIV = POST INDICATOR VALVE

BLANK = REFER TO PLANS

BLANK = REFER TO PLANS KB = KNOX BOX MONITOR

BLANK = REFER TO PLANS

LC = LIGHTING CONTROL

DH = DOOR HOLD OPEN

PD = HOLD OPEN OVERRIDE

(BY OTHERS, WIRED BY E.C.)

PD - HOLD OPEN OVERRIDE

DH - ELECTROMAGNETIC DOOR

BLANK = REFER TO PLANS

COMBINATION AUDIO HORN/CHIME AND

VISUAL ALARM DEVICE, CEILING OR WALL

CD = CANDELA RATING SELECTED BY NICET

ALARM DEVICE, CEILING OR WALL MOUNTED

CD = CANDELA RATING SELECTED BY NICET

CD = CANDELA RATING SELECTED BY NICET

	ELECTRICAL SYMBOL LIST								
SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:						
	ECONN	26 05 33	ELECTRICAL CONNECTION						
J	<u>JB</u>	26 05 33	JUNCTION BOX						
	<u>FB-#</u> or <u>PT-#</u>	26 27 26	FLOOR BOX or POKE THROUGH						
RI <b>V</b>	<u>RI-TECH</u>	26 05 33	TECHNOLOGY OUTLET ROUGH-IN						
<b>⊘</b> RI	RI-TECH-C 26 05 33 TECHNOLOGY ROUGH-IN, CEILING								
W/RI	RI-TECH-W	26 05 33	TECHNOLOGY ROUGH-IN, WALL PHONE						
TV	<u>RI-TV</u>	26 05 33	TV ANTENNA OUTLET ROUGH-IN						
•	<u>WW-#</u>	26 05 35	ELECTRICAL WIREWAY w/ DEVICES SHOWN						
	<u>EPO</u>	26 09 16 26 32 13	EMERGENCY STOP / POWER OFF (N.C. AND N.O CONTACT)						
ES	<u>ES</u>	26 09 16	EMERGENCY STOP, N.C. CONTACT						
PB	<u>PB</u>	26 09 16	MOMENTARY PUSHBUTTON OPERATOR						
	PANEL '###'	26 24 16	PANELBOARD - RECESS MOUNT						
	PANEL '###'	26 24 16	PANELBOARD - SURFACE MOUNT						
	MX-#/MS-# /CB-#/CS-# /MD-#/FS-# /AS-#/SS-#/ MCS-#/ AMS-#	26 24 19 26 28 16	SURFACE OR RECESS MOUNTED MANUAL SWITCH / STARTER / COMBINATION STARTER/ CIRCUIT BREAKER. MANUAL DISCONNECT / FUSED SWITCH (PLUG FUSE) / AUTOMATIC STARTER / SOLID STATE - SOFT STARTER / COMBINATION STARTER / MOTOR CIRCUIT PROTECTOR / ASSEMBLED MOTOR STARTER. REFER TO DISC/STA SCHEDULE.						
	FCS-#	26 28 16	FUSED COMBINATION STARTER REFER TO DISC/STA STARTER						
$\boxtimes$	TR-#/DTR-#	26 22 00	TRANSFORMER. REFER TO TRANSFORMER SCHEDULE						
	DS-#/FDS-#/DSS-#	26 28 16	DISCONNECT SWITCH FUSED DISCONNECT SWITCH INTERLOCKED RECEPTACLE DISCOMMENDED. REFER TO DISC/STA SCHEDULE						

25 , 24 , 23 , 22 , 21 , 20 , 19 , 18 , 17 , 16 , 15 , 14 , 13 , 12 , 11 , 10 , 9 ,

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
#	REC-DUP	26 27 26	DUPLEX RECEPTACLE, 125V
<b>₩</b>	REC-DUP-GFI	26 27 26	DUPLEX GFI RECEPTACLE, 125V
G	REC-DUP-GFI-R	26 27 26	GROUND FAULT DEVICE
<b>₩</b> W	REC-DUP-WP	26 27 26	DUPLEX GFI WEATHERPROOF RECEPTACLE 125
<b>⇒</b> ,,	REC-USB	26 27 26	DUPLEX RECEPTACLE, USB CHARGING
<b>₩</b> AF	REC-AFGF	26 27 26	REC AFCI, GFCI, TAMPER RESISTANT
<del>-0</del>	REC-SIM-520R	26 27 26	SIMPLEX RECEPTACLE, 125V
<del>-</del>	REC-SIM-530R	26 27 26	RECEPTACLE, 125V
-	REC-SIM-620R	26 27 26	RECEPTACLE, 6-20R, 250V
#	REC-SIM-630R	26 27 26	RECEPTACLE, 6-30R, 250V
€>	REC-TAMP	26 27 26	DUPLEX RECEPTACLE, TAMPER RESISTANT, 125
<b>₩</b> >	REC-TAMP-GFI	26 27 26	GFI DUPLEX RECEPTACLE, TAMPER RESISTANT, 125V
<b>=⊕</b> >	REC-TAMP-QUAD	26 27 26	QUAD RECEPTACLE, TAMPER RESISTANT, 125V
₩	REC-QUAD	26 27 26	QUAD RECEPTACLE, 125V
*	REC-QUAD-GFI	26 27 26	QUAD GFI RECEPTACLE, 125V
<b>-⇔</b> ∪	REC-QUAD-USB	26 27 26	QUAD RECEPTACLE, USB 125V
<b>₩</b> W	REC-QUAD-WP	26 27 26	QUAD GFI WEATHERPROOF RECEPTACLE, 125V

	ELECTRICAL SYMBOL LIST							
SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:					
S	SW-1P	26 09 33	SWITCH - SINGLE POLE					
$s_3$	<u>SW-3W</u>	26 09 33	SWITCH - THREE WAY					
<b>S</b> <sub>4</sub>	<u>SW-4W</u>	26 09 33	SWITCH - FOUR WAY					
$D_D$	SW-D-LED	26 09 33	DIMMER - LED					
D <sub>D3</sub>	SW-D3-LED	26 09 33	DIMMER - LED - 3-WAY					
Do	SW-OD	26 09 33	DIMMER - WALL DIMMER OCCUPANCY SENSOR - WATTSTOPPER DW-311					
(R) <sub>D#</sub>	<u>SW-R</u>	26 09 33	WATTSTOPPER DIGITAL LIGHTING MANAGEMENT ROOM CONTROLLER. # - REFERS TO NUMBER OF DELAYS D - REFERS TO 0-10V DIMMING CONTROLLEF					
PC	SW-LS-PC	26 09 33	PHOTOCELL					
© <sub>D</sub>	SW-OC-D	26 09 33	OCCUPANCY SENSOR - DUAL TECHNOLOGY					
\$ <sub>O</sub>	SW-OC-P-O	26 09 33	SWITCH - OCCUPANCY SENSOR WALL SWITCH - WATTSTOPPER DSW-301					
\$ <sub>O2</sub>	SW-OC-P-02	26 09 33	SWITCH - OCCUPANCY SENSOR AND DUAL SWITCH					
© <sub>P</sub>	SW-OC-P-P	26 09 33	OCCUPANCY SENSOR - PASSIVE INFRARED 360 DEGREE COVERAGE					
OO P2	SW-OC-P-P2	26 09 33	OCCUPANCY SENSOR - PASSIVE INFRARED 100 DEGREE COVERAGE					
SW	<u>sw</u>	26 09 33	WALL CONTROL STATION					
TC	<u>TC-#</u>	26 09 33	TIME SWITCH					
#B	SW-DCS	26 09 33	DIMMER CONTROL STATION # - INDICATES NUMBER OF ZONES CONTROLLED					
$s_LV$	SW-LV	26 09 33	CENTRAL CONTROL - STATION					
	LCS-#	26 09 33	LIGHTING CONTROL STATION					

	ELEC	TRICAL	SYMBOL LIST
SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
			LINEAR LUMINAIRES
			TROFFER
			WALL SCONCE LUMINAIRE
0			DOWNLIGHT LUMINAIRE
<b>(</b> 0			AIMABLE OR WALL WASH LUMINAIRE
•	REFER TO LI		INDUSTRIAL LUMINAIRE
Y	SCHED	ULE	WALL BRACKET LUMINAIRE
			SINGLE FACE EXIT SIGN
			DOUBLE FACE EXIT SIGN
			WALL/CEILING EMERGENCY EXIT SIGN
4			EMERGENCY UNIT

ELECTRICAL EQUIPMENT TAGS		
TAG:	DESCRIPTION:	RELATED SPECIFICATION
BAT-#	BATTERY RACK	26 32 13
<u>C-#</u>	GENERAL PURPOSE CONTACTOR	26 28 21
DP-#	DISTRIBUTION PANEL	26 24 16
<u>DR-#</u>	DIMMING RACK	26 09 33
DTR-#	TRANSFORMER - DISTRIBUTION TYPE REFER TO TRANSFORMER SCHEDULE	26 12 19 26 12 13 26 12 16 26 12 21
HH-#	HANDHOLE	26 05 33
HT-#	HEAT TAPE	26 05 17
INV-#	LIGHTING INVERTER	26 52 00
<u>MH-#</u>	MANHOLE	26 05 37
MTS-#	MANUAL TRANSFER SWITCH, REFER TO TRANSFER SWITCH SCHEDULE	26 36 00
<u>MX-#</u>	MANUAL SWITCH, REFER TO DISCONNECT AND STARTER SCHEDULE	26 24 19
<u>R-#</u>	RELAY	26 09 39
<u>SB-#</u>	SWITCHBOARD	26 24 13
<u>UPS-#</u>	UNINTERRUPTIBLE POWER SUPPLY	26 33 53
VFD-#	VARIABLE FREQUENCY DRIVE - REFER TO VFD SCHEDULE	26 29 23

ELECTRICAL ABBREVIATION KEY		
ABBR:	DESCRIPTION:	
AFF	ABOVE FINISHED FLOOR	
С	CONDUIT (BRANCH CIRCUIT OR FEEDER CONTEXT)	
GFI	GROUND FAULT INTERRUPTER	
NC	NORMALLY CLOSED	
NIC	NOT IN CONTRACTED SCOPE	
NO	NORMALLY OPEN	
TYP	TYPICAL	
UON	UNLESS OTHERWISE NOTED	

