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A. THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC DESIGN INTENT FOR THE GENERAL SYSTEM. DISTRIBUTION AND ARRANGEMENTS ARE NOT INTENDED TO DEPICT DETAILED INSTALLATION REQUIREMENTS OR DETAILED FIT AND PLACEMENT OF COMPONENTS. REFER TO CALLOUTS, DETAILS, AND SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION, AND COORDINATION DRAWINGS THAT INCLUDED THE REQUIREMENTS OF THE WORK OF ALL TRADES. REFER ALSO TO THE GENERAL CONDITIONS OF THE PROJECT SPECIFICATIONS.

B. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE BUILDING OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE BUILDING OPERATION.

C. EXACT SIZES AND LOCATIONS OF ALL OPENINGS IN STRUCTURE TO BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, AND ELECTRICAL DRAWINGS, AND WITH THE STRUCTURAL CONTRACTOR.

D. VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING SERVICES IN FIELD.

E. MAINTAIN ACCEPTABLE CLEARANCE FOR SERVICE AND ACCESS OF MECHANICAL EQUIPMENT AS PER ANY APPLICABLE CODES AND/OR MANUFACTURER RECOMMENDATIONS.

F. MAINTAIN CODE-REQUIRED MINIMUM CLEARANCES ABOVE AND IN FRONT OF ALL ELECTRICAL PANELS, INCLUDING THOSE INCLUDED AS A PART OF MECHANICAL EQUIPMENT.

G. COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT, PIPING, AND DEVICES WITH ALL OWNER-PROVIDED EQUIPMENT, PIPING, AND DEVICES. MAINTAIN REQUIRED CLEARANCE FOR ACCESS AND INSTALLATION OF ALL OWNER-PROVIDED EQUIPMENT, PIPING, AND DEVICES.

H. INTERNALLY LINE WITH 1.5" ACOUSTICAL INSULATION ALL RECTANGULAR SUPPLY DUCTWORK DOWNSTREAM OF TERMINAL UNITS. PROVIDE MINIMUM LENGTHS OF DOWNSTREAM DUCTWORK BEFORE OUTLETS AS NOTED ON THE DETAILS ON M6 SERIES DRAWINGS. ACOUSTICALLY LINED DUCT DIMENSIONS NOTED ARE INSIDE CLEAR DIMENSIONS.

I. TERMINAL UNIT DUCT CONNECTION TO MATCH MANUFACTURER OUTLET SIZE UNLESS OTHERWISE NOTED ON PLAN.

J. REFER TO STRUCTURAL DRAWINGS AND DETAILS FOR EXISTING STRUCTURE ANCHORING, ATTACHMENT, AND MAXIMUM LOADING REQUIREMENTS.
A. ARRANGEMENTS ARE NOT INTENDED TO DEPICT DETAILED AND SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING AND COORDINATION DRAWINGS THAT INCLUDED THE MATCH LINE SHEET M2.0.C THE BUILDING OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE BUILDING OPERATION.

B. VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING SERVICES IN FIELD.

C. EXACT SIZES AND LOCATIONS OF ALL OPENINGS IN STRUCTURE TO BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, AND ELECTRICAL DRAWINGS, AND WITH THE STRUCTURAL FACILITY.

D. MAINTAIN ACCEPTABLE CLEARANCE FOR SERVICE AND ACCESS OF MECHANICAL EQUIPMENT AS PER ANY APPLICABLE CODES AND/OR MANUFACTURER RECOMMENDATIONS.

E. ACCESSORY STORAGE

F. REFER TO STRUCTURAL DRAWINGS AND DETAILS FOR EXISTING STRUCTURE ANCHORING, ATTACHMENT, AND MAXIMUM LOAD REQUIREMENTS.

G. PROVIDE MINIMUM LENGTHS OF DOWNSTREAM OUTLET SIZE UNLESS OTHERWISE NOTED ON PLAN.

H. INSTALLATION REQUIREMENTS OR DETAILED FIT AND DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION, THE GENERAL CONDITIONS OF THE PROJECT SPECIFICATIONS. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE BUILDING OWNER.

I. TERMINAL UNIT DUCT CONNECTION TO MATCH MANUFACTURER TERMINAL UNIT DUCT CONNECTION TO MATCH MANUFACTURER BLACK. M221 ROUND SUPPLY DUCT SHALL BE ROUTED HIGH IN PANT JOIST POCKET AND ... BALANCE AIRFLOW TO CFM INDICATED ON PLAN. BIDS 1 28APR22ADDENDUM NO.1 2 12MAY22PLAN REVIEW 3 13MAY22BULLETIN 05 4 02DEC22
GENERAL SHEET NOTES

REQUIRED MINIMUM CLEARANCES ABOVE AND PROVIDED

THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC PLACEMENT OF COMPONENTS. REFER TO CALLOUTS, DETAILS, THE BUILDING OWNER'S REPRESENTATIVE SO AS NOT TO VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING AND/OR MANUFACTURER RECOMMENDATIONS.

ACCESS AND INSTALLATION OF ALL OWNER TERMINAL UNIT DUCT CONNECTION TO MATCH MANUFACTURER REQUIREMENTS.

DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION, REQUIREMENTS OF THE WORK OF ALL TRADES. REFER ALSO TO ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY TO BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, AND MAINTAIN ACCEPTABLE CLEARANCE FOR SERVICE AND ACCESS.

COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT, DUCTWORK BEFORE OUTLETS AS NOTED ON THE DETAILS ON REFER TO STRUCTURAL DRAWINGS AND DETAILS FOR EXISTING STRUCTURE ANCHORING, ATTACHMENT, AND MAXIMUM LOADING.

DUCT DIMENSIONS NOTED ARE INSIDE CLEAR DIMENSIONS.

INSTALLATION REQUIREMENTS OR DETAILED FIT AND CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING INTERFERE WITH THE BUILDING OPERATION.

REFER TO CIVIL ARRANGEMENTS ARE NOT INTENDED TO DEPICT DETAILED PLACEMENT OF COMPONENTS. REFER TO CALLOUTS, DETAILS, CONTRACTOR.

THE DESIGN INTENT FOR THE GENERAL SYSTEM. DISTRIBUTION AND EXACT SIZES AND LOCATIONS OF ALL OPENINGS IN STRUCTURE ELECTRICAL DRAWINGS, AND WITH THE STRUCTURAL INCLUDED AS A PART OF MECHANICAL EQUIPMENT.

REFER TO SERIES DRAWINGS. ACoustically lined Duct Dimensions.
GENERAL SHEET NOTES

A. TO BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, AND ELECTRICAL DRAWINGS, AND WITH THE STRUCTURAL UNITS. PROVIDE MINIMUM LENGTHS OF DOWNSTREAM M211 SG 30"x8"

B. PROVIDING MINIMUM LENGTHS OF UPSTREAM M211 SG 30"x8"

C. PROVIDE MINIMUM LENGTHS OF DOWNSTREAM M211 SG 30"x8"

D. PROVIDE MINIMUM LENGTHS OF UPSTREAM M211 SG 30"x8"

E. PROVIDE MINIMUM LENGTHS OF DOWNSTREAM M211 SG 30"x8"

F. PROVIDE MINIMUM LENGTHS OF UPSTREAM M211 SG 30"x8"

G. PROVIDE MINIMUM LENGTHS OF DOWNSTREAM M211 SG 30"x8"

H. PROVIDE MINIMUM LENGTHS OF UPSTREAM M211 SG 30"x8"

I. PROVIDE MINIMUM LENGTHS OF DOWNSTREAM M211 SG 30"x8"

J. PROVIDE MINIMUM LENGTHS OF UPSTREAM M211 SG 30"x8"

K. PROVIDE MINIMUM LENGTHS OF DOWNSTREAM M211 SG 30"x8"

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U. PROVIDE MINIMUM LENGTHS OF DOWNSTREAM M211 SG 30"x8"

V. PROVIDE MINIMUM LENGTHS OF UPSTREAM M211 SG 30"x8"

W. PROVIDE MINIMUM LENGTHS OF DOWNSTREAM M211 SG 30"x8"

X. PROVIDE MINIMUM LENGTHS OF UPSTREAM M211 SG 30"x8"

Y. PROVIDE MINIMUM LENGTHS OF DOWNSTREAM M211 SG 30"x8"

Z. PROVIDE MINIMUM LENGTHS OF UPSTREAM M211 SG 30"x8"
DESIGN INTENT FOR THE GENERAL SYSTEM. DISTRIBUTION AND PLACEMENT OF COMPONENTS. REFER TO CALLOUTS, DETAILS, B.

THE BUILDING OWNER'S REPRESENTATIVE SO AS NOT TO

SERVICES IN FIELD. MAINTAIN CODE

PIPING, AND DEVICES WITH ALL OWNER PROVIDED EQUIPMENT, PIPING, AND DEVICES.

RECTANGULAR SUPPLY DUCTWORK DOWNSTREAM OF TERMINAL SERIES DRAWINGS. ACOUSTICALLY LINED DUCT DIMENSIONS OUTLET SIZE UNLESS OTHERWISE NOTED ON PLAN. REFER TO STRUCTURAL DRAWINGS AND DETAILS FOR EXISTING

INSTALLATION REQUIREMENTS OR DETAILED FIT AND SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS. THE INTERFERE WITH THE BUILDING OPERATION.

INCLUDED AS A PART OF MECHANICAL EQUIPMENT. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY

THE CONSTRUCTION CONTRACTOR. E.

OF MECHANICAL EQUIPMENT AS PER ANY APPLICABLE CODES

INCLUDED AS A PART OF MECHANICAL EQUIPMENT.

INCLUDED AS A PART OF MECHANICAL EQUIPMENT. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY

THE CONTRACTOR. F.

ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY

THE CONTRACTOR. G.

ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY

THE CONTRACTOR. H.

ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY

THE CONTRACTOR. I.

ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY

THE CONTRACTOR. J.

ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY

THE CONTRACTOR.

THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC AND COORDINATION DRAWINGS THAT INCLUDED THE

ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY

THE CONTRACTOR.
**GENERAL SHEET NOTES**

- INSTALLATION REQUIREMENTS OR DETAILED FIT AND DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION, AND COORDINATION DRAWINGS THAT INCLUDED THE REQUIREMENTS OF THE WORK OF ALL TRADES. REFER ALSO TO B.
- EXACT SIZES AND LOCATIONS OF ALL OPENINGS IN STRUCTURE MATCH LINE

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<th>R1</th>
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<td>20&quot;x8&quot; RA</td>
<td>1100 / 200</td>
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- IN FRONT OF ALL ELECTRICAL PANELS, INCLUDING THOSE PIPING, AND DEVICES. MAINTAIN REQUIRED CLEARANCE FOR PROVIDED

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- RECTANGULAR SUPPLY DUCTWORK DOWNSTREAM OF TERMINAL UNIT DUCT CONNECTION TO MATCH MANUFACTURER

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- OF MECHANICAL EQUIPMENT AS PER ANY APPLICABLE CODES

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- ACCESS AND INSTALLATION OF ALL OWNER

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- ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY

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- TO BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, AND SERVICES IN FIELD.

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- THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC ARRANGEMENTS ARE NOT INTENDED TO DEPICT DETAILED CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING

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- ACOUSTICALLY LINED DUCT DIMENSIONS REFER TO STRUCTURAL DRAWINGS AND DETAILS FOR EXISTING

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- PROVIDE BIDS 1 28APR22 ADDENDUM NO. 1 2 12MAY22 PLAN REVIEW 3 13MAY22 BULLETIN 01 4 29JULY22 BULLETIN 02 5 26AUG22
GENERAL SHEET NOTES

ARRANGEMENTS ARE NOT INTENDED TO DEPICT DETAILED PLACEMENT OF COMPONENTS. REFER TO CALLOUTS, DETAILS, DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION, REQUIREMENTS OF THE WORK OF ALL TRADES. REFER ALSO TO ELECTRICAL DRAWINGS, AND WITH THE STRUCTURAL CONTRACTOR.

MAINTAIN ACCEPTABLE CLEARANCE FOR SERVICE AND ACCESS INCLUDED AS A PART OF MECHANICAL EQUIPMENT.

2201.01 ELECTRICAL DRAWINGS, AND WITH THE STRUCTURAL CONTRACTOR.

RG 4 8"x6" REQUIRED MINIMUM CLEARANCES ABOVE AND

125 - PROVIDED

2090.04 RG VAV-2201A

12"x6" VAV-2202B

18"x12" SA 10"x10" SA (TYP)

2206.00 FPB-2122

VAV-2117B

STUDY ROOM 12

1300 / 200 1100 / 200 850 / 145 750 / 145

2202.00 LSD1 165 -

2222.00 42"x8" 42"x8" 22"x6" 22"x8" 20"x8" 20"x8" 12"x6" 12"x6"

CLASSROOM - CLASSROOM

12

2090.05 R1 30"x8" RA

88"x54" RA DN

850 140 750 / 145

12

R1 30"x8"

M2.2.A M2.2.B

SCALE: R1 1/8" = 1'-0"

WSU State Hall Renovation

1500 Gabriel Street, Detroit, MI

SMITHGROUP

1017140 D11793

LEVEL 2 HVAC PLAN AREA B

LEVEL 2 HVAC PLAN AREA B

1306.000
A. ARRANGEMENTS ARE NOT INTENDED TO DEPICT DETAILED AND SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS. THE EXACT SIZES AND LOCATIONS OF ALL OPENINGS IN STRUCTURE, PIPING, AND DEVICES WITH ALL OWNER-PROVIDED EQUIPMENT, PIPING, AND DEVICES.

