



City of Dearborn

**INVITATION TO BID (ITB) FOR  
Comfort Station at Ford Field**

**CONTROL No. 123560A  
ADDENDUM No. 3**

**ISSUE DATE: 04/04/17**

**DUE DATE: 04/12/17 AT 3:00 PM Eastern Time**

This addendum is being issued to modify some sections of the ITB, as well as to answer the last of the questions submitted by the question deadline.

**MODIFICATIONS:**

Refer to the attached submitted from NSA:

Attachment 1-

- o Addendum No. 3 (2 pages)
- o Table of Contents (2 pages)
- o Section 237333.16 – Indoor, Indirect-fired Heating and Ventilating Units (3 pages)
- o Section 238239.19 – Wall and Ceiling Unit Heaters (2 pages)

Attachment 2-

- o Drawing E1.0
- o Drawing E3.0
- o Drawing M1.0
- o Drawing P1.0

**ANSWERS TO SUBMITTED QUESTIONS:**

1. Does the city pay for the cost of the 3rd party inspections, namely, the inspection for an independent testing agency for concrete construction, masonry construction, steel construction, and soil inspection?

***A: Due to the very tight timeline for completion of this project, the City of Dearborn prefers that the contractor secure and include the cost for all required 3<sup>rd</sup> party inspections. However, please note that the City of Dearborn retains the right to review and approve the testing agency(s) secured by the contractor.***

2. Is the DECO Utility Meter to be located on the northeast interior wall rm # 103 per plan. or is it to be located on exterior wall ?

***A: The DECO Utility Meter can be installed on the interior wall, as long as, there is a smart digital meter installed on the exterior wall to facilitate DTE and City staff outside meter reading access. If a smart digital meter cannot be used, the DECO Utility Meter should be installed on the interior wall.***

3. Are there any provisions for Communications ? ( Telephone ) No Details on site plan.

***A: Yes, provisions are to be made to accommodate a 1/2" conduit run for a CAT5 communications/data line and one (1) dedicated phone line. NSA and the City of Dearborn's MIS Department will provide additional drawing specifications/notes to designate the exact installation location and confirm the materials to be utilized***

**THIS ADDENDUM MUST BE ACKNOWLEDGED ON THE RESPONSE FORM IN THE ITB**

---

***MODIFICATIONS DURING BIDDING***

This Addendum describes revisions to the Issued for Bid Documents issued February 27, 2017.

***ACCOMPANYING DOCUMENTS:*** The following documents accompany this write-up and are a part of this Addendum and are dated April 3, 2017:

- Project Manual Documents: Section 000005 – Table of Contents; Section 237333.16 – Indoor, Indirect-Fired Heating and Ventilating Units; Section 238239.19 – Wall and Ceiling Unit Heaters.
- Whole Drawings: M1.0; P1.0; E1.0; E3.0.
- Additional Documentation: None.

---

***Project Manual Documentation:***

- ITEM NO. 1 Refer to Section 000005 – Table of Contents (Reissued)
  - a. Sections added and deleted.
- ITEM NO. 2 Refer to Section 237333.16 – Indoor, Indirect-Fired Heating and Ventilating Units (Issued)
  - a. Section added.
- ITEM NO. 3 Refer to Section 237339 – Indoor, Direct-Fired Heating and Ventilating 100% Outside Air Units (Not issued)
  - a. Section deleted.
- ITEM NO. 4 Refer to Section 238239.19 – Wall and Ceiling Unit Heaters (Issued)
  - a. Section added.

***Whole Drawings***

- ITEM NO. 1 Refer to M1.0
  - a. Separated one exhaust fan into two exhaust fans for controllability.
  - b. Added electric ceiling heaters.
  - c. Added louvers above toilet room doors.
  - d. Changed HV-1 to F-1, and updated schedules accordingly.
  - e. Updated CFM's and duct-layout to accommodate design changes.
- ITEM NO.2 Refer to P1.0
  - a. Revised additional gas pipe sizes for clarification.
- ITEM NO.3 Refer to E1.0
  - a. Revised Panel Schedule RP-A to accommodate design changes.