LUMINAIRE SYMBOL KEY		
SYMBOL:	DESCRIPTION:	
0	NORMAL BRANCH LUMINAIRE	
<b>1</b>	EMERGENCY LUMINAIRE UNSWITCHED FOR NIGHT LIGHT, UNLESS NOTED 'SE'	

### **ELECTRICAL GENERAL NOTES:**

- . {L###} INDICATES THE LIGHTING SEQUENCE OF OPERATION FOR THE SPACE. REFER TO THE LIGHTING SEQUENCE OF OPERATION MATRIX ON SHEET E600.
- 2. SHADED LUMINAIRE OR DEVICE INDICATES LUMINAIRE OR DEVICE IS CONNECTED TO AN EMERGENCY CIRCUIT. 3. { B#} PUSH BUTTON REFERS TO SCENE QUANTITY. CONTROL STATION SHALL BE CAPABLE OF IRAISE/LOWER AND SWITCHING ON/OFF FOR MULTIPLE SCENES AS INDICATED ON
- SHEETS AND THE LIGHTING SEQUENCE OF OPERATIONS {L##}. COORDINATE QUANTITIES OF BUTTONS FOR CONTROL STATIONS WITH LIGHTING CONTROL MANUFACTURER. REFER TO
- 4. { Z###} INDICATES THE LIGHTING ZONES FOR THE SPACE. PROVIDE SEPARATE CONTROL OF EACH CONTROLLED ZONE. LUMINAIRES ASSOCIATED WITH THE SAME ZONE SHALL OPERATE TOGETHER WITHIN THE SAME PROGRAMMED SCENE.
- 5. REFER TO SHEET E600 FOR LUMINAIRE SCHEDULE. LUMINAIRE KEY:

F1 = FIXTURE TAG 1 = CIRCUIT NUMBER LUMINAIRE a = SWITCH DESIGNATION

Z = ZONE DESIGNATION "NL" INDICATES LUMINAIRE IS UNSWITCHED FOR NIGHT LIGHT. "SE" INDICATES LUMINAIRE IS SWITCHED/CONTROLLED DURING NORMAL OPERATION AND OPERATES FROM EMERGENCY BATTERY (EXTEND UNSWITCHED CIRCUIT LEG TO BATTERY) UPON LOSS OF POWER.

\*IF LABEL IS ORIENTED HORIZONTALLY A SLASH WILL SEPARATE THIS INFORMATION. EX: F1/1/a/NL

DEVICE # = MOUNTING (IF APPLICABLE)
1 = CIRCUIT NUMBER

\*IF LABEL IS ORIENTED HORIZONTALLY A SLASH WILL SEPARATE THIS INFORMATION. EX: A / 1

- **ELECTRICAL MOUNTING SUBSCRIPT KEY:** MOUNT AT +6" TO CENTERLINE ABOVE COUNTER OR BACKSPLASH MOUNT AT CEILING (DEVICE OR ROUGH-IN CONTEXT)
- MOUNT ORIENTED HORIZONTALLY
- MOUNT IN CASEWORK MOUNT IN MODULAR FURNITURE MOUNT IN SURFACE RACEWAY
- WEATHERPROOF WIRING DEVICE, NEMA 3R WHILE-IN-USE COVER, WR LISTED EXISTING DEVICE TO BE REMOVED AND OUTLET BOX AND CONDUIT TO BE REUSED FOR NEW DEVICE

## **ELECTRICAL INSTALLATION NOTES:**

- 1. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE ADA STANDARDS FOR ACCESSIBLE DESIGN. REFER TO THE ADA GUIDELINES FOR ALL CONFIGURATION DETAILS ON THIS PAGE FOR ADDITIONAL INFORMATION. 2. CIRCUIT NUMBERS ARE SHOWN FOR CIRCUIT IDENTIFICATION. CIRCUITING SHALL AGREE
- WITH NUMBERING ON THE PANEL PROVIDED. COMMON NEUTRALS MAY NOT BE USED FOR BRANCH CIRCUITS. BALANCE THE LOAD ON PANEL AS EVENLY AS POSSIBLE BETWEEN EACH 3. EMERGENCY BRANCH WIRING FOR FEEDERS AND BRANCH CIRCUITS SHALL BE ROUTED IN SEPARATE RACEWAY, JUNCTION BOXES, PULL BOXES, AND CABINETS. WIRING FOR EACH BRANCH SHALL BE INDEPENDENT FROM OTHER BRANCHES. INCLUDING THE NORMAL
- 4. FLUSH MOUNT ALL LIGHTING CONTROL DEVICES AT +42" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED. DEVICES MAY BE SURFACE MOUNTED
- WHEN CONDUIT IS SPECIFIED EXPOSED 5. FLUSH MOUNT ALL DUPLEX RECEPTACLES AND TECHNOLOGY OUTLETS AT +18" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED. RECEPTACLES AND OUTLETS MAY BE SURFACE MOUNTED WHEN CONDUIT IS SPECIFIED EXPOSED. MOUNT EXTERIOR LOCATED RECEPTACLES WITH WHILE-IN-USE COVERS AT +20" FROM FINISHED GRADE (CENTER DIMENSIONS) TO MAINTAIN INSTALLATION ADA COMPLIANCE.
- ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS. REFER TO 27 05 03 AND 28 05 03 FOR ADDITIONAL INFORMATION AND REQUIREMENTS SPECIFIC TO FIRESTOPPING.
- 7. CONNECTION FOR ELECTRIC WATER COOLERS (EWC) SHALL BE A JUNCTION BOX CONCEALED BEHIND WATER COOLER ACCESS PLATE OR BE A GFI RECEPTACLE LOCATED DIRECTLY BELOW AND CENTERED ON EWC. CONTRACTOR SHALL VERIFY TYPE OF EWC TO BE INSTALLED.
- 8. MOUNT ALL FIRE ALARM PULL STATIONS AT +42" FROM FLOOR (CENTERLINE DIMENSION) EXCEPT WHERE OTHERWISE NOTED.
- 9. INSTALL ALL WALL MOUNTED FIRE ALARM NOTIFICATION DEVICES AT 90" ABOVE FINISHED FLOOR OR 6" BELOW THE CEILING, WHICHEVER IS LOWER, EXCEPT WHERE OTHERWISE
- NOTED. HEIGHT SHALL BE MEASURED TO THE TOP OF THE DEVICE. 10. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL CEILING MOUNTED DEVICES AND EQUIPMENT WITH LUMINAIRES, SPRINKLER, AND CEILING DIFFUSERS. CENTER ALL DEVICES IN CEILING TILE PATTERN. SMOKE DETECTORS, CARBON MONOXIDE DETECTORS, AND OCCUPANCY/VACANCY SENSORS SHALL BE LOCATED NO CLOSER THAN 3 FEET TO AN AIR
- SUPPLY DIFFUSER OR RETURN GRILLE. 11. CONTRACTOR SHALL VERIFY ALL FURNITURE, MODULAR FURNITURE, AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS, AND REVIEWED SHOP DRAWINGS. PRIOR TO MAKING THE ACTUAL ELECTRICAL INSTALLATION, THIS CONTRACTOR SHALL ADJUST RECEPTACLES, OUTLETS, OR CONNECTION LOCATIONS TO ACCOMMODATE
- FURNITURE AND/OR EQUIPMENT. 12. ELECTRICAL AND TECHNOLOGY EQUIPMENT SHALL BE MOUNTED TO AVOID IMPEDANCE OF, OPERATION OF, AND/OR ACCESS TO ELECTRICAL AND MECHANICAL EQUIPMENT. ALL MOUNTING OF ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT, ON EQUIPMENT SUPPLIED BY ANOTHER CONTRACTOR, SHALL BE APPROVED IN ADVANCE BY THE OTHER
- CONTRACTOR. 13. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE
- EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS. 14. ALL WELDING SHALL BE ACCORDING TO AMERICAN WELDING SOCIETY STANDARDS. CONTRACTOR SHALL FURNISH TO THE ARCHITECT/ENGINEER CERTIFICATES QUALIFYING EACH WELDER, PRIOR TO START OF WORK. THE ARCHITECT/ENGINEER RESERVES THE RIGHT TO REQUIRE QUALIFYING DEMONSTRATION, AT THE CONTRACTOR'S EXPENSE, OF ANY
- WELDERS ASSIGNED TO THE JOB. 15. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CUTTING, REMOVAL AND PATCHING OF ROOFS. WALLS. AND FLOORS ASSOCIATED WITH WORK BY ALL CONTRACTORS. CONTRACTORS SHALL NOTIFY THE GC OF AFFECTED AREAS WHOSE WORK CAUSES DAMAGE. GENERAL CONTRACTOR IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL
- CONSTRUCTION, FIRE RATING, AND FINISH 16. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER ELECTRICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING

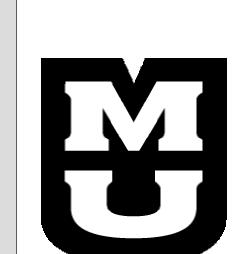
REQUIREMENTS FOR CONDUIT, BOX, CABLE/WIRE, AND EQUIPMENT.

FIELD CONDITIONS.

MOUNTED DEVICES, OTHER THAN SPRINKLERS. 17. ELECTRICAL IDENTIFICATION. REFER TO SPECIFICATION SECTION 26 05 53 FOR COLOR/LABEL

# **ELECTRICAL RENOVATION NOTES:**

- THESE NOTES APPLY TO ALL ELECTRICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED
- TO, LIGHTING, POWER, FIRE ALARM, AND OTHER LOW VOLTAGE SYSTEMS. 1. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS. CONTRACTOR SHALL REVIEW EXISTING
- CONDITIONS AND REPORT CONFLICTS. 2. NOT ALL EXISTING EQUIPMENT, LUMINAIRES, AND CONDUIT ARE SHOWN. CONTRACTOR
- SHALL REVIEW EXISTING CONDITIONS AND REPORT CONFLICTS. 3. FIELD VERIFY THE AVAILABLE CLEARANCES FOR CABLE TRAY, BUSWAY AND CONDUITS BEFORE FABRICATION. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING
- 4. EACH CONTRACTOR SHALL FIELD VERIFY ACCESSIBILITY TO THE AREA OF THEIR WORK AND SHALL NOTIFY THE GENERAL CONTRACTOR AND ARCHITECT/ENGINEER PRIOR TO BIDDING
- IF OTHER UTILITIES ARE REQUIRED TO BE REMOVED OR RELOCATED TO ALLOW ACCESS TO THEIR AREA OF WORK.
- 5. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CUTTING, REMOVAL AND PATCHING OF ROOFS, WALLS, AND FLOORS ASSOCIATED WITH WORK BY ALL CONTRACTORS. CONTRACTORS SHALL NOTIFY THE GC OF AFFECTED AREAS PRIOR TO BIDDING.
- 6. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS, CEILING TILES, AND CEILING GRIDS ASSOCIATED WITH AREAS OF WORK BY ALL CONTRACTORS. NOTIFY THE GENERAL CONTRACTOR OF AFFECTED AREAS PRIOR TO
- 7. WHERE EXISTING ELECTRICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, CONDUIT, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING ELECTRICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.