B. DUCTWORK BEFORE OUTLETS AS NOTED ON THE DETAILS ON SHEET M2.2.B

C. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING AND COORDINATING DRAWINGS THAT INCLUDED THE ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT, INTERNALLY LINE WITH 1.5" ACOUSTICAL INSULATION ALL REFERENCE TO STRUCTURAL DRAWINGS AND DETAILS FOR EXISTING REQUIREMENTS.

D. VAV-2209.07A 46"x18" SA
VAV-2208 36"x18" SA
VAV-2212 35"x18" SA
VAV-2211 12"x12" SA
VAV-2210 10"x10" SA
VAV-2207 10"x10" SA
VAV-2216 12"x12" SA
VAV-2214 600 / 200
VAV-2213 600 / 200
VAV-2212 30"x6" SA

E. M214 AIR TERMINAL FINISH TO BE MANUFACTURER BLACK. M215 CLEARANCE FOR REMOTE MOUNTED DISCONNECT SWITCH. BIDS 1 28APR22 PLAN REVIEW 2 13MAY22 RFI 157 3 14OCT22 BULLETIN 05 4 02DEC22

F. REFER TO SERIES DRAWINGS. ACOUSTICALLY LINED DUCT DIMENSIONS ARE IN ACCORDANCE WITH THE TERMINAL UNIT DUCT CONNECTION TO MATCH MANUFACTURER REQUIRED CLEARANCES ABOVE AND REQUIRED MINIMUM CLEARANCES DOWNSTREAM OF TERMINAL UNITS. PROVIDE MINIMUM LENGTHS OF DOWNSTREAM OUTLET SIZE UNLESS OTHERWISE NOTED ON PLAN.

G. 1/5" = 1'-0"
A. DESIGN INTENT FOR THE GENERAL SYSTEM. DISTRIBUTION AND ARRANGEMENTS ARE NOT INTENDED TO DEPICT DETAILED ELECTRICAL DRAWINGS, AND WITH THE STRUCTURAL AND MANUFACTURER RECOMMENDATIONS.

B. PROVIDE CODE COMPLIANT STRAIN RELIEF AT ALL ELECTRICAL PANELS, INCLUDING THOSE IN FRONT OF ALL ELECTRICAL PANELS, INCLUDING THOSE NOTED ARE INSIDE CLEAR DIMENSIONS.

C. INTERNAL LINE WITH 1.5" ACOUSTICAL INSULATION ALL PIPING, AND DEVICES. MAINTAIN REQUIRED CLEARANCE FOR ACCESS AND INSTALLATION OF ALL OWNER PROVIDED VAV-3111.

D. STRUCTURE ANCHORING, ATTACHMENT, AND MAXIMUM LOADING 450/145.

E. MAINTAIN REQUIRED CLEARANCE FOR HOOD ON ROOF (FIELD VERIFY OPENINGS; EXISTING STRUCTURAL JOISTS TO REMAIN UNCHANGED).

F. M214 AIR TERMINAL FINISH TO BE MANUFACTURER BLACK. M216 20"X10" DRUM LOUVER TO BE ROTATED 90 DEGREES TO FIT IN LEVEL 3 HVAC PLAN AREA A.

G. LEVEL 3 HVAC PLAN AREA A

LEVEL 3 HVAC PLAN AREA A
**GENERAL SHEET NOTES**

**A11**

The general conditions of the project specifications.

**SHEET M2.3.C**

B. Required minimum clearances above and in front of all electrical panels, including those provided equipment, provided series drawings. Acoustically lined duct dimensions:

- AM 1430 / 200 40"x12" SA
- AM 40"x12" RA

**SHEET M2.3.A**

AREA B - LEVEL 3 HVAC PLAN

M214 Air terminal finish to be manufacturer black. M221 round supply duct shall be routed high in pan joist pocket and ... review 3 13 May 22 RFI 035 4 11 July 22 bulletin 01 5 29 July 22 RFI 143 6 26 Sept 22 RFI 145 7 26 Sept 22 bulletin 05 8 02 Dec 22

Theese plans are intended to demonstrate the basic detailed shop drawings of the systems distribution, and coordination drawings that included the piping, and devices with all owner units. Provide minimum lengths of downstream equipment, piping, and devices. Units. Provide minimum lengths of downstream terminal unit duct connection to match manufacturer requirements.

- A4 3201.01
- D. M221
- C.
- F. Rectangular supply ductwork downstream of terminal ductwork before outlets as noted on the details on M6 requirements.

- A10
- F. EFC-ELEV

- A14
- G.

**SCALE:** 1/9/2023 1:36:51 PM

WSU State Hall
Renovation

5143 Cass Ave, Detroit, MI
VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING SERVICES IN FIELD.

ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT PROVIDED.

M207 OPEN ENDED DUCT SHALL BE TERMINATED WITH WISH MESH SCREEN. M214 AIR TERMINAL FINISH TO BE MANUFACTURER BLACK. M215 SERIES DRAWINGS. ACOUSTICALLY LINED DUCT DIMENSIONS INSIDE CLEAR DIMENSIONS.

DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION, INSTALLATION REQUIREMENTS OR DETAILED FIT AND SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE BUILDING OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE BUILDING OPERATION.

PROVIDE MINIMUM LENGTHS OF DOWNSTREAM REQUIREMENTS.

SHALL BE TERMINATED WITH WISH MESH SCREEN. M214 AIR TERMINAL FINISH TO BE MANUFACTURER BLACK. M215 SERIES DRAWINGS. ACOUSTICALLY LINED DUCT DIMENSIONS INSIDE CLEAR DIMENSIONS.

THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC CONTRACTOR.

THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC CONTRACTOR.

COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT, SERIES DRAWINGS. ACOUSTICALLY LINED DUCT DIMENSIONS INSIDE CLEAR DIMENSIONS.

THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC CONTRACTOR.

THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC CONTRACTOR.

THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC CONTRACTOR.
A. REQUIREMENTS OF THE WORK OF ALL TRADES. REFER ALSO TO THE GENERAL CONDITIONS OF THE PROJECT SPECIFICATIONS.

B. CONTRACTOR.

C. GENERAL SHEET NOTES

D. SERVICES IN FIELD.

E. PROVIDED EQUIPMENT, PIPING, AND DEVICES.

F. RECTANGULAR SUPPLY DUCTWORK DOWNSTREAM OF TERMINAL UNIT DUCT CONNECTION TO MATCH MANUFACTURER TERMINAL UNIT DUCT CONNECTION TO MATCH MANUFACTURER.

G. PROVIDE OPENING IN STUDENT AUXILIARY SPACE.

H. ACCESS AND INSTALLATION OF ALL OWNER OUTLET SIZE UNLESS OTHERWISE NOTED ON PLAN.

I. VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING OPENINGS IN STRUCTURE.

J. MAINTAIN CODE INTERFERE WITH THE BUILDING OPERATION.

K. ACCESS AND INSTALLATION OF ALL OWNER OUTLET SIZE UNLESS OTHERWISE NOTED ON PLAN.

L. VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING SERVICES OR EQUIPMENT.

M. MAINTAIN CODE INTERFERE WITH THE BUILDING OPERATION.

N. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT.

O. REQUIRED MINIMUM CLEARANCES ABOVE AND INCLUDED AS A PART OF MECHANICAL EQUIPMENT.

P. VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING SERVICES OR EQUIPMENT.

Q. MAINTAIN CODE INTERFERE WITH THE BUILDING OPERATION.

R. VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING SERVICES OR EQUIPMENT.

S. MAINTAIN ACCEPTABLE CLEARANCE FOR SERVICE AND ACCESS.

T. GENERAL SHEET NOTES

U. THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC AND SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS. THE BUILDING OWNER'S REPRESENTATIVE SO AS NOT TO EXACT SIZES AND LOCATIONS OF ALL OPENINGS IN STRUCTURE.

V. MAINTAIN CODE INTERFERE WITH THE BUILDING OPERATION.

W. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT.

X. REQUIRED MINIMUM CLEARANCES ABOVE AND INCLUDED AS A PART OF MECHANICAL EQUIPMENT.
GENERAL SHEET NOTES

DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION, REQUIREMENTS OF THE WORK OF ALL TRADES. REFER ALSO TO B.

C.

ELECTRICAL DRAWINGS, AND WITH THE STRUCTURAL CONTRACTOR.
SERVICES IN FIELD.

E.

MAINTAIN ACCEPTABLE CLEARANCE FOR SERVICE AND ACCESS IN FRONT OF ALL ELECTRICAL PANELS, INCLUDING THOSE INCLUDED AS A PART OF MECHANICAL EQUIPMENT.

COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT, PIPING, AND DEVICES. MAINTAIN REQUIRED CLEARANCE FOR

PROVIDED INTERNALLY LINE WITH 1.5" ACOUSTICAL INSULATION ALL

A13

A17

A28

A30

J.

AR

AO

4221.00

20"x8"

NEEDED WHERE

430

510

290

VAV-4219

20"x8"

20"x8"

18"x4"

22

1

18"x10" SA

24"x10" SA

R1

4211.00

1

510 / 150

500 /

215

FPB-4222

STUDENT AUX

36"x10" SA

48202

30"x10" SA

22

1

1200x350

200x350

48209

LEVEL 4 HVAC PLAN

1 LEVEL 4 HVAC PLAN AREA C

LEVEL 4 HVAC PLAN

ARCHITECTURE

MECHANICAL

ELECTRICAL

PLUMBING

HEATING

AIR CONDITIONING

ISOLATION

5113

A15

A16

A17

A18

A19

A20

A21
A. THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC
DESIGN INTENT FOR THE GENERAL SYSTEM. DISTRIBUTION AND
ARRANGEMENTS ARE NOT INTENDED TO DEPICT DETAILED
INSTALLATION REQUIREMENTS OR DETAILED FIT AND
PLACEMENT OF COMPONENTS. REFER TO CALLOUTS, DETAILS ,
AND SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS. TH E
CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING
DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION,
AND COORDINATION DRAWINGS THAT INCLUDED THE
REQUIREMENTS OF THE WORK OF ALL TRADES. REFER ALSO TO
THE GENERAL DONCDITIONS OF THE PROJECT SPECIFICATIO NS.

B. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT
SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY
THE BUILDING OWNER'S REPRESENTATIVE SO AS NOT TO
INTERFERE WITH THE BUILDING OPERATION.

C. EXACT SIZES AND LOCATIONS OF ALL OPENINGS IN STRUCT URE
TO BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, A ND
ELECTRICAL DRAWINGS, AND WITH THE STRUCTURAL
CONTRACTOR.

D. VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING
SERVICES IN FIELD.

E. MAINTAIN ACCEPTABLE CLEARANCE FOR SERVICE AND ACCES S
OF MECHANICAL EQUIPMENT AS PER ANY APPLICABLE CODE S
AND/OR MANUFACTURER RECOMMENDATIONS.

F. MAINTAIN CODE -
REQUIRED MINIMUM CLEARANCES ABOVE AND
IN FRONT OF ALL ELECTRICAL PANELS, INCLUDING THOSE
INCLUDED AS A PART OF MECHANICAL EQUIPMENT.

G. COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT,
PIPING, AND DEVICES WITH ALL OWNER-
-PROVIDED EQUIPMENT,
PIPING, AND DEVICES. MAINTAIN REQUIRED CLEARANCE FO R
ACCESS AND INSTALLATION OF ALL OWNER-
-PROVIDED
EQUIPMENT, PIPING, AND DEVICES.

H. INTERNALLY LINE WITH 1.5" ACOUSTICAL INSULATION ALL
RECTANGULAR SUPPLY DUCTWORK DOWNSTREAM OF TERMINAL
UNITS. PROVIDE MINIMUM LENGTHS OF DOWNSTREAM
DUCTWORK BEFORE OUTLETS AS NOTED ON THE DETAILS ON M6
SERIES DRAWINGS. ACOUSTICALLY LINED DUCT DIMENSION S
NOTED ARE INSIDE CLEAR DIMENSIONS.

I. TERMINAL UNIT DUCT CONNECTION TO MATCH MANUFACTURER
OUTLET SIZE UNLESS OTHERWISE NOTED ON PLAN.

J. REFER TO STRUCTURAL DRAWINGS AND DETAILS FOR EXISTI NG
STRUCTURE ANCHORING, ATTACHMENT, AND MAXIMUM LOADIN G
REQUIRMENTS.
A. These plans are intended to demonstrate the basic design intent for the general system. Distribution and arrangements are not intended to depict detailed installation requirements or detailed fit and placement of components. Refer to callouts, details, and system diagrams for additional requirements. The contractor shall be responsible for completing detailed shop drawings of the systems distribution, and coordination drawings that included the requirements of the work of all trades. Refer also to the general conditions of the project specifications.

