



Department of Public Works
Engineering Division
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April 24, 2017

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**NOTICE OF ADDENDUM
ADDENDUM NO. 5**

**CONTRACT NO. 7939
MADISON MUNICIPAL BUILDING - RENOVATION**

Revise and amend the contract document(s) for the above project as stated in this addendum, otherwise, the original document shall remain in effect.

Please acknowledge this addendum on page E1 of the contract documents and/or in Section E: Bidder's Acknowledgement on Bid Express.

Electronic version of these documents can be found on the Bid Express web site at:

<http://www.bidexpress.com>

If you are unable to download plan revisions associated with the addendum, please contact the Engineering office at 608-266-4751 receive the material by another route.

Sincerely,

Robert F. Phillips, P.E., City Engineer

Cc: Mike Dailey

**NOTICE OF ADDENDUM
ADDENDUM NO. 5**

**CONTRACT NO. 7939
MADISON MUNICIPAL BUILDING - RENOVATION**

This addendum is issued to modify, explain or correct the original Drawings, Specifications, or Contract Documents and is hereby made a part of the contract documents.

This addendum consists of the following documents:

1. **GENERAL CONTRACT CONDITIONS**
This section is not used.
2. **GENERAL QUESTIONS/REQUESTS AND ANSWERS**
See attached architect/engineer documents addressing a question(s) regarding missing mechanical ductwork sizing; as well as 09 30 00 Staining & Varnish Specification scope in Room 260.
3. **ACCEPTABLE EQUIVALENTS**
This section is not used.
4. **SPECIFICATIONS**
See attached additional information from architect/engineer consultant.
5. **DRAWINGS**
See attached additional information from architect/engineer consultant.
6. **PROPOSAL**
This section not used.

Please acknowledge this addendum on page E1 of the contract documents and/or in Section E: Bidder's Acknowledgement on Bid Express.

Electronic version of these documents can be found on Bid Express at <https://www.bidexpress.com/>

If you are unable to download plan revisions associated with the addendum, please contact the Engineering office at 608-266-4751.

For questions regarding this bid, contact:

Mike Schuchardt, Construction Manager Department of Public Works Engineering Division – Facilities Management PH: (608) 261-9249 mschuchardt@cityofmadison.com	Bryan Cooper, Architect IV Department of Public Works Engineering Division – Facilities Management PH: (608) 261-5533 bcooper@cityofmadison.com
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ADDENDUM NO. 005

MSR

Architecture
Interiors and
Urban Design

Date: 4/24/2017
Project Name: **Madison Municipal Building Refurbishment**
Project No: 2014057.00
Project Phase: Bid
Project Location: Madison, WI

Issue Date: 4/24/2017
Bid Date: 3/24/2017

To: Plan Holders
From: MSR Design
701 South 2nd Street, 8th Floor
Minneapolis, MN USA 55401-2294
T 612 375 0336
F 612 342 2216

Introduction

This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated 3/24/2017. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject Bidder to disqualification. Reference made below to Specifications and Drawings shall be used as a guide only. When Specification Sections or Drawings are issued, changes made in Specification or on Drawings will take precedence over narrative explanation below. Contractor shall determine for themselves the work affected by Addendum items. It is assumed that specification sections and drawings are not attached unless specifically indicated as *Attached*.

Attachments

Specification Sections: 09 93 00
Detail Drawings: None
Drawings: M100; M101; M102; M103; M104; M105; M410; M411; M412; M420; M421.
Special Attachments: I. MEP Addendum 005 Narrative

If attachments are not as stipulated above, please notify MSR Design promptly.

Changes to Project Manual

Modifications to Specifications

- I. 09 93 00 Stains and Varnishes: revised section **1.2 and 3.3**

Changes to Drawings

1. M100. See attached MEP Addendum 5 Narrative
2. M101. See attached MEP Addendum 5 Narrative
3. M102. See attached MEP Addendum 5 Narrative
4. M103. See attached MEP Addendum 5 Narrative
5. M104. See attached MEP Addendum 5 Narrative
6. M105. See attached MEP Addendum 5 Narrative
7. M410. See attached MEP Addendum 5 Narrative
8. M411. See attached MEP Addendum 5 Narrative

9. M412. See attached MEP Addendum 5 Narrative

10. M420. See attached MEP Addendum 5 Narrative

11. M421. See attached MEP Addendum 5 Narrative

Substitution requests.

I. None

Clarifications.

I. None.

End of Addendum 005



ADDENDUM No. 5

Client: MSR
Project Name: Madison Municipal Building
Project Location: Madison, Wisconsin

Issue Date: April 24, 2017

Owner: City of Madison
Engineer: MEP Associates, LLC

MEP Project No. M10.15.02

To: Prospective Bidders.

This Addendum forms a part of the Contract Documents and modifies the Bidding Documents dated March 24, 2017, with amendments and additions noted below.

Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may disqualify Bidder.

CHANGES TO BIDDING REQUIREMENTS

- None.

CHANGES TO CONTRACT REQUIREMENTS

- None.

CHANGES TO THE SPECIFICATIONS

- None.

CHANGES TO THE DRAWINGS

- M100: sheet re-issued.
 - Duct sizes, not shown on issue set, shown on plan.
- M101: sheet re-issued.
 - Duct sizes, not shown on issue set, shown on plan.
- M102: sheet re-issued.
 - Duct sizes, not shown on issue set, shown on plan.
- M103: sheet re-issued.
 - Duct sizes, not shown on issue set, shown on plan.
- M104: sheet re-issued.
 - Duct sizes, not shown on issue set, shown on plan.

- M105: sheet re-issued.
 - Duct sizes, not shown on issue set, shown on plan.
- M410: sheet re-issued.
 - Duct sizes, not shown on issue set, shown on plan.
- M411: sheet re-issued.
 - Duct sizes, not shown on issue set, shown on plan.
- M412: sheet re-issued.
 - Duct sizes, not shown on issue set, shown on plan.
- M420: sheet re-issued.
 - Duct sizes, not shown on issue set, shown on plan.
- M421: sheet re-issued.
 - Duct sizes, not shown on issue set, shown on plan.

Revisions have been made to the following drawings and are issued in the form of full-size plans. Edits are indicated by a revision delta and a cloud surrounding the affected portion of the drawing.

END OF ADDENDUM

SECTION 09 93 00
STAINS AND VARNISHES

PART 1 – GENERAL

- 1.1 [RELATED DOCUMENTS](#)
- 1.2 [SCOPE OF WORK](#)
- 1.3 [DEFINITIONS](#)
- 1.4 [SUBMITTALS](#)
- 1.5 [QUALITY ASSURANCE](#)
- 1.6 [DELIVERY, STORAGE, AND HANDLING](#)
- 1.7 [PROTECTION](#)
- 1.8 [JOB CONDITIONS](#)

PART 2 – PRODUCTS

- 2.1 [MATERIALS AND MANUFACTURERS](#)

PART 3 – EXECUTION

- 3.1 [EXAMINATION](#)
- 3.2 [PREPARATION](#)
- 3.3 [STRIPPING](#)
- 3.4 [STAINING AND VARNISHING](#)
- 3.5 [APPLICATION](#)
- 3.6 [FIELD QUALITY CONTROL](#)
- 3.7 [CLEANING](#)
- 3.8 [PROTECTION](#)
- 3.9 [SCHEDULE](#)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Applicable provisions of Division 1 govern work of this Section.

1.2 SCOPE OF WORK

- A. Work of this Section includes on-site surface preparation, stripping, wood staining and finishing of new and existing finished wood items and surfaces. The terms "Varnish," "Transparent Finish" and "Shellac" are used interchangeably in this specification section and imply the same finish material, per the products listings. Components and surfaces to be finished include the following:

- 1 Room 260: Strip down to original, unfinished wood surface per 3.2 and 3.3 below, and refinish all existing wood; doors, casing, wainscot, paneling, **window trim**, beam support moldings, base and shoe per finishing sections below.
- 2 Room 260: Finish all new wood to match refinished, existing wood per the finishing sections below.
- 3 Second Floor Corridor 263 and existing, historic wall bases at Level 2 and 3: Prepare per 3.2 and 3.3 below and finish all existing wood; doors, transoms, casings, wainscot.
- 4 All Historic doors and frames, architraves, wood wall bases (either left in place or relocated): Prepare per 3.2 and 3.3 below and finish per finishing sections below.
- 5 All new wood and wood handrails: Finish per finishing sections below.