INTERNATIONAL ARCHITECTS ATELIER

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REF. SCALE IN INCHES

FOR THE CURATORS OF THE UNIVERSITY OF MISSOURI

**CHEMISTRY BUILDING - 1ST FLOOR** RENOVATION

# ISSUED FOR CONSTRUCTION

125 CHEMISTRY BUILDING 601 COLLEGE AVE COLUMBIA, MO 65211

DATE: PROJ. NO.:	09/26/202 CP24233
DESIGNED BY:	VPI
DRAWN BY:	VPI
CHECKED BY:	ZM
APPROVED BY:	PL

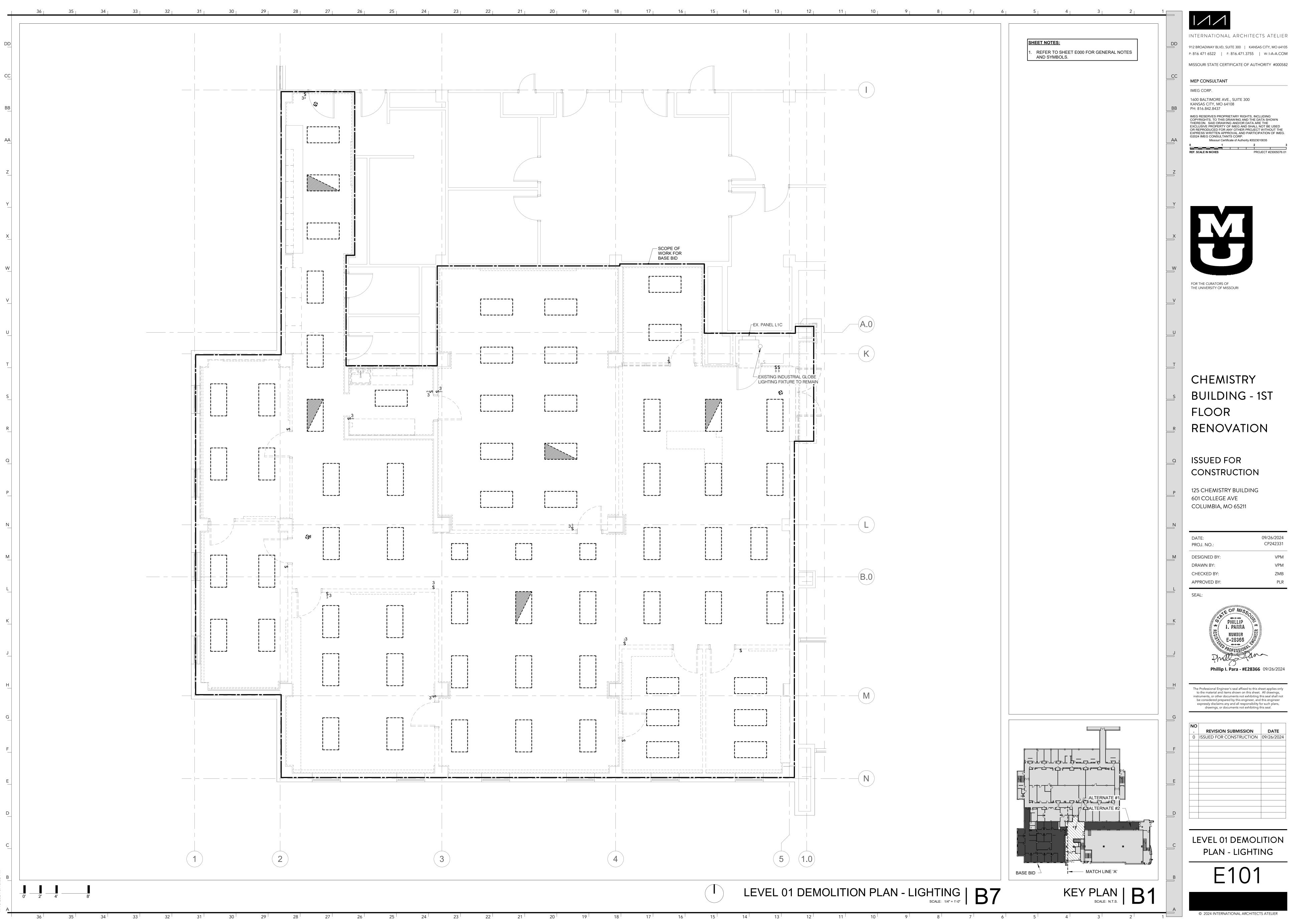


**Phillip I. Para - #E28366** 09/26/2024

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	0	ISSUED FOR CONSTRUCTION	09/26/2024

ELECTRICAL COVERSHEET



INTERNATIONAL ARCHITECTS ATELIER 912 BROADWAY BLVD, SUITE 300 | KANSAS CITY, MO 64105

1 2 3

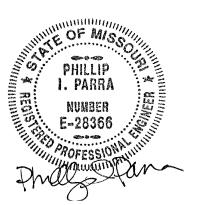
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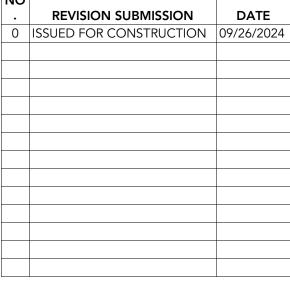
**BUILDING - 1ST** RENOVATION

CONSTRUCTION

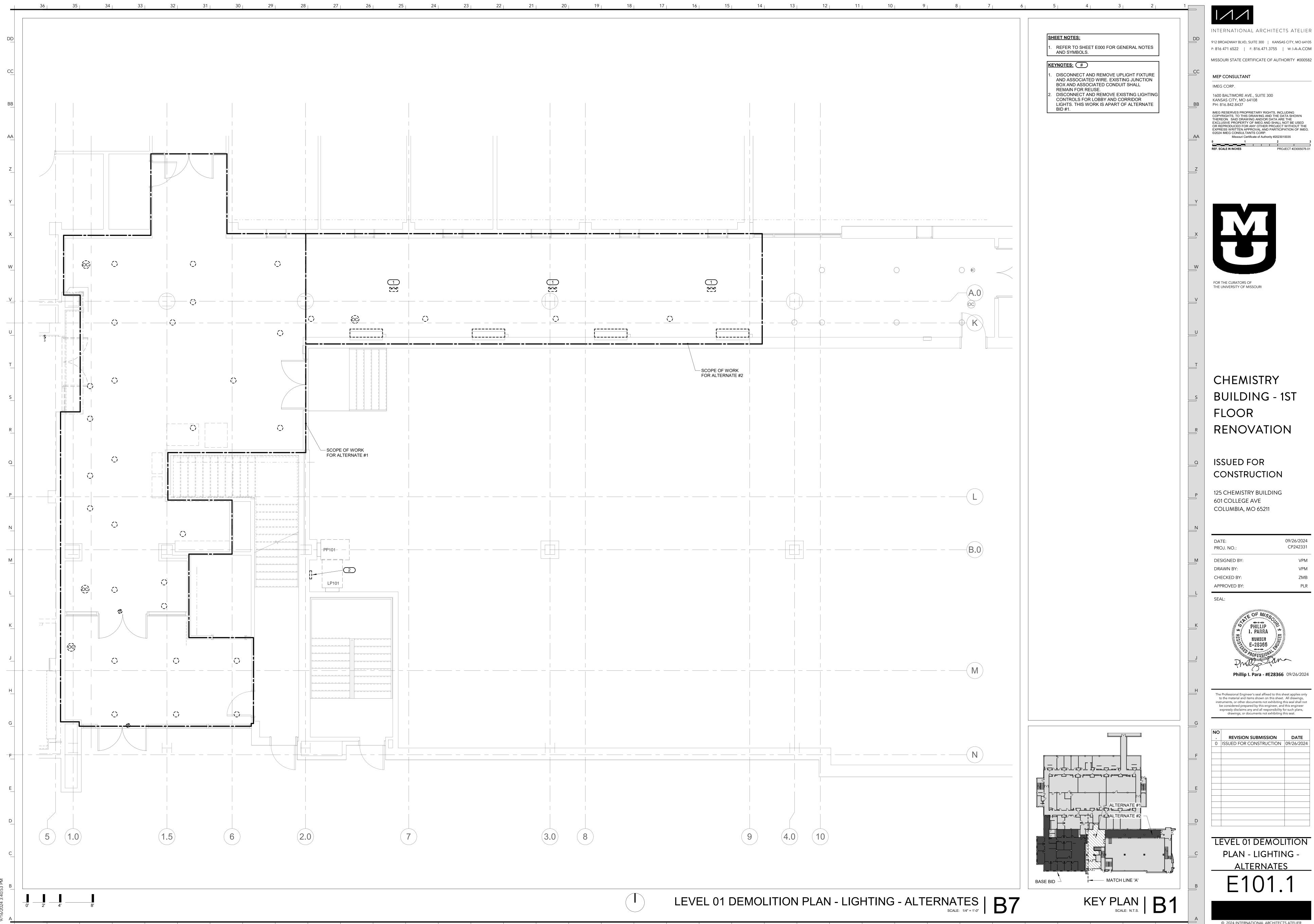
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VPM
VPM
ZMB
PLR



