

## SECTION 009113 – ADDENDUM TWO

## PART 1 - ADDENDA

## 1.1 PROJECT INFORMATION

- A. Project Name: 22034.03 Meridian High School Baseball/Softball
- B. Owner: Meridian Public School District, 1019 25<sup>th</sup> Avenue, Meridian, MS 38391
- C. Architect: Dale | Bailey, an Association, One Jackson Place, Suite 250, 188 East Capitol Street, Jackson, MS 39201-2100
- D. Architect Project Number: 22034.03
- E. Date of Addendum Two: 5 April 2023

## 1.2 NOTICE TO BIDDERS

- A. This Addendum is issued to all registered plan holders pursuant to the Instructions to Bidders and Conditions of the Contract. This Addendum serves to clarify, revise, and supersede information in the Project Manual, Drawings, and previously issued Addenda. Portions of the Addendum affecting the Contract Documents will be incorporated into the Contract by enumeration of the Addendum in the Owner/Contractor Agreement.
- B. The Bidder shall acknowledge receipt of this Addendum in the appropriate space on the Bid Form.
- C. The date for receipt of bids is unchanged by this Addendum at same time and location.

## 1.3 GENERAL INFORMATION

- A. Geotechnical Report G-1277J Meridian Senior High School is attached.

## 1.4 GENERAL RESPONSES TO REQUESTS FOR INFORMATION

- A. QUESTION: Structural plans indicate wood trusses & 2 x wood studs. Architectural plans indicate 6" metal studs & 2x6 wood studs. Please provide details required.

ANSWER: Use structural details for all framing and structural details.

- B. QUESTION: Sheet A-532 is indicating pre-engineered building typical sections. The architectural roof and wall panel system will need to be by our roofing subcontractor in order to carry all necessary warrants. Please provide details for metal roofing and wall panel systems as required



especially for weather tightness warranty. Also, the roofing sub will provide and install all necessary gutters, d.s., trim and flashing required in order to have (1) manufacturer for warranties and color selections.

ANSWER: NO downspouts or gutters are required in this job. See specifications for roofing system details.

- C. QUESTION: 3. The finish schedule indicates melamine in comments to be installed on walls in every room. Please provide spec and details.

ANSWER: Will include in upcoming addenda.

- D. QUESTION: 4. Please provide details for additional wall partitions types and marks needed. Legend on sheet A-612 indicates metal studs

ANSWER: Use structural details for all framing and structural details.

- E. QUESTION: 5. Reviewing this spec in detail and in section 2.2 B the Architect is specifying a snap down standing seam but in section 2.2 C they have a mechanically seamed standing seam specified. Typical gauges are 24 or 22. Please clarify which system and gauge to use?

ANSWER: 20 gauge is specified and required for this work. Either roofing system will be acceptable for all roofs.

- F. QUESTION: Elevations 3/A201a states fixed fiberglass window unit. There is no spec for these windows and none listed in window legend. Please clarify...

ANSWER: Additional specification included with this addendum.

#### 1.4 REVISIONS TO DIVISION 00 – PROCUREMENT REQUIREMENTS AND CONTRACTING REQUIREMENTS

- A. DOCUMENT 000110 – TABLE OF CONTENTS. Add this section to the front of your project manual. See attached.

#### 1.5 REVISIONS TO TECHNICAL SPECIFICATIONS

- A. 085413 FIBERGLASS WINDOWS [MS - SF]. (New). See attached.

#### 1.6 REVISIONS TO DRAWINGS

- A. Sheet C-400 – Overall Site Plan. Add new site plan sheet to Construction Document set.
- B. Sheet P-102 – Partial Plumbing Plan. Delete sheet in its entirety and replace with new. Add drinking fountain and associated piping outside Wmns Public Toilets 203.

- C. Sheet M-102 – Partial Mechanical Plan. Delete sheet in its entirety and replace with new. Add EF-06 in Storage 302, Pressbox Level 1.
- D. Sheet M-201 – Mechanical Schedules.
  - a. Heat Recovery Units Schedule – Change voltage to 460V.,3phase to match electrical.
  - b. Indoor Heat Pump Multi-Zone Indoor Unit Schedule – Change CFM values.
  - c. Fan Schedules – Add EF-06.

## 1.7 ATTACHMENTS

- A. This Addendum includes the following report:
  - 1. G-1277J Meridian Senior High School Geo Report.
- B. This Addendum includes the following attached Specifications:
  - 1. 085413 Fiberglass Windows dated 5 April 2023.
- C. This Addendum includes the following attached Drawings:
  - 1. Sheet P-102—Partial Plumbing Plan dated 5 April 2023.
  - 2. Sheet M-102 – Partial Plumbing Plan dated 5 April 2023.
  - 3. Sheet M-201 – Mechanical Schedules dated 5 April 2023.

END OF ADDENDUM TWO

# LADNER TESTING, Inc.

JACKSON -  
(601) 362-5421

HATTIESBURG -  
(601) 544-5782

GULFPORT  
(228) 604-2527

April 5, 2023

Meridian Public School District  
1019 25<sup>th</sup> Ave  
Meridian, MS 39301

RE: Report of Geotechnical Exploration – Addendum  
Meridian Senior High School  
Meridian, Mississippi

W Geotechnical Project No. G-1277J  
Ladner Project No. 950-22-B

Dear Sir or Madam:

Thank you for retaining Ladner Testing Inc. to complete a geotechnical exploration for the above referenced site. This addendum is in addition to the original report for this project dated December 9, 2022, and provides recommendations for new parking and driveway areas. Please see original report for full recommendations and field investigation results.

We understand that parking and drive areas at the school are expanding and replacing some existing parking and drive areas. Additional auger soil borings, designated as Borings P-7 through P-10, were performed to 5 feet below the existing ground surface within the footprint of the parking and drive areas.

In general, poor soil conditions were observed at the location of the new parking and drive areas. Heavy clay soils that are prone to shrink and swell with fluctuations in moisture content were observed at most boring locations. For this site, we recommend that the footprint of the entire parking and drive areas is excavated and replaced with structural fill to a depth of 12 inches below the base layer of the pavement section.

Assuming that the parking and drive areas are stripped of topsoil, organic material and soft soil, 12 inch structural fill buffer, and thoroughly proofrolled as described in the subgrade preparation section of this report, a typical minimum pavement section for the expected soil subgrade is shown below. The pavement can also be constructed on the existing clay if chemically treated with lime. If CBR values of less than 5 are encountered at the subgrade elevation at the time of construction, the subgrade may need to be stabilized by additional over excavation and replacement or by use of a geogrid reinforcement such as Tensar® TX5. All asphalt production and placement should meet Mississippi Standard Specifications for State Aid Road and Bridge Construction, 2004 Edition (MDOT). Lime treatment should meet Class A specifications according to MDOT.

### Typical Asphalt Pavement Sections

| Material Type  | Parking Stalls and Light<br>Duty Driveways | Heavy Duty Truck<br>Driveways |
|--|--|-------------------------------|
| AC Surface Course (ST 9.5mm)   | 2.0 inches                                 | 2.0 inches                    |
| AC Base Course (ST 12.5mm)   | 4.0 inches                                 | 6.0 inches                    |
| Granular Aggregate Base (#610<br>Gradation)                            | 6.0 inches                                 | 8.0 inches                    |
| Compacted Structural Fill <b>OR</b><br>Lime Treated Subgrade (6% lime) | 12.0 inches<br>12.0 inches                 | 12.0 inches<br>12.0 inches    |

The heavy-duty truck driveways section should be used in areas expecting heavy trucks, deliveries and/or garbage truck service. As an alternative option to asphalt, typical rigid pavement sections are also provided below. We recommend that rigid concrete sections are used in areas with tight turns, frequent braking, entry and exit aprons, dumpster pads, and large or sustained loads. Concrete joint spacing, reinforcement and layout should be designed in accordance with American Concrete Institute (ACI) 330.

### Typical Rigid Pavement Sections

| Material Type  | Parking Stalls and Light<br>Duty Driveways | Heavy Duty Truck<br>Driveways |
|--|--|-------------------------------|
| 4,000 psi Concrete   | 6.0 inches                                 | 8.0 inches                    |
| Granular Aggregate Base (#610<br>Gradation)                            | 6.0 inches                                 | 8.0 inches                    |
| Compacted Structural Fill <b>OR</b><br>Lime Treated Subgrade (6% lime) | 12.0 inches<br>12.0 inches                 | 12.0 inches<br>12.0 inches    |

We recommend that the concrete pavements joint layout be designed with a maximum spacing of 12 feet for light duty and 15 feet for heavy duty sections. Load transfer at control joints may not be necessary but proper construction joint details should be provided. We recommend the use of a diamond dowel<sup>®</sup> or similar system for this application, <https://www.pna-inc.com/diamond-dowel-system>. Concrete used for paving should have 3%-6% entrained air. We would like the opportunity to review the concrete pavement design and can offer more detailed recommendations upon request.

An important consideration with the design and construction of pavements is surface and subsurface drainage. Where standing water develops, either on the pavement surface or within the base course layer, softening of the subgrade and other problems related to the deterioration of the pavement can be expected. Furthermore, good drainage should minimize the risk of the subgrade materials becoming saturated over a long period of time. The use of a triaxial geosynthetic, such as Geogrid<sup>®</sup> TX5, may be used to stabilize the subgrade if needed.

Report of Geotechnical Exploration – Addendum  
Meridian Senior High School – Meridian, MS  
G-1277J/950-22-B  
April 5, 2023

This addendum letter has been prepared in accordance with generally accepted geotechnical engineering practice. No other warranty is expressed or implied. The evaluations and recommendations presented in this report are based on the available project information, as well as on the results of the exploration performed for the adjacent building. Ladner Testing, Inc. should be given the opportunity to review the final drawings and site plans for this project to determine if changes to the recommendations outlined in this report are needed. Should the nature of the project change, these recommendations should be reevaluated. No third party is given permission to rely on this report or data without the express written consent of Ladner Testing Inc.

Thank you for the opportunity to provide geotechnical engineering services on this project. Should you have questions regarding our findings or need additional consultations, please do not hesitate to contact our office.