- B. Related Work.

1. Section 06 03 12 – Historic Wood Repair
2. Section 08 21 10 - Wood Door Rehabilitation.
3. Section 09 90 23 – Interior Painting.

1.3 DEFINITIONS

- A. Stain and Transparent Finish includes coating systems materials, primers, emulsions, stains,

1 sealers and fillers, and other applied materials whether used as prime, intermediate, or finish
2 transparent coats on finished wood.
3 B. Refinishing is defined as all the process(es) necessary to restore woodwork. Stripping is
4 defined as the process of removing existing coatings from woodwork without damage to the
5 wood. Finishing is defined as the process of applying stain and protective coating and all
6 related preparatory and follow-up tasks.

7
8 **1.4 SUBMITTALS**

- 9
10 A. Product Data: Manufacturer's technical information, label analysis, and application instructions
11 for each material proposed for use.
12
13 1. List each material and cross-reference the specific coating and finish system and
14 application. Identify each material by the manufacturer's catalog number and general
15 classification. Indicate VOC content.
16
17 B. Samples for initial and final color selection in the form of manufacturer's color charts.
18
19 C. Mock-ups and Samples: Refer to Section 01 43 39. Prepare samples of staining and shellac
20 finish, on new and existing woods, and stripping on existing wood for review and approval by
21 Architect. Include one existing door, and a minimum of four 10' long lengths of wood trim of
22 each type as selected by the Architect. Duplicate finishes of Owner samples.
23
24 1. Sample submission must include example of blending new and existing woods and
25 stain and light and dark areas of wood to produce even, matched colors and tones.
26
27 D. Mock-up Room 260: Refer to Section 01 43 39. Provide full-finish example in mock-up Room
28 260, 4 feet wide by height of wainscot, until required sheen, color and texture are achieved
29 and approved by Architect.
30
31 1. Apply stain and varnish on sample surfaces in accordance with the schedule or as
32 specified. After finishes are accepted, the mock-up suite will be used as a basis for
33 evaluation of stain and varnish during other finished work.
34
35 E. All samples shall be produced by contractor's staff proposed to work on the project.
36
37 F. Samples of stripping, cleaning, bleaching and staining materials with manufacturer product
38 data for each.
39

40 **1.5 QUALITY ASSURANCE**

- 41
42 A. Provide stain and finish produced by the same manufacturers stated in the Products section.
43
44 B. Coordination of Work: Review other applicable sections in which primers are provided to
45 ensure compatibility of the total systems for various substrates. On request, furnish
46 information on characteristics of finish materials to ensure use of compatible primers.
47
48 1. Notify the Architect of problems anticipated using the materials specified.
49
50 C. Material Quality: Provide the manufacturer's best quality stain and varnish material of the
51 various coating types specified. Material containers not displaying manufacturer's product
52 identification will not be acceptable.
53
54 1. The objectives of wood refinishing and cleaning are to give wood surfaces a smooth,
55 uniform appearance consistent with the original design intent, and to preserve the
56 inherent patina. Splotches, streaks, runs, or any other kind of spotty appearance
57 shall not be accepted. Too aggressive cleaning or sanding shall not be accepted.
58 2. Sample areas shall be prepared which shall form a standard for wood refinishing.
59 3. Products that comply with qualitative requirements of applicable Federal Specifications,
60 yet differ in quantitative requirements, may be considered for use when acceptable to
61 the Architect. Furnish material data and manufacturer's certificate of performance to

1 Architect for proposed substitutions.
2
3

- 4 D. Contractor Qualifications: Contractor performing work of this Section shall have no less than
5 ten documented years of experience providing highest quality staining and varnishing work
6 including blending of colors and touching-up or restoring ornamental wood on at least three
7 similar sized and quality projects. Contractor's key staff on project shall each have a minimum
8 of three years of experience in this trade including experience on at least two of three
9 documented similar projects. Key staff shall be of sufficient number to accomplish required
10 work within required project schedule.
11

12
13 **1.6 DELIVERY, STORAGE, AND HANDLING**
14

- 15 A. Deliver materials to the job site in the manufacturer's original, unopened packages and
16 containers bearing manufacturer's name and label and the following information:
17
18 1. Product name or title of material.
19 2. Product description (generic classification or binder type).
20 3. Federal Specification number, if applicable.
21 4. Manufacturer's stock number and date of manufacture.
22 5. Contents by volume, for pigment and vehicle constituents.
23 6. Thinning instructions.
24 7. Application instructions.
25 8. Color name and number.
26
27 B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum
28 ambient temperature of 45°F. Maintain containers used in storage in a clean condition, free of
29 foreign materials and residue.
30
31 C. Do not store materials throughout building, but in designated area. Store flammable materials
32 in metal safety containers.
33
34 D. Provide appropriate type and size fire extinguishers in place of storage.
35
36 E. Protect materials from freezing. Keep storage area neat and orderly. Remove application
37 rags and waste from building daily. Take necessary measures to ensure that workers and
38 work areas are protected from fire and health hazards resulting from handling, mixing, and
39 application.
40

41 **1.7 PROTECTION**
42

- 43 A. Cover materials and surfaces, including floors, adjoining work in progress with clean drop
44 cloths or canvas.
45
46 B. Remove hardware, accessories, plates, lighting fixtures and similar items or otherwise mask
47 item for protection from staining and varnishing materials. Stain color and clear finishes will
48 continue under any hardware or plates that are in place.
49
50 C. The contractor shall be responsible to provide the proper respiratory equipment, as necessary,
51 for workers doing the staining and varnishing.
52
53 D. The contractor shall take reasonable precautions to contain materials and odors to areas of
54 work.
55

56 **1.8 JOB CONDITIONS**
57

- 58 A. All staining and varnishing work shall be provided on site after installation of wood products
59 requiring work of this Section except for backpriming.
60
61 B. Apply stain and varnish only when the temperature of surfaces to be finished and surrounding

1 air temperatures are between 50°F and 90°F.

- 2
3 C. Do not apply stain or varnish when the relative humidity exceeds 85 percent, at temperatures
4 less than 5°F above the dew point, or to damp or wet surfaces.
5
6 D. Contractor shall be responsible for providing adequate heat and humidity control in work
7 space.
8
9

10 **PART 2 - PRODUCTS**

11
12 **2.1 MATERIALS AND MANUFACTURERS**

- 13
14 A. Manufacturers: Refer to subsections below.
15
16 B. Stripper:
17
18 1. Strippers: Nonvolatile, nonsolvent, low odor type product using products such as
19 organic esters. Solvent-based; methylene chloride type strippers are not allowed.
20
21 2. Back to Nature Multi-Strip or equal as approved by Architect.
22
23 3. Rinse shall be mineral spirits or other materials as recommended by the stripper
24 manufacturer.
25
26 C. Bleach: Not permitted.
27
28 D. Stain [**CCT-1**].
29
30 1. Existing Oak Wood: Old Masters Wiping Stain, Natural Walnut 12804.
31
32 2. Stain mix for woods receiving varnish shall be adjusted to compensate for color of
33 varnish and submitted to Architect for approval.
34
35 E. Varnish [**CCT-2**]:
36
37 3. Type I Varnish: Graham Aqua Borne Ceramic-Ceremithane Satin tinted to match
38 Amber Shellac.
39
40 4. Type II Varnish, Second Coat & Finish Coat: Graham Aqua Borne Ceramithane Catin
41 finish.
42
43
44 F. Filler/Sealer: As required.
45
46 G. Accessory Materials:
47
48 1. Solvent as recommended by Pratt and Lambert.
49 2. Tack Cloths.
50 3. Wood glue.
51 4. Sandpaper: Maximum grit shall be "00".
52