---

**DISTRIBUTION: Via E-Mail Date: 4/4/2017**

ITEM NO.4 Refer to E3.0

- a. Revised branch circuit wiring to mechanical equipment to accommodate design changes.
- b. Indicated wire sizing to 100A special purpose receptacle at Utility Room 103 for clarification.

END OF ADDENDUM WRITE-UP

Prepared by:  
NORDSTROM SAMSON ASSOCIATES



Project Manager

## Table of Contents

000001 Title Page  
000005 Table of Contents; Document Set

### BIDDING REQUIREMENTS

Provided by the City of Dearborn

### CONDITIONS OF CONTRACT

Provided by the City of Dearborn

### SPECIFICATIONS

#### SECT.

NO. SECTION TITLE

### DIVISION 01 – GENERAL REQUIREMENTS

Provided by the City of Dearborn

### DIVISION 02 – EXISTING CONDITIONS

024116 Structure Demolition

### DIVISION 03 – CONCRETE

033000 Cast-In-Place Concrete

### DIVISION 04 - MASONRY

042200 Concrete Unit Masonry  
042300 Glass Unit Masonry

### DIVISION 05 - METALS

051200 Structural Steel Framing  
055000 Metal Fabrications

### DIVISION 06 – WOOD, PLASTICS, AND COMPOSITES

061053 Miscellaneous Rough Carpentry  
061600 Sheathing  
061753 Shop-Fabricated Wood Trusses

### DIVISION 07 – THERMAL AND MOISTURE PROTECTION

072100 Thermal Insulation  
072119 Foamed In-Place Insulation  
072500 Weather Barriers  
073113 Asphalt Shingles  
074616 Aluminum Siding  
074633 Plastic Siding  
074646 Fiber-Cement Siding  
076200 Sheet Metal Flashing and Trim  
079200 Joint Sealants

### DIVISION 08 – OPENINGS

081113 Hollow Metal Doors and Frames  
083113 Access Doors and Frames  
083323 Overhead Coiling Doors  
087100 Door Hardware  
089119 Fixed Louvers

### DIVISION 09 - FINISHES

092900 Gypsum Board  
099113 Exterior Painting  
099123 Interior Painting

### DIVISION 10 - SPECIALTIES

101423 Panel Signage  
102113.19 Plastic Toilet Compartments  
102213 Wire Mesh Partitions  
102800 Toilet, Bath, and Laundry Accessories  
104416 Fire Extinguishers

### DIVISION 22 – PLUMBING

220500 Common Work Results for Plumbing  
220523 General-Duty Valves for Plumbing Piping  
220529 Hangers and Supports for Plumbing Piping and Equipment  
220553 Identification for Plumbing Piping and Equipment  
220700 Plumbing Insulation  
221116 Domestic Water Piping  
221119 Domestic Water Piping Specialties  
221316 Sanitary Waste and Vent Piping  
221319 Sanitary Waste Piping Specialties  
223400 Fuel-Fired, Domestic-Water Heaters  
224000 Plumbing Fixtures

### DIVISION 23 – HEATING VENTILATING AND AIR CONDITIONING

230500 Common Work Results for HVAC  
230513 Common Motor Requirements for HVAC Equipment  
230529 Hangers and Supports for HVAC Piping and Equipment  
230553 Identification for HVAC Piping and Equipment  
230593 Testing, Adjusting, and Balancing for HVAC  
230700 HVAC Insulation  
231123 Facility Natural-Gas Piping  
233113 Metal Ducts  
233300 Air Duct Accessories  
233400 HVAC Fans  
233713 Diffusers, Registers, and Grilles  
235100 Breechings, Chimneys, and Stacks

**237333.16 Indoor, Indirect-Fired Heating and Ventilating Units**

~~237339 Indoor, Direct Fired Heating and Ventilating  
100% Outside Air Units~~  
**238239.19 Wall and Ceiling Unit Heaters**