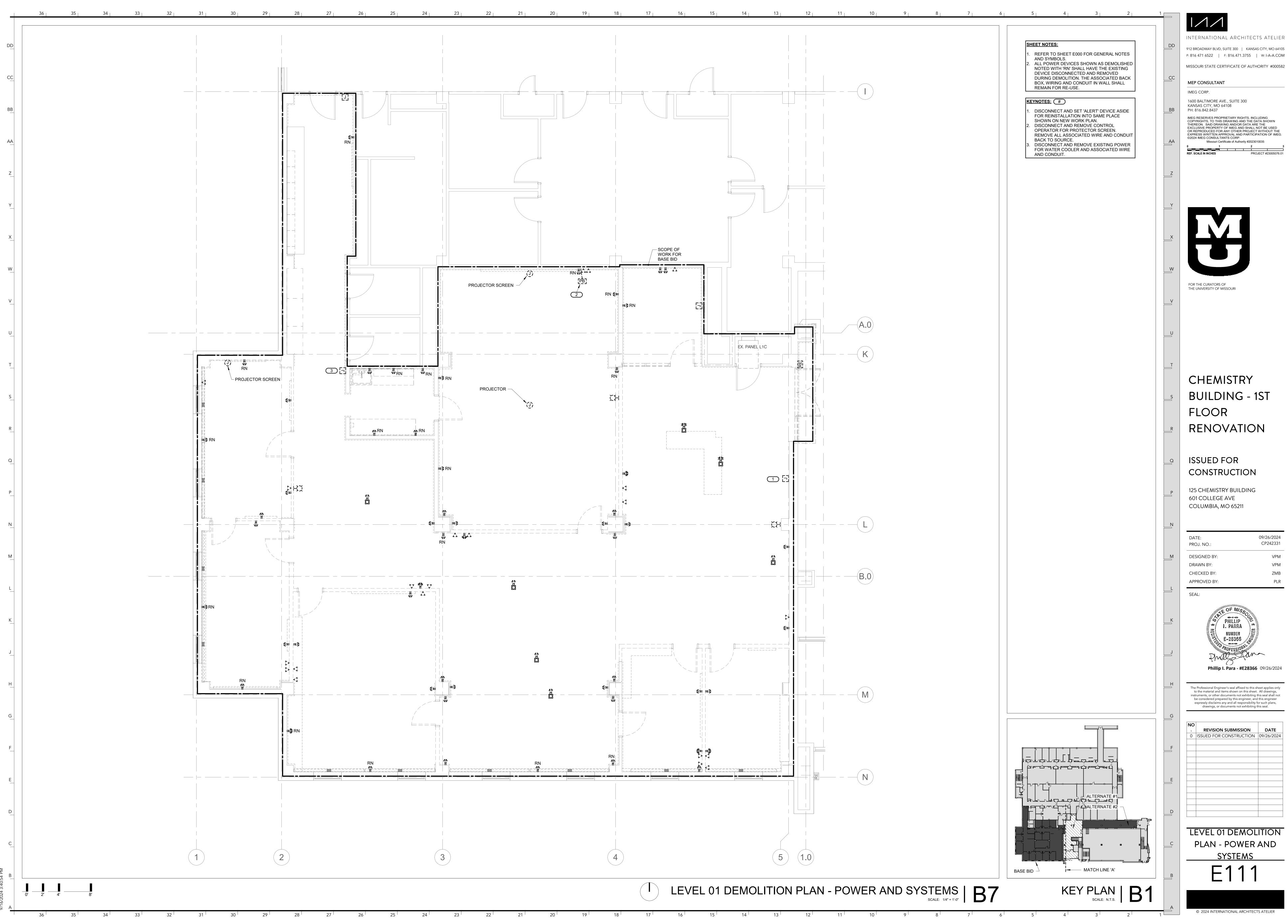
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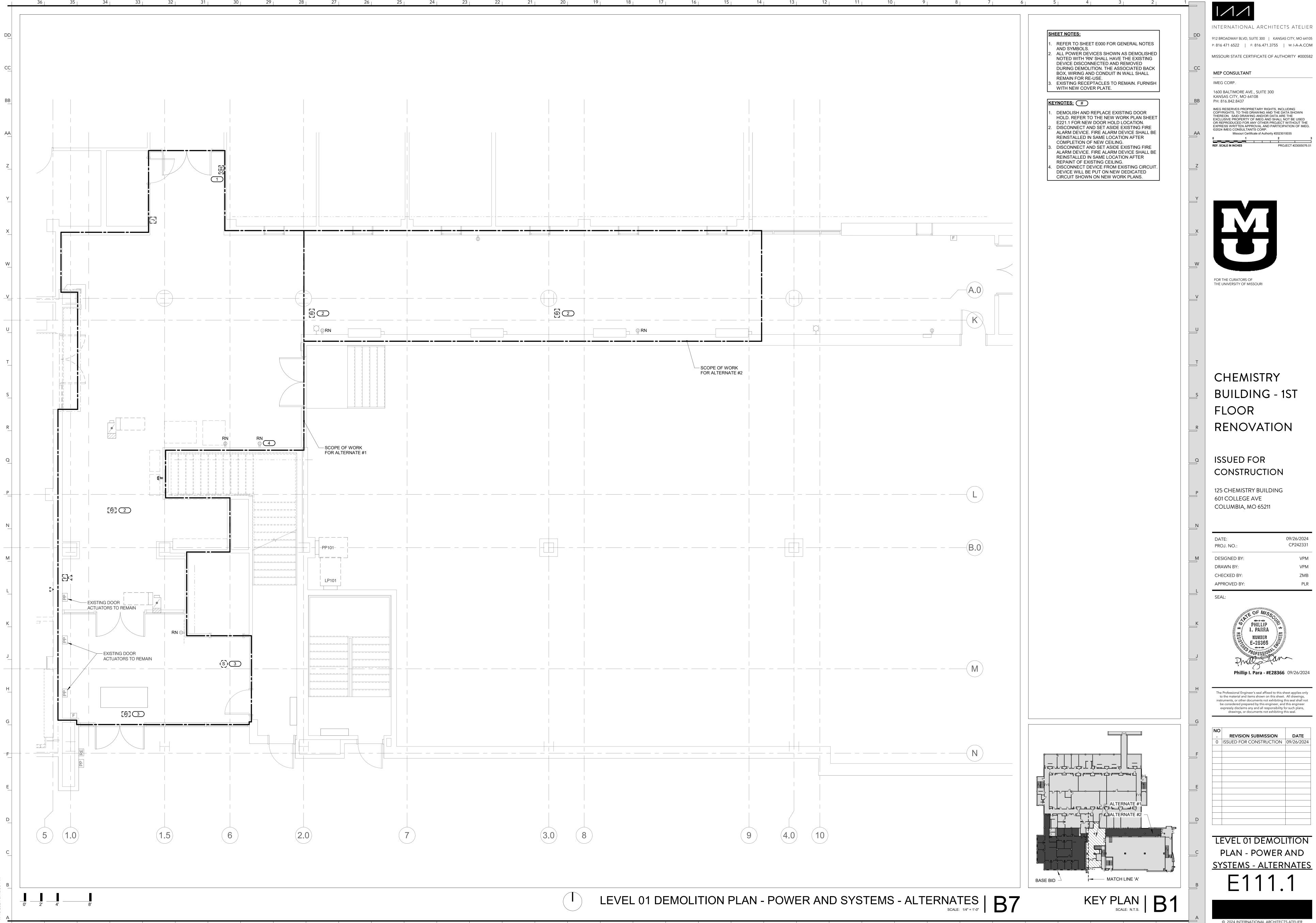
LEVEL 01 DEMOLITION PLAN - LIGHTING



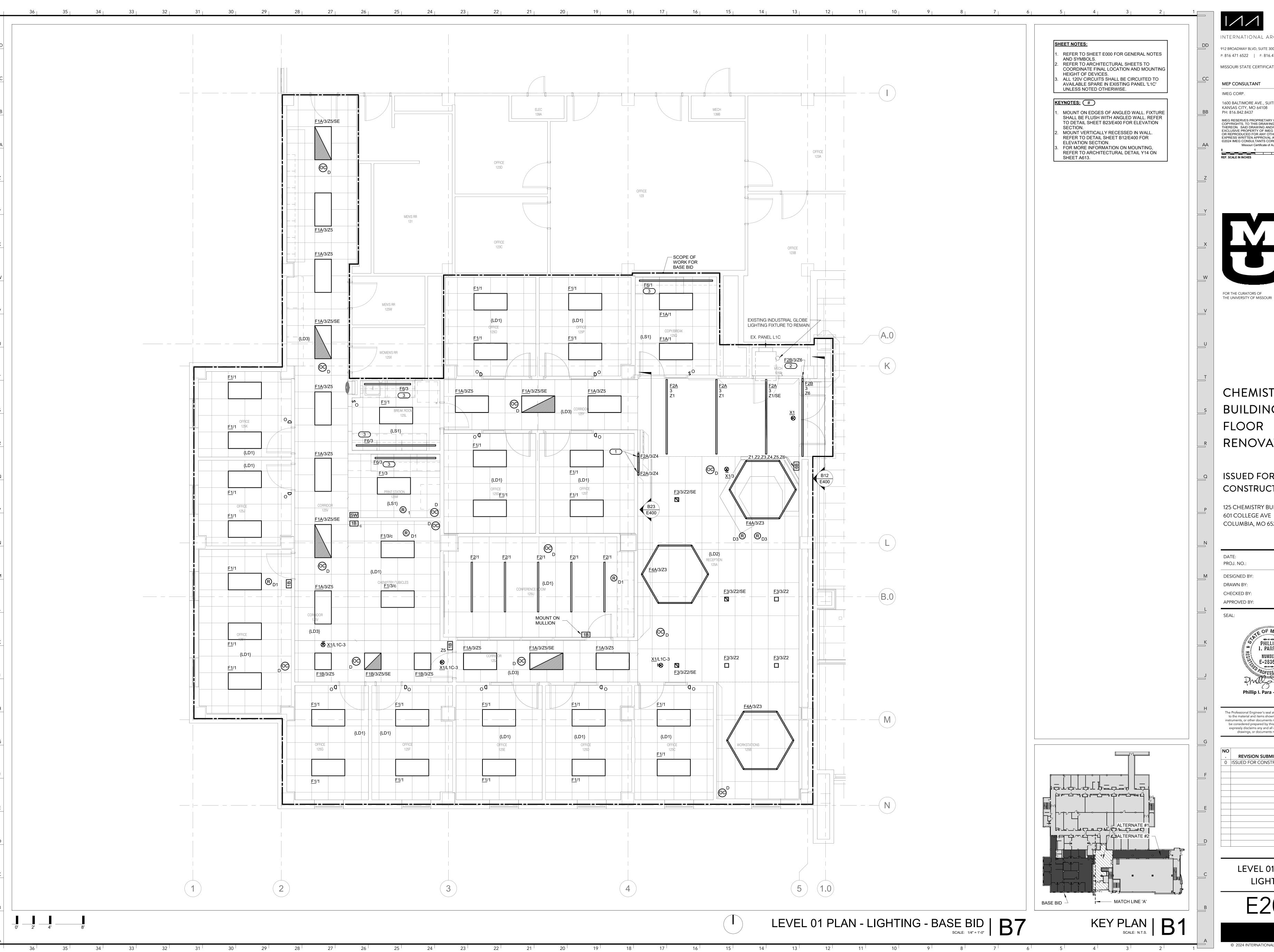
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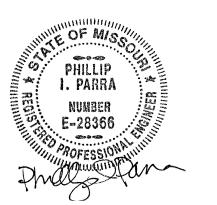