53 **PART 3 - EXECUTION**

54
55 **3.1 EXAMINATION**

- 56
57 A. Examine substrates and conditions under which staining and varnishing will be performed for
58 compliance with requirements for application of materials. Do not begin application until
59 unsatisfactory conditions have been corrected. Start of finishing will be construed as the
60 Applicator's acceptance of surfaces and conditions within a particular area.
61

1 **3.2 PREPARATION**
2
3

- 4 A. General Procedures: Remove hardware and hardware accessories, plates, machined
5 surfaces, lighting fixtures, and similar items in place that are not to be finished or provide
6 surface-applied protection prior to beginning work. Remove these items if necessary for
7 complete finishing of the wood items. Following completion of staining and varnishing
8 operations in each space or area, have items reinstalled by workers skilled in the trades
9 involved.
10
11 B. Surface Preparation of Wood: Clean and prepare surfaces to be finished in accordance with
12 the manufacturer's instructions for each particular substrate condition and as specified.
13
14 1. Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits,
15 and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.
16
17 2. Back prime wood trim and casing receiving clear finishes prior to installation with spar
18 varnish compatible with materials and finishes listed in the Products section of this
19 specification. Include edges, ends and backsides of wood trim.
20
21 3. Seal tops, bottoms, and cutouts of wood doors with a heavy coat of varnish or sealer
22 compatible with surface finishes prior to installation or hardware installation.
23
24 C. Coordinate to have wood doors which are planned to be removed from existing openings, per
25 the drawings, to have tops, bottoms and edges finished.

26 **3.3 STRIPPING**
27

- 28 A. **Room 260 only, excluding Judge's Bench:** Remove all existing finishes from wood ~~doors,~~
29 ~~windows, handrails and casing~~ **doors, casing, wainscot, paneling, window trim, beam**
30 **support moldings, base and shoe** using specified remover and methods recommended by
31 remover manufacturer.
32
33 B. Wash wood surfaces with mineral spirits and allow to dry.
34
35 C. **Historic wood outside Room 260, and Judge's Bench in Room 260:** Sand lightly with
36 sandpaper and remove all dust with tackcloths.
37
38 D. Fill minor holes, sand out scratches and gouges, and for doors as required by the Door
39 Schedule.

40 **3.4 STAINING AND VARNISHING**
41

- 42 A. Stain and varnish wood after installation
43
44 B. New and reused wood shall be stained to match samples submitted by contractor and
45 approved by Architect. Contractor shall carefully blend staining as required to match old and
46 new wood, and compensate for color differences in heartwood and sapwood and
47 inconsistencies in the color of the natural wood.
48
49 C. Finish woodwork on edges, tops and bottoms in same manner as approved for faces.
50
51 D. Stain all stripped wood where original stain is deteriorated or lost, and all new wood as follows:
52
53 1. Apply one or more coats of stain as necessary to match approved samples and mock-
54 ups.
55 2. Seal stained wood.
56
57 E. Varnish.
58
59 1. Varnish shall not be thinned.
60 2. Do not apply in temperatures less than 70 degrees F.
61 3. Apply evenly without runs, sags or brush marks.

1
2 **3.5 APPLICATION**
3

- 4 A. Apply finishes in accordance with manufacturer's directions. Use brush applicators and
5 techniques best suited for wood material and type of finish material being applied.
6
7 B. Do not varnish over dirt, scale, grease, moisture, scuffed surfaces, or conditions detrimental to
8 formation of a durable film.
9
10 1. The number of coats and film thickness required is the same regardless of the
11 application method.
12 2. Do not apply succeeding coats until the previous coat has cured as recommended by
13 the manufacturer.
14 3. Sand between applications where sanding is required to produce an even smooth
15 surface in accordance with the manufacturer's directions and project requirements.
16 4. Apply additional coats of final varnish until film is of uniform finish, and appearance.
17 Give special attention to ensure that surfaces, including edges, corners, crevices,
18 welds, and exposed fasteners, receive a dry film thickness equivalent to that of flat
19 surfaces.
20 5. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures,
21 convector covers, covers for finned tube radiation, grilles, and similar components are
22 in place. Extend coatings in these areas as required to maintain the system integrity
23 and provide desired protection.
24 6. Finish surfaces behind movable equipment and furniture same as similar exposed
25 surfaces.
26 7. Allow sufficient time between successive coats to permit proper drying. Do not recoat
27 until previous coat has dried to where it feels firm, and does not deform or feel sticky
28 under moderate thumb pressure and where application of another coat of finish does
29 not cause lifting or loss of adhesion of the undercoat.
30
31 C. Completed Work: Match approved samples for color, texture, and coverage. Refinish
32 unacceptable work.
33

34 **3.6 FIELD QUALITY CONTROL**
35

- 36 A. The Owner reserves the right to invoke the following test procedure at any time and as often
37 as the Owner deems necessary during the period when finishes are being applied:
38
39 1. The Owner will engage the services of an independent testing laboratory to sample the
40 finish materials being used. Samples of materials delivered to the project will be taken,
41 identified, sealed, and certified in the presence of the Contractor.
42
43 2. The testing laboratory will perform appropriate tests for the following characteristics as
44 required by the Owner:
45
46 a. Quantitative materials analysis.
47 b. Abrasion resistance.
48 c. Apparent reflectivity.
49 d. Flexibility.
50 e. Washability.
51 f. Absorption.
52 g. Accelerated weathering.
53 h. Accelerated yellowness.
54
55 3. If test results show material being used does not comply with specified requirements,
56 the Contractor may be directed to stop work, remove noncomplying finish materials
57 from job, pay for testing, refinish surfaces that were coated with rejected finishes.
58

59 **3.7 CLEANING**
60

- 61 A. Cleanup: At the end of each work day, remove empty cans, rags, rubbish, and other discarded

1 paint materials from the site.
2

- 3 B. Upon completion of finishing, clean glass and stain-spattered surfaces. Remove spattered
4 stain by washing and scraping, using care not to scratch or damage adjacent finished
5 surfaces.
6
7 C. Touch up varnish and stain after all other trades have completed their work in preparation for
8 final acceptance of work.
9