Respectfully,

**Ladner Testing Laboratories, Inc.**

**Represented by:**

Heath S. Williams, P.E.  
Principal Engineer  
MS Registration No. 17702

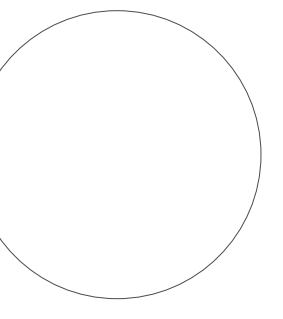








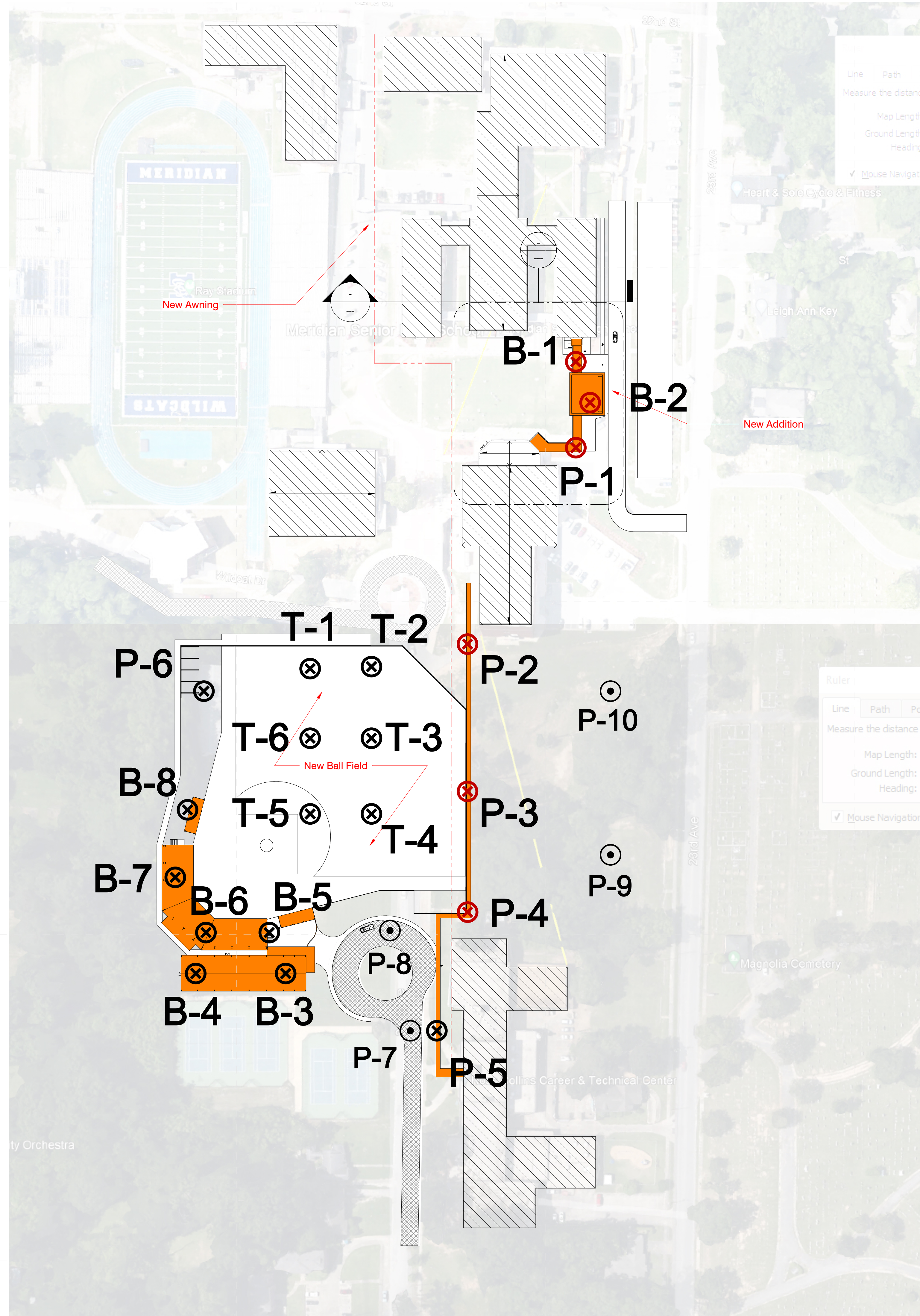




**Meridian School District Bond Issue**  
Meridian Senior High School: 32nd Street, Meridian, MS 39305

**Construction Documents**

|            |              |
|------------|--------------|
| Project No | 21097        |
| Date       | May 20, 2022 |
| Revisions  | Rev Date     |
| Drawn      | PPU          |
| Checked    | RBI          |



**1 Site Plan**  
1" = 80'-0"

## SECTION 085413 - FIBERGLASS WINDOWS

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. Section includes fiberglass-framed windows.

## 1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.

## 1.3 INFORMATIONAL SUBMITTALS

- A. Sample warranties.

## 1.4 WARRANTY

- A. Manufacturer's Warranty: Manufacturer agrees to repair or replace fiberglass windows that fail in materials or workmanship within specified warranty period.
  - 1. Warranty Period:
    - a. Window: 10 years from date of Substantial Completion.
    - b. Glazing Units: Five years from date of Substantial Completion.

## PART 2 - PRODUCTS

## 2.1 WINDOW PERFORMANCE REQUIREMENTS

- A. Product Standard: Comply with AAMA/WDMA/CSA 101/I.S.2/A440 for definitions and minimum standards of performance, materials, components, accessories, and fabrication unless more stringent requirements are indicated.
  - 1. Window Certification: WDMA certified with label attached to each window.
- B. Solar Heat-Gain Coefficient (SHGC): NFRC 200 maximum whole-window SHGC of 0.40 .

## 2.2 FIBERGLASS WINDOWS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Accurate Dorwin Inc.
  - 2. Alpen High Performance Products.

3. Duxton Windows and Doors.
4. Fibertec Window and Door Manufacturing.
5. Graham Architectural Products Corporation.
6. Inline Fiberglass Inc.
7. Milgard Manufacturing, LLC.
8. Pella Corporation.

B. Operating Types: NA .

C. Frames and Sashes: Pultruded fiberglass complying with AAMA/WDMA/CSA 101/I.S.2/A440 and with exposed exterior fiberglass surfaces finished with manufacturer's standard enamel coating complying with AAMA 613 .

1. Exterior Color: As selected by Architect from manufacturer's full range .
2. Interior Finish: Matching exterior finish, in color selected by Architect from manufacturer's full range .

D. Insulating-Glass Units: ASTM E 2190.

1. Glass: ASTM C 1036, Type 1, Class 1, q3.
  - a. Tint: Clear .
  - b. Kind: Fully tempered where indicated on Drawings .
2. Filling: Fill space between glass lites with argon.
3. Low-E Coating: Pyrolytic on second surface .

E. Glazing System: Manufacturer's standard factory-glazing system that produces weathertight seal .

F. Fasteners: Noncorrosive and compatible with window members, trim, hardware, anchors, and other components.

1. Exposed Fasteners: Do not use exposed fasteners to greatest extent possible. For application of hardware, use fasteners that match finish hardware being fastened.

## 2.3 ACCESSORIES

## 2.4 FABRICATION

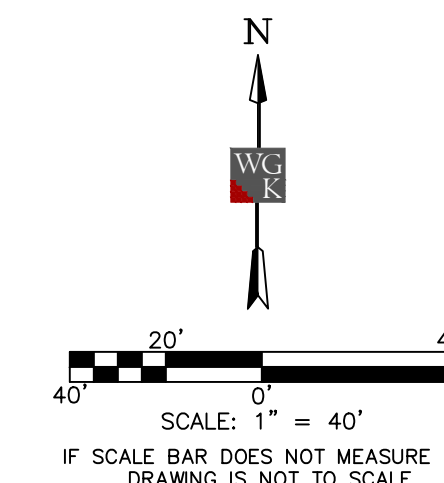
- A. Fabricate fiberglass windows in sizes indicated. Include a complete system for installing and anchoring windows.
- B. Glaze fiberglass windows in the factory.
- C. Complete fabrication, assembly, finishing, hardware application, and other work in the factory to greatest extent possible. Disassemble components only as necessary for shipment and installation. Allow for scribing, trimming, and fitting at Project site.