B. Any interruptions of existing services or equipment shall be performed at a time approved in advance by the building owner's representative so as not to interfere with the building operation.

C. Exact sizes and locations of all openings in structure to be coordinated with architectural, structural, and electrical drawings, and with the structural contractor.

D. Verify exact sizes and locations of all existing services in field.

E. Maintain acceptable clearance for service and access of mechanical equipment as per any applicable codes and/or manufacturer recommendations.

F. Maintain code-required minimum clearances above and in front of all electrical panels, including those included as a part of mechanical equipment.

G. Coordinate location of all mechanical equipment, piping, and devices with all owner-provided equipment, piping, and devices. Maintain required clearance for access and installation of all owner-provided equipment, piping, and devices.

H. Refer to details for fin-tube piping within architectural enclosures, for piping at hot water cabinet unit heaters, and for piping at VAV box heating coils.

I. Refer to structural drawings and details for existing structure anchoring, attachment, and maximum loading requirements.

J. All piping branches serving equipment with 2.5 GPM or less flow to be sized at 3/4".
GENERAL SHEET NOTES

THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC DESIGN INTENT FOR THE GENERAL SYSTEM. DISTRIBUTION AND ARRANGEMENTS ARE NOT INTENDED TO DEPICT DETAILED AND COORDINATION DRAWINGS THAT INCLUDED THE GENERAL CONDITIONS OF THE PROJECT SPECIFICATIONS.

B. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT MATCH LINE EXACT SIZES AND LOCATIONS OF ALL OPENINGS IN STRUCTURE TO BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, AND ACCESSORY STORAGE.

D. ACCESS AND INSTALLATION OF ALL OWNER EQUIPMENT, PIPING, AND DEVICES.

E. REFER TO DETAILS FOR FINishing.

F. REFER TO STRUCTURAL DRAWINGS AND DETAILS FOR EXISTING FACILITY.

G. REQUIRED MINIMUM CLEARANCES ABOVE AND UNDERGROUND.

H. MAINTAIN CODE ACCEPTABLE CLEARANCE FOR SERVICE AND ACCESS TO PIPING IN TRENCH ALIGNED.

I. INSTALLATION REQUIREMENTS OR DETAILED FIT AND CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING SHALT BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE BUILDING OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE BUILDING OPERATION.

J. ALL PIPING BRANCHES SERVING EQUIPMENT WITH 2.5 GPM OR LESS SHALT BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE BUILDING OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE BUILDING OPERATION.

A. 1 1/4" HHWR

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

E. 3" ERF

F. 2 1/2" PC

G. 1.5 GPM

H. CV 1113A

I. CV 1114B

J. CV 1115B

K. CV 1116A

L. CV 1116B

M. CV 0201

N. TF-1

O. FT-1

P. FT-1

Q. 32"
ARRANGEMENTS ARE NOT INTENDED TO DEPICT DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION, CONTRACTOR.

VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING PIPING, AND DEVICES WITH ALL OWNER PROPER EQUIMENT, PIPING, AND DEVICES.

STRUCTURE ANCHORING, ATTACHMENT, AND MAXIMUM LOAD ING 3/4" HHWR DN M305 MATCH LINE 3/4" HHWS DN FT-1 FT-1 FT-1 FT-1 A18 A21 A25 A28 A32 CV 0205 CV 1205B VAV-0209 2.0 GPM 1.5 GPM 1209B VAV-0205 2 1/2" HHWR 4" HHWS BMS HHWP-2 CV 0212.00 26" BV (E)CF SOFTENER ACCU-0210.01 AS POSSIBLE ABOVE (E)8" CHWR M3.0.C 1/9/2023 1:37:23 PM

WSU State Hall
Renovation

M305 ROUTE PIPING (OF SIZE INDICATED) UP TO Finned TUBE ON FLOOR ABOVE. VALVING SERVING EQUIPMENT ON FLOOR ABOVE SHALL REFER TO DETAIL ON M6.4 FOR ADDITIONAL INFORMATION. BIDS 1 28APR22 PLAN REVIEW 2 13MAY22 BULLETIN 05 3 02DEC22

GARDEN LEVEL HVAC PIPING PLAN AREA C
A. DESIGN INTENT FOR THE GENERAL SYSTEM. DISTRIBUTION AND REQUIREMENTS OF THE WORK OF ALL TRADES. REFER ALSO TO BP MATCH LINE FT-1 ELECTRICAL DRAWINGS, AND WITH THE STRUCTURAL CLASSROOM SERVICES IN FIELD. MAINTAIN ACCEPTABLE CLEARANCE FOR SERVICE AND ACCESS.

CV 2109 3/4" HHWS DN

1.5 GPM FT-1

G. PROVIDED BM.3

PROVIDED BM.8

3/4" HHWR FT-1

3" HHWR M306 CV1114A M305

3/4" HHWR

1.3 GPM FT-1

VAV-1090.06B

FC-1105

BK.9

1 1/4" HHWR 2.0 GPM

FT-1

1 1/4" HHWS

T DN

BJ.6

3/4" HHWR

1 1/4" HHWS - T CO2 CB

LECTURE

BF FPB VAV-1102

BE BD

FOOT WASH B5.8

13385.000

48202

THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC PLACEMENT OF COMPONENTS. REFER TO CALLOUTS, DETAILS, DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION, CONTRACTOR.

E. AND/OR MANUFACTURER RECOMMENDATIONS. IN FRONT OF ALL ELECTRICAL PANELS, INCLUDING THOSE COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT, REFER TO DETAILS FOR FIN

INSTALLATION REQUIREMENTS OR DETAILED FIT AND COORDINATION DRAWINGS THAT INCLUDED THE ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT INTERFERE WITH THE BUILDING OPERATION.

VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING OF MECHANICAL EQUIPMENT AS PER ANY APPLICABLE CODE S INCLUDED AS A PART OF MECHANICAL EQUIPMENT.

ARCHITECTURAL ENCLOSURES, FOR PIPING AT HOT WATER CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

3/4" HHWR DN FT-1

CV 2114

2 1/2" HHWR

M305

VAV-1107 M

1107.00

ALL GENDER

T

1102.01 CUH-1090.07 3.0 GPM WEST VESTIBULE

ECUH-1090.10

3" HHWR UP

1101.01

1/2" HHWS

T

VAV-1101.01

CUH-1090.09 2" HHWS

VAV-1109A

M

1109.00

1 1/4" HHWS

1 1/2" HHWS

3/4" HHWS

1" HHWR

1101A LOCATED IN GARDEN LEVEL

1101B LOCATED IN LEVEL 1 HVAC PIPING PLAN AREA A

1" HHWS

LEVEL 1 HVAC PIPING

NORTH VESTIBULE

3/4" HHWR

3/4" HHWS

1 1/4" HHWS

1" HHWR

B5.5

4" HHWR DN

3" HHWR

1108.00

1101.00

LEVEL 1 HVAC PIPING

M305 ROUTE PIPING (OF SIZE INDICATED) UP TO FINNED TUBE ON FLOOR ABOVE. VALVING SERVING EQUIPMENT ON FLOOR ABOVE SHALL ... TUBE SECTION TO BE CONTROLLED FROM CONTROL VALVE INDICATED. BIDS 1 28APR22PLAN REVIEW 2 13MAY22BULLETIN 01 3 29JULY22

LEVEL 1 HVAC PIPING PLAN AREA A
These plans are intended to demonstrate the basic requirements of the work of all trades. Refer also to contracts, details, and systems diagrams for additional requirements. The general conditions of the project specifications.

Placements of components. Refer to callouts, details, and system diagrams for additional requirements.

Verify exact sizes and locations of all existing openings in structure and electrical drawings, and with the structural accessories storage.

Maintain acceptable clearance for service and access in front of all electrical panels, including those in architectural enclosures, for piping at hot water faucets. Maintain required clearance for service and access in front of all electrical panels, including those in architectural enclosures, for piping at hot water faucets.

The building owner's representative so as not to interfere with the building operation.

The general conditions of the project specifications.

Refer also to contracts, details, and systems diagrams for additional requirements.

Placements of components. Refer to callouts, details, and system diagrams for additional requirements.

Verify exact sizes and locations of all existing openings in structure and electrical drawings, and with the structural accessories storage.

Maintain acceptable clearance for service and access in front of all electrical panels, including those in architectural enclosures, for piping at hot water faucets. Maintain required clearance for service and access in front of all electrical panels, including those in architectural enclosures, for piping at hot water faucets.

The building owner's representative so as not to interfere with the building operation.

The general conditions of the project specifications.

Refer also to contracts, details, and systems diagrams for additional requirements.

Placements of components. Refer to callouts, details, and system diagrams for additional requirements.

Verify exact sizes and locations of all existing openings in structure and electrical drawings, and with the structural accessories storage.

Maintain acceptable clearance for service and access in front of all electrical panels, including those in architectural enclosures, for piping at hot water faucets. Maintain required clearance for service and access in front of all electrical panels, including those in architectural enclosures, for piping at hot water faucets.

The building owner's representative so as not to interfere with the building operation.

The general conditions of the project specifications.

Refer also to contracts, details, and systems diagrams for additional requirements.

Placements of components. Refer to callouts, details, and system diagrams for additional requirements.

Verify exact sizes and locations of all existing openings in structure and electrical drawings, and with the structural accessories storage.

Maintain acceptable clearance for service and access in front of all electrical panels, including those in architectural enclosures, for piping at hot water faucets. Maintain required clearance for service and access in front of all electrical panels, including those in architectural enclosures, for piping at hot water faucets.

The building owner's representative so as not to interfere with the building operation.

The general conditions of the project specifications.

Refer also to contracts, details, and systems diagrams for additional requirements.

Placements of components. Refer to callouts, details, and system diagrams for additional requirements.

Verify exact sizes and locations of all existing openings in structure and electrical drawings, and with the structural accessories storage.

Maintain acceptable clearance for service and access in front of all electrical panels, including those in architectural enclosures, for piping at hot water faucets. Maintain required clearance for service and access in front of all electrical panels, including those in architectural enclosures, for piping at hot water faucets.

The building owner's representative so as not to interfere with the building operation.

The general conditions of the project specifications.

Refer also to contracts, details, and systems diagrams for additional requirements.

Placements of components. Refer to callouts, details, and system diagrams for additional requirements.

Verify exact sizes and locations of all existing openings in structure and electrical drawings, and with the structural accessories storage.

Maintain acceptable clearance for service and access in front of all electrical panels, including those in architectural enclosures, for piping at hot water faucets. Maintain required clearance for service and access in front of all electrical panels, including those in architectural enclosures, for piping at hot water faucets.

The building owner's representative so as not to interfere with the building operation.

The general conditions of the project specifications.

Refer also to contracts, details, and systems diagrams for additional requirements.

Placements of components. Refer to callouts, details, and system diagrams for additional requirements.

Verify exact sizes and locations of all existing openings in structure and electrical drawings, and with the structural accessories storage.

Maintain acceptable clearance for service and access in front of all electrical panels, including those in architectural enclosures, for piping at hot water faucets. Maintain required clearance for service and access in front of all electrical panels, including those in architectural enclosures, for piping at hot water faucets.
DESIGN INTENT FOR THE GENERAL SYSTEM. DISTRIBUTION AND ARRANGEMENTS ARE NOT INTENDED TO DEPICT DETAILED INSTALLATION REQUIREMENTS OR DETAILED FIT AND SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS. THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC REQUIREMENTS OF THE WORK OF ALL TRADES. REFER ALSO TO CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING AND COORDINATION DRAWINGS THAT INCLUDED THE GENERAL CONDITIONS OF THE PROJECT SPECIFICATIONS. THE BUILDING OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE BUILDING OPERATION.

REFER TO DETAILS FOR FINISH-TUBE PIPING WITHIN THE BUILDING.'
A. These plans are intended to demonstrate the basic design intent for the general system. Distribution and installation requirements or detailed fit and placement of components. Refer to callouts, details, contractor shall be responsible for completing detailed shop drawings of the systems distribution, and coordination drawings that included the requirements of the work of all trades. Refer also to the general conditions of the project specifications.

B. Work shall be performed at a time approved in advance by the building owner's representative so as not to interfere with the building operation. Exact sizes and locations of all openings in structure to be coordinated with architectural, structural, and electrical drawings, and with the structural and/or manufacturer recommendations. Maintain code required minimum clearances above and included as a part of mechanical equipment. Coordinate location of all mechanical equipment, provided equipment, and required clearance for piping, and devices. Maintain required clearance for any interruption of existing services or equipment in front of all electrical panels, including those access and installation of all owner equipment, piping, and devices.

C. Refer to details for architectural enclosures, for piping at hot water coils.

D. Refer to structural drawings and details for existing structure anchoring, attachment, and maximum loading requirements.

E. All piping branches serving equipment with 2.5 GPM or.

F. Refer to architectural enclosures for piping at hot water coils.

G. Refer to structural drawings and details for existing structure anchoring, attachment, and maximum loading requirements.

H. Provide equipment, piping, and devices. Maintain required clearance for any interruption of existing services or equipment in front of all electrical panels, including those access and installation of all owner equipment, piping, and devices.
DESIGN INTENT FOR THE GENERAL SYSTEM.