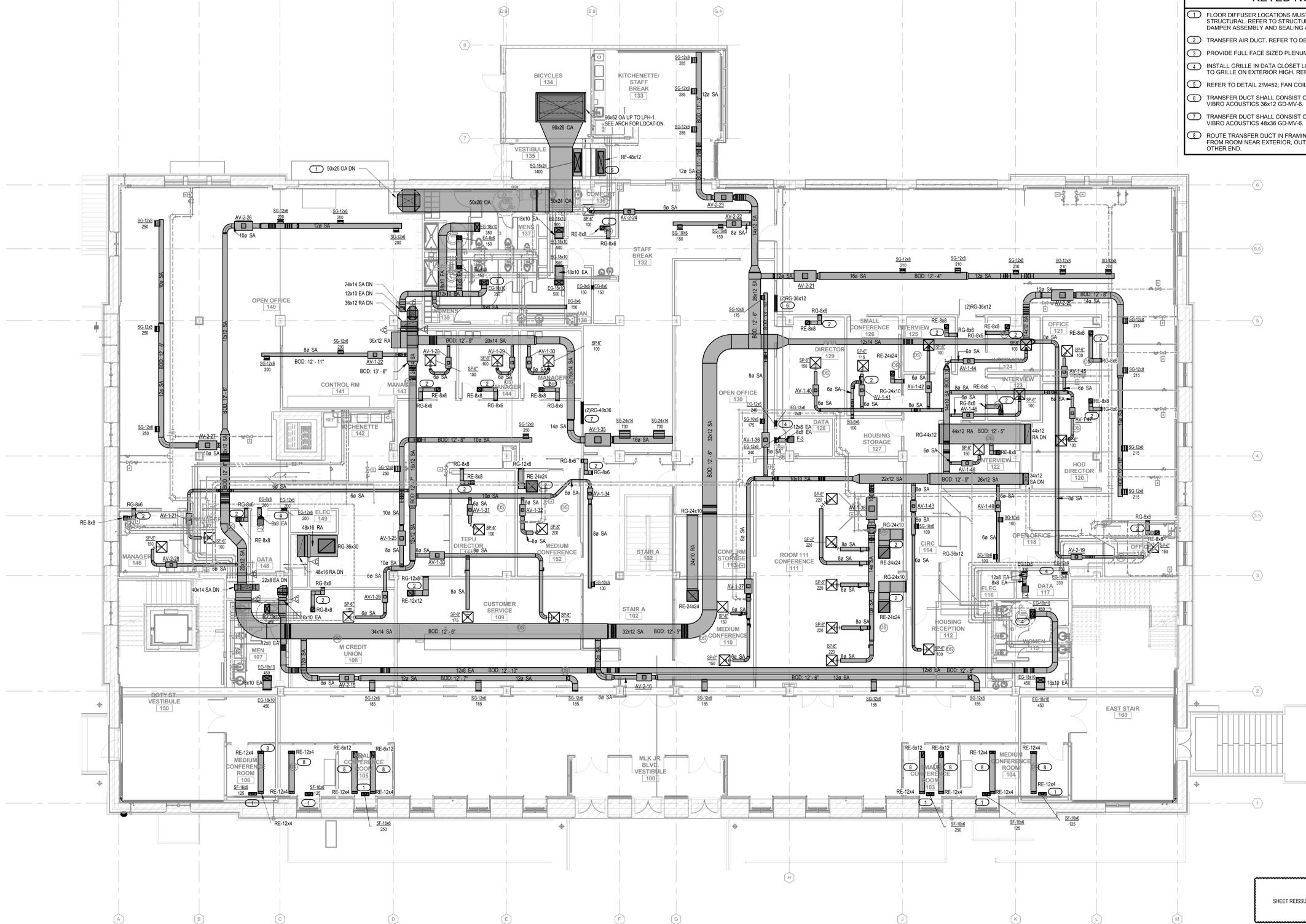
10 **3.8 PROTECTION**

- 11
12 A. Protect work of other trades, whether to be painted or not, against damage by this section.
13 Correct damage by cleaning, repairing or replacing, and repainting, as acceptable to Architect
14 and Owner Project representative.
15
16 B. Provide "wet varnish" signs to protect newly applied finishes. Remove temporary protective
17 wrappings provided by other subcontractors as part of this contract for protection of their work
18 after completion of finishing work.
19
20 C. Touch up and restore damaged or defaced finished surfaces at completion of project
21 construction activities of other trades and in compliance with final punch list by Architect.
22

23 **3.9 SCHEDULE: REFER TO DRAWINGS FOR SPECIFIC AREAS OF SCOPE**

- 24
25 A. Historic wood doors:
26 1. One or more coats of CCT-1 wood stain as necessary to match approved sample.
27 2. One coat of CCT-2 Type I varnish.
28 3. One coat of CCT-2 Type II varnish and one coat 50% gloss/50% satin.
29
30 B. Historic wood wainscot and/or paneling, Room 260 ceiling beams and other exposed framing
31 members, Room 260 window trim:
32 1. One or more coats of CCT-1 wood stain as approved to match approved sample.
33 2. One coat of CCT-2 Type I varnish.
34 4. Two coats of CCT-2 Type II varnish.
35
36
37
38
39

END OF SECTION 09 93 00



- ### GENERAL NOTES
1. ALL PROVIDED DETAILS APPLY; REFER TO DETAIL SHEET.
 2. HYDRONIC PIPING AND EQUIPMENT IS SHOWN ON DUCTWORK PLAN FOR REFERENCE ONLY. REFER TO M200 SERIES FOR HYDRONIC PLANS.
 3. ALL EXPOSED TO VIEW DUCTWORK SHALL BE UNINSULATED, AND PREPPED FOR PAINTING.
 4. NOTE THAT HISTORICAL / ARCHITECTURAL CONCERNS DICTATE NO PIPING, PLUMBING, OR HVAC ELEMENTS APPEAR IN CERTAIN AREAS. REFER TO ARCHITECTURAL PLANS FOR COORDINATION OF EXCLUSION ZONES.
 5. COMPOUND CEILING PANELS SHOULD GENERALLY NOT BE PENETRATED FOR HANGERS. ARCHITECTURAL PROVIDES UNISTRUT BETWEEN. REFER TO ARCHITECTURAL.
 6. OFFSETS FOR DUCTWORK, EG. AROUND BEAMS, SHALL BE 45 DEGREE MITER OR GORE. 90 DEGREE OFFSETS NOT ALLOWED.
 7. REFER TO M200 SHEETS FOR SENSOR LOCATIONS.
 8. ACCESS TO FIRE AND COMBINATION DAMPERS SHALL BE ON THE FLOOR IN WHICH THEY ARE SHOWN.
 9. ALL FLOORS ARE FIRE BARRIERS; PROVIDE NECESSARY DAMPER AND SEALANT FOR ALL FLOOR PENETRATIONS.
- ### KEYED NOTES
- 1 FLOOR DIFFUSER LOCATIONS MUST COORDINATE WITH STRUCTURAL. REFER TO STRUCTURAL PLANS. INCLUDE FIRE DAMPER ASSEMBLY AND SEALING AT FLOOR.
 - 2 TRANSFER AIR DUCT. REFER TO DETAIL 5M451.
 - 3 PROVIDE FULL FACE SIZED PLENUM BOX ABOVE EXHAUST GRILLE.
 - 4 INSTALL GRILLE IN DATA CLOSET LOW. CONNECT BY 12X3 DUCT UP TO GRILLE ON EXTERIOR HIGH. REFER TO DETAIL 6M452.
 - 5 REFER TO DETAIL 2M452; FAN COIL UNIT MOUNTING.
 - 6 TRANSFER DUCT SHALL CONSIST OF A SOUND DAMPENER AS VIBRO ACOUSTICS 36X12 GD-MV-6.
 - 7 TRANSFER DUCT SHALL CONSIST OF A SOUND DAMPENER AS VIBRO ACOUSTICS 48X36 GD-MV-6.
 - 8 ROUTE TRANSFER DUCT IN FRAMING SPACE ABOVE CEILING. INLET FROM ROOM NEAR EXTERIOR. OUTLET TO OPEN CORRIDOR AT OTHER END.

SHEET REISSUED WITH DUCT SIZES SHOWN.

1 LEVEL 1 MECHANICAL DUCTWORK PLAN
1/8" = 1'-0"



**Madison Municipal
Building Renovation**

BPW Project #7939
215 Martin Luther King, Jr. Blvd
Madison, WI 53703

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Engineer under the Laws of the State of Wisconsin.
ENGINEER SEAL

