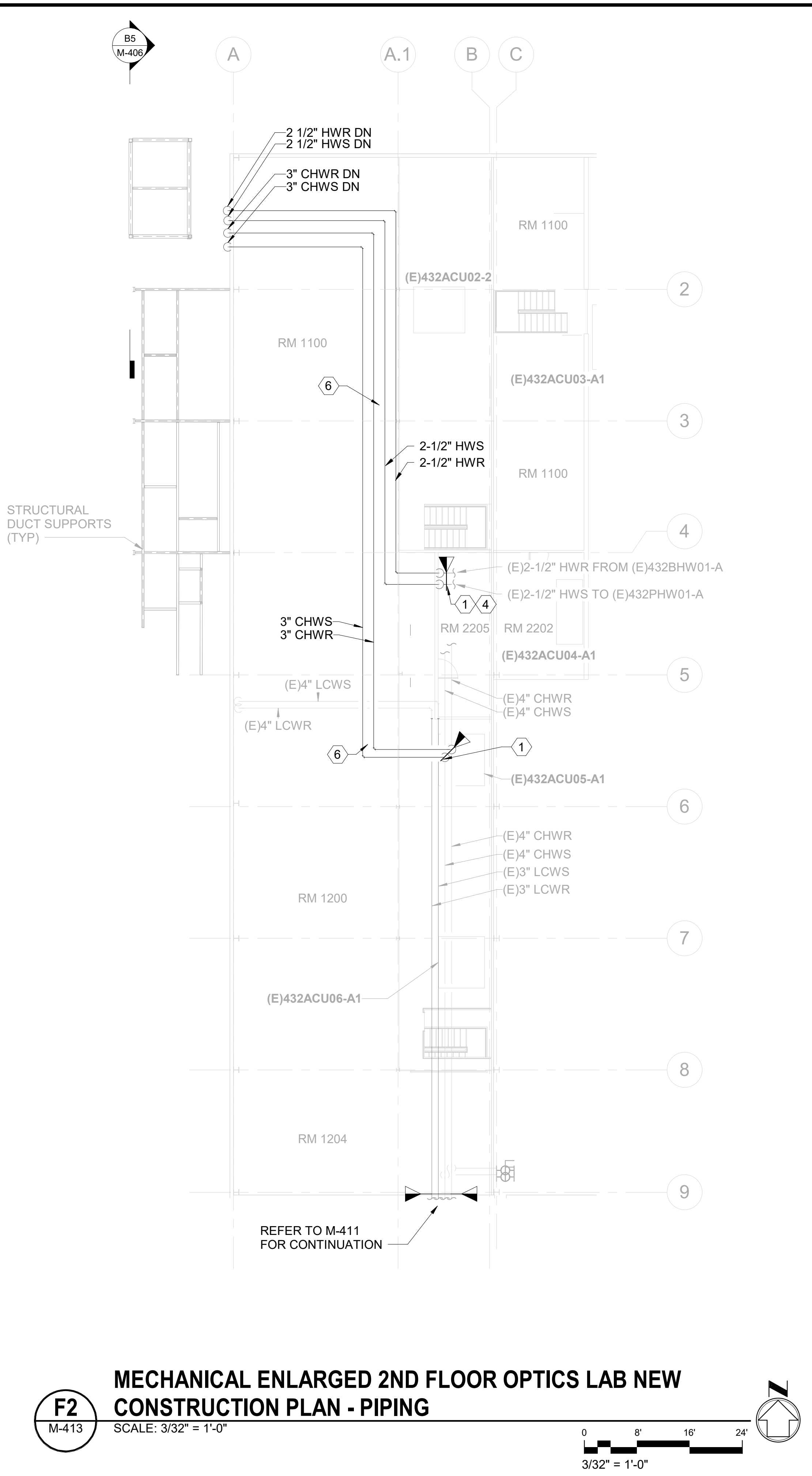


F1
M-413
MECHANICAL ENLARGED 1ST FLOOR OPTICS LAB NEW
CONSTRUCTION PLAN - PIPING
SCALE: 3/32" = 1'-0"