## PART 3 - EXECUTION

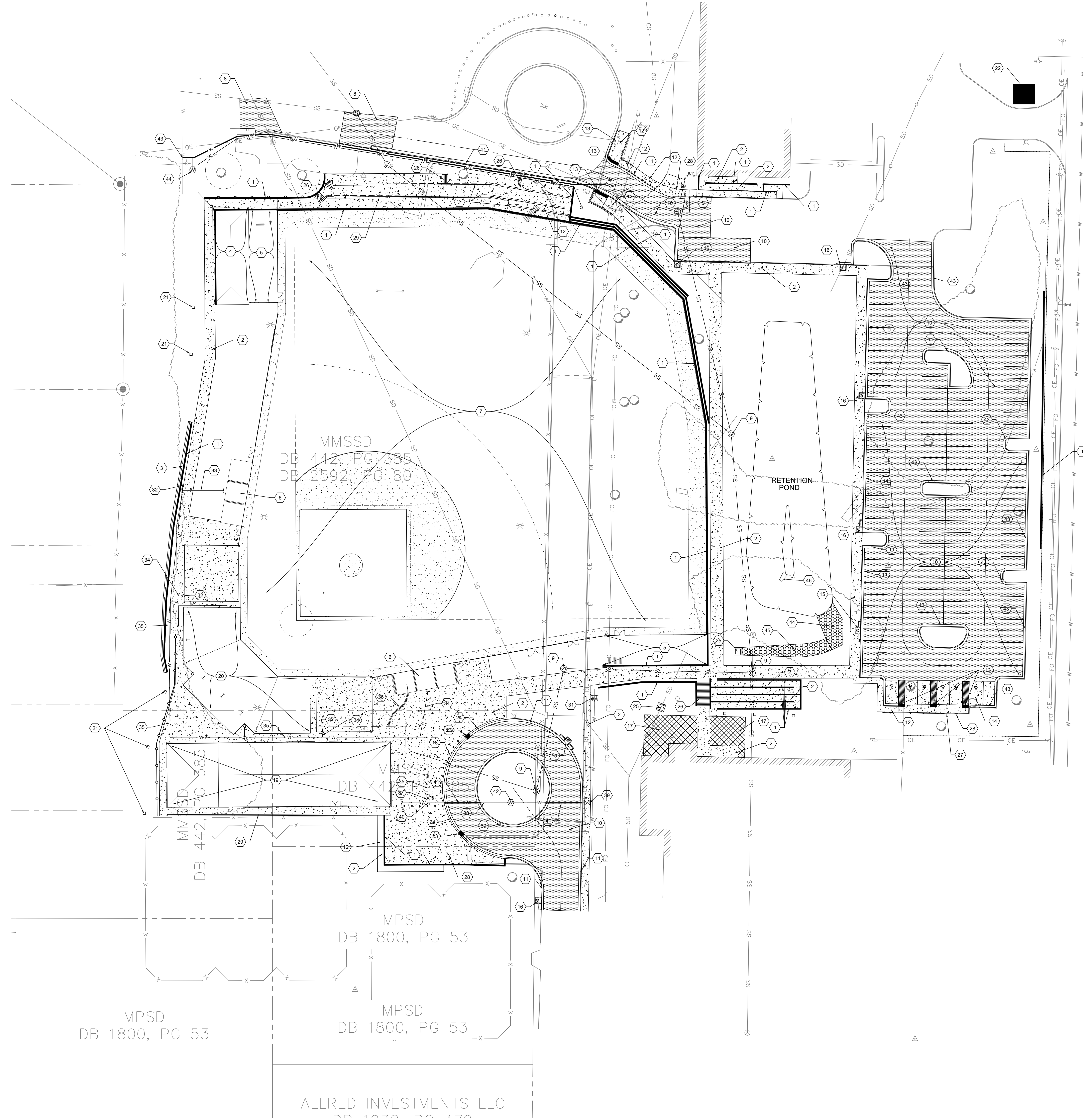
## 3.1 INSTALLATION

- A. Comply with manufacturer's written instructions for installing windows, hardware, accessories, and other components. For installation procedures and requirements not addressed in manufacturer's written instructions, comply with installation requirements in ASTM E 2112.
- B. Install windows level, plumb, square, true to line, without distortion, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction to produce weathertight construction.
- C. Adjust operating sashes and hardware for a tight fit at contact points and weather stripping for smooth operation and weathertight closure.
- D. Clean exposed surfaces immediately after installing windows. Remove excess sealants, glazing materials, dirt, and other substances.
- E. Remove and replace sashes if glass has been broken, chipped, cracked, abraded, or damaged during construction period.

END OF SECTION 085413



| Site Items |   |
|------------|---|
| 1          | RETAINING WALL (SEE STRUCTURAL PLANS)   |
| 2          | CONCRETE SIDEWALK (typ.)  |
| 3          | CONCRETE PAVED DITCH (typ.)   |
| 4          | BATTING CAGE (SEE ARCHITECTURAL PLAN FOR DETAILS)                                     |
| 5          | BULL PEN (SEE ARCHITECTURAL PLAN FOR DETAILS)   |
| 6          | DUG-OUT (SEE ARCHITECTURAL PLAN FOR DETAILS)  |
| 7          | FIELD AREA (SEE ARCHITECTURAL PLAN FOR DETAILS)                                       |
| 8          | ASPHALT REPAIR  |
| 9          | SEWER MANHOLE (typ.)  |
| 10         | HEAVY DUTY ASPHALT (typ.)   |
| 11         | 6" CURB AND GUTTER  |
| 12         | HANDICAP RAMP   |
| 13         | DETECTABLE WARNING PANEL  |
| 14         | LIGHT DUTY CONCRETE   |
| 15         | SS-2 W/ 2 ext. (typ.)   |
| 16         | SS-2 W/ 1 ext. (typ.)   |
| 17         | GRANULAR MATERIAL   |
| 18         | BALLARD (typ.)  |
| 19         | LOCKER ROOM, RESTROOMS AND CONCESSIONS BUILDING (SEE ARCHITECTURAL PLANS FOR DETAILS) |
| 20         | BLEACHERS AND PRESS BOX SEE ARCHITECTURAL PLANS FOR DETAILS                           |
| 21         | INLET (typ.)  |
| 22         | GUARD HOUSE (SEE ARCHITECTURAL PLANS FOR DETAILS)                                     |
| 23         | GUTTER INLET (typ.)   |
| 24         | VALLEY GUTTER (typ.)  |
| 25         | Y-INLET (typ.)  |
| 26         | CONCRETE STEPS (typ.)   |
| 27         | 6" BARRIER CURB   |
| 28         | HEAVY DUTY CONCRETE   |
| 29         | 1" WIDE U-CHANNEL W/ GRATE  |
| 30         | TYPE 2 CURB (typ.)  |
| 31         | FIRE HYDRANT (typ.)   |
| 32         | 1" HOSE BIB (SEE MECHANICAL PLANS FOR DETAILS)  |
| 33         | 3/4" POLYETHYLENE TUBE  |
| 34         | 1" POLYETHYLENE TUBE  |
| 35         | 2-1/2" SDR 26 PVC   |
| 36         | FENCE (SEE ARCHITECTURE PLANS FOR DETAILS)  |
| 37         | 2-1/2" GATE VALVE   |
| 38         | 3" SDR PVC  |
| 39         | 3" WATER VALVE  |
| 40         | 3" X 2-1/2" X 3" TEE  |
| 41         | 8" HDPE CASING  |
| 42         | 3" WATER METER (typ.)   |
| 43         | 6" CURB & PITCH AWAY GUTTER   |
| 44         | EMERGENCY SPILLWAY  |
| 45         | FLEX-A-MAT (typ.)   |
| 46         | OUTLET CONTROL STRUCTURE  |



V:\Dale Partners\2022-24\03-00 Meridian High School Baseball\_Softball\1\Production Drawings\Working\Site Plan.dwg 15/03/2023 4:48 PM

**WG K**  
 ENGINEERS & SURVEYORS  
 204 West Leake Street  
 Clinton, Mississippi 39056  
 p. 601.925.4444  
 132 West Cherokee Street  
 Brookhaven, Mississippi 39601  
 p. 601.833.9598

| SPECIFIC PLUMBING NOTES |   |
|-------------------------|---|
| P1                      | TYPICAL SERVICE PIPING BELOW GRADE. SEE MECHANICAL CIVIL DRAWINGS FOR CONTINUATION.   |
| P6                      | EXTEND NEW FULL SIZE WATER HEADER PIPING HORIZONTALLY IN PLUMBING CHASES WITH BRANCH PIPING TO SERVE INDIVIDUAL FIXTURES SIZED PER PLUMBING FIXTURE ROUGH-IN SCHEDULE AND INCLUDING WATER HAMMER ARRESTERS.   |
| P7                      | 1/2" TYPE 'K' SOFT COPPER TRAP PRIMER AND 3" WASTE BELOW SLAB/FLOOR.  |
| P9                      | TYPICAL GRAVITY CONDENSATE DRAIN PIPING ROUTED HIGH AS FEASIBLE. EXTEND TO NEARBY VENT STACK OR FLOOR DRAIN AS INDICATED. PROVIDE FULL PIPE SIZE CLEAN OUT AT EVERY CHANGE OF DIRECTION AND EVERY 50'-0" OF STRAIGHT RUN OF PIPE. COMBINED DRAINS FROM TWO OR MORE UNITS SHALL BE 1-1/4" SIZE UNLESS OTHERWISE NOTED.                                   |
| P10                     | INSULATE CONDENSATE DRAIN AND/OR SANITARY WASTE/VENT PIPING, INCLUDING TRAP AND SANITARY WASTE PIPING IN APPLICATIONS WHERE CONDENSATE FROM AIR CONDITIONING UNITS DISCHARGE. INSULATION SHALL EXTEND FROM ORIGIN POINT OF COLD CONDENSATE AND EXTEND CONTINUOUS TO SLAB ON GRADE PENETRATION. INSULATE PER SPECIFICATIONS FOR CONDENSATE DRAIN PIPING. |

**DALE BAILEY**  
AN ASSOCIATION

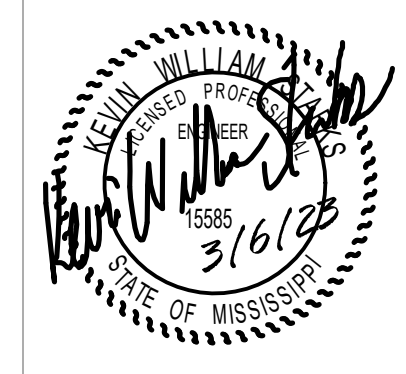
Architects

One Jackson Place 250  
188 East Capitol Street  
Jackson, MS 39201  
p 601.352.5411

201 Park Court Suite B  
Ridgeland, MS 39157  
p 601.790.9432

161 Lameuse St. Suite 201  
Biloxi, MS 39530  
p 228.374.1409

dalebaileyplans.com



Meridian High School Baseball/Softball

2320 32nd St, Meridian, MS 39305

100%  
Construction  
Documents

Project No 22034.03  
Date 6 March 2023  
Drawn JMK  
Checked JK/KS

Revisions Rev Date  
2 04/05/23

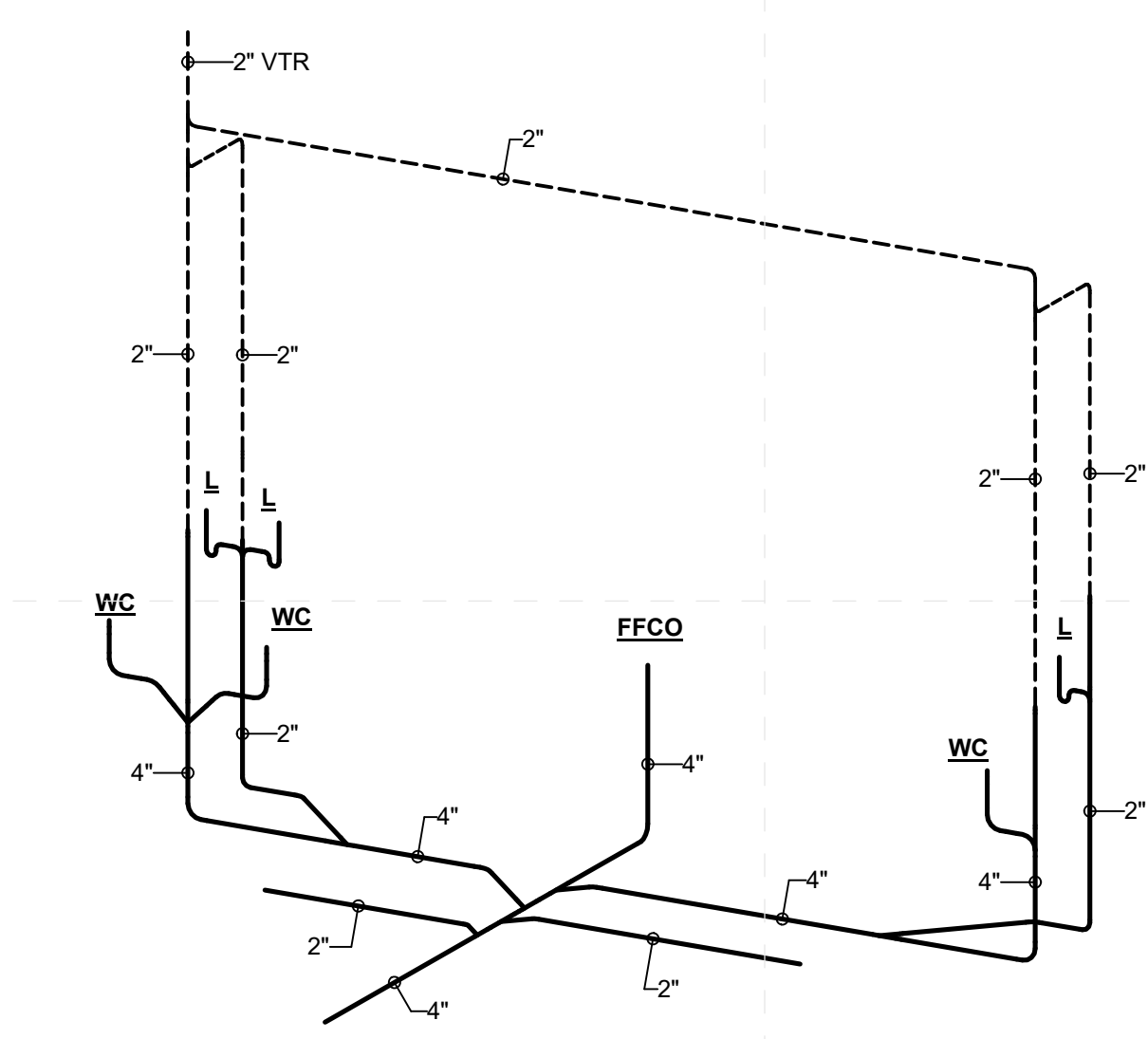
**GSK**  
MECHANICAL  
Consulting Engineering