Signature: _____

Print Names: _____

Date: _____ License No: _____

ISSUE

MARK	DATE	DESCRIPTION
24	03 2017	BID SET
5	24 04 2017	ADDENDUM #5

PROJECT NO: 2014057

PROJECT PHASE: BID SET

DRAWN BY: ALH/BTB/JTG CHECKED BY: RCA

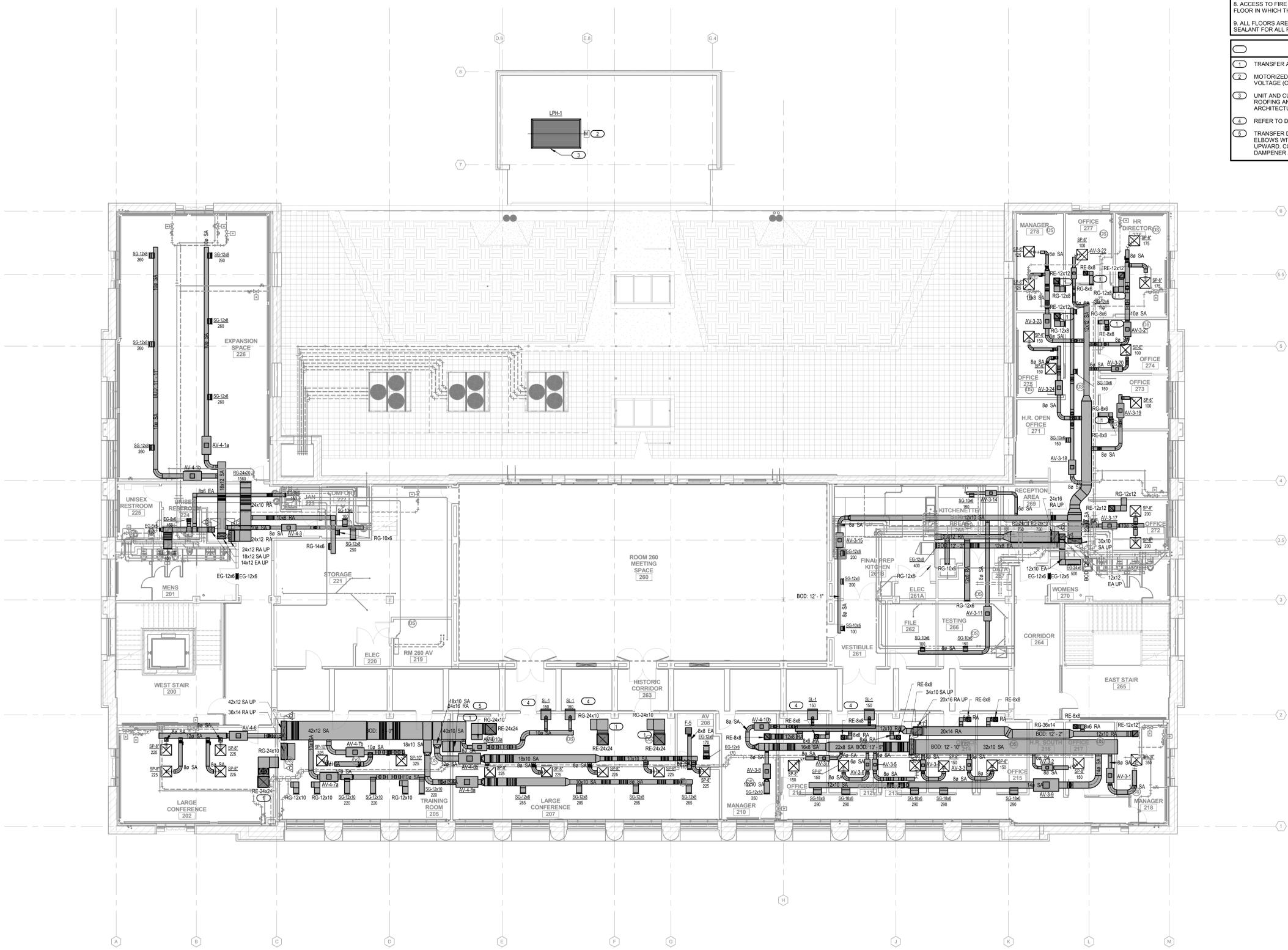
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**LEVEL ONE
MECHANICAL
DUCTWORK PLAN**

EXHIBIT I

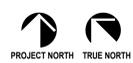
M101

- GENERAL NOTES**
1. ALL PROVIDED DETAILS APPLY. REFER TO DETAIL SHEET.
 2. HYDRONIC PIPING AND EQUIPMENT IS SHOWN ON DUCTWORK PLAN FOR REFERENCE ONLY. REFER TO M200 SERIES FOR HYDRONIC PLANS.
 3. ALL EXPOSED TO VIEW DUCTWORK SHALL BE UNINSULATED, AND PREPARED FOR PAINTING.
 4. NOTE THAT HISTORICAL / ARCHITECTURAL CONCERNS DICTATE NO PIPING, PLUMBING, OR HVAC ELEMENTS APPEAR IN CERTAIN AREAS. REFER TO ARCHITECTURAL PLANS FOR COORDINATION OF EXCLUSION ZONES.
 5. COMPOUND CEILING PANELS SHOULD GENERALLY NOT BE PENETRATED FOR HANGERS. ARCHITECTURAL PROVIDES UNISTRUT BETWEEN. REFER TO ARCHITECTURAL.
 6. OFFSETS FOR DUCTWORK, EG. AROUND BEAMS, SHALL BE 45 DEGREE MITER OR GORE. 90 DEGREE OFFSETS NOT ALLOWED.
 7. REFER TO M200 SHEETS FOR SENSOR LOCATIONS.
 8. ACCESS TO FIRE AND COMBINATION DAMPERS SHALL BE ON THE FLOOR IN WHICH THEY ARE SHOWN.
 9. ALL FLOORS ARE FIRE BARRIERS; PROVIDE NECESSARY DAMPER AND SEALANT FOR ALL FLOOR PENETRATIONS.
- KEYED NOTES**
1. TRANSFER AIR DUCT. REFER TO DETAIL 5M451.
 2. MOTORIZED TWO-POSITION DAMPER, CONTROLLED BY LOW VOLTAGE (CONTROL) WIRING/ACTUATOR.
 3. UNIT AND CURB PROVIDED BY MECHANICAL CONTRACTOR. ROOFING AND FLASHING BY GENERAL CONTRACTOR. REFER TO ARCHITECTURAL.
 4. REFER TO DETAIL 4M451; SLOT DIFFUSER DETAIL.
 5. TRANSFER DUCT SHOWN SHALL CONSIST OF 2 90 DEGREE ELBOWS WITH OPENING SIZES AS NOTED IN PLANS DIRECTED UPWARD. CONNECT ELBOWS AT WALL PARTITION WITH SOUND DAMPENER AS VIBRO ACCUSTICS 24x16 GD-MV-6.



1 LEVEL 2 MECHANICAL DUCTWORK PLAN
1/8" = 1'-0"

SHEET REISSUED WITH DUCT SIZES SHOWN.



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BPW Project #7939
215 Martin Luther King, Jr. Blvd
Madison, WI 53703

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ENGINEER SEAL

Signature: _____
Print Names: _____
Date: _____ License No: _____

MARK	DATE	DESCRIPTION
1	24.03.2017	BID SET
5	24.04.2017	ADDENDUM #5

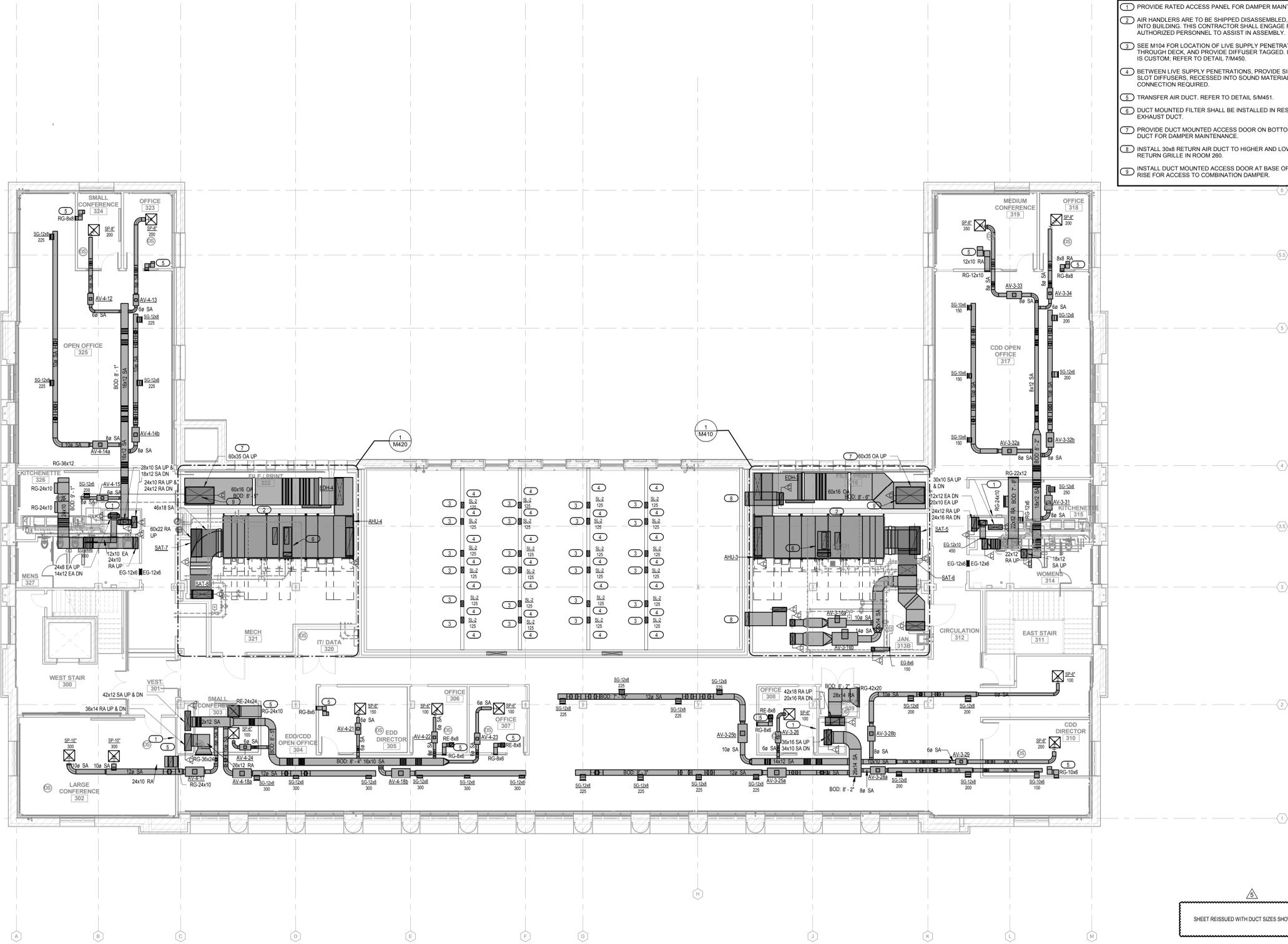
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PROJECT PHASE: BID SET
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LEVEL TWO MECHANICAL DUCTWORK PLAN