**DIVISION 26 - ELECTRICAL**

260500 Common Work Results for Electrical  
260526 Grounding and Bonding for Electrical Systems  
260529 Hangers and Supports for Electrical Systems  
260533 Raceways and Boxes for Electrical Systems  
260544 Sleeves and Sleeve Seals for Electrical  
Raceways and Cabling  
260553 Identification for Electrical Systems  
260923 Lighting-Control Devices  
262416 Panelboards  
262726 Wiring Devices  
265119 Led Interior Lighting

**DIVISION 31 – EARTHWORK**

311000 Site Clearing  
312000 Earth Moving

**DIVISION 32 – EXTERIOR IMPROVEMENTS**

321313 Concrete Paving  
329200 Turf and Grasses

**DIVISION 33 – UTILITIES**

330500 Common Work Results for Utilities

**DOCUMENT SET**

The Contract Drawings that accompany this Project Manual and with it form the Document Set are identified by the same Architect Project No. as this Project Manual. The individual drawings are listed on the Drawing Cover Sheet.

Verification of Document Set: Verify that the Document Set transmitted is complete. Compare Drawings received with lists. Documents in the Project Manual, except standard pre-printed Documents, are terminated with "END OF ..." statement.

The Document Set will include additional Documents, if any, that are issued in conjunction with addenda and bulletins.

END OF TABLE OF CONTENTS

## **SECTION 237333.16 - INDOOR, INDIRECT-FIRED HEATING AND VENTILATING UNITS**

### **PART 1 - GENERAL**

#### **1.1 SUMMARY**

- A. Section includes indoor, indirect-fired heating and ventilating units.

#### **1.2 ACTION SUBMITTALS**

- A. Product Data: For each type and configuration of indoor, direct-fired heating and ventilating unit.
- B. Shop Drawings: For each type and configuration of indoor, direct-fired heating and ventilating unit.
  - 1. Include plans, elevations, sections, and details.
  - 2. Include details of equipment assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.

#### **1.3 INFORMATIONAL SUBMITTALS**

- A. Sample Warranty: For manufacturer's special warranty.
- B. Seismic Qualification Certificates: For indoor, direct-fired heating and ventilating units, accessories, and components, from manufacturer.

#### **1.4 CLOSEOUT SUBMITTALS**

- A. Operation and maintenance data.

#### **1.5 QUALITY ASSURANCE**

- A. Comply with NFPA 70.
- B. ASHRAE Compliance: Applicable requirements in ASHRAE 62.1, Section 5 - "Systems and Equipment" and Section 7 - "Construction and Startup."
- C. ASHRAE/IES 90.1 Compliance: Applicable requirements in ASHRAE/IES 90.1, Section 6 - "Heating, Ventilating, and Air-Conditioning."

#### **1.6 WARRANTY**

- A. Special Warranty: Manufacturer agrees to repair or replace components of direct-fired heating and ventilating units that fail in materials or workmanship within specified warranty period.

1. Warranty Period for Heat Exchangers: Manufacturer's standard, but not less than 10 years from date of Substantial Completion.

## **PART 2 - PRODUCTS**

### **2.1 MANUFACTURERS**

- A. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
  1. **Greenheck Fan Corporation.**
  2. **Hastings Industries.**
  3. **Sterling HVAC Products; a Mestek company.**
  4. **Trane (Basis of Design)**

### **2.2 SYSTEM DESCRIPTION**

- A. Factory-assembled, prewired, self-contained unit consisting of cabinet, supply fan, controls, filters, and indirect-fired gas burner to be installed interior to the building.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

### **2.3 AIR FILTERS**

- A. Comply with NFPA 90A.
- B. Cleanable Filters: Cleanable metal mesh; 1 inch.
- C. Disposable Panel Filters: Factory-fabricated, flat-panel-type, disposable air filters; 1 inch.