201 Park Court Suite A1 Ridgeland, MS 39157  
P 601.790.9432 F 601.493.3111  
www.gskmech.com

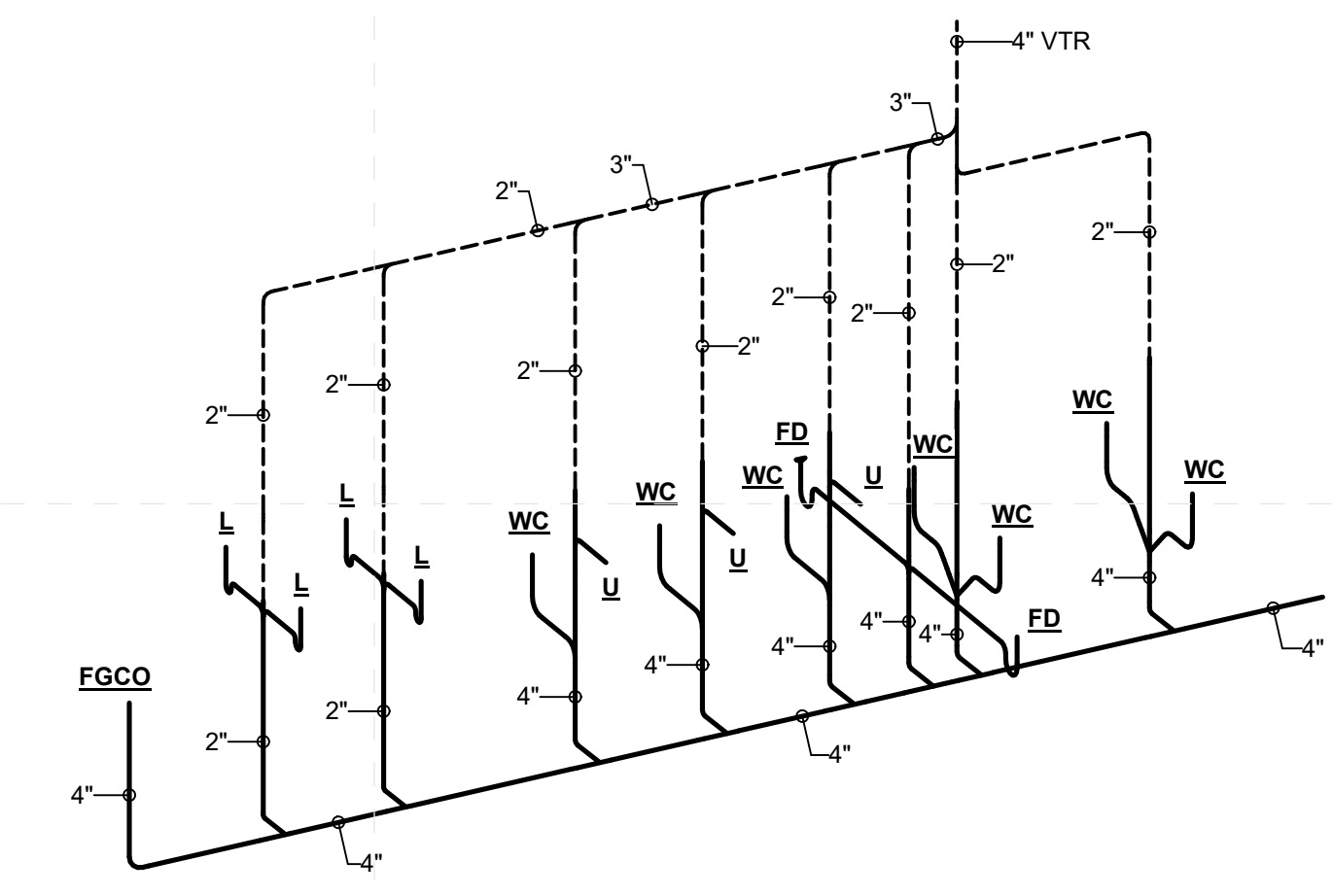
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P-102