EXHIBIT I M102

- GENERAL NOTES**
1. ALL PROVIDED DETAILS APPLY. REFER TO DETAIL SHEET.
 2. HYDRONIC PIPING AND EQUIPMENT IS SHOWN ON DUCTWORK PLAN FOR REFERENCE ONLY. REFER TO M200 SERIES FOR HYDRONIC PLANS.
 3. ALL EXPOSED TO VIEW DUCTWORK SHALL BE UNINSULATED, AND PREPARED FOR PAINTING.
 4. NOTE THAT HISTORICAL / ARCHITECTURAL CONCERNS DICTATE NO PIPING, PLUMBING, OR HVAC ELEMENTS APPEAR IN CERTAIN AREAS. REFER TO ARCHITECTURAL PLANS FOR COORDINATION OF "EXCLUSION ZONES."
 5. COMPOUND CEILING PANELS SHOULD GENERALLY NOT BE PENETRATED FOR HANGERS. ARCHITECTURAL PROVIDES UNISTRUT BETWEEN. REFER TO ARCHITECTURAL.
 6. OFFSETS FOR DUCTWORK, E.G. AROUND BEAMS, SHALL BE 45 DEGREE MITER OR GORE, 90 DEGREE OFFSETS NOT ALLOWED.
 7. REFER TO M200 SHEETS FOR SENSOR LOCATIONS.
 8. ACCESS TO FIRE AND COMBINATION DAMPERS SHALL BE ON THE FLOOR IN WHICH THEY ARE SHOWN.
 9. ALL FLOORS ARE FIRE BARRIERS. PROVIDE NECESSARY DAMPER AND SEALANT FOR ALL FLOOR PENETRATIONS.

- KEYED NOTES**
1. PROVIDE RATED ACCESS PANEL FOR DAMPER MAINTENANCE.
 2. AIR HANDLERS ARE TO BE SHIPPED DISASSEMBLED. FOR ENTRY INTO BUILDING. THIS CONTRACTOR SHALL ENGAGE FACTORY-AUTHORIZED PERSONNEL TO ASSIST IN ASSEMBLY.
 3. SEE M104 FOR LOCATION OF LIVE SUPPLY PENETRATIONS THROUGH DECK, AND PROVIDE DIFFUSER TAGGED. INSTALLATION IS CUSTOM; REFER TO DETAIL 7/M450.
 4. BETWEEN LIVE SUPPLY PENETRATIONS, PROVIDE SIMILAR LINEAR SLOT DIFFUSERS. RECESSED INTO SOUND MATERIAL. NO CONNECTION REQUIRED.
 5. TRANSFER AIR DUCT. REFER TO DETAIL 5/M451.
 6. DUCT MOUNTED FILTER SHALL BE INSTALLED IN RESTROOM EXHAUST DUCT.
 7. PROVIDE DUCT MOUNTED ACCESS DOOR ON BOTTOM OF 60x16 DUCT FOR DAMPER MAINTENANCE.
 8. INSTALL 30x8 RETURN AIR DUCT TO HIGHER AND LOWER EXISTING RETURN GRILLE IN ROOM 260.
 9. INSTALL DUCT MOUNTED ACCESS DOOR AT BASE OF VERTICAL RISE FOR ACCESS TO COMBINATION DAMPER.



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 Print Names: _____
 Date: _____ License No.: _____

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24	03 2017	BID SET
5	24 04 2017	ADDENDUM #5

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 PROJECT PHASE: BID SET
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**ROOF ATTIC
 MECHANICAL
 DUCTWORK PLAN**