A. DISTRIBUTION

- CV 3201A
- M305
- AK
- 3/4" HHWR DN
- MAINTAIN CODE INCLUDED AS A PART OF MECHANICAL EQUIPMENT.

B. PROVIDED EQUIPMENT,

- ELECT CLOSET
- FT-1
- 3/4" HHWR
- T
- M
- 1.5 GPM

CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING

- CO2
- FT-1
- T

ALL PIPING BRANCHES SERVING EQUIPMENT WITH 2.5 GPM OR LESS

- 2" HHWS
- 2" HHWR
- T
- M
- 1.5 GPM

ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT MATCH LINE TO BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, AND ELECTRICAL.

DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION, TUBE PIPING WITHIN BUILDING

REFER TO STRUCTURAL DRAWINGS AND DETAILS FOR EXISTING COILS.

LEVEL 2 HVAC PIPING PLAN AREA B

CLASSROOM

- 2.0 GPM
- M

LEARNING LOUNGE

- 1.5 GPM

CORRIDOR

- CV 3117A
- 3/4" HHWR
- CV 3202B
- 3/4" HHWS
- 3/4" HHWR
- 3/4" HHWR DN
- CV 3201A
- VAV-2090.06C
- FT-1
- VAV-2201B
- VAV-2202B
- VAV-2201A
- VAV-2202A
- T
- M
- 1/2" HHWS
- 3/4" HHWS DN
- 3/4" HHWR
- 3/4" HHWS
- 3/4" HHWR DN
- FT-1
- 3/4" HHWS DN

500 GRISWOLD SUITE 1700 DETROIT, MI 48226 313.983.3600 smithgroup.com Plot Date: B
THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC DESIGN INTENT FOR THE GENERAL SYSTEM. DISTRIBUTION AND ARRANGEMENTS ARE NOT INTENDED TO DEPICT DETAILED INSTALLATION REQUIREMENTS OR DETAILED FIT AND DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION, AND COORDINATION DRAWINGS THAT INCLUDED THE REQUIREMENTS OF THE WORK OF ALL TRADES. REFER ALSO TO THE GENERAL CONDITIONS OF THE PROJECT SPECIFICATIONS.

A. VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING OPENINGS IN STRUCTURE TO BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, AND ELECTRICAL DRAWINGS, AND WITH THE STRUCTURAL CONTRACTOR.

B. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE BUILDING OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE BUILDING OPERATION.

C. MAINTAIN CODE REQUIRED MINIMUM CLEARANCES ABOVE AND BELOW ALL MECHANICAL EQUIPMENT, PIPING, AND DEVICES. MAINTAIN ACCEPTABLE CLEARANCE FOR SERVICE AND ACCESS OF MECHANICAL EQUIPMENT AS PER ANY APPLICABLE CODES AND/OR MANUFACTURER RECOMMENDATIONS.

D. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

E. REFER TO STRUCTURAL DRAWINGS AND DETAILS FOR EXISTING STRUCTURE ANCHORING, ATTACHMENT, AND MAXIMUM LOADING.


H. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

I. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

J. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

K. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

L. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

M. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

N. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

O. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

P. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

Q. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

R. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

S. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

T. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

U. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

V. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

W. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

X. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

Y. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.

Z. REFER TO DETAILS FOR FINISH CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING COILS.
A. The plans are intended to demonstrate the basic design intent for the general system. Distribution and arrangements are not intended to depict detailed installation requirements or detailed fit and placement of components. Refer to callouts, details, and system diagrams for additional requirements. The contractor shall be responsible for completing detailed shop drawings of the systems distribution, and coordination drawings that include the requirements of the work of all trades. Refer also to the general conditions of the project specifications.

B. Any interruptions of existing services or equipment shall be performed at a time approved in advance by the building owner's representative so as not to interfere with the building operation.

C. Exact sizes and locations of all openings in structure to be coordinated with architectural, structural, and electrical drawings, and with the structural contractor.

D. Verify exact sizes and locations of all existing services in field.

E. Maintain acceptable clearance for service and access of mechanical equipment as per any applicable codes and/or manufacturer recommendations.

F. Maintain code-required minimum clearances above and in front of all electrical panels, including those included as a part of mechanical equipment.

G. Coordinate location of all mechanical equipment, piping, and devices with all owner-provided equipment, piping, and devices. Maintain required clearance for access and installation of all owner-provided equipment, piping, and devices.

H. Refer to details for (fill in) tube piping within architectural enclosures, for piping at hot water cabinet unit heaters, and for piping at VAV box heating coils.

I. Refer to structural drawings and details for existing structure anchoring, attachment, and maximum loading requirements.

J. All piping branches serving equipment with 2.5 GPM or less flow to be sized at 3/4".

GENERAL SHEET NOTES

WSU State Hall
Renovation

SCALE: 1/8" = 1'-0"
PLACEMENT OF COMPONENTS. REFER TO CALLOUTS, DETAILS, AND COORDINATION DRAWINGS THAT INCLUDED THE REQUIREMENTS OF THE WORK OF ALL TRADES. REFER ALSO TO ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT MATCH LINE SHEET M3.3.C SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE CONTRACTOR.

EXACT SIZES AND LOCATIONS OF ALL OPENINGS IN STRUCTURE ELECTRICAL DRAWINGS, AND WITH THE STRUCTURAL VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING REFRIGERANT MAINTAIN ACCEPTABLE CLEARANCE FOR SERVICE AND ACCESS LINES UP TO ELEV. MACHINE ROOM IN FRONT OF ALL ELECTRICAL PANELS, INCLUDING THOSE.

COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT, PIPING, AND DEVICES WITH ALL OWNER PROVIDED EQUIPMENT, MAINTAIN REQUIRED CLEARANCE FOR ACCESS AND INSTALLATION OF ALL OWNER PROVIDED TUBE PIPING WITHIN T CO2 (E) 2" HHWR T CO2 3/4" HHWS DN T CO2 2 1/2" HHWR T CO2 0.5 GPM STAT LOCATED IN OFFICE 4122.02 VAV-4122 T CO2 3113.00 T CO2 3115.00 T CO2 3121.00 1/8" = 1'-0" T CO2 3116.00 T CO2 3118.00 T CO2 3122.00 T CO2 3/4" HHWS DN 3/4" HHWR DN 2" HHWS 2" HHWR

I. DESIGN INTENT FOR THE GENERAL SYSTEM. DISTRIBUTION AND ARRANGEMENTS ARE NOT INTENDED TO DEPICT DETAILED AND SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS. THE GENERAL CONDITIONS OF THE PROJECT SPECIFICATIONS, THE BUILDING OWNER'S REPRESENTATIVE SO AS NOT TO CONTRACTOR.

A. THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC OF MECHANICAL EQUIPMENT AS PER ANY APPLICABLE CODES EXISTING SERVICES IN FIELD.

B. PROVIDE DRIP TRAY ABOVE CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING STRUCTURE ANCHORING, ATTACHMENT, AND MAXIMUM LOADING REQUIREMENTS.

C. 1.0 GPM ALL PIPING BRANCHES SERVING EQUIPMENT WITH 2.5 GPM OR
A. THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC DESIGN INTENT FOR THE GENERAL SYSTEM. DISTRIBUTION AND ARRANGEMENTS ARE NOT INTENDED TO DEPICT DETAILED INSTALLATION REQUIREMENTS OR DETAILED FIT AND SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING INTERFERE WITH THE BUILDING OPERATION.

B. VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING AND/OR MANUFACTURER RECOMMENDATIONS. IN FRONT OF ALL ELECTRICAL PANELS, INCLUDING THOSE COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT, PIPING, AND DEVICES WITH ALL OWNER PROVIDED COILS. ALL PIPING BRANCHES SERVING EQUIPMENT WITH 2.5 GPM OR 3/4" HHWS DN.

C. LEVEL 3 HVAC PIPING PLAN AREA C

D. SHEET NUMBER PROJECT NUMBER SHEET TITLE KEYPLAN SEALS AND SIGNATURES ISSUED FOR REV DATE

E. Refer to structural drawings and details for existing requirements.

F. Refer to callouts, details, placement of components. Refer to VAV boxes for piping at VAV box heating.

G. Refer to electrical drawings, and with the structural contractor.

H. The building owner's representative so as not to maintain code included as a part of mechanical equipment.

I. Maintain required clearances for equipment, piping, and devices. The contractor shall be responsible for completing.

J. Less flow to be sized at 3/4".
A.
These plans are intended to demonstrate the basic design intent for the general system. Distribution and arrangements are not intended to depict detailed installation requirements or detailed fit and placement of components. Refer to callouts, details, and system diagrams for additional requirements. The contractor shall be responsible for completing detailed shop drawings of the system distribution, and coordination drawings that included the requirements of the work of all trades. Refer also to the general conditions of the project specifications.

B.
Any interruptions of existing services or equipment shall be performed at a time approved in advance by the building owner's representative so as not to interfere with the building operation.

C.
Exact sizes and locations of all openings in structure to be coordinated with architectural, structural, and electrical drawings, and with the structural contractor.

D.
Verify exact sizes and locations of all existing services in field.

E.
Maintain acceptable clearance for service and access of mechanical equipment as per any applicable codes and/or manufacturer recommendations.

F.
Maintain code-required minimum clearances above and in front of all electrical panels, including those included as a part of mechanical equipment.

G.
Coordinate location of all mechanical equipment, piping, and devices with all owner-provided equipment, piping, and devices. Maintain required clearance for access and installation of all owner-provided equipment, piping, and devices.

H.
Refer to details for fin-tube piping within architectural enclosures, for piping at hot water cabinet unit heaters, and for piping at VAV box heating coils.

I.
Refer to structural drawings and details for existing structure anchoring, attachment, and maximum loading requirements.

J.
All piping branches serving equipment with 2.5 GPM or less flow to be sized at 3/4".
A. THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC DESIGN INTENT FOR THE GENERAL SYSTEM. DISTRIBUTION AND ARRANGEMENTS ARE NOT INTENDED TO DEPICT DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION, THE GENERAL CONDITIONS OF THE PROJECT SPECIFICATIONS. INTERFERE WITH THE BUILDING OPERATION.

B. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT ELECTRICAL DRAWINGS, AND WITH THE STRUCTURAL EXISTING REFRIGERANT (E)ACCU-ELEV COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT, PIPING, AND DEVICES WITH ALL OWNER PROVIDED EQUIPMENT, PIPING, AND DEVICES. REFER TO DETAILS FOR FIN STRUCTURE ANCHORING, ATTACHMENT, AND MAXIMUM LOADING LESS FLOW TO BE SIZED AT 3/4".

C. INSTALLATION REQUIREMENTS OR DETAILED FIT AND CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING AND COORDINATION DRAWINGS THAT INCLUDED THE REQUIREMENTS OF THE WORK OF ALL TRADES. REFER ALSO TO SHEET M3.4.C

D. VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING PIPING, AND DEVICES. MAINTAIN ACCEPTABLE CLEARANCE FOR SERVICE AND ACCESS MACHINERY AND/OR MANUFACTURER RECOMMENDATIONS.

E. MAINTAIN ACCEPTABLE CLEARANCE FOR SERVICE AND ACCESS MACHINERY ROOM AND/OR MANUFACTURER RECOMMENDATIONS. IN FRONT OF ALL ELECTRICAL PANELS, INCLUDING THOSE PIPING, AND DEVICES. MAINTAIN REQUIRED CLEARANCE FOR - PROVIDED 3/4" HHWS DN

F. COILS.

G. ARCHITECTURAL ENCLOSURES, FOR PIPING AT HOT WATER STAIR 4 (E) PIPING STACKED ALONG CLASSROOM 2" (E)2" HHWR DN (E)HHWS, (E)HHWR, STACKED ON LEVEL 3 2 1/2" CHWR CHW PIPING BT BMS DISCHARGE OUT EXTERIOR - CONDENSATE DISCHARGES UV - 2" (E)UV-4 (E)UV-3 OFFSET Pipe BEAM; WELD (OR BRAZE IF COPPER) PIPING AND PROVIDE CAP (E) HHWR 1 1/4" (E) HHWS 1 1/2" (E) CHWR 1/2" -(E) CHWS T TTT T 500 GRISWOLD SUITE 1700 DETROIT, MI 48226 313.983.3600 smithgroup.com Plot Date: B SHEET KEYNOTES SHEET NUMBER PROJECT NUMBER SHEET TITLE KEYPLAN SEALS AND SIGNATURES ISSUED FOR REV DATE

LEVEL 4 HVAC PIPING PLAN AREA B
GENERAL SHEET NOTES

1. THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC ARRANGEMENTS ARE NOT INTENDED TO DEPICT DETAILED AND SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS. THE BUILDING OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE BUILDING OPERATION.

2. REFER TO STRUCTURAL DRAWINGS AND DETAILS FOR EXISTING AND COORDINATION DRAWINGS THAT INCLUDED THE PROVIDED EQUIPMENT, PIPING, AND DEVICES. MAINTAIN REQUIRED CLEARANCE FOR SERVICE AND ACCESS AND/OR MANUFACTURER RECOMMENDATIONS.