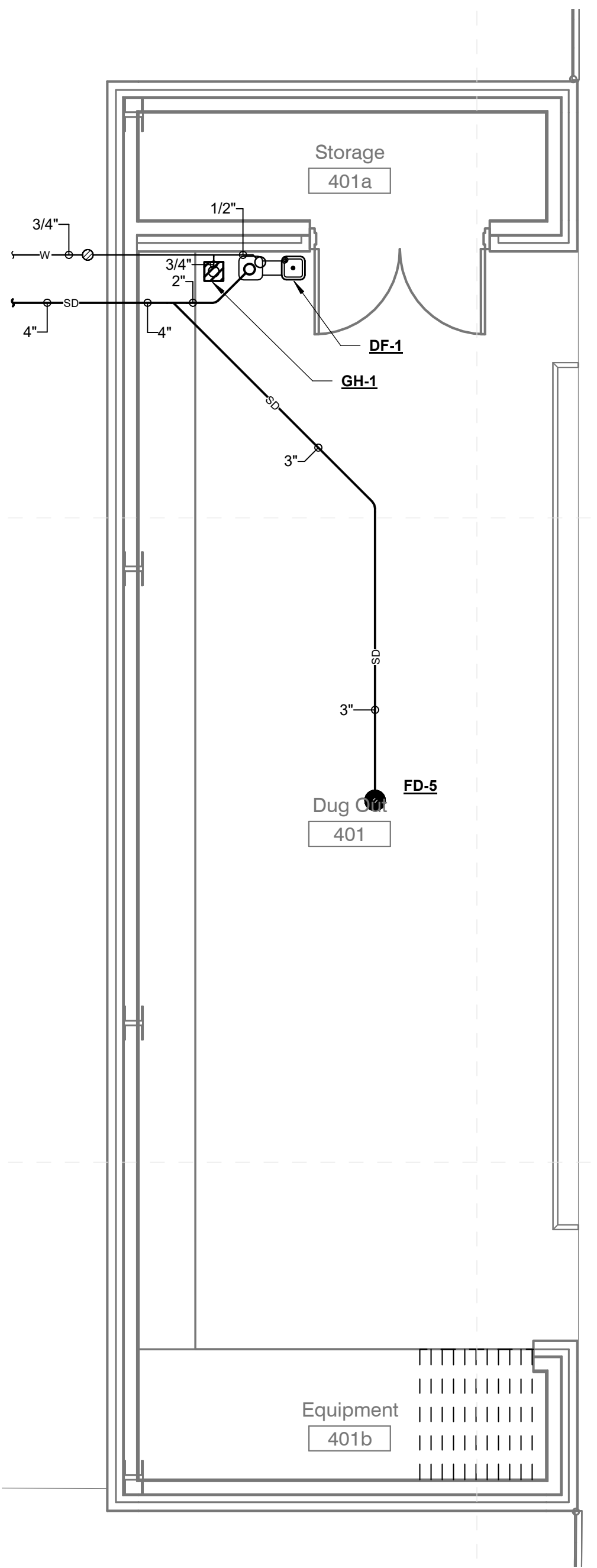
Partial Plumbing Plans



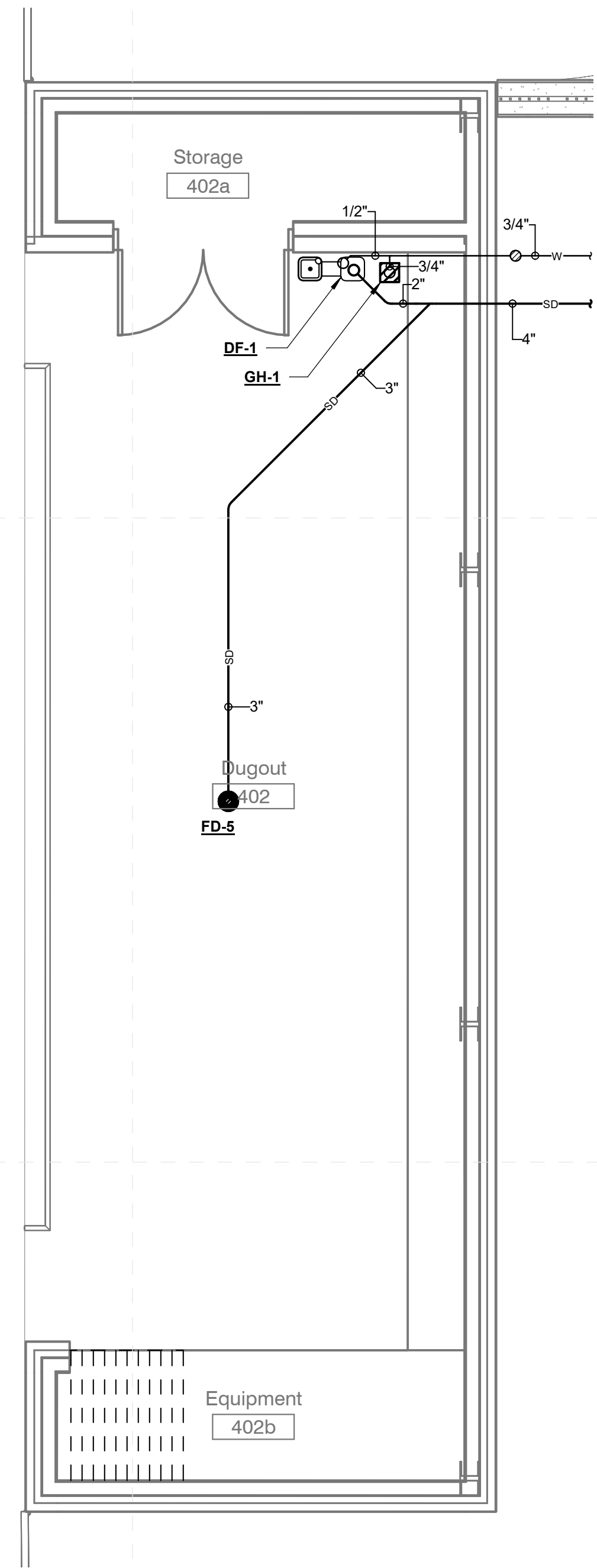
3 Plumbing Riser 5  
P-102



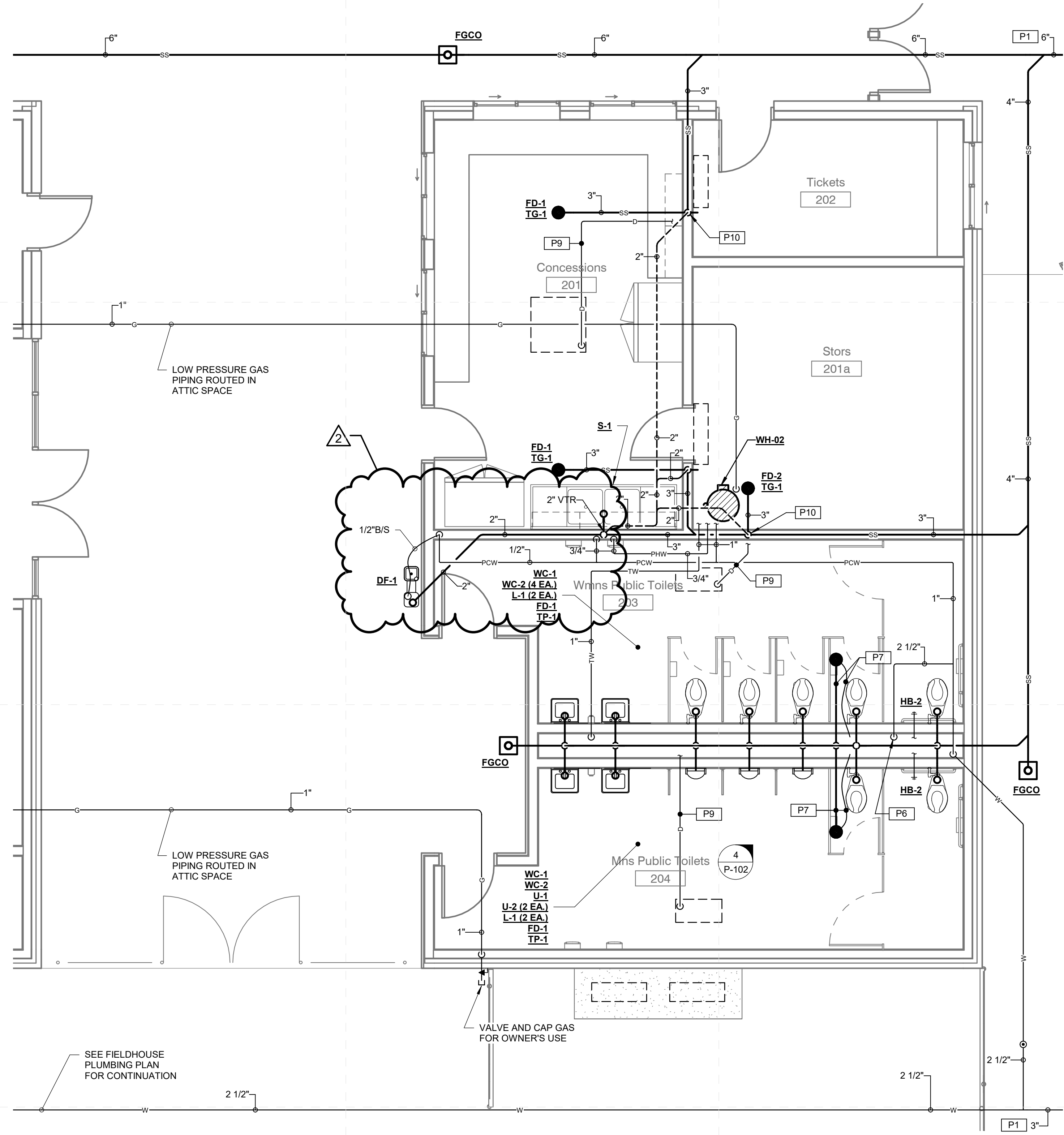
4 Plumbing Riser 6  
P-102



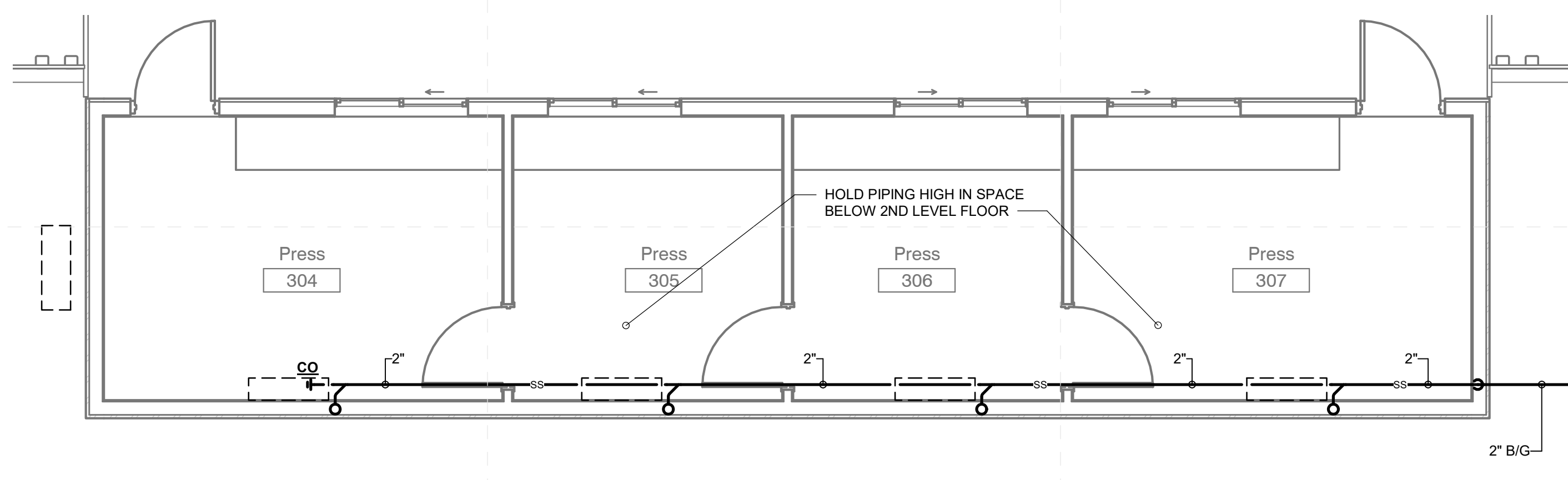
5 Dugout North Plumbing Plan  
P-102 1/4" = 1'-0"



6 Dugout South Plumbing Plan  
P-102 1/4" = 1'-0"



1 Concessions Plumbing Plan  
P-102 1/4" = 1'-0"



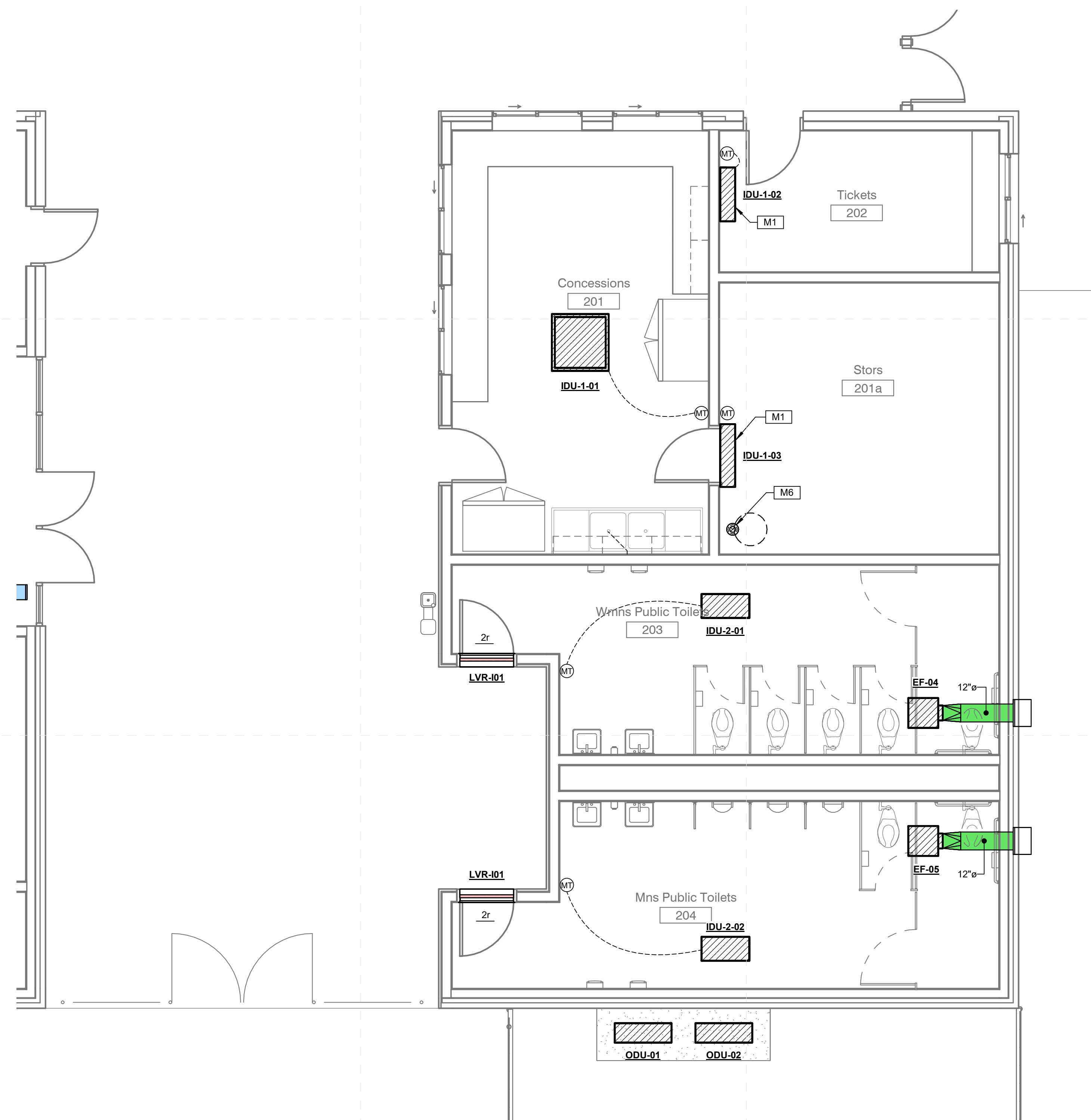
2 Pressbox Plumbing Plan - Level 2  
P-102 1/4" = 1'-0"