F2
M-413
MECHANICAL ENLARGED 2ND FLOOR OPTICS LAB NEW
CONSTRUCTION PLAN - PIPING
SCALE: 3/32" = 1'-0"

- GENERAL NOTES**
1. REFER TO M-001 FOR MECHANICAL ABBREVIATIONS, LEGEND, SYMBOLS, AND GENERAL NOTES.
 2. COMPONENTS SHOWN HALF-TONE ON THIS DRAWING ARE ITEMS TO REMAIN; BOLD COMPONENTS ARE NEW.
 3. DASHED REGIONS AROUND EQUIPMENT INDICATE CLEARANCE REQUIRED FOR EQUIPMENT ACCESS AND MAINTENANCE.
 4. REFER TO M-401 FOR HVAC EQUIPMENT INSTALLATION.
 5. INSTALLATION OF NEW INTERIOR PIPING WILL REQUIRE A DETAILED WORK PLAN DEVELOPED WITH INPUT FROM CONSTRUCTION MANAGER, SUBCONTRACTORS, AND FACILITY END-USERS. SUBCONTRACTOR MUST REVIEW EXISTING CONDITIONS AND DISCUSS ACCEPTABLE MEANS AND METHODS FOR NEW INSTALLATION WITH CONSTRUCTION MANAGER PRIOR TO BID. USAGE CONTINUITY OF END-USER LAB EQUIPMENT IN PROJECT AREA WILL REQUIRE COMPLETE INSTALLATION OF NEW COMPONENTS OVER A LONG WEEKEND, INCLUDE COSTS TO ACCOMPLISH THIS IN BID. CONSTRUCTION MANAGER TO COORDINATE TEMPORARY LAB EQUIPMENT REMOVAL.
 6. CLEAN AND FLUSH ALL NEW PIPING SYSTEMS IN ACCORDANCE WITH SPEC. 220111.13.
 7. INSTALL AUTOMATIC AIR VENTS AT ALL HIGH POINTS, AND ELSEWHERE AS NECESSARY TO ELIMINATE TRAPPED AIR. EXTEND VENT FROM AUTOMATIC AIR VENT TO NEAREST FLOOR DRAIN OR SOAK PIT.

- KEYED NOTES**
- ① INSTALL NEW BRANCH LINE-SIZE ISOLATION VALVES WITHIN FIRST SYSTEM SHUTDOWN AT BEGINNING OF CONSTRUCTION PROJECT TO FACILITATE INSTALLATION OF REMAINING NEW PIPING WITHOUT AN ADDITIONAL SHUTDOWN. WORK SHALL BE ACCOMPLISHED WITHOUT DRAINING FULL SYSTEM. FREEZING PIPE OR USING HOT TAP PIPE PLUG INSERTION SOLUTION IS ACCEPTABLE.
 - ② EXISTING CW INSTALLED UNDER MEZZANINE.
 - ③ EXTEND NEW CW UNDER EXISTING STAIR LANDING AND THROUGH INTERIOR AND EXTERIOR WALL AS INDICATED TO TIE-IN POINT SHOWN ON M-411.
 - ④ REFER TO M-802 FOR HEATING WATER TIE-IN POINTS WITHIN BOILER ROOM. RE-USE EXISTING WALL OPENINGS, ENLARGE EXISTING OPENINGS AS NECESSARY.
 - ⑤ FURNISH AND INSTALL NEW FIRE SPRINKLER PIPING FROM MAIN TIE-IN, THREE SPRINKLER HEADS IN LOCATION IDENTICAL TO EXISTING SYSTEM, AND ALL APPURTENANCES. SIZE TO MATCH EXISTING SYSTEM BRANCH PIPING. REFER TO M-411 FOR EXISTING SPRINKLER SYSTEM.
 - ⑥ ROUTE NEW PIPING WITHIN 18" OF BUILDING ROOF STRUCTURE.

KEY PLAN

Sheet Title
MECHANICAL ENLARGED 1ST AND 2ND FLOOR OPTICS LAB NEW CONSTRUCTION PLANS - PIPING

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Sht. No.
M-413