3. REFER TO DETAILS FOR FINISHED ARCHITECTURAL ENCLOSURES, FOR PIPING AT HOT WATER STRUCTURE ANCHORING, ATTACHMENT, AND MAXIMUM LOADING.

4. REFER TO DETAILS FOR FINISHED ARCHITECTURAL ENCLOSURES, FOR PIPING AT HOT WATER STRUCTURE ANCHORING, ATTACHMENT, AND MAXIMUM LOADING.

5. ALL PIPING BRANCHES SERVING EQUIPMENT WITH 2.5 GPM OR LESS FLOW TO BE SIZED AT 3/4".

6. VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING OPENINGS IN STRUCTURE AND EXACT SIZES AND LOCATIONS OF ALL OPENINGS IN STRUCTURE.

7. MAINTAIN CODE IN FRONT OF ALL ELECTRICAL PANELS, INCLUDING THOSE PROVIDED.

8. MAINTAIN ACCEPTABLE CLEARANCE FOR SERVICE AND ACCESS AND/OR MANUFACTURER RECOMMENDATIONS.

9. REFERENCE SHOWN DIMENSIONS AND COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT, CABINET UNIT HEATERS, AND FOR PIPING AT VAV BOX HEATING.

10. THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC ARRANGEMENTS ARE NOT INTENDED TO DEPICT DETAILED AND SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS. THE BUILDING OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE BUILDING OPERATION.

11. PROJECT: WSU State Hall Renovation

12. SHEET TITLE: LEVEL 4 HVAC PIPING PLAN AREA C

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

14. SHEET NUMBER: M3.4.C

15. ISSUED FOR REVIEW: 1/9/2023

16. CONTRACTOR: SMITHGROUP

17. 5143 Cass Ave, Detroit, MI 48226

18. PHONE: 313.983.3600

19. EMAIL: smithgroup.com

20. PLATED DATE: 1/9/2023

21. BIM: N/A

22. PROJECT NUMBER: 48202

23. WSU State Hall Renovation

24. 1/9/2023 1:38:21 PM

25. SHEET KEYNOTES
A. THESE PLANS ARE INTENDED TO DEMONSTRATE THE BASIC DESIGN INTENT FOR THE GENERAL SYSTEM. DISTRIBUTION AND ARRANGEMENTS ARE NOT INTENDED TO DEPICT DETAILED INSTALLATION REQUIREMENTS OR DETAILED FIT AND PLACEMENT OF COMPONENTS. REFER TO CALLOUTS, DETAILS, AND SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING DETAILED SHOP DRAWINGS OF THE SYSTEM DISTRIBUTION, AND COORDINATION DRAWINGS THAT INCLUDED THE REQUIREMENTS OF THE WORK OF ALL TRADES. REFER ALSO TO THE GENERAL CONTRACTS OF THE PROJECT SPECIFICATIONS.

B. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE BUILDING OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE BUILDING OPERATION.

C. EXACT SIZES AND LOCATIONS OF ALL OPENINGS IN STRUCUURE TO BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, AND ELECTRICAL DRAWINGS, AND WITH THE STRUCTURAL CONTRACTOR.

D. VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING SERVICES IN FIELD.

E. MAINTAIN ACCEPTABLE CLEARANCE FOR SERVICE AND ACCESS OF MECHANICAL EQUIPMENT AS PER ANY APPLICABLE CODES AND/OR MANUFACTURER RECOMMENDATIONS.

F. MAINTAIN CODE-REQUIRED MINIMUM CLEARANCES ABOVE AND IN FRONT OF ALL ELECTRICAL PANELS, INCLUDING THOSE INCLUDED AS A PART OF MECHANICAL EQUIPMENT.

G. COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT, PIPING, AND DEVICES WITH ALL OWNER-PROVIDED EQUIPMENT, PIPING, AND DEVICES. MAINTAIN REQUIRED CLEARANCE FOR ACCESS AND INSTALLATION OF ALL OWNER-PROVIDED EQUIPMENT, PIPING, AND DEVICES.

H. INTERNALLY LINE WITH 1.5" ACOUSTICAL INSULATION ALL RECTANGULAR SUPPLY DUCTWORK DOWNSTREAM OF TERMINAL UNITS. PROVIDE MINIMUM LENGTHS OF DOWNSTREAM DUCTWORK BEFORE OUTLETS AS NOTED ON THE DETAILS ON M6 SERIES DRAWINGS. ACOUSTICALLY LINED DUCT DIMENSIONS NOTED ARE INSIDE CLEAR DIMENSIONS.

I. REFER TO DETAILS FOR FINISH-TUBE PIPING WITHIN ARCHITECTURAL ENCLOSURES, AT HOT WATER CABINET UNIT HEATERS, AND VAV BOX HEATING COILS.
1. AIR HANDLING UNIT DETAILS

2. REQUIREMENTS OF THE WORK OF ALL TRADES. REFER ALSO TO ELECTRICAL DRAWINGS, AND WITH THE STRUCTURAL.

3. VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING UNITS. PROVIDE MINIMUM LENGTHS OF DOWNSTREAM UNITS. PROVIDE MINIMUM LENGTHS OF DOWNSTREAM PIPING, AND DEVICES WITH ALL OWNER PROVIDED EQUIPMENT, PIPING, AND DEVICES. MAINTAIN REQUIRED CLEARANCE FOR COMPONENT DIAGRAMS.

4. ARRANGEMENTS ARE NOT INTENDED TO DEPICT DETAILED INSTALLATION REQUIREMENTS OR DETAILED FIT AND PLACEMENT OF COMPONENTS. REFER TO CALLOUTS, DETAILS, AND SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS. THE DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION, AND COORDINATION DRAWINGS THAT INCLUDED THE

5. THE GENERAL DonCDtIONS OF THE PROJECT SPECIFICATIONS. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE GENERAL CONDITIONS OF THE PROJECT SPECIFICATIONS.

6. IN FRONT OF ALL ELECTRICAL PANELS, INCLUDING THOSE AREA RESERVED FOR LADDER ACCESS ARCHITECTURAL ENCLOSURES, AT HOT WATER CABINET UNIT HEATERS, AND VAV BOX HEATING COILS.

7. ARRANGEMENT ARE NOT INTENDED TO DEPICT DETAILED INSTALLATION REQUIREMENTS OR DETAILED FIT AND PLACEMENT OF COMPONENTS. REFER TO CALLOUTS, DETAILS, AND SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS. THE DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION, AND COORDINATION DRAWINGS THAT INCLUDED THE

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9. IN FRONT OF ALL ELECTRICAL PANELS, INCLUDING THOSE AREA RESERVED FOR LADDER ACCESS ARCHITECTURAL ENCLOSURES, AT HOT WATER CABINET UNIT HEATERS, AND VAV BOX HEATING COILS.

10. ARRANGEMENT ARE NOT INTENDED TO DEPICT DETAILED INSTALLATION REQUIREMENTS OR DETAILED FIT AND PLACEMENT OF COMPONENTS. REFER TO CALLOUTS, DETAILS, AND SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS. THE DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION, AND COORDINATION DRAWINGS THAT INCLUDED THE

11. THE GENERAL DonCDtIONS OF THE PROJECT SPECIFICATIONS. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE GENERAL CONDITIONS OF THE PROJECT SPECIFICATIONS.

12. IN FRONT OF ALL ELECTRICAL PANELS, INCLUDING THOSE AREA RESERVED FOR LADDER ACCESS ARCHITECTURAL ENCLOSURES, AT HOT WATER CABINET UNIT HEATERS, AND VAV BOX HEATING COILS.

13. ARRANGEMENT ARE NOT INTENDED TO DEPICT DETAILED INSTALLATION REQUIREMENTS OR DETAILED FIT AND PLACEMENT OF COMPONENTS. REFER TO CALLOUTS, DETAILS, AND SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS. THE DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION, AND COORDINATION DRAWINGS THAT INCLUDED THE

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15. IN FRONT OF ALL ELECTRICAL PANELS, INCLUDING THOSE AREA RESERVED FOR LADDER ACCESS ARCHITECTURAL ENCLOSURES, AT HOT WATER CABINET UNIT HEATERS, AND VAV BOX HEATING COILS.

16. ARRANGEMENT ARE NOT INTENDED TO DEPICT DETAILED INSTALLATION REQUIREMENTS OR DETAILED FIT AND PLACEMENT OF COMPONENTS. REFER TO CALLOUTS, DETAILS, AND SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS. THE DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION, AND COORDINATION DRAWINGS THAT INCLUDED THE

17. THE GENERAL DonCDtIONS OF THE PROJECT SPECIFICATIONS. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE GENERAL CONDITIONS OF THE PROJECT SPECIFICATIONS.

18. IN FRONT OF ALL ELECTRICAL PANELS, INCLUDING THOSE AREA RESERVED FOR LADDER ACCESS ARCHITECTURAL ENCLOSURES, AT HOT WATER CABINET UNIT HEATERS, AND VAV BOX HEATING COILS.

19. ARRANGEMENT ARE NOT INTENDED TO DEPICT DETAILED INSTALLATION REQUIREMENTS OR DETAILED FIT AND PLACEMENT OF COMPONENTS. REFER TO CALLOUTS, DETAILS, AND SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS. THE DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION, AND COORDINATION DRAWINGS THAT INCLUDED THE

20. THE GENERAL DonCDtIONS OF THE PROJECT SPECIFICATIONS. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE GENERAL CONDITIONS OF THE PROJECT SPECIFICATIONS.

21. IN FRONT OF ALL ELECTRICAL PANELS, INCLUDING THOSE AREA RESERVED FOR LADDER ACCESS ARCHITECTURAL ENCLOSURES, AT HOT WATER CABINET UNIT HEATERS, AND VAV BOX HEATING COILS.

22. ARRANGEMENT ARE NOT INTENDED TO DEPICT DETAILED INSTALLATION REQUIREMENTS OR DETAILED FIT AND PLACEMENT OF COMPONENTS. REFER TO CALLOUTS, DETAILS, AND SYSTEM DIAGRAMS FOR ADDITIONAL REQUIREMENTS. THE DETAILED SHOP DRAWINGS OF THE SYSTEMS DISTRIBUTION, AND COORDINATION DRAWINGS THAT INCLUDED THE

23. THE GENERAL DonCDtIONS OF THE PROJECT SPECIFICATIONS. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE GENERAL CONDITIONS OF THE PROJECT SPECIFICATIONS.

24. IN FRONT OF ALL ELECTRICAL PANELS, INCLUDING THOSE AREA RESERVED FOR LADDER ACCESS ARCHITECTURAL ENCLOSURES, AT HOT WATER CABINET UNIT HEATERS, AND VAV BOX HEATING COILS.
### MECHANICAL SCHEDULES

#### M7.1

**SHEETS**

- SHEET NUMBER: [500 GRISWOLD SUITE 1700 DETROIT, MI 48226 313.983.3600 smithgroup.com](mailto:sheets@smithgroup.com)
- Plot Date: 1/9/2023 1:38:48 PM

**MACHINERY SCHEDULES**

**Air Separator Schedule**

<table>
<thead>
<tr>
<th>TAG</th>
<th>System</th>
<th>Type</th>
<th>Location</th>
<th>Connection</th>
<th>Size</th>
<th>Flow</th>
<th>Strainer</th>
<th>Pressure</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS-ER(G)</td>
<td>ER(G)</td>
<td>BMENT</td>
<td>MER</td>
<td>AIR/DIRT</td>
<td>4&quot;</td>
<td>150 GPM</td>
<td>No</td>
<td>3.00 psi</td>
<td>0.00 lb</td>
</tr>
<tr>
<td>AS-HHW</td>
<td>HHW</td>
<td>BMENT</td>
<td>MER</td>
<td>AIR/DIRT</td>
<td>6&quot;</td>
<td>600 GPM</td>
<td>No</td>
<td>3.00 psi</td>
<td>0.00 lb</td>
</tr>
</tbody>
</table>

**Expansion Tank Schedule**

| TAG | System | Type | Location | Temperature | System | Volume | Acceptance | Change | Pressure | Relief | Valve | Basis | Design | Remarks | Manufacturer | Model |
|-----|--------|------|----------|-------------|--------|--------|------------|--------|----------|--------|--------|--------|--------|---------|-----------|-----------|-------|
| ET-ER(G) | ERW(G) | 1950 | B'MENT | MER | BLADDER | 40 °F | 100 °F | 665.0 gal | 23.0 gal | 23.0 gal | 12.00 psi | 60.00 psi | B&G SERIES B-85 | ET-HHW | HHW | B'MENT | MER | BLADDER | 40 °F | 180 °F | 2300.0 gal | 211.0 gal | 211.0 gal | 27.00 psi | 60.00 psi | B&G SERIES B-800 |