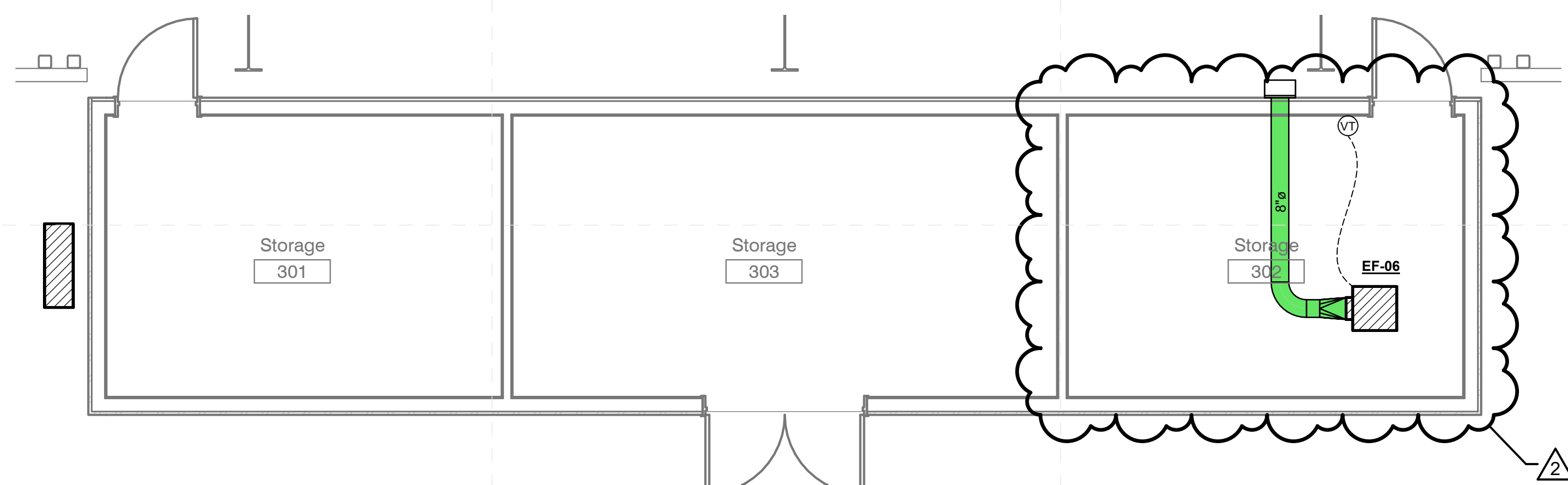


| SPECIFIC HVAC NOTES |   |
|---------------------|---|
| M1                  | DUCTLESS MINI-SPLIT MOUNTED HIGH ON WALL. SEE DETAIL. |
| M6                  | WATER HEATER INTAKE/VENT. SEE DETAIL.                 |

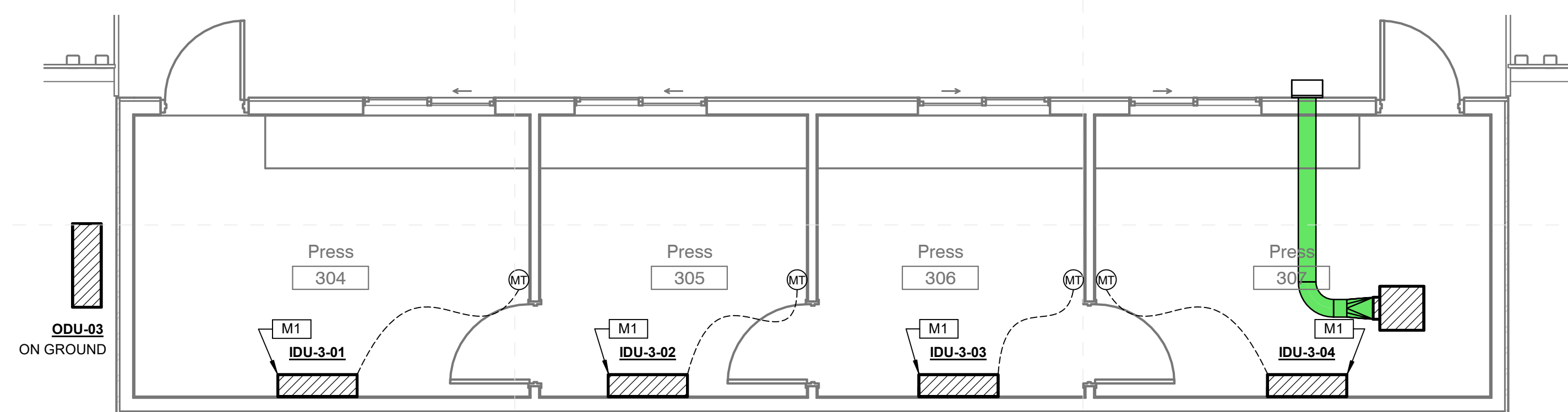
Architects  
One Jackson Place 250  
188 East Capitol Street  
Jackson, MS 39201  
p 601.352.5411  
201 Park Court Suite B  
Ridgeland, MS 39157  
p 601.790.9432  
161 Lameuse St. Suite 201  
Biloxi, MS 39530  
p 228.374.1409  
dalebaileyplans.com



1 Concessions Mechanical Plan  
M-102 1/4" = 1'-0"



3 Pressbox Mechanical Plan - Level 1  
M-102 1/4" = 1'-0"



2 Pressbox Mechanical Plan - Level 2  
M-102 1/4" = 1'-0"

100%  
Construction  
Documents

Project No 22034.03  
Date 6 March 2023  
Drawn JMK  
Checked JK/KS

Revisions Rev Date

### HEAT RECOVERY UNITS SCHEDULE

| MARK   | HEAT EXCHANGER DESIGN CONDITIONS |           |           |           |           |           |           |           |           |           |                               |                   |           |           |           |           |      |                |                    |               | COOLING CAPACITY (ALL VALUES LISTED ARE NET CAPACITIES) |    |                   |                |                |                                   |           |                    |        |                        | HEATING CAPACITY (REHEAT POSITION) |        |     |      |     |                |                         |                                |           |      | ELECTRICAL DATA |        |                                |   |        |  | UNIT WEIGHT (LBS.) | BASIS OF DESIGN | FEATURES/ACCESSORIES | MARK |
|--------|----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------------------------------|-------------------|-----------|-----------|-----------|-----------|------|----------------|--------------------|---------------|---|----|-------------------|----------------|----------------|-----------------------------------|-----------|--------------------|--------|------------------------|------------------------------------|--------|-----|------|-----|----------------|-------------------------|--------------------------------|-----------|------|-----------------|--------|--------------------------------|---|--------|--|--------------------|-----------------|----------------------|------|
|        | OUTSIDE AIR / SUPPLY AIR SIDE    |           |           |           |           |           |           |           |           |           | EXHAUST AIR / RETURN AIR SIDE |                   |           |           |           |           |      |                |                    |               | DESIGN CONDITIONS                                       |    |                   |                |                | COOLING AND DEHUMIDIFICATION MODE |           |                    |        |                        | HEATING MODE                       |        |     |      |     | SUPPLY FAN HP. | RETURN/ EXHAUST FAN HP. | HEAT EXCHANGER WHEEL MOTOR HP. | SERVICE   | MCA  | MOCP            |        |                                |   |        |  |                    |                 |                      |      |
|        | WINTER                           |           |           |           |           | SUMMER    |           |           |           |           | CFM                           | EXT. S.P. IN W.G. | WINTER    |           |           |           |      | SUMMER         |                    |               |   |    | OUTSIDE AIR TEMP. | COIL E.A.T. °F | COIL L.A.T. °F | TOTAL MBH                         | SENS. MBH | MIN. NO. OF STAGES | ISIRME | SECONDARY HEATING MODE |                                    |        |     |      |     |                |                         |                                |           |      |                 |        |                                |   |        |  |                    |                 |                      |      |
|        | E.A.T. °F                        | L.A.T. °F | E.A.T. °F | L.A.T. °F | E.A.T. °F | L.A.T. °F | E.A.T. °F | L.A.T. °F | E.A.T. °F | L.A.T. °F |                               |                   | E.A.T. °F | L.A.T. °F | E.A.T. °F | L.A.T. °F | FUEL | MAX. INPUT MBH | MIN. MOD. TURNDOWN | MIN. A.F.U.E. |   |    |                   |                |                |                                   |           |                    |        |                        |                                    |        |     |      |     |                |                         |                                |           |      |                 |        |                                |   |        |  |                    |                 |                      |      |
| HRU-01 | 3,750                            | 1.00      | 22.0      | 18.3      | 50.8      | 42.0      | 95.6      | 76.7      | 83.2      | 68.8      | 3,175                         | 1.00              | 72.0      | 55.8      | 55.8      | 35.9      | 75.0 | 64.0           | 89.3               | 72.6          | 96  | 77 | 83.2              | 68.8           | 52.6           | 52.5                              | 193       | 126                | 1      | 6.6                    | 83                                 | N. GAS | 200 | 16:1 | 80% | 5              | 3                       | 1/6                            | 460V, 3ph | 56.7 | 80              | GROUND | GREENHECK MODEL RVE-40-41D-15I | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 | HRU-01 |  |                    |                 |                      |      |

**NOTES:**  
1. MINIMUM REHEAT CAPACITY COINCIDENT WITH ONLY LEAD CIRCUIT COOLING SYSTEM ENERGIZED.  
2. SEE SPECIFICATIONS FOR MORE INFORMATION AND CONTROL SEQUENCES.  
3. SEE SPECIFICATIONS FOR COORDINATION OF SMOKE DETECTORS.  
4. ALL UNITS SHALL UTILIZE R-410A REFRIGERANT.  
5. UNIT SHALL BE STARTED UP AND CHECKED OUT BY A FACTORY SERVICE REPRESENTATIVE. PROVIDE COPY OF START-UP REPORT AND MANUFACTURER'S REGISTERED CASE NUMBER IN CLOSE-OUT DOCUMENTATION.