EXHIBIT I

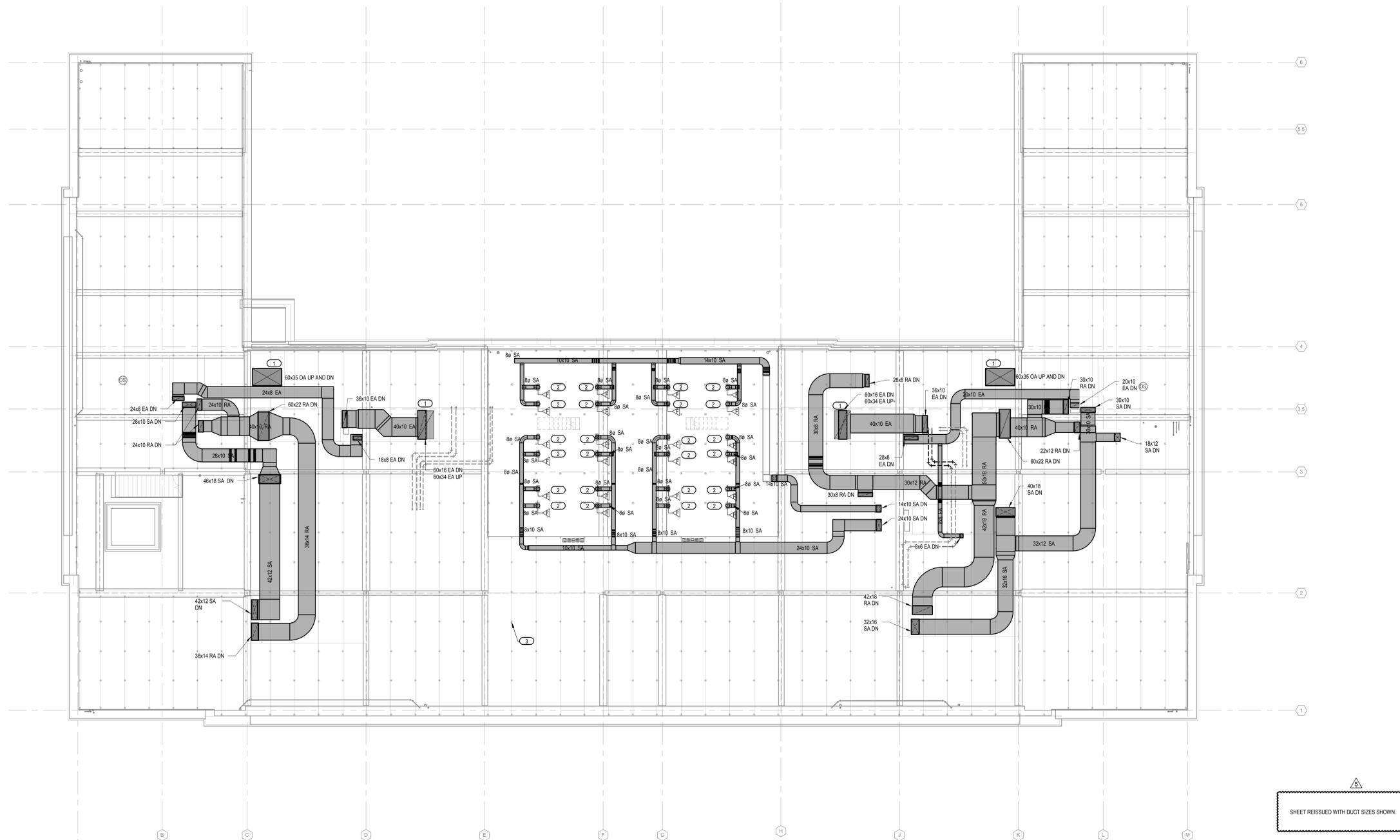
M104

GENERAL NOTES

1. ALL PROVIDED DETAILS APPLY; REFER TO DETAIL SHEET.
2. HYDRONIC PIPING AND EQUIPMENT IS SHOWN ON DUCTWORK PLAN FOR REFERENCE ONLY. REFER TO M200 SERIES FOR HYDRONIC PLANS.
3. ALL EXPOSED TO VIEW DUCTWORK SHALL BE UNINSULATED, AND PREPPED FOR PAINTING.
4. NOTE THAT HISTORICAL / ARCHITECTURAL CONCERNS DICTATE NO PIPING, PLUMBING, OR HVAC ELEMENTS APPEAR IN CERTAIN AREAS. REFER TO ARCHITECTURAL PLANS FOR COORDINATION OF "EXCLUSION ZONES."
5. COMPOUND CEILING PANELS SHOULD GENERALLY NOT BE PENETRATED FOR HANGERS. ARCHITECTURAL PROVIDES UNISTRUT BETWEEN. REFER TO ARCHITECTURAL.
6. OFFSETS FOR DUCTWORK, EG. AROUND BEAMS, SHALL BE 45 DEGREE MITER OR GORE. 90 DEGREE OFFSETS NOT ALLOWED.
7. REFER TO M200 SHEETS FOR SENSOR LOCATIONS.
8. ACCESS TO FIRE AND COMBINATION DAMPERS SHALL BE ON THE FLOOR IN WHICH THEY ARE SHOWN.
9. ALL FLOORS ARE FIRE BARRIERS; PROVIDE NECESSARY DAMPER AND SEALANT FOR ALL FLOOR PENETRATIONS.

KEYED NOTES

- CONNECT DUCT TO LOUVERED PENTHOUSE THROAT SIZE PLENUM BOX. REFER TO SCHEDULE. INCLUDE FIRE DAMPER AT ATTIC SPACE DECK, SHOWN BELOW.
- SUPPLY DUCT PENETRATION THROUGH DECK SHALL INCLUDE FIRE DAMPER, AS SHOWN. PENETRATION MUST BE COORDINATED WITH STRUCTURAL. REFER TO STRUCTURAL PLANS. INSTALLATION IS CUSTOM; REFER TO DETAIL 7M450.
- 4x4 POSTS SHOWN FOR REFERENCE ONLY. EXACT LOCATION SHALL BE VERIFIED IN FIELD. CONTRACTOR SHALL LAY OUT DUCT TO AVOID. WHERE NECESSARY, COORDINATE RELOCATION/ITERATION OF POSTS WITH GENERAL CONTRACTOR. REFER TO STRUCTURAL DRAWINGS.

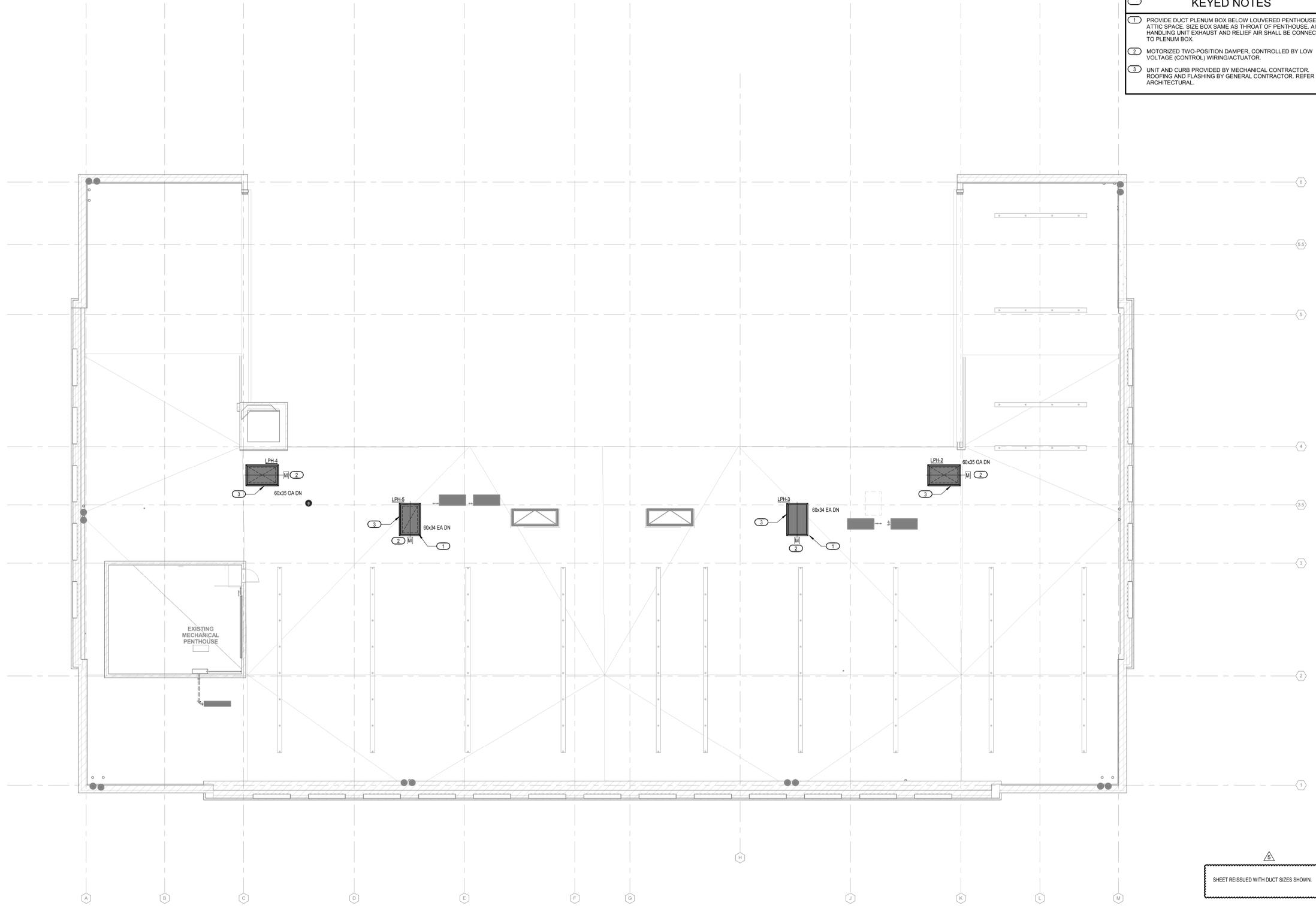


1 ATTIC SPACE MECHANICAL DUCTWORK PLAN
 1/8" = 1'-0"

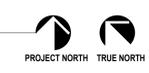


- GENERAL NOTES**
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 8. ACCESS TO FIRE AND COMBINATION DAMPERS SHALL BE ON THE FLOOR IN WHICH THEY ARE SHOWN.
 9. ALL FLOORS ARE FIRE BARRIERS; PROVIDE NECESSARY DAMPER AND SEALANT FOR ALL FLOOR PENETRATIONS.