**Fin Tube Radiation Schedule**

<table>
<thead>
<tr>
<th>TAG</th>
<th>System</th>
<th>Type</th>
<th>Location</th>
<th>Mounting</th>
<th>Tube</th>
<th>Size</th>
<th>Width</th>
<th>Height</th>
<th>Fins</th>
<th>Enclosure</th>
<th>Capacity</th>
<th>Active Length</th>
<th>Water Temp</th>
<th>EAT</th>
<th>Number of Rows</th>
<th>Basis</th>
<th>Design</th>
<th>Remarks</th>
<th>Manufacturer</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT-1</td>
<td>HHW</td>
<td>BARE WALL</td>
<td>3/4&quot;</td>
<td>4.25</td>
<td>4.25</td>
<td>40</td>
<td>NONE/ARCH</td>
<td>900 Btu/h</td>
<td>6' - 0&quot;</td>
<td>140 °F</td>
<td>65 °F</td>
<td>1</td>
<td>2</td>
<td>RITTLING</td>
<td>3/4C-4.25X4.25-40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Pump Schedule**

<table>
<thead>
<tr>
<th>TAG</th>
<th>System</th>
<th>Type</th>
<th>Location</th>
<th>Fluid</th>
<th>Temperature</th>
<th>Flow</th>
<th>Head</th>
<th>BHP</th>
<th>RPM</th>
<th>Voltage</th>
<th>Phase</th>
<th>Remakrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERP-1(G)</td>
<td>ERW(G)</td>
<td>1950</td>
<td>B'MENT</td>
<td>MER</td>
<td>END SUCTION</td>
<td>40% GLY</td>
<td>50 °F</td>
<td>180 GPM</td>
<td>85 Feet</td>
<td>70</td>
<td>2</td>
<td>5/8&quot;</td>
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</table>

**Shell & Tube Heat Exchanger Schedule (Steam to Water)**

<table>
<thead>
<tr>
<th>TAG</th>
<th>System</th>
<th>Type</th>
<th>Location</th>
<th>Capacity</th>
<th>Heating</th>
<th>Surface</th>
<th>Tube</th>
<th>Shell</th>
<th>Relief Valve</th>
<th>Set</th>
<th>Fouling Factor</th>
<th>Steam Flow</th>
<th>Steam Pressure</th>
<th>Diameter</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>HX-1</td>
<td>HHW</td>
<td>B'MENT</td>
<td>MER</td>
<td>U TUBE</td>
<td>6000000 Btu/h</td>
<td>178 SF</td>
<td>140 °F</td>
<td>160 °F</td>
<td>610 GPM</td>
<td>2.16 psi</td>
<td>0.0005</td>
<td>6165</td>
<td>2</td>
<td>1' - 2&quot;</td>
<td>6' - 10&quot;</td>
</tr>
</tbody>
</table>

**Steam Condensate Pump & Receiver Unit Schedule**

<table>
<thead>
<tr>
<th>TAG</th>
<th>System</th>
<th>Type</th>
<th>Flow Per Pump</th>
<th>Temperature</th>
<th>Discharge Head</th>
<th>Receiver</th>
<th>Motor</th>
<th>Remakrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRU-1</td>
<td>HHW</td>
<td>DUPLEX</td>
<td>25 GPM</td>
<td>180 °F</td>
<td>15.00 psi</td>
<td>23.00 gal</td>
<td>0&quot;</td>
<td>0&quot;</td>
</tr>
</tbody>
</table>

**Hot Water Unit Heater Schedule**

<table>
<thead>
<tr>
<th>TAG</th>
<th>System</th>
<th>Type</th>
<th>Airside</th>
<th>Heating</th>
<th>Fan</th>
<th>Mounting</th>
<th>Height</th>
<th>Remakrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUH-0090.04</td>
<td>HHW</td>
<td>STAIR</td>
<td>4</td>
<td>970 CFM</td>
<td>65 °F</td>
<td>105 °F</td>
<td>57000 Btu/h</td>
<td>140 °F</td>
</tr>
</tbody>
</table>

**Split System Condensing Unit Schedule**

<table>
<thead>
<tr>
<th>TAG</th>
<th>Service</th>
<th>Tons</th>
<th>Ambient Temp</th>
<th>Compressors</th>
<th>Electrical</th>
<th>Basis</th>
<th>Remakrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCU-0210.01</td>
<td>2</td>
<td>-10 °F</td>
<td>1</td>
<td>208 V</td>
<td>1</td>
<td>19 A</td>
<td>25 A</td>
</tr>
<tr>
<td>ACCU-0210.03</td>
<td>1</td>
<td>-10 °F</td>
<td>1</td>
<td>208 V</td>
<td>1</td>
<td>12 A</td>
<td>25 A</td>
</tr>
<tr>
<td>ACCU-4124</td>
<td>1</td>
<td>-10 °F</td>
<td>1</td>
<td>208 V</td>
<td>1</td>
<td>12 A</td>
<td>25 A</td>
</tr>
</tbody>
</table>

**Notes:**

1. PROVIDE LOW AMBIENT KIT WITH WIND BAFFLES
2. PROVIDE SINGLE POINT POWER CONNECTION WITH DISCONNECT SWITCH, INDOOR UNIT POWER FED FROM OUTDOOR UNIT
3. PROVIDE ROOFTOP SUPPORT
4. PROVIDE BACNET COMMUNICATIONS CARD.

**Pressure Reducing Valve Assembly**

<table>
<thead>
<tr>
<th>TAG</th>
<th>System</th>
<th>Type</th>
<th>Location</th>
<th>Remakrs</th>
</tr>
</thead>
</table>

**Pump Schedule**

<table>
<thead>
<tr>
<th>TAG</th>
<th>System</th>
<th>Type</th>
<th>Location</th>
<th>Flow</th>
<th>Temperature</th>
<th>Head</th>
<th>Remakrs</th>
</tr>
</thead>
</table>

**Air Separator Schedule**

<table>
<thead>
<tr>
<th>TAG</th>
<th>System</th>
<th>Type</th>
<th>Location</th>
<th>Connection</th>
<th>Size</th>
<th>Flow</th>
<th>Strainer</th>
<th>Pressure</th>
<th>Weight</th>
</tr>
</thead>
</table>

**Expansion Tank Schedule**

<table>
<thead>
<tr>
<th>TAG</th>
<th>System</th>
<th>Type</th>
<th>Location</th>
<th>Temperature</th>
<th>System</th>
<th>Volume</th>
<th>Acceptance</th>
<th>Change</th>
<th>Pressure</th>
<th>Relief</th>
<th>Valve</th>
<th>Basis</th>
<th>Design</th>
<th>Remarks</th>
<th>Manufacturer</th>
<th>Model</th>
</tr>
</thead>
</table>

**Fin Tube Radiation Schedule**

| TAG | System | Type | Location | Mounting | Tube | Size | Width | Height | Fins | Enclosure | Capacity | Active Length | Water Temp | EAT | Number of Rows | Basis | Design | Remarks | Manufacturer | Model |

**Hot Water Unit Heater Schedule**

<table>
<thead>
<tr>
<th>TAG</th>
<th>System</th>
<th>Type</th>
<th>Airside</th>
<th>Heating</th>
<th>Fan</th>
<th>Mounting</th>
<th>Height</th>
<th>Remakrs</th>
</tr>
</thead>
</table>

**Electric Unit Heater Schedule**

<table>
<thead>
<tr>
<th>TAG</th>
<th>Location</th>
<th>Type</th>
<th>Air</th>
<th>Flow</th>
<th>Heating</th>
<th>EAT</th>
<th>Lat</th>
<th>Min</th>
<th>Capacity</th>
<th>Power</th>
<th>Voltage</th>
<th>Phase</th>
</tr>
</thead>
</table>

**Split System Fan Coil Schedule**

<table>
<thead>
<tr>
<th>TAG</th>
<th>Service</th>
<th>Type</th>
<th>Airflow</th>
<th>Cooling</th>
<th>EAT DB</th>
<th>EAT WB</th>
<th>Total Cooling</th>
<th>Sensible</th>
<th>Power</th>
<th>Voltage</th>
<th>Phase</th>
</tr>
</thead>
</table>

**Split System Condensing Unit Schedule**

| TAG | Service | Type | Airflow | Cooling | EAT DB | EAT WB | Total Cooling | Sensible | Power | Voltage | Phase |

**Pressure Reducing Valve Assembly**

| TAG | System | Type | Location | Remakrs |

**Pump Schedule**

<table>
<thead>
<tr>
<th>TAG</th>
<th>System</th>
<th>Type</th>
<th>Location</th>
<th>Flow</th>
<th>Temperature</th>
<th>Head</th>
<th>Remakrs</th>
</tr>
</thead>
</table>

**Air Separator Schedule**

<table>
<thead>
<tr>
<th>TAG</th>
<th>System</th>
<th>Type</th>
<th>Location</th>
<th>Connection</th>
<th>Size</th>
<th>Flow</th>
<th>Strainer</th>
<th>Pressure</th>
<th>Weight</th>
</tr>
</thead>
</table>

**Expansion Tank Schedule**

<table>
<thead>
<tr>
<th>TAG</th>
<th>System</th>
<th>Type</th>
<th>Location</th>
<th>Temperature</th>
<th>System</th>
<th>Volume</th>
<th>Acceptance</th>
<th>Change</th>
<th>Pressure</th>
<th>Relief</th>
<th>Valve</th>
<th>Basis</th>
<th>Design</th>
<th>Remarks</th>
<th>Manufacturer</th>
<th>Model</th>
</tr>
</thead>
</table>

**Fin Tube Radiation Schedule**

<table>
<thead>
<tr>
<th>TAG</th>
<th>System</th>
<th>Type</th>
<th>Location</th>
<th>Mounting</th>
<th>Tube</th>
<th>Size</th>
<th>Width</th>
<th>Height</th>
<th>Fins</th>
<th>Enclosure</th>
<th>Capacity</th>
<th>Active Length</th>
<th>Water Temp</th>
<th>EAT</th>
<th>Number of Rows</th>
<th>Basis</th>
<th>Design</th>
<th>Remarks</th>
<th>Manufacturer</th>
<th>Model</th>
</tr>
</thead>
</table>

**Notes:**

1. PROVIDE CONDENSATE OVERFLOW SAFETY CUTOFF SWITCH
2. PROVIDE SINGLE POINT POWER CONNECTION WITH DISCONNECT SWITCH. COORDINATE POWER AND CONTROLS COORDINATED WITH ASSOCIATED CONDENSING UNIT.
### AIR FILTER SCHEDULE

<table>
<thead>
<tr>
<th>TAG</th>
<th>SYSTEM</th>
<th>LOCATION</th>
<th>TYPE</th>
<th>AIRFLOW SF</th>
<th>ACCESSORIES</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FF-1</td>
<td>BOX 500</td>
<td>FPM</td>
<td>12000 CFM</td>
<td>155000 Btu/h</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PF-1</td>
<td>PLEAT</td>
<td>12000 CFM</td>
<td>155000 Btu/h</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SEMI-CUSTOM AIR HANDLING UNIT SCHEDULE

<table>
<thead>
<tr>
<th>TAG</th>
<th>SYSTEM</th>
<th>LOCATION</th>
<th>TYPE</th>
<th>AIRFLOW SF</th>
<th>ACCESSORIES</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHU-1-S</td>
<td>1940S</td>
<td>B'MENT</td>
<td>SEMI CUSTOM</td>
<td>20000 CFM</td>
<td></td>
<td></td>
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<tr>
<td>AHU-2-S</td>
<td>1950S</td>
<td>B'MENT</td>
<td>SEMI CUSTOM</td>
<td>30000 CFM</td>
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### HYDRONIC COIL SCHEDULE

<table>
<thead>
<tr>
<th>TAG</th>
<th>SYSTEM</th>
<th>LOCATION</th>
<th>TYPE</th>
<th>AIRFLOW SF</th>
<th>TOTAL CAPACITY</th>
<th>SENSIBLE CAPACITY</th>
<th>QTY</th>
<th>ROWS</th>
<th>FINS</th>
<th>INCH</th>
<th>DATA WATERSIDE</th>
<th>DATA AIRSIDE</th>
<th>REMARKS</th>
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</thead>
<tbody>
<tr>
<td>CC-1-S</td>
<td>CHW</td>
<td>1940 B'MENT</td>
<td>WATER</td>
<td>45000 CFM</td>
<td>2406000 Btu/h</td>
<td>1553000 Btu/h</td>
<td>3</td>
<td>500</td>
<td>90</td>
<td>45</td>
<td>90 °F</td>
<td>70 °F</td>
<td>54 °F</td>
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### FAN SCHEDULE

<table>
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<tr>
<th>TAG</th>
<th>SYSTEM</th>
<th>LOCATION</th>
<th>TYPE</th>
<th>AIR CAPACITY</th>
<th>WHEEL TYPE</th>
<th>CLASS</th>
<th>TSP</th>
<th>FAN RPM</th>
<th>VOLUME CONTROL</th>
<th>MOTOR DATA</th>
<th>REMARKS</th>
</tr>
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<tbody>
<tr>
<td>EF</td>
<td>(E)EF</td>
<td>4TH FLOOR</td>
<td>TOILET EXHAUST</td>
<td>1100 CFM</td>
<td>BI AIR FOIL</td>
<td>1</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AHU-2-S</td>
<td>DD</td>
<td>PLENUM</td>
<td>1625 CFM</td>
<td>8125 CFM</td>
<td>BI AIR FOIL</td>
<td>2</td>
<td>15</td>
<td>1800</td>
<td>460 V 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### EXISTING UNIT VENTILATOR AND FANCOIL UNIT SCHEDULE