**FEATURES/ACCESSORIES:**  
1. EVAPORATOR LOW LIMIT TEMPERATURE AND TIME DELAY AUTOMATIC RESTART CONTROLS FOR EACH CIRCUIT.  
2. SPLIT-FACE EVAPORATOR COIL DESIGN.  
3. EQUIPMENT VIBRATION ISOLATION CURBS.  
4. VARIABLE SPEED COMPRESSOR ON LEAD COMPRESSOR REFRIGERANT CIRCUITS.  
5. MODULATING OUTSIDE AIR AND RETURN AIR DAMPERS (COORDINATE ACTUATOR REQUIREMENTS WITH CONTROLS CONTRACTOR).  
6. THRU-BASE ELECTRICAL CONNECTION.  
7. FACTORY MOUNTED AND POWERED GFI CONVENIENCE OUTLET.  
8. FACTORY MOUNTED AND WIRED DISCONNECT SWITCH.  
9. 2" DEEP FILTER RACK.  
10. HINGED ACCESS DOORS, WEATHER PROOF GASKETED SEALS AND TOOL-LESS QUARTER TURN LATCHES ON COMPRESSOR, EVAPORATOR FAN, CONTROLS AND AIR FILTER SECTIONS.  
11. MODULATING HOT GAS REHEAT COIL.  
12. HORIZONTAL DUCT CONNECTIONS OR SOLID BOTTOM HORIZONTAL DISCHARGE CURB. SEE DETAIL.  
13. DUCT MOUNTED SUPPLY AND RETURN SMOKE DETECTORS WIRED TO SHUT-DOWN UNIT UPON DETECTION OF PRODUCTS OF COMBUSTION.

**COMPARABLE PRODUCTS:**  
AAON, VALENT

### DUCTLESS SPLIT SYSTEM (INDOOR SECTION) SCHEDULE

| MARK   | TYPE | TOTAL CFM | HEATING CAPACITY |                  |                     |           | COOLING CAPACITY |      | ELECTRICAL SERVICE | BASIS OF DESIGN                       | FEATURES/ ACCESSORIES | MATCHED TO |
|--------|------|-----------|------------------|------------------|---------------------|-----------|------------------|------|--------------------|---------------------------------------|-----------------------|------------|
|        |      |           | INDOOR D.B., °F  | OUTDOOR D.B., °F | TOT. REV. CYCLE MBH | EAT (°F)  | TOTAL MBH        |      |                    |                                       |                       |            |
|        |      |           | E.A.T. °F        | L.A.T. °F        | E.A.T. °F           | L.A.T. °F |                  |      |                    |                                       |                       |            |
| DSS-01 | WALL | 360       | 70               | 47               | 12.3                | 80        | 67               | 12.0 | 208V, 1ph          | TRANE-MITSUBISHI MODEL NTXWPH12B112AA | 1, 2                  | DCU-01     |
| DSS-02 | WALL | 360       | 70               | 47               | 12.3                | 80        | 67               | 12.0 | 208V, 1ph          | TRANE-MITSUBISHI MODEL NTXWPH12B112AA | 1, 2                  | DCU-02     |
| DSS-03 | WALL | 360       | 70               | 47               | 12.3                | 80        | 67               | 12.0 | 208V, 1ph          | TRANE-MITSUBISHI MODEL NTXWPH12B112AA | 1, 2                  | DCU-03     |

**\*BASED ON 47 °F D.B. OUTSIDE AND 70 °F D.B. INDOOR ENTERING**

**COMPARABLE PRODUCTS:**  
MITSUBISHI, DAIKIN, LG

**FEATURES/ACCESSORIES:**  
1. PROVIDE WITH HARD WIRED WALL MOUNTED THERMOSTAT.  
2. PROVIDE WITH NEEDLE POINT IONIZATION DEVICES PER SCHEDULE

### DUCTLESS SPLIT SYSTEM (OUTDOOR SECTION) SCHEDULE

| MARK   | COOLING CAPACITY |           |               | HEATING CAPACITY         |      | MAXIMUM REFRIGERANT PIPE LENGTH (FT.) | ELECTRICAL SERVICE | BASIS OF DESIGN                       | MATCHED TO |
|--------|------------------|-----------|---------------|--------------------------|------|---------------------------------------|--------------------|---------------------------------------|------------|
|        | OUTDOOR D.B., °F | TOTAL MBH | MIN. S.E.E.R. | TOTAL REVERSE CYCLE, MBH | HSPF |                                       |                    |                                       |            |
| DCU-01 | 95               | 12.0      | 26.1          | 12.3                     | 12.5 | 65                                    | 208V, 1ph          | TRANE-MITSUBISHI MODEL NTXSPH12B112AA | DSS-01     |
| DCU-02 | 95               | 12.0      | 26.1          | 12.3                     | 12.5 | 65                                    | 208V, 1ph          | TRANE-MITSUBISHI MODEL NTXSPH12B112AA | DSS-02     |
| DCU-03 | 95               | 12.0      | 26.1          | 12.3                     | 12.5 | 65                                    | 208V, 1ph          | TRANE-MITSUBISHI MODEL NTXSPH12B112AA | DSS-03     |

**\*BASED ON 47 °F D.B. OUTSIDE AND 70 °F D.B. INDOOR ENTERING COIL TEMPERATURE**

**COMPARABLE PRODUCTS:**  
MITSUBISHI, DAIKIN, LG

**NOTES:**  
1. REFRIGERANT PIPE SIZE SHALL BE AS PER MANUFACTURER'S RECOMMENDATION TO PROVIDE SCHEDULED MINIMUM COOLING CAPACITY AND MAXIMUM EQUIPMENT LIFE.  
2. PROVIDE LOW AMBIENT CONTROLS/CAPABILITY.  
3. ALL UNITS TO BE PROVIDED WITH HIGH/LOW PRESSURE SWITCHES, HARD SHUTOFF KIT, AND WARRANTY AS SPECIFIED.  
4. SEE SPECIFICATIONS FOR WARRANTY INFORMATION.  
5. PROVIDE WITH INVERTER DUTY OR VARIABLE SPEED COMPRESSOR.  
6.

### FAN SCHEDULE

| MARK  | TYPE [1] | CONTROL SEQ. [2] | OPERATING CFM | S.P. IN W.G. | R.P.M. | MAX. SONES | MOTOR DATA |        |       | ELEC. SERVICE | DRIVE  | BASIS OF DESIGN         | FEATURES/ACCESSORIES |
|-------|----------|------------------|---------------|--------------|--------|------------|------------|--------|-------|---------------|--------|-------------------------|----------------------|
|       |          |                  |               |              |        |            | H.P.       | B.H.P. | WATTS |               |        |                         |                      |
| EF-01 | A        | A                | 75            | 0.375        | 768    | 1.0        | -          | -      | 80    | 120V, 1ph     | DIRECT | GREENHECK MODEL SP-B110 | 1, 2, 3, 4, 5, 6     |
| EF-02 | A        | A                | 75            | 0.375        | 768    | 1.0        | -          | -      | 80    | 120V, 1ph     | DIRECT | GREENHECK MODEL SP-B110 | 1, 2, 3, 4, 5, 6     |
| EF-03 | A        | A                | 75            | 0.375        | 768    | 1.0        | -          | -      | 80    | 120V, 1ph     | DIRECT | GREENHECK MODEL SP-B110 | 1, 2, 3, 4, 5, 6     |
| EF-04 | A        | A                | 375           | 0.375        | 1,047  | 4.0        | -          | -      | 224   | 120V, 1ph     | DIRECT | GREENHECK MODEL SP-A510 | 1, 2, 3, 4, 5, 6     |
| EF-05 | A        | A                | 375           | 0.375        | 1,047  | 4.0        | -          | -      | 224   | 120V, 1ph     | DIRECT | GREENHECK MODEL SP-A510 | 1, 2, 3, 4, 5, 6     |
| EF-06 | A        | B                | 150           | 0.375        | 1,050  | 3.5        | -          | -      | 128   | 120V, 1ph     | DIRECT | GREENHECK MODEL SP-B150 | 1, 2, 3, 4, 5, 6     |

**[1] TYPE - SEE DETAILS FOR MORE INFORMATION:**  
A. CEILING CABINET TYPE

**[2] CONTROL SEQUENCE:**  
A. EXHAUST FAN SHALL BE INTERLOCKED WITH LIGHT OCCUPANCY SENSOR IN SAME ROOM FAN SERVES  
B. VENTILATION FAN SHALL BE CONTROLLED BY LOW VOLTAGE VENTILATION THERMOSTAT SET AT 85°F LOCATED IN SAME ROOM AS FAN.