**CHEMISTRY** BUILDING - 1ST **FLOOR** RENOVATION

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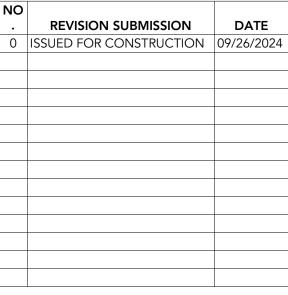
125 CHEMISTRY BUILDING 601 COLLEGE AVE COLUMBIA, MO 65211

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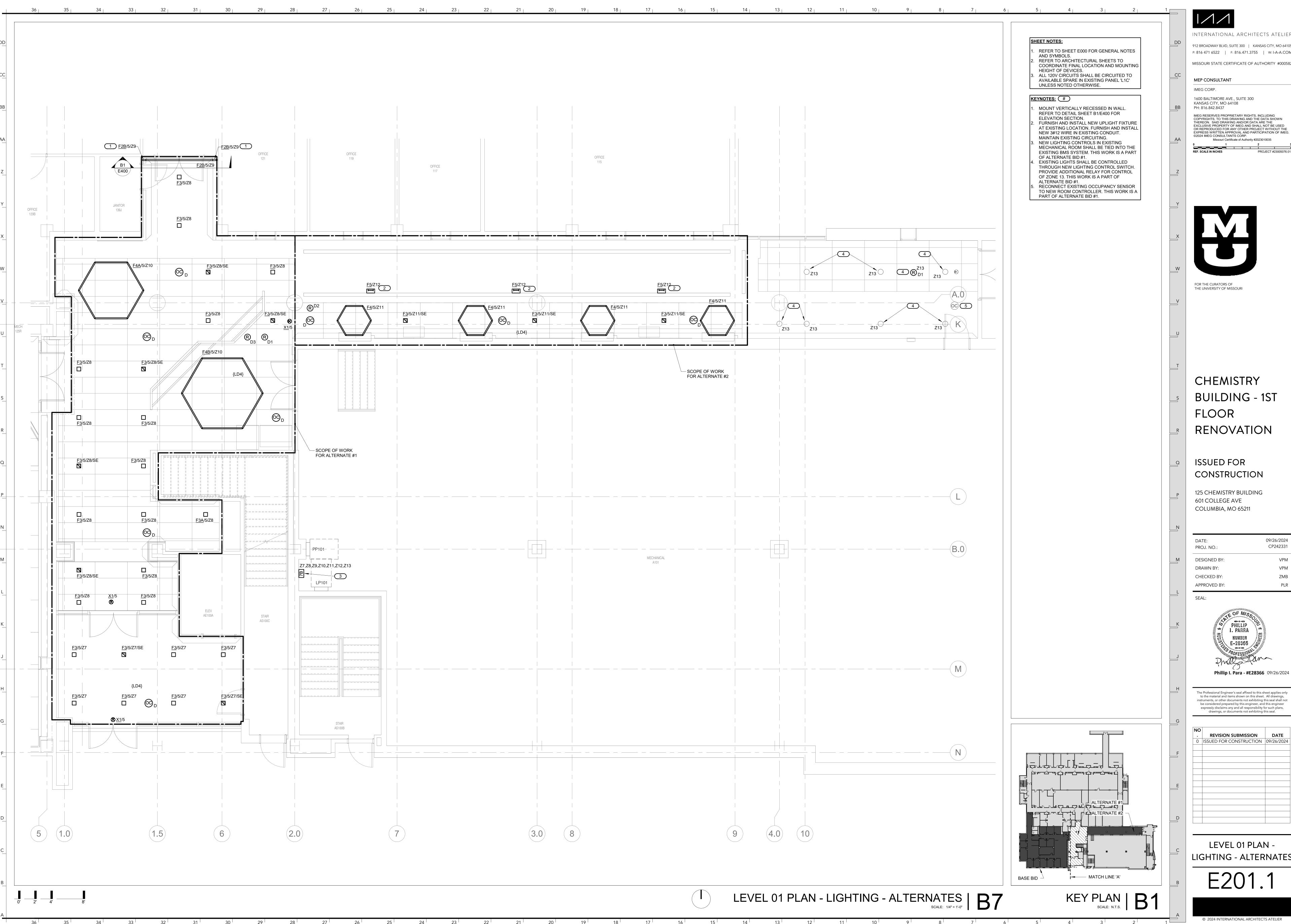
**Phillip I. Para - #E28366** 09/26/2024

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LEVEL 01 PLAN -LIGHTING

E201



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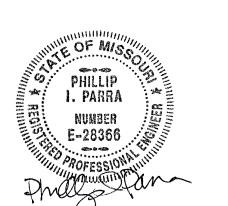
THE UNIVERSITY OF MISSOURI

**CHEMISTRY BUILDING - 1ST** RENOVATION

CONSTRUCTION

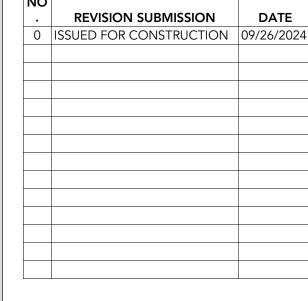
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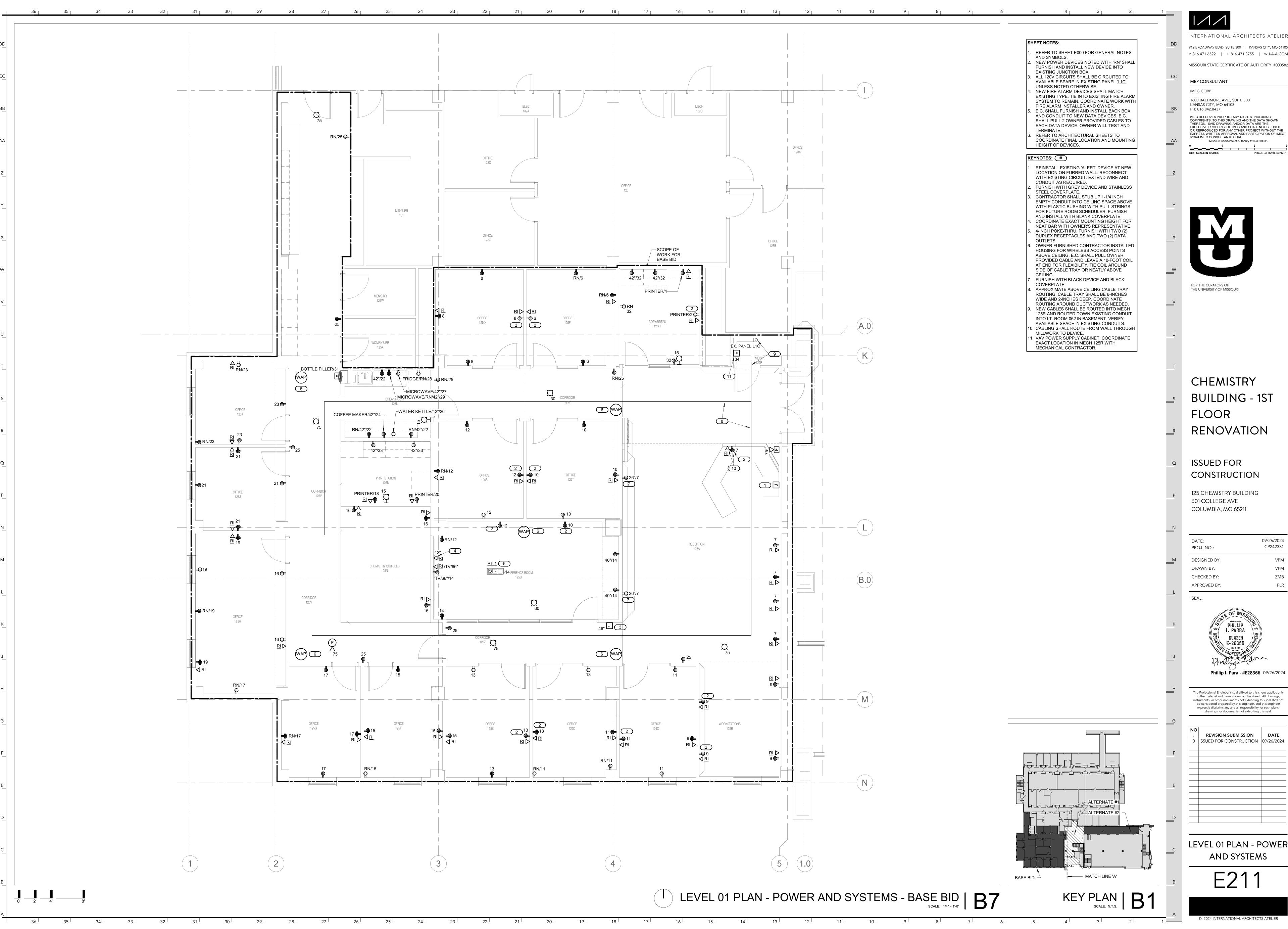
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LEVEL 01 PLAN -LIGHTING - ALTERNATES

E201.1





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**CHEMISTRY BUILDING - 1ST FLOOR** 