<table>
<thead>
<tr>
<th>TAG</th>
<th>SYSTEM</th>
<th>LOCATION</th>
<th>TYPE</th>
<th>ACCESSORIES</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCU-1</td>
<td>MENS TOILET ROOM</td>
<td>600 CFM</td>
<td>GREENHECK VFC-600</td>
<td>(E)</td>
<td></td>
</tr>
<tr>
<td>FCU-2</td>
<td>WOMENS TOILET ROOM</td>
<td>600 CFM</td>
<td>GREENHECK VFC-600</td>
<td>(E)</td>
<td></td>
</tr>
<tr>
<td>UV-7</td>
<td>CLASSROOM 4112</td>
<td>4112 CFM</td>
<td>AIREDALE UV3CHW4</td>
<td>(R)</td>
<td></td>
</tr>
</tbody>
</table>

### NOTES:

1. 2’X2’ TYPICAL SIZE, 1’X2’ ACCEPTABLE ALONG TOP OR ONE SIDE OF FILTER BANK
2. AIR AND WATER FLOW RATES SCHEDULED ARE PREVIOUSLY SCHEDULED VALUES, CONTRACTOR SHALL BALANCE THE EXISTING SYSTEMS TO OBTAI...
### Fan Powered Terminal Unit Schedule

<table>
<thead>
<tr>
<th>Tag</th>
<th>Model</th>
<th>H2O CFM</th>
<th>H2O CFM B/out</th>
<th>EAT</th>
<th>LAT</th>
<th>EWT</th>
<th>LWT</th>
<th>FPD</th>
<th>Manf.</th>
<th>Model</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPB-1101A</td>
<td>TITUS</td>
<td>400</td>
<td>2220</td>
<td>16</td>
<td>1' - 4 1/2&quot;</td>
<td>1' - 2&quot;</td>
<td>65 °F</td>
<td>85 °F</td>
<td>140 °F</td>
<td>120 °F</td>
<td>GPM 4.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Volumetric Box Without Heating Coil Schedule

<table>
<thead>
<tr>
<th>Tag</th>
<th>Model</th>
<th>Min Airflow</th>
<th>Max Airflow</th>
<th>EAT</th>
<th>LAT</th>
<th>EWT</th>
<th>LWT</th>
<th>Water PD</th>
<th>Flow</th>
<th>Manf.</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAV-0201</td>
<td>TITUS</td>
<td>10</td>
<td>145</td>
<td>900</td>
<td></td>
<td></td>
<td>1.1 GPM</td>
<td>8250 Btu</td>
<td>1 3/4&quot;</td>
<td>TITUS DESV</td>
<td></td>
</tr>
<tr>
<td>VAV-0203</td>
<td>TITUS</td>
<td>10</td>
<td>145</td>
<td>900</td>
<td></td>
<td></td>
<td>0.5 GPM</td>
<td>3750 Btu</td>
<td>1 3/4&quot;</td>
<td>TITUS DESV</td>
<td></td>
</tr>
<tr>
<td>VAV-0205</td>
<td>TITUS</td>
<td>12</td>
<td>200</td>
<td>1200</td>
<td></td>
<td></td>
<td>1.1 GPM</td>
<td>8250 Btu</td>
<td>1 3/4&quot;</td>
<td>TITUS DESV</td>
<td></td>
</tr>
<tr>
<td>VAV-4215</td>
<td>TITUS</td>
<td>8</td>
<td>150</td>
<td>510</td>
<td></td>
<td></td>
<td>0.5 GPM</td>
<td>3750 Btu</td>
<td>1 3/4&quot;</td>
<td>TITUS DESV</td>
<td></td>
</tr>
<tr>
<td>VAV-4219</td>
<td>TITUS</td>
<td>8</td>
<td>150</td>
<td>580</td>
<td></td>
<td></td>
<td>0.5 GPM</td>
<td>3750 Btu</td>
<td>1 3/4&quot;</td>
<td>TITUS DESV</td>
<td></td>
</tr>
<tr>
<td>VAV-4221</td>
<td>TITUS</td>
<td>10</td>
<td>150</td>
<td>720</td>
<td></td>
<td></td>
<td>0.5 GPM</td>
<td>3750 Btu</td>
<td>1 3/4&quot;</td>
<td>TITUS DESV</td>
<td></td>
</tr>
</tbody>
</table>

### Grille, Register, and Diffuser Schedule

<table>
<thead>
<tr>
<th>Tag</th>
<th>System</th>
<th>Type</th>
<th>Face Size</th>
<th>Neck Size</th>
<th>Pattern</th>
<th>Material</th>
<th>Design</th>
<th>Manf.</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>E2-6</td>
<td>Exhaust</td>
<td>Air</td>
<td>0-150</td>
<td>24x24</td>
<td>N/A</td>
<td>Steel</td>
<td>Surface</td>
<td>TITUS PAR</td>
<td></td>
</tr>
<tr>
<td>E2-10</td>
<td>Exhaust</td>
<td>Air</td>
<td>0-150</td>
<td>24x24</td>
<td>N/A</td>
<td>Steel</td>
<td>Surface</td>
<td>TITUS PAR</td>
<td></td>
</tr>
<tr>
<td>E2-20</td>
<td>Exhaust</td>
<td>Air</td>
<td>0-150</td>
<td>24x24</td>
<td>N/A</td>
<td>Steel</td>
<td>Surface</td>
<td>TITUS PAR</td>
<td></td>
</tr>
<tr>
<td>E2-30</td>
<td>Exhaust</td>
<td>Air</td>
<td>0-150</td>
<td>24x24</td>
<td>N/A</td>
<td>Steel</td>
<td>Surface</td>
<td>TITUS PAR</td>
<td></td>
</tr>
<tr>
<td>E2-40</td>
<td>Exhaust</td>
<td>Air</td>
<td>0-150</td>
<td>24x24</td>
<td>N/A</td>
<td>Steel</td>
<td>Surface</td>
<td>TITUS PAR</td>
<td></td>
</tr>
<tr>
<td>E2-50</td>
<td>Exhaust</td>
<td>Air</td>
<td>0-150</td>
<td>24x24</td>
<td>N/A</td>
<td>Steel</td>
<td>Surface</td>
<td>TITUS PAR</td>
<td></td>
</tr>
</tbody>
</table>

---

**Wayne State University**

**WSU State Hall Renovation**

3331 Cass Ave, Detroit, MI

**SmithGroup**

300 GRISWOLD SUITE 1700 DETROIT, MI 48226 313.983.3600 smithgroup.com

**Plot Date:** 1/9/2023 1:39:00 PM
NOTE: THIS SENSOR ALSO METER BUILDING CHILLED WATER USAGE.

THE 3-500 GRISWOLD SUITE 1700 DETROIT, MI 48226 313.983.3600 smithgroup.com

CENTRAL HEATING AND COOLING CONTROLS

1/9/2023 1:39:05 PM

13385.000

EQUIPMENT ROOM (E) EF STATUS.

STATE HALL STEAM FLOW RATE FROM EXISTING STEAM
**TEMPERATURE CONTROL**

- **AFMS**
- **HHWR**
- **HHWS**
- **VARIABLE VOLUME TERMINAL (VAV)**
- **PARALLEL FPB WITH HOT WATER REHEAT & ECM**
- **EXISTING UNIT VENTILATOR**

**COOLING**

- **CONTROL DAMPER**
- **FAN OFF**
- **DAMPER MINIMUM POSITION**
- **DAMPER MAXIMUM POSITION**

**HEATING**

- **AIR DAMPER**
- **SEQUEL OF OPERATION**

**SENSORS**

- **OCCUPANCY**
- **CO2**

**ROOM TEMPERATURE**

- **SETPOINT**

**SENSOR**

- **UNITS**

**SETPOINTS**

- **OCCUPIED MODE = 75 F COOLING, 70 F HEATING**
- **UNOCCUPIED MODE = 85 F COOLING, 60 F HEATING**

**IF THE ASSOCIATED AHU IS SHUT DOWN DUE TO SMOKE DETECTION (REFER TO AHU CONTROL DRAWINGS), THEN THE FAN POWERED TERMINAL UNIT**

**IF THE CO2 LEVELS EXCEED 1200 PPM, AN ALARM SHALL BE SENT TO THE BMS.**

**THE SPACE SHALL IMMEDIATELY SWITCH TO OCCUPIED MODE WHEN OCCUPANCY IS SENSED BY THE LOCAL SENSOR. NO OCCUPANCY MUST BE SENSED 5 MINUTES BEFORE SWITCHING FROM OCCUPIED TO EITHER THE STANDBY OR UNOCCUPIED MODES.**

**THE PRIMARY DAMPER SHALL MODULATE FROM MAINTAIN THE COOLING SETPOINT SPACE TEMPERATURE. IF IN THE OCCUPIED MODE, THE PRIMARY DAMPER SHALL BE ENABLED.**

**THE PRIMARY DAMPER SHALL MODULATE FROM MAINTAIN THE COOLING SETPOINT SPACE TEMPERATURE. IF IN THE OCCUPIED MODE, THE PRIMARY DAMPER SHALL BE ENABLED.**

**THE PRIMARY DAMPER SHALL MODULATE FROM MAINTAIN THE COOLING SETPOINT SPACE TEMPERATURE. IF IN THE OCCUPIED MODE, THE PRIMARY DAMPER SHALL BE ENABLED.**

**THE PRIMARY DAMPER SHALL MODULATE FROM MAINTAIN THE COOLING SETPOINT SPACE TEMPERATURE. IF IN THE OCCUPIED MODE, THE PRIMARY DAMPER SHALL BE ENABLED.**
1. **HOT WATER UNIT HEATER CONTROLS**
   - **SEQUENCE OF OPERATION**
   - A. **TOILET EXHAUST FAN CONTROLS**
   - B. **DHW**
   - C. **RELAY KIT**
   - D. **ELECTRIC ROOM TRANSFER FAN CONTROLS**
   - E. **DOMESTIC WATER BOOSTER PUMP CONTROLS DIAGRAM**
   - F. **SUCTION PUMP CONTROLS**
   - G. **CARTRIDGE FILTER REMOVAL**
   - H. **ELECTRIC UNIT HEATER CONTROLS**
   - I. **GLYCOL FEEDER CONTROLS DIAGRAM**
   - J. **CONDENSATE RETURN UNIT CONTROLS**
   - K. **MISCELLANEOUS CONTROLS**

2. **NOT APPLICABLE**

3. **SCALE NOT TO SCALE**

4. **WSU State Hall Renovation**

5. **Author**

6. **PROJECT NUMBER**

7. **ISSUED FOR REV**

8. **DATE**

9. **SHEET NUMBER**

10. **SHOWN NOT APPLIED**

11. **MISCELLANEOUS**

12. **CONTROLS**

13. **SMITHGROUP**

14. **901 Claflin St. Ste. 300, Boston, MA 02116**

15. **STATE HALL RENOVATION**

16. **WSU State Hall**

17. **1/9/2023 1:39:11 PM**

18. **CONDUCTIVE WIRE**

19. **WEIGHT**

20. **NOT TO SCALE**

21. **SCHEMATIC**

22. **BACNET**

23. **NATIONAL**

24. **M8.6**

25. **TYP FOR EACH**

26. **RETURN UNIT**

27. **SMITH GROUP**

28. **SCALE**

29. **HIGH PRESSURE**

30. **SPLIT UNIT**

31. **BELOW THIS LINE**

32. ** disinfection**

33. **AIR CONDITIONING UNIT**

34. **SYSTEM UNIT MANUFACTURER**

35. **ASSOCIATE PROJECT MANAGER**

36. **BMS**
A. FOR MECHANICAL GENERAL NOTES REFER TO SHEET M0.1.

B. PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL VISIT THE SITE AND MAKE CERTAIN THAT THE EXTENT OF DEMOLITION WORK AND ASSOCIATED DIFFICULTY FACTORS ARE CLEARLY UNDERSTOOD. ONCE CONTRACT HAS BEEN SIGNED, NO EXTRA COSTS WILL BE APPROVED FOR DEMOLITION WORK.

C. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED BY THE OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH FACILITY OPERATIONS. IN PARTICULAR, THE EXISTING TO REMAIN STEAM BOILER SERVE THE ADJACENT PRENTIS BUILDING AND SHOULD REMAIN OPERATIONAL THROUGHOUT CONSTRUCTIONS (OTHER THAN SCHEDULED INTERRUPTIONS).

D. THESE DRAWINGS INDICATE THE GENERAL EXTENT OF WORK. THE FULL EXTENT OF DEMOLITION SHALL BE AS REQUIRED BY THE NEW WORK PLANS AND REMOVAL OF MATERIALS AND COMPONENTS REQUIRED FOR INSTALLATION OF THE NEW AND RENOVATED SYSTEMS.

E. ALL MECHANICAL SYSTEMS AND COMPONENTS TO BE REMOVED SHALL BE REMOVED COMPLETELY, INCLUDING ALL ASSOCIATED HANGERS, SUPPORTS, CONTROLS, ETC. ALL OPEN ENDED PIPING SHALL BE CAPPED.