- KEYED NOTES**
- (1) PROVIDE DUCT PLENUM BOX BELOW LOUVERED PENTHOUSE IN ATTIC SPACE. SIZE BOX SAME AS THROAT OF PENTHOUSE. AIR HANDLING UNIT EXHAUST AND RELIEF AIR SHALL BE CONNECTED TO PLENUM BOX.
 - (2) MOTORIZED TWO-POSITION DAMPER, CONTROLLED BY LOW VOLTAGE (CONTROL) WIRING/ACTUATOR.
 - (3) UNIT AND CURB PROVIDED BY MECHANICAL CONTRACTOR. ROOFING AND FLASHING BY GENERAL CONTRACTOR. REFER TO ARCHITECTURAL.



1 ROOF MECHANICAL DUCTWORK PLAN
1/8" = 1'-0"



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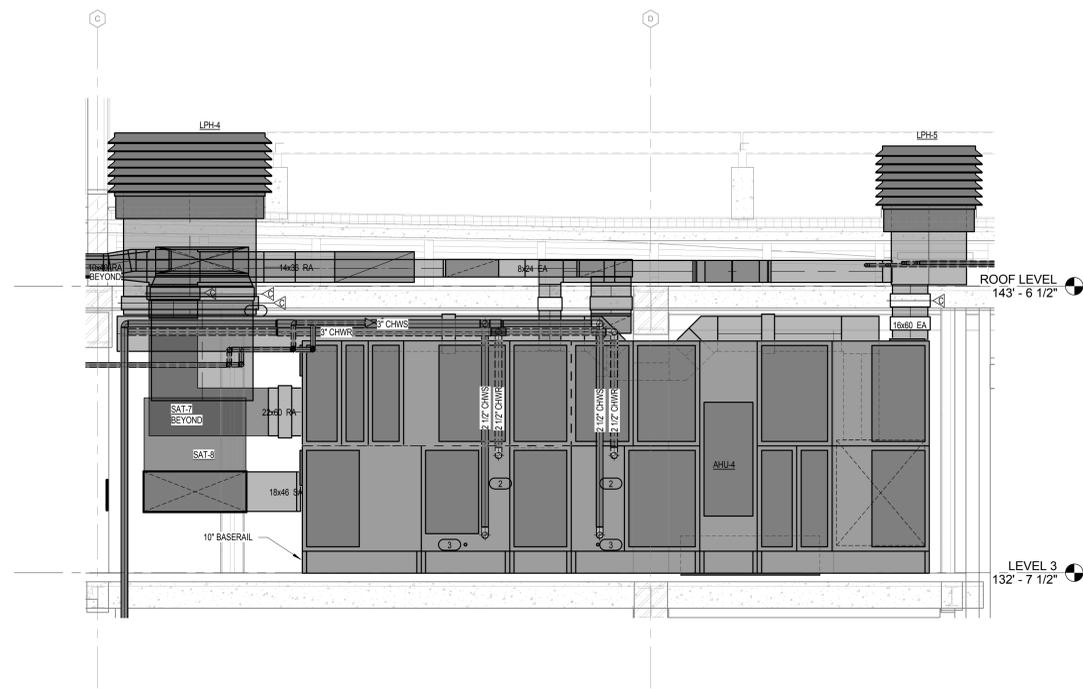
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5	24 04 2017	ADDENDUM #5

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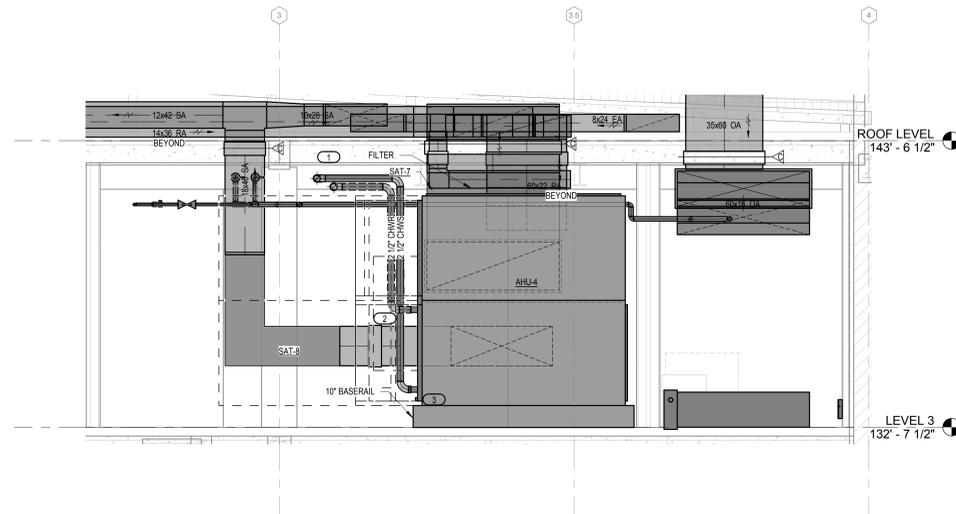
ROOF MECHANICAL DUCTWORK PLAN

EXHIBIT I
M105

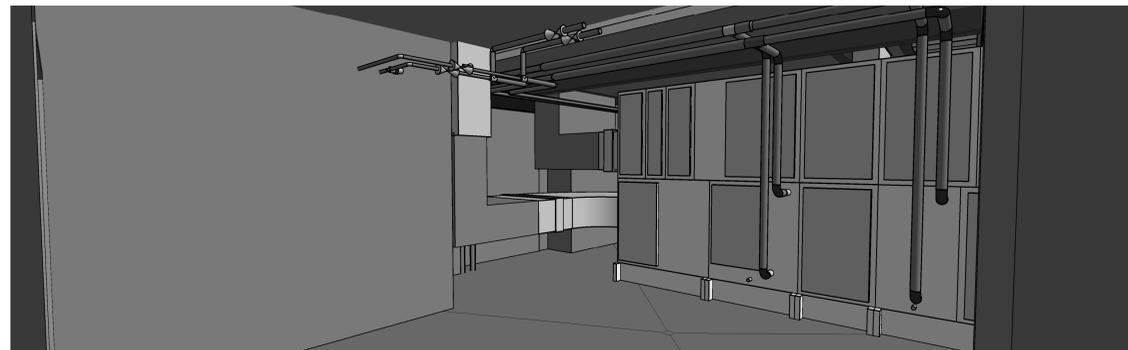
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1 3RD LEVEL WEST MECHANICAL ROOM - NORTH
3/8" = 1'-0"



2 3RD LEVEL WEST MECHANICAL ROOM - WEST
3/8" = 1'-0"



3 3RD LEVEL WEST MECHANICAL ROOM NORTH-WEST CORNER

- GENERAL NOTES**
1. ALL DUCTWORK IN THIS VIEW SHALL BE HUNG WITH SPRING HANGERS.
 2. ALL HYDRONIC PIPING IN THIS VIEW SHALL BE HUNG WITH SPRING HANGERS.
 3. ALL HYDRONIC PIPING IN THIS VIEW SHALL BE PROVIDED WITH PVC JACKET, PER SPECIFICATIONS.
 4. FOR ALL EQUIPMENT, MAINTAIN ACCESS/CLEARANCE REQUIREMENTS. FOR DUCT-MOUNTED EQUIPMENT, ENSURE PULL SPACE HORIZONTAL OR VERTICAL, AS REQUIRED BY SPACE CONSTRAINTS.
- KEYED NOTES**
- 1 REFER TO DETAIL 4/M452; AUTOMATIC AIR VENT ASSEMBLY.
 - 2 REFER TO DETAIL 6/M450; 2-WAY AHU COOLING COIL.
 - 3 REFER TO DETAIL 4/M450; NEGATIVE PRESSURE CONDENSATE DRAIN.

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PROJECT NO. 2014057

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LEVEL THREE

WEST MECHANICAL

ROOM ELEVATIONS

EXHIBIT I

M421

△
SHEET REISSUED WITH DUCT SIZES SHOWN