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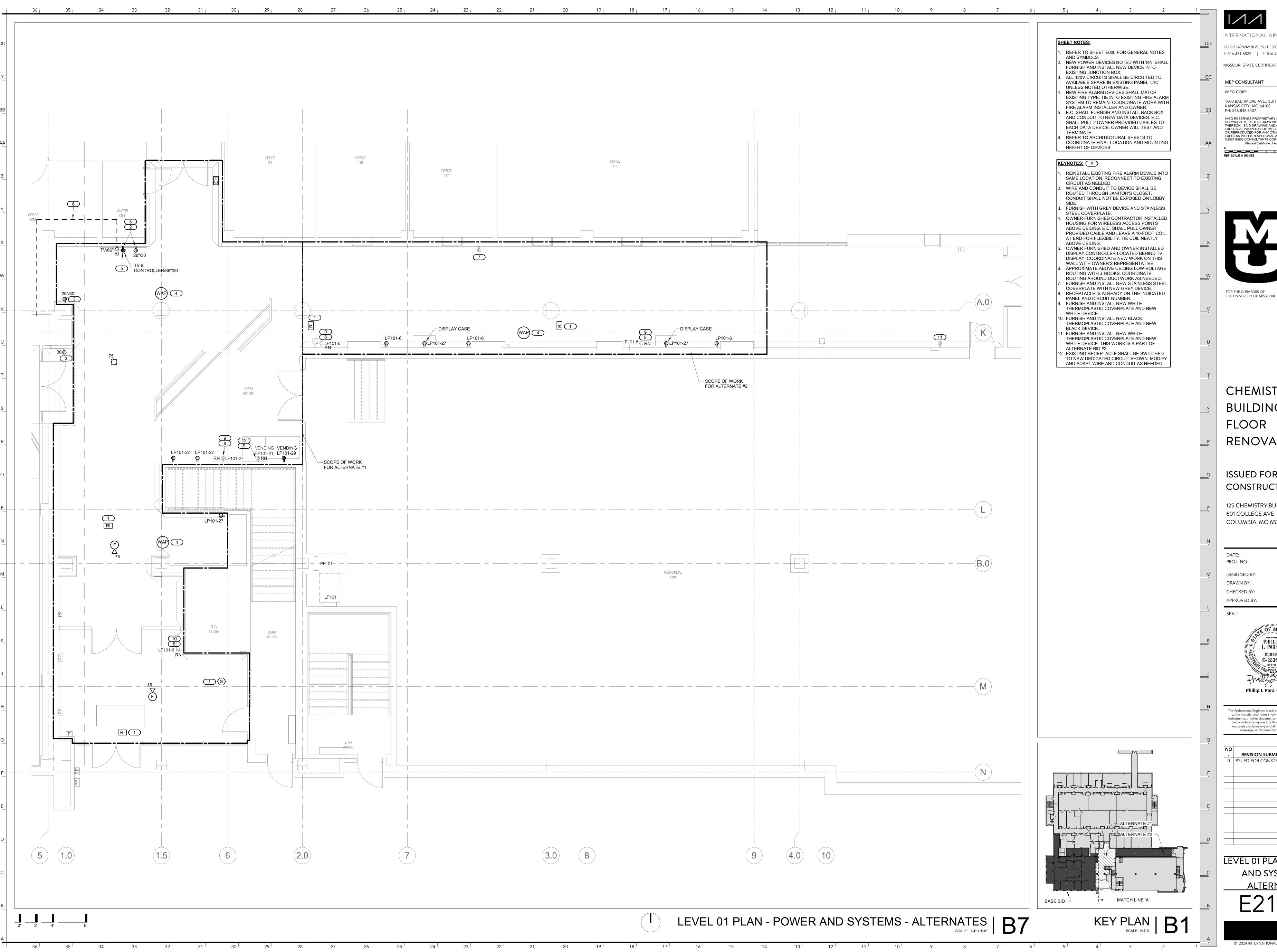


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NO		
	REVISION SUBMISSION	DATE
0	ISSUED FOR CONSTRUCTION	09/26/2024

LEVEL 01 PLAN - POWER AND SYSTEMS



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**CHEMISTRY BUILDING - 1ST FLOOR** RENOVATION

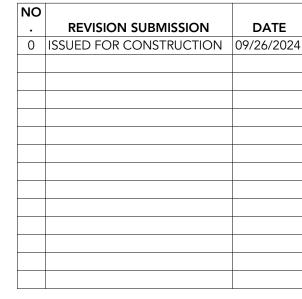
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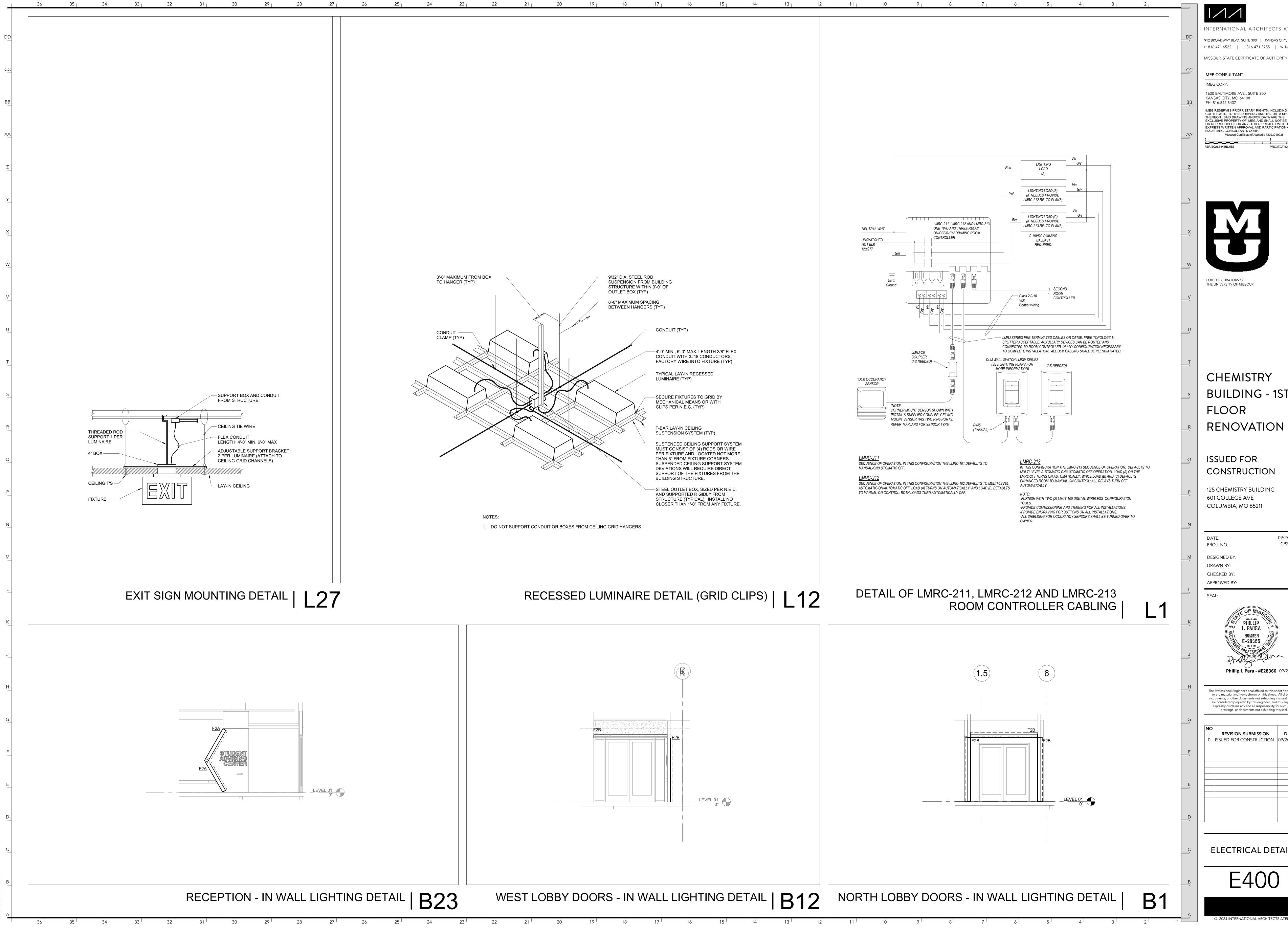


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LEVEL 01 PLAN - POWER AND SYSTEMS -ALTERNATES

E211.1



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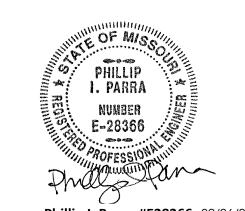


**CHEMISTRY** BUILDING - 1ST **FLOOR** 

**ISSUED FOR** CONSTRUCTION

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REVISION SUBMISSION 0 ISSUED FOR CONSTRUCTION 09/26/2024

**ELECTRICAL DETAILS** 

E400

**MOUNTING:** SURFACE **ENCLOSURE**: NEMA 1 FED FROM: 0 A/0P @ LOCATION: ELEC. 63

**EX. PANEL L1C** SINGLE TUB **SOLID NEUTRAL GROUND BUS** 

MAIN: 100 A MCB VOLTS: 120/208 Wye **PHASE**: 3 WIRE: 4 SCCR: 65 kA ISC UNKNOWN 0.00 kA

NOTES:

K E Y	CKT NO.	LOAD DESCRIPTION	OCPI AMPS	D P		WIRI SIZE N		,	4	ı	В	C	3	WIRE SIZE G N H		ZE		OCPD AMPS		
•	1	LTG: LEVEL 1 - CHEM. & ADVISING	20 A	1	8	8	8	1.33	1.5					12		12	1		PRINTER: COPY/BREAK 125Q	<b>NO</b> .
	3	LTG: LEVEL 1 CORRIDORS & LOBBY	20 A	1	10		10	1.00	1.0	1.38	1.5			12		12	1	-	PRINTER: COPY/BREAK 125Q	4
	5	LTG: LEVEL 1 - LOBBY AC100A	20 A	1	8	8	8			1.00		1.05	0.9	12		12	1		REC: OFFICE 125P & COPY 125Q	6
	7	REC: RECEPTION 125A	20 A	1	12	12		1.44	1.08				0.0	12		12	1		REC: OFFICES 1250 & 125P	8
	9	REC: WORK 125B & OFFICE 125C	20 A	1	12	12	-			1.44	1.26			12		12	1		REC: OFFICE 125T & CONF. 125U	10
	11	REC: OFFICES 125C & 125D	20 A	1	12	12	_					1.44	1.26		12	12	1	20 A	REC: OFFICE 125S & CONF. 125U	12
	13	REC: OFFICES 125D & 125E	20 A	1	12	12	12	1.26	1.08					12	12	12 12 1 20 A		20 A	REC: CONF. 125U	14
	15	REC: OFFICES 125E & 125F	20 A	1	10	10	10			1.44	1.26			12	12	12 12 1 20 A		20 A	REC: CHEM. CUBICLES 125N & OFFICE 125H	16
	17	REC: OFFICES 125G & 125H	20 A	1	10	10	10					1.26	1.5	12	12	12	1	20 A	PRINTER: PRINT 125M	18
	19	REC: OFFICE 125H	20 A	1	10	10	10	1.08	1.5					12	12	12	1	20 A	PRINTER: PRINT 125M	20
	21	REC: OFFICE 125J	20 A	1	12	12	12			1.08	0.54			12	12	12	1	20 A	REC: BREAK RM 125L	22
	23	REC: OFFICE 125K	20 A	1	12	12	12					0.9	1	12	12	12	1	20 A	COFFEE: BREAK RM 125L	24
	25	REC: CIRCULATION 125V, 125Y, 125Z	20 A	1	12	12	12	1.44	1					12	12	12	1	20 A	WATER KETTLE: BREAK RM 125L	26
	27	MICROWAVE: BREAK RM 125L	20 A	1	12	12	12			1	1			12	12	12	1	20 A	FRIDGE: BREAK RM 125L	28
	29	MICROWAVE: BREAK RM 125L	20 A	1	12	12	12					1	0.9	12	12	12	1	20 A	REC: LOBBY AC100A	30
	31	BOTTLE FILLER: CIRCULATION 125V	20 A	1	12	12	12	0.3	0.72					12	12	12	1	20 A	REC: COPY/BREAK 125Q	32
	33	REC: PRINT STATION 125M	20 A	1	12	12	12			0.36	0.5			12	12	12	1	20 A	VAV POWER SUPPLY: MECH 125R	34
	35	SPARE	20 A	1								0	0				1	20 A	SPARE	36
	37	SPARE	20 A	1				0	0								1	20 A	SPARE	38
	39	SPARE	20 A	1						0	0						2	30 A	SPARE	40
	41	SPARE	20 A	1								0	0				-			42
				Total Load:		13.73	3 kVA	12.70	6 kVA	11.21	kVA									
			Total Amps:		116	5.44	108	3.28	93.	42										

LOAD SUMMARY										
LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	TOTALS*						
Lighting	3.761 kVA	100.00%	3.761 kVA	TOTALS						
Power	0.8 kVA	100.00%	0.8 kVA	TOTAL CONNECTED LOAD:	37.70 kVA					
Receptacles	33.14 kVA	65.09%	21.57 kVA	TOTAL ESTIMATED DEMAND LOAD:	26.131 kVA					
				TOTAL CONNECTED AMPS:	104.65 A					
				TOTAL ESTIMATED DEMAND AMPS:	72.5 A					

\*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL. CIRCUIT KEY NOTES: A - REPLACE EXISTING CIRCUIT BREAKER WITH NEW GFCI RATED CIRCUIT BREAKER.

**EX. PANEL LP101** 

	MOUNTING: SURFACE ENCLOSURE: NEMA 1 FED FROM: LOCATION: MECHANICAL A101									SOL	NGLE ID NEI OUND	UTRAL					IS	P	MAIN: 125 A MLO /OLTS: 120/208 Wye PHASE: 3 WIRE: 4 SCCR: 65 kA (NOWN 0.00 kA	
	NOTES	S:																		
K E Y	CKT NO.	LOAD DESCRIPTION	OCP AMPS			WIR SIZI N			A	ı	В		С		WIR SIZI N	Ξ		OCPD AMPS	LOAD DESCRIPTION	CK
	1	EX. LOAD TO REMAIN	20 A	1	T			0	0								1	20 A	EX. LOAD TO REMAIN	2
	3	EX. LOAD TO REMAIN	20 A	1						0	0						1	20 A	EX. LOAD TO REMAIN	4
	5	EX. LOAD TO REMAIN	20 A	1								0	1.08	12	12	12	1	20 A	REC: LOBBY AC100A	6
	7	EX. LOAD TO REMAIN	20 A	1				0	0								1	20 A	EX. LOAD TO REMAIN	8
	9	EX. LOAD TO REMAIN	20 A	1						0	0						1	20 A	EX. LOAD TO REMAIN	10
	11	EX. LOAD TO REMAIN	20 A	1								0	0				1	20 A	EX. LOAD TO REMAIN	12
	13	EX. LOAD TO REMAIN	20 A	1				0	0								1	20 A	EX. LOAD TO REMAIN	14
	15	EX. LOAD TO REMAIN	20 A	1						0	0						1	20 A	EX. LOAD TO REMAIN	16
	17	EX. LOAD TO REMAIN	20 A	1								0	0				1	20 A	EX. LOAD TO REMAIN	18
	19	EX. LOAD TO REMAIN	20 A	1				0	0								3	60 A	EX. LOAD TO REMAIN	20
	21	REC: VENDING LOBBY AC100A	20 A	1	12	12	12			0.18	0									22
	23	SPARE	20 A	2								0	0							24
	25							0	0								1	20 A	EX. LOAD TO REMAIN	26
Α	27	REC: LOBBY AC100A	20 A	1	12					1.12	0						1	20 A	EX. LOAD TO REMAIN	28
Α	29	REC: VENDING LOBBY AC100A	20 A	1	12	12	12					1.2					1		SPACE	30
					Tot	al I	nad.	0.00	) k\/A	1 30	k\/Δ	2 28	k\/Δ							

LOAD SUMMARY											
LOAD CLASSIFICATION	CONNECTED LOAD	CONNECTED LOAD   DEMAND FACTOR   ESTIMATED DEMAND									
Receptacles	3.58 kVA	100.00%	3.58 kVA	TOTALS*							
				TOTAL CONNECTED LOAD:	3.58 kVA						
				TOTAL ESTIMATED DEMAND LOAD:	3.58 kVA						
				TOTAL CONNECTED AMPS:	9.94 A						
				TOTAL ESTIMATED DEMAND AMPS:	9.9 A						

CIRCUIT KEY NOTES: A - FURNISH AND INSTALL NEW CIRCUIT BREAKER OF SIMILAR TYPE TO EXISTING BREAKERS IN THIS PANEL.

\*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**Total Load:** 0.00 kVA 1.30 kVA 2.28 kVA **Total Amps:** 0.00 12.50 20.67

LED LUMINAIRE SCHEDULE

(DESC) DOOR: **DISTRIBUTION: BEAMWIDTH:** (L/L) LENS/LOUVER: K19 - KSH19 .156" ACRYLIC NSP - VERY NARROW SPOT FA - FLAT ALUMINUM II - ANSI/IES TYPE 2 DISTRIBUTION A - .125" ACRYLIC M - MATTE DIFFUSE CLEAR FS - FLAT STEEL III - ANSI/IES TYPE 3 DISTRIBUTION SP - SPOT B - BAFFLE/LOUVER N - NONE IV - ANSI/IES TYPE 4 DISTRIBUTION MD - MEDIUM C - CLEAR ALZAK P - POLYCARBONATE RA - REGRESSED ALUMINUM R - HIGH IMPACT DR ACRYLIC RS - REGRESSED STEEL V - ANSI/IES TYPE 5 DISTRIBUTION WD - WIDE F - FROSTED ACRYLIC SS - SEMI-SPECULAR CLEAR VWD - VERY WIDE G - TEMPERED GLASS PAF - PAINT AFTER FABRICATION WW - WALL WASH K - KSH12 .125" ACRYLIC O - OTHER (SEE DESCRIPTION) CFSA - COLOR-FINISH SELECTION BY ARCHITECT [DESIGN SPECIFIC BLANKS] (MTG) MOUNTING: RE - RECESSED FIX - FIXTURE, FT - FOOT, LAMP CL - CEILING SURFACE SP - SUSPENDED (TYPE) LED RGB - COLOR CHANGING LED RGBW - COLOR CHANGING + WHITE CV - COVE SU - SURFACE LED - LIGHT EMITTING DIODE UC - UNDER CABINET FR - FLANGED RECESSED TLED - TUBULAR LED LAMP RGBA - COLOR CHANGING + AMBER P - PERIMETER OLED - ORGANIC LED RLED - RETROFIT LED WL - WALL O - OTHER (SEE DESCRIPTION) DLED - DYNAMIC TUNABLE LED WLED - WARM DIM LED PL - POLE (TYPE) DRIVER: 0-10V - 0-10V DIMMING EB - ELECTRONIC HL - HIGH/LOW (100%/50%) STEP DIM MV - MULTI-VOLTAGE ELECTRONIC DALI - DIGITAL ADDRESSABLE LINE - LINE VOLTAGE DIMMING **REM - REMOTE** 

O - OTHER (SEE DESCRIPTION) EM - EMERGENCY BATTERY ML - MULTI-LEVEL SWITCHING DMX - DIGITAL MULTIPLEX CATALOG NUMBER SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND CATALOG NUMBER ONLY. THE COMPLETE DESCRIPTION AND THE SPECIFICATION SHALL BE COORDINATED WITH THE CATALOG NUMBER TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN.

CONFIRM ALL COLORS AND FINISHES OF ALL LUMINAIRE COMPONENTS WITH ARCHITECT AND INTERIOR DESIGNER PRIOR TO THE RELEASE OF THE LUMINAIRE ORDER. UNLESS INDICATED ON LIGHTING PLANS OR BELOW, REFER TO ARCHITECTURAL AND INTERIOR DESIGN ELEVATIONS, SECTIONS AND DETAILS FOR ALL SUSPENDED AND WALL MOUNTED LUMINAIRE MOUNTING

REFER TO SPECIFICATION SECTIONS LED LIGHTING 26 51 19 FOR ADDITIONAL INFORMATION AND REQUIREMENTS. INTERIOR CORRELATED COLOR TEMPERATURE 3500K, COLOR RENDERING INDEX (CRI) AT OR ABOVE 80, UNLESS NOTED OTHERWISE.