**[3] FEATURES/ACCESSORIES:**  
PROVIDE THE FOLLOWING MANUFACTURER'S ACCESSORIES  
1. UL AND AMCA RATING  
2. FACTORY MOUNTED & WIRED DISCONNECT  
3. BACKDRAFT DAMPER  
4. FACTORY MOUNTED & WIRED SOLID STATE SPEED CONTROLLER  
5. ALUMINUM GRILLE  
6. MANUFACTURER'S SIDEWALL HOODED DISCHARGE CAP (COLOR TO MATCH ADJACENT WALL)

**COMPARABLE PRODUCTS:**  
GREENHECK, COOK, PENN-BARRY

### INDOOR HEAT PUMP MULTI-ZONE UNIT SCHEDULE

| MARK     | TYPE | TOTAL CFM | E.S.P. IN W.G. | HEATING CAPACITY |                  |                     |                     | COOLING CAPACITY |           |             | REFRIGERANT PIPE SIZING |                    |           | ELECTRICAL DATA |    |                                       | BASIS OF DESIGN | FEATURES/ ACCESSORIES | MATCHED TO |
|----------|------|-----------|----------------|------------------|------------------|---------------------|---------------------|------------------|-----------|-------------|-------------------------|--------------------|-----------|-----------------|----|---------------------------------------|-----------------|-----------------------|------------|
|          |      |           |                | INDOOR D.B., °F  | OUTDOOR D.B., °F | TOT. REV. CYCLE MBH | ENT. COND. D.B., °F | TOTAL MBH        | SENS. MBH | LIQUID LINE | VAPOR LINE              | ELECTRICAL SERVICE | MCA       | MOCP            |    |                                       |                 |                       |            |
|          |      |           |                | E.A.T. °F        | L.A.T. °F        | E.A.T. °F           | L.A.T. °F           |                  |           |             |                         |                    |           |                 |    |                                       |                 |                       |            |
| IDU-1-01 | A    | 1,160     | -              | 70               | 47               | 38.0                | 80                  | 67               | 36.00     | 27.0        | 3/8                     | 5/8                | 208V, 1ph | 2.00            | 15 | TRANE-MITSUBISHI MODEL TPLA00361EA70B | 1, 2, 3, 4, 5   | ODU-01                |            |
| IDU-1-02 | B    | 320       | -              | 70               | 47               | 9.6                 | 80                  | 67               | 9.00      | 6.8         | 1/4                     | 3/8                | 208V, 1ph | 1.00            | 15 | TRANE-MITSUBISHI MODEL NTXWPH09B112AA | 1, 2, 3, 5      | ODU-01                |            |
| IDU-1-03 | B    | 360       | -              | 70               | 47               | 12.3                | 80                  | 67               | 12.00     | 9.0         | 1/4                     | 3/8                | 208V, 1ph | 1.00            | 15 | TRANE-MITSUBISHI MODEL NTXWPH12B112AA | 1, 2, 3, 5      | ODU-01                |            |
| IDU-2-01 | C    | 340       | -              | 70               | 47               | 20.0                | 80                  | 67               | 18.0      | 13.5        | 1/4                     | 1/2                | 208V, 1ph | 1.0             | 15 | TRANE-MITSUBISHI MODEL NTXUKS18A112BA | 1, 2, 3, 4, 5   | ODU-02                |            |
| IDU-2-02 | C    | 340       | -              | 70               | 47               | 20.0                | 80                  | 67               | 18.0      | 13.5        | 1/4                     | 1/2                | 208V, 1ph | 1.0             | 15 | TRANE-MITSUBISHI MODEL NTXUKS18A112BA | 1, 2, 3, 4, 5   | ODU-02                |            |
| IDU-3-01 | B    | 360       | -              | 70               | 47               | 12.3                | 80                  | 67               | 12.00     | 9.0         | 1/4                     | 3/8                | 208V, 1ph | 1.00            | 15 | TRANE-MITSUBISHI MODEL NTXWPH12B112AA | 1, 2, 3, 5      | ODU-03                |            |
| IDU-3-02 | B    | 320       | -              | 70               | 47               | 9.6                 | 80                  | 67               | 9.00      | 6.8         | 1/4                     | 3/8                | 208V, 1ph | 1.00            | 15 | TRANE-MITSUBISHI MODEL NTXWPH09B112AA | 1, 2, 3, 5      | ODU-03                |            |
| IDU-3-03 | B    | 320       | -              | 70               | 47               | 9.6                 | 80                  | 67               | 9.00      | 6.8         | 1/4                     | 3/8                | 208V, 1ph | 1.00            | 15 | TRANE-MITSUBISHI MODEL NTXWPH09B112AA | 1, 2, 3, 5      | ODU-03                |            |
| IDU-3-04 | B    | 360       | -              | 70               | 47               | 12.3                | 80                  | 67               | 12.00     | 9.0         | 1/4                     | 3/8                | 208V, 1ph | 1.00            | 15 | TRANE-MITSUBISHI MODEL NTXWPH12B112AA | 1, 2, 3, 5      | ODU-03                |            |

**TYPE:**  
A. CEILING CASSETTE  
B. WALL MOUNTED  
C. CEILING CASSETTE (1 WAY)

**FEATURES AND ACCESSORIES:**  
1. REFRIGERANT PIPE SIZE AND CONFIGURATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATION TO PROVIDE SCHEDULED MINIMUM COOLING CAPACITY AND MAXIMUM EQUIPMENT LIFE.  
2. PROVIDE ONE POINT ELECTRICAL CONNECTION.  
3. PROVIDE WITH MANUFACTURER'S THERMOSTAT  
4. PROVIDE WITH MANUFACTURER'S INTEGRAL CONDENSATE PUMP.  
5. PROVIDE WITH NEEDLEPOINT BIPOLAR DEVICE. SEE SCHEDULE.

**COMPARABLE PRODUCTS:**  
MITSUBISHI, DAIKIN, LG

### OUTDOOR HEAT PUMP MULTI-ZONE UNIT SCHEDULE

| MARK   | COOLING CAPACITY |           | HEATING CAPACITY          |        | REFRIGERANT | ELECTRICAL DATA |         |                                       | BASIS OF DESIGN  | MATCHED TO |
|--------|------------------|-----------|---------------------------|--------|-------------|-----------------|---------|---------------------------------------|------------------|------------|
|        | OUTDOOR D.B., °F | TOTAL MBH | TOTAL REVERSE CYCLE, MBH* | SEVICE |             | MCA **          | MOCP ** |                                       |                  |            |
| ODU-01 | 95               | 60.0      | 66.0                      | R410A  | 208V, 1ph   | 46              | 55      | TRANE-MITSUBISHI MODEL NTXMSM60A182AA | IDU-1-01 thru 03 |            |
| ODU-02 | 95               | 36.0      | 42.0                      | R410A  | 208V, 1ph   | 35              | 50      | TRANE-MITSUBISHI MODEL NTXMSM36A142AA | IDU-2-01 thru 01 |            |
| ODU-03 | 95               | 48.0      | 54.0                      | R410A  | 208V, 1ph   | 35              | 50      | TRANE-MITSUBISHI MODEL NTXMSM48A182AA | IDU-3-01 thru 04 |            |

**\* BASED ON 47°F D.B. OUTSIDE AND 70°F D.B. INDOOR ENTERING COIL TEMPERATURE**  
**\*\* BRANCH BOX POWERED BY OUTDOOR UNIT**

**COMPARABLE PRODUCTS:**  
MITSUBISHI, DAIKIN, LG

**NOTES:**  
1. ALL UNITS TO BE PROVIDED WITH HIGH/LOW PRESSURE SWITCHES, HARD SHUTOFF KIT, LIQUID LINE FILTER DRYER & WARRANTY AS SPECIFIED.  
2. REFRIGERANT PIPE SIZE AND CONFIGURATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATION TO PROVIDE SCHEDULED MINIMUM COOLING CAPACITY AND MAXIMUM EQUIPMENT LIFE.  
3. CONTRACTOR SHALL CONNECT MANUFACTURER'S CONTROLS WIRING BETWEEN ALL OUTDOOR HEAT PUMP CONDENSING UNITS.

### FURNACE WITH DX COOLING SCHEDULE

| MARK  | TYPE | TOTAL CFM | O.A. CFM | E.S.P. IN W.G. | HEATING DATA |           |            | DX COOLING CAPACITY |                     |           | ELECTRICAL DATA |           |         | BASIS OF DESIGN |         |                      | MATCHED TO           |       |
|-------|------|-----------|----------|----------------|--------------|-----------|------------|---------------------|---------------------|-----------|-----------------|-----------|---------|-----------------|---------|----------------------|----------------------|-------|
|       |      |           |          |                | FUEL         | INPUT MBH | OUTPUT MBH | NO. OF STAGES       | MAX. A.P.D. IN W.G. | E.A.T. °F | TOTAL MBH       | SENS. MBH | SERVICE | FAN HP          | FURNACE | EVAPORATOR           |                      |       |
| FE-01 | VERT | 1,100     | 300      | 0.80           | N. GAS       | 60.0      | 58.2       | 2                   | 0.30                | 80        | 67              | 40.7      | 29.0    | 120V, 1ph       | 0.75    | TRANE MODEL S9X2B060 | TRANE MODEL 4TXCB006 | CU-01 |

**COMPARABLE PRODUCTS:**  
LENNOX, TRANE, CARRIER, YORK

**NOTES:**  
1. REFRIGERANT PIPE SIZE SHALL BE AS PER MANUFACTURER'S RECOMMENDATION TO PROVIDE SCHEDULED MINIMUM COOLING CAPACITY AND MAXIMUM EQUIPMENT LIFE.  
2. PROVIDE ONE POINT ELECTRICAL CONNECTIONS FOR ALL INDOOR UNITS.  
3. PROVIDE WITH NEEDLE POINT IONIZATION DEVICES PER SCHEDULE.  
4. PROVIDE ALL UNITS WITH EXTERNAL FILTER RACKS.

### CONDENSING UNIT SCHEDULE

| MARK  | COOLING CAPACITY |           |               |             |               | ELECTRICAL |      |      | BASIS OF DESIGN      | MATCHED TO |
|-------|------------------|-----------|---------------|-------------|---------------|------------|------|------|----------------------|------------|
|       | OUTDOOR D.B., °F | TOTAL MBH | MIN. S.E.E.R. | MIN. E.E.R. | MIN. I.E.E.R. | SERVICE    | MCA  | MOCP |                      |            |
| CU-01 | 95               | 36.0      | 14.0          | -           | -             | 208V, 1ph  | 18.0 | 30   | TRANE MODEL 4TTR4036 | FE-01      |

**COMPARABLE PRODUCTS:**  
LENNOX, TRANE, CARRIER, YORK

**NOTES:**  
1. ALL UNITS TO BE PROVIDED WITH HIGH/LOW PRESSURE SWITCHES, HARD SHUTOFF KIT, LIQUID LINE FILTER DRYER AND WARRANTY AS SPECIFIED.  
2. ALL UNITS SHALL BE PROVIDED WITH HEAVY DUTY FACTORY COIL GUARD. SEE MECHANICAL SPECIFICATIONS FOR CLARITY.  
3. REFRIGERANT PIPE SIZE SHALL BE AS PER MANUFACTURER'S RECOMMENDATION TO PROVIDE SCHEDULED MINIMUM COOLING CAPACITY AND MAXIMUM EQUIPMENT LIFE.  
4. PROVIDE LOW AMBIENT CONTROLS/CAPABILITY.