F. ALL ITEMS ON THE DEMOLITION PLANS SHALL BE CONSIDERED EXISTING UNLESS OTHERWISE NOTED.

G. REMOVE EXISTING MECHANICAL DEVICES, EQUIPMENT, PIPING AND ACCESSORIES IN THEIR ENTIRETY BACK TO THEIR POINT OF ORIGIN UNLESS OTHERWISE INDICATED.

H. LOCATION AND QUANTITY OF EQUIPMENT, PIPING AND DEVICES, IF SHOWN, ARE APPROXIMATE.

I. PROTECT EXISTING CEILING, FLOORS AND WALLS.

J. SELECT DEMOLITION MAY BE REQUIRED FOR NEW CONSTRUCTION AND MAY NOT BE DELINEATED ON THIS DRAWING. CAREFULLY COORDINATE DEMOLITION WITH NEW CONSTRUCTION PLANS TO VERIFY ACTUAL EXTENT OF DEMOLITION.

K. EXAMINE THE DRAWINGS OF OTHER TRADES AND BE FAMILIAR WITH THE DEMOLITION REQUIRED BY OTHER TRADES. PERFORM INCIDENTAL MECHANICAL DEMOLITION WORK AND/OR RELOCATION REQUIRED TO FACILITATE THE DEMOLITION WORK OF OTHER TRADES, WHETHER OR NOT SPECIFICALLY INDICATED.

GENERAL SHEET NOTES
UNLESS OTHERWISE INDICATED TO REMAIN, DEMOLISH ALL HVAC DUCTWORK, PIPING, CONTROLS, AND ASSOCIATED DEVICES

A. FOR MECHANICAL GENERAL NOTES REFER TO SHEET M0.1.
B. PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL VISIT THE SITE AND MAKE CERTAIN THAT THE EXTENT OF DEMOLITION WORK AND ASSOCIATED DIFFICULTY FACTORS ARE CLEARLY UNDERSTOOD. ONCE CONTRACT HAS BEEN SIGNED, NO EXTRA COSTS WILL BE APPROVED FOR DEMOLITION WORK.
C. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED BY THE OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH FACILITY OPERATIONS.
D. THESE DRAWINGS INDICATE THE GENERAL EXTENT OF WORK. THE FULL EXTENT OF DEMOLITION SHALL BE AS REQUIRED BY THE NEW WORK PLANS AND REMOVAL OF MATERIALS AND COMPONENTS REQUIRED FOR INSTALLATION OF THE NEW AND RENOVATED SYSTEMS.
E. ALL MECHANICAL SYSTEMS AND COMPONENTS TO BE REMOVED SHALL BE REMOVED COMPLETELY, INCLUDING ALL ASSOCIATED HANGERS, SUPPORTS, CONTROLS, ETC. ALL OPEN ENDED PIPING SHALL BE CAPPED.
F. ALL ITEMS ON THE DEMOLITION PLANS SHALL BE CONSIDERED EXISTING UNLESS OTHERWISE NOTED.
G. ALL ITEMS AND EQUIPMENT REMOVED SHALL REMAIN THE PROPERTY OF THE BUILDING OWNER UNLESS POSSESSION RIGHTS ARE WAIVED.
H. VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING SERVICES PRIOR TO DEMOLITION.
I. REMOVE EXISTING MECHANICAL DEVICES, EQUIPMENT, PIPING AND ACCESSORIES IN THEIR ENTIRETY BACK TO THEIR POINT OF ORIGIN UNLESS OTHERWISE INDICATED.
J. LOCATION AND QUANTITY OF EQUIPMENT, PIPING AND DEVICES, IF SHOWN, ARE APPROXIMATE.
K. PROTECT EXISTING CEILING, FLOORS AND WALLS.
L. SELECT DEMOLITION MAY BE REQUIRED FOR NEW CONSTRUCTION AND MAY NOT BE DELINEATED ON THIS DRAWING. CAREFULLY COORDINATE DEMOLITION WITH NEW CONSTRUCTION PLANS TO VERIFY ACTUAL EXTENT OF DEMOLITION.
M. EXAMINE THE DRAWINGS OF OTHER TRADES AND BE FAMILIAR WITH THE DEMOLITION REQUIRED BY OTHER TRADES. PERFORM INCIDENTAL MECHANICAL DEMOLITION WORK AND/OR RELOCATION REQUIRED TO FACILITATE THE DEMOLITION WORK OF OTHER TRADES, WHETHER OR NOT SPECIFICALLY INDICATED.
UNLESS OTHERWISE INDICATED TO REMAIN, DEMOLISH ALL HVAC DUCTWORK, PIPING, CONTROLS, AND ASSOCIATED DEVICES.

A. FOR MECHANICAL GENERAL NOTES REFER TO SHEET M0.1.

B. PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL VISIT THE SITE AND MAKE CERTAIN THAT THE EXTENT OF DEMOLITION WORK AND ASSOCIATED DIFFICULTY FACTORS ARE CLEARLY UNDERSTOOD. ONCE CONTRACT HAS BEEN SIGNED, NO EXTRA COSTS WILL BE APPROVED FOR DEMOLITION WORK.

C. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED BY THE OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH FACILITY OPERATIONS.

D. THESE DRAWINGS INDICATE THE GENERAL EXTENT OF WORK. THE FULL EXTENT OF DEMOLITION SHALL BE AS REQUIRED BY THE NEW WORK PLANS AND REMOVAL OF MATERIALS AND COMPONENTS REQUIRED FOR INSTALLATION OF THE NEW AND RENOVATED SYSTEMS.

E. ALL MECHANICAL SYSTEMS AND COMPONENTS TO BE REMOVED SHALL BE REMOVED COMPLETELY, INCLUDING ALL ASSOCIATED HANGERS, SUPPORTS, CONTROLS, ETC. ALL OPEN ENDED PIPING SHALL BE CAPPED.

F. ALL ITEMS ON THE DEMOLITION PLANS SHALL BE CONSIDERED EXISTING UNLESS OTHERWISE NOTED.

G. ALL ITEMS AND EQUIPMENT REMOVED SHALL REMAIN THE PROPERTY OF THE BUILDING OWNER UNLESS POSSESSION RIGHTS ARE WAVED.

H. VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING SERVICES PRIOR TO DEMOLITION.

I. REMOVE EXISTING MECHANICAL DEVICES, EQUIPMENT, PIPING AND ACCESSORIES IN THEIR ENTIRETY BACK TO THEIR POINT OF ORIGIN UNLESS OTHERWISE INDICATED.

J. LOCATION AND QUANTITY OF EQUIPMENT, PIPING AND DEVICES, IF SHOWN, ARE APPROXIMATE.

K. PROTECT EXISTING CEILING, FLOORS AND WALLS.

L. SELECT DEMOLITION MAY BE REQUIRED FOR NEW CONSTRUCTION AND MAY NOT BE DELINEATED ON THIS DRAWING. CAREFULLY COORDINATE DEMOLITION WITH NEW CONSTRUCTION PLANS TO VERIFY ACTUAL EXTENT OF DEMOLITION.

M. EXAMINE THE DRAWINGS OF OTHER TRADES AND BE FAMILIAR WITH THE DEMOLITION REQUIRED BY OTHER TRADES. PERFORM INCIDENTAL MECHANICAL DEMOLITION WORK AND/OR RELOCATION REQUIRED TO FACILITATE THE DEMOLITION WORK OF OTHER TRADES, WHETHER OR NOT SPECIFICALLY INDICATED.

GENERAL SHEET NOTES

BS 2016
BR 2016
BQ 2016
BP 2016
BN 2016
BM 2016
BL.6 2016
BL.2 2016
BL 2016
BK.9 2016
BK.5 2016
BK 2016
BJ 2016
BH 2016
BG 2016
BF 2016
BE 2016
BD 2016
BC 2016
BB 2016
BA 2016
B4 2016
B3 2016
B2 2016
B1 2016
CA 2016
CB 2016
CC 2016
B3.5 2016
AR 2016
AP 2016
AO 2016
AM 2016
AH 2016
AG 2016
AF 2016
AD 2016
AB 2016
AA 2016
AK 2016
BT 2016
B4.1 2016
B5.5 2016
B5.8 2016
B7.6 2016

LEVEL 2 MECHANICAL DEMOLITION PLAN

MD2.2
UNLESS OTHERWISE INDICATED TO REMAIN, DEMOLISH ALL HVAC DUCTWORK, PIPING, CONTROLS, AND ASSOCIATED DEVICES.

A. FOR MECHANICAL GENERAL NOTES REFER TO SHEET M0.1.

B. PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL VISIT THE SITE AND MAKE CERTAIN THAT THE EXTENT OF DEMOLITION WORK AND ASSOCIATED DIFFICULTY FACTORS ARE CLEARLY UNDERSTOOD. ONCE CONTRACT HAS BEEN SIGNED, NO EXTRA COSTS WILL BE APPROVED FOR DEMOLITION WORK.

C. ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED BY THE OWNER’S REPRESENTATIVE SO AS NOT TO INTERFERE WITH FACILITY OPERATIONS.

D. THESE DRAWINGS INDICATE THE GENERAL EXTENT OF WORK. THE FULL EXTENT OF DEMOLITION SHALL BE AS REQUIRED BY THE NEW WORK PLANS AND REMOVAL OF MATERIALS AND COMPONENTS REQUIRED FOR INSTALLATION OF THE NEW AND RENOVATED SYSTEMS.

E. ALL MECHANICAL SYSTEMS AND COMPONENTS TO BE REMOVED SHALL BE REMOVED COMPLETELY, INCLUDING ALL ASSOCIATED HANGERS, SUPPORTS, CONTROLS, ETC. ALL OPENEnded PIPING SHALL BE CAPPED.

F. ALL ITEMS ON THE DEMOLITION PLANS SHALL BE CONSIDERED EXISTING UNLESS OTHERWISE NOTED.

G. ALL ITEMS AND EQUIPMENT REMOVED SHALL REMAIN THE PROPERTY OF THE BUILDING OWNER UNLESS POSSESSION RIGHTS ARE WAIVED.

H. VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING SERVICES PRIOR TO DEMOLITION.

I. REMOVE EXISTING MECHANICAL DEVICES, EQUIPMENT, PIPING AND ACCESSORIES IN THEIR ENTIRETY BACK TO THEIR POINT OF ORIGIN UNLESS OTHERWISE INDICATED.

J. LOCATION AND QUANTITY OF EQUIPMENT, PIPING AND DEVICES, IF SHOWN, ARE APPROXIMATE.

K. PROTECT EXISTING CEILING, FLOORS AND WALLS.

L. SELECT DEMOLITION MAY BE REQUIRED FOR NEW CONSTRUCTION AND MAY NOT BE DELINEATED ON THIS DRAWING. CAREFULLY COORDINATE DEMOLITION WITH NEW CONSTRUCTION PLANS TO VERIFY ACTUAL EXTENT OF DEMOLITION.

M. EXAMINE THE DRAWINGS OF OTHER TRADES AND BE FAMILIAR WITH THE DEMOLITION REQUIRED BY OTHER TRADES. PERFORM INCIDENTAL MECHANICAL DEMOLITION WORK AND/OR RELOCATION REQUIRED TO FACILITATE THE DEMOLITION WORK OF OTHER TRADES, WHETHER OR NOT SPECIFICALLY INDICATED.

GENERAL SHEET NOTES

LEVEL 3 MECHANICAL DEMOLITION PLAN

WSU State Hall
Renovation
WSU State Hall
Renovation

LEVEL 3 MECHANICAL DEMOLITION PLAN

1/9/2023 1:39:33 PM

LEVEL 3 MECHANICAL DEMOLITION PLAN

WSU State Hall
Renovation
WSU State Hall
Renovation

LEVEL 3 MECHANICAL DEMOLITION PLAN

WSU State Hall
Renovation
WSU State Hall
Renovation
ROOM COND UNIT

UNIT (ON ROOF) AND ASSOCIATED

COMPONENTS REQUIRED FOR INSTALLATION OF THE NEW AND
HHWS PIPING, DEMO THIS FEED

RIGHTS ARE WAIVED.

FCU-1
2"

HHWR
3"
PUMPED CONDENSATE

HHWS
B4

EXAMINE THE DRAWINGS OF OTHER TRADES AND BE FAMILIAR

LEVEL 4 MECHANICAL DEMOLITION PLAN

1/9/2023 1:39:38 PM

J.

Renovation

THESE DRAWINGS INDICATE THE GENERAL EXTENT OF WORK.

ANY INTERRUPTIONS OF EXISTING SERVICES OR EQUIPMENT

THE FULL EXTENT OF DEMOLITION SHALL BE AS REQUIRED BY

PROPERTY OF THE BUILDING OWNER UNLESS POSSESSION

THE PROPERTY OWNER.

THE PROPERTY OWNER.

GENERAL SHEET NOTES

SHEET TITLE
LEVEL 4 MECHANICAL
DEMO  PLN

SHEET NUMBER
04

ISSUED FOR REV
04

DATE
09-18-23

SMITHGROUP

5143 Cass Ave, Detroit, MI
313.983.3600
smithgroup.com

I.

L.

M.

K.

J.

H.

G.

F.

E.

D.

C.

B.

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