VERIFY AND COORDINATE ALL CEILING TYPES WITH LUMINAIRE MOUNTING AND TRIM REQUIREMENTS PRIOR TO THE RELEASE OF THE LUMINAIRE ORDER.

ELV - ELECTRONIC LOW VOLTAGE

					DIMEN	ISIONS		W	ATT		L	.ED	DRIVE	R	
ITEM	DESCRIPTION	L/L	MTG		w	н	DIA.	ANSI WATTS	PER	TYPE	QTY	DELIVERED LUMENS (MIN)	VOLTS	TYPE	MANUFACTURER AND MODEL
F1	2'x4' RECESSED DIRECT/INDIRECT TROFFER FOR LED SOURCE. DIFFUSE MATTE ACRYLIC CENTER SHIELDING. FIXTURE STEEL POST PAINTED BAKED WHITE ENAMEL.	0	RE	4'-0"	2'-0"	4 3/8"	DIA.	31 W	FIX	LED	1	3500	120 V		H.E. WILLIAMS AT3 SERIES
F1A	SAME AS TYPE F1 EXCEPT 2000 LUMENS.	0	RE	4'-0"	2'-0"	4 3/8"		18 W	FIX	LED	1	2000	120 V	0-10\/	H.E. WILLIAMS AT3 SERIES
F1B	SAME AS TYPE F1A EXCEPT 2'x2' FIXTURE.	0	RE	2'-0"	2'-0"	4 3/8"		18 W	FIX	LED	1	2000	120 V		H.E. WILLIAMS AT3 SERIES
F2	2" WIDE RECESSED LED LINEAR FIXTURE INSTALLED IN LAY-IN GRID WITH FLAT DIFFUSE ACRYLIC LENS, EXTRUDED ALUMINUM HOUSING. WHITE POLYESTER POWDER COAT FINISH. BATWING DISTRIBUTION. LENGTH AS SHOWN ON PLAN.	0	RE	6'-0"	2"	4 225/256"		12 W	FT	LED	1	375	120 V		FOCAL POINT SEEM 2
F2A	SAME AS TYPE F2 EXCEPT INSTALLED IN HARD CEILING AND/OR WALL.	0	RE	<varies></varies>	2"	4 225/256"		12 W	FT	LED	1	375	120 V		FOCAL POINT SEEM 2
F2B	SAME AS TYPE F2A EXCEPT FLUSH LENS AND 125 LUMENS PER FOOT OUTPUT.	0	RE	<varies></varies>	2"	4 225/256"		7 W	FT	LED	1	125	120 V	0-10V	FOCAL POINT SEEM 2
<del>-</del> 3	4" SQUARE RECESSED LED DOWNLIGHT WITH 60° WIDE DISTRIBUTION. FLUSH LENS WITH CLEAR SEMI-SPECULAR POWDER COAT FINISH.	0	RE	4 1/2"	4 1/2"	5"		17 W	FIX	LED	1	1500	120 V	0-10V	H.E. WILLIAMS 4DS
F3A	SAME AS TYPE F3 EXCEPT 2000 LUMENS.	0	RE	4 1/2"	4 1/2"	5"		25 W	FIX	LED	1	2000	120 V	0-10V	H.E. WILLIAMS 4DS
F4	2' LONG LINEAR HEXAGONAL DIRECT DISTRIBUTION LED LIGHTING FIXTURE WITH INTEGRAL DRIVER. FROSTED FLUSH LENS. WHITE FINISH. FURNISH WITH 48" ADJUSTABLE AIRCRAFT CABLE. FIXTURE SHALL BE SUSPENDED SO BOTTOM OF FIXTURE IS AT 8 FEET A.F.F. FURNISH WITH WHITE CANOPIES AND CORDS.	0	SP	2'-0"	1 5/8"	1 1/2"		2 W	FT	LED	1	300	120 V	0-10V	NULITE REGOLO 1 RP11-D
F4A	SAME AS TYPE F4 EXCEPT EACH SIDE IS 4' LONG.	0	SP	4'-0"	1 5/8"	1 1/2"		2 W	FT	LED	1	300	120 V	0-10V	NULITE REGOLO 1 RP11-D
F4B	SAME AS TYPE F4 EXCEPT EACH SIDE IS 5' LONG.	0	SP	5'-0"	1 5/8"	1 1/2"		2 W	FT	LED	1	300	120 V	0-10V	NULITE REGOLO 1 RP11-D
<del>-</del> 5	WALL WASHER LED UPLIGHT WITH WHITE FINISH. MOUNT AT LOCATION OF EXISTING FIXTURE.	0	WL	10 1/4"	6 1/8"	3"		34 W	FIX	LED	1	3630	120 V	0-10V	BEGA 50199
6	UNDER CABINET UNIT WITH SOLID FRONT AND PRISMATIC LENS. ALUMINUM CHANNEL MOUNTED INSIDE OF SHELF TO ALIGN BOTTOM OF FIXTURE WITH BOTTOM OF SHELF. REFER TO PLANS FOR VARYING LENGTHS.	0	UC	<varies></varies>	2"	1"		1 W	FT	LED	1	LUMENS/FT	120 V	0-10V	KELVIX UNIFORM STATIC WHITE TAPE LIGHT IN KELVIX CH-014-0 CHANNEL
(1	SINGE-FACE OR DOUBLE-FACE EDGE LIT ACRYLIC LED EXIT SIGN. RED LETTERING. FURNISH WITH NECESSARY MOUNTING HARDWARE FOR CEILING AND CONFIGURE FACES AND ARROWS AS SHOWN ON PLANS. FURNISH WITH SELF BATTERY BACKUP WITH	0	CL	1'-1"	2"	9"		3 W	FIX	LED	1	L.E.D.	120 V	EM	LITHONIA EDGR

# NOTES:

SELF-DIAGNOSTICS.

1. LIGHT FIXTURES ARE SHOWN AS HALF-SHADED, INDICATED WITH 'NL', OR 'SE' AND EXIT SIGNS SHALL HAVE AN INTEGRAL EMERGENCY BATTERY PACK. PROVIDE A BATTERY INVERTERS NEEDED.

	ING SEQUENCE OF OPERATION
2. [#B] PUSH SWITCHING COORDINAT 3. [Z#] DENO ASSOCIATEI 4. a = SWITC 5. VERIFY AN 6. VERIFY AN ZONES PER 7. VERIFY AN	OTES THE LIGHTING SEQUENCE OF OPERATIONS FOR THIS SPACE. BUTTON REFERS TO SCENE QUANTITY. CONTROL STATION SHALL BE CAPABLE OF [RAISE/LOWER AND] ON/OFF FOR MULTIPLE SCENES AS INDICATED ON SHEETS AND THE LIGHTING SEQUENCE OF OPERATIONS {L##] E QUANTITIES OF BUTTONS FOR CONTROL STATIONS WITH LIGHTING CONTROL MANUFACTURER. TES LIGHTING CONTROL ZONE. PROVIDE SEPARATE CONTROL OF EACH CONTROLLED ZONE. LUMINAIRES O WITH THE SAME ZONE SHALL OPERATE TOGETHER WITHIN THE SAME PROGRAMMED SCENE. H DESIGNATION FOR LIGHTING CONTROL ID COORDINATE ALL TIME CLOCK SETTINGS WITH OWNER PRIOR TO FINAL PROGRAMMING. ID COORDINATE ALL PUSH BUTTON WALL DEVICES AND QUANTITIES OF INDIVIDUAL BUTTONS WITH SCENES AND LOCATION. ID COORDINATE ALL PUSH BUTTON QUANTITIES AND SCENE NAMES WITH OWNER PRIOR TO SUBMITTING TEMPLATE TO MANUFACTURER.
PLAN ID	LIGHTING SWITCHED
{LD1}	Sequence: Dimmed and switched emergency lights (where applicable) are controlled in this space. ON: The lights turn on via wall control station. ADJUST: The lights are raised / lowered via wall control station. OFF: The lights turn off via wall control station, or via occupancy sensor after the space has been vacant for 20 minutes. Upon loss of normal power, all emergency luminaires shall turn ON via integral batteries.
{LD2}	Sequence: Multiple zones of switched lights are controlled in this space.  ON: All light zones in this space shall turn on manually via 1 button on the wall control station.  ADJUST: Each lighting zone shall be raised/lowered separately using a wall switch.  OFF: All light zones in this space shall turn off together manually using 1 button on the wall control station, or automatically after all zones have been vacant for 20 minutes.
{LD3}	Sequence: Switched lights are controlled in this space. ON: The lights shall turn on automatically no greater than 50% illumination or 100% via wall switch. OFF: The lights shall reduce output to 50% when unoccupied for 20 minutes and they shall turn off competely, via occupance sensor, once the space has been unoccupied for 30 minutes or turn off manually via wall switch.
{LD4}	Sequence: Switched lights are controlled in this space. The wall station is located in Mechanical A101.  ON: The lights shall turn on automatically to 100% via occupancy sensor.  ADJUST: Each lighting zone shall be raised/lowered separately using a wall switch.  OFF: The lights shall reduce output to 50% when unoccupied for 20 minutes and they shall turn off competely, via occupance sensor, once the space has been unoccupied for 30 minutes or turn off manually via wall switch.

OFF: The lights turn off manually using a wall control station, or automatically after the space has been vacant for 20 minutes.

Sequence: Switched lights are controlled in this space. ON: The lights turned on using wall control station.

INTERNATIONAL ARCHITECTS ATELIER

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MISSOURI STATE CERTIFICATE OF AUTHORITY #000582

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0 1 2 3 REF. SCALE IN INCHES

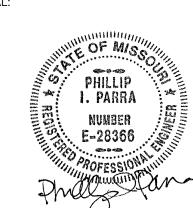


**CHEMISTRY** BUILDING - 1ST **FLOOR** RENOVATION

**ISSUED FOR** CONSTRUCTION

125 CHEMISTRY BUILDING 601 COLLEGE AVE COLUMBIA, MO 65211

DATE: PROJ. NO.:	09/26/2024 CP242331
DESIGNED BY:	VPM
DRAWN BY:	VPM
CHECKED BY:	ZMB
APPROVED BY:	PLR



**Phillip I. Para - #E28366** 09/26/2024

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NO		
	REVISION SUBMISSION	DATE
0	ISSUED FOR CONSTRUCTION	09/26/202
		1

ELECTRICAL SCHEDULES