### **2.4 UNIT CONTROL PANEL**

- A. Factory-wired, fuse-protected control transformer, connection for power supply and field-wired unit to remote control panel.
- B. Control Panel: Surface-mounted remote panel, with engraved plastic cover and the following lights and switches:
  1. On-off-auto fan switch.
  2. Heat-vent-off switch.
  3. Supply-fan operation indicating light.
  4. Heating operation indicating light.
  5. Thermostat.
  6. Dirty-filter indicating light operated by unit-mounted differential pressure switch.
  7. Safety-lockout indicating light.

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION**

- A. Install gas-fired units according to NFPA 54, "National Fuel Gas Code."
- B. Install controls and equipment shipped by manufacturer for field installation with direct-fired heating and ventilating units.

### **3.2 CONNECTIONS**

- A. Drawings indicate general arrangement of piping, fittings, and specialties.
  - 1. Gas Piping: Comply with requirements in Section 231123 "Facility Natural-Gas Piping." Connect gas piping with shutoff valve and union, and with sufficient clearance for burner removal and service. Make final connections of gas piping to unit with corrugated, stainless-steel tubing flexible connectors complying with ANSI LC 1/CSA 6.26 equipment connections.
- B. Duct Connections: Connect supply ducts to indirect-fired heating and ventilating units with flexible duct connectors. Comply with requirements in Section 233300 "Air Duct Accessories" for flexible duct connectors.
- C. Ground equipment according to Section 260526 "Grounding and Bonding for Electrical Systems."

### **3.3 FIELD QUALITY CONTROL**

- A. Perform tests and inspections with the assistance of a factory-authorized service representative.
- B. Units will be considered defective if they do not pass tests and inspections.
- C. Prepare test and inspection reports.

### **3.4 ADJUSTING**

- A. Adjust initial temperature set points.
- B. Set field-adjustable switches and circuit-breaker trip ranges as indicated.

### **3.5 DEMONSTRATION**

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain heating and ventilating units.

END OF SECTION 237339



## **SECTION 238239.19 –WALL AND CEILING UNIT HEATERS**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### **1.2 SUMMARY**

- A. Section includes wall and ceiling heaters with propeller fans and electric-resistance heating coils.

#### **1.3 ACTION SUBMITTALS**

- A. Product Data: For each type of product.
  - 1. Include rated capacities, operating characteristics, furnished specialties, and accessories.

#### **1.4 CLOSEOUT SUBMITTALS**

- A. Operation and maintenance data.

### **PART 2 - PRODUCTS**

#### **2.1 MANUFACTURERS**

- A. Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
  - 1. Basis of Design: Markel Products Company; TPI Corporation
  - 2. Trane Inc.
  - 3. Berko; Marley Engineered Products.
  - 4. Chromalox, Inc.
  - 5. Indeeco.

#### **2.2 DESCRIPTION**

- A. Assembly including chassis, electric heating coil, fan, motor, and controls. Comply with UL 2021.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

#### **2.3 CABINET**

- A. Front Panel: Stamped-steel louver, with removable panels fastened with tamperproof fasteners.
- B. Finish: Baked enamel over baked-on primer with manufacturer's standard color selected by Architect, applied to factory-assembled and -tested wall and ceiling heaters before shipping.
- C. Surface-Mounted Cabinet Enclosure: Steel with finish to match cabinet.

#### **2.4 COIL**

- A. Electric-Resistance Heating Coil: Nickel-chromium heating wire, free from expansion noise and 60-Hz hum, embedded in magnesium oxide refractory and sealed in corrosion-resistant metallic sheath. Terminate elements in stainless-steel, machine-staked terminals secured with stainless-steel hardware, and limit controls for high-temperature protection.

#### **2.5 FAN AND MOTOR**

- A. Fan: Aluminum propeller directly connected to motor.

- B. Motor: Permanently lubricated. Comply with requirements in Section 230513 "Common Motor Requirements for HVAC Equipment."

## **2.6 CONTROLS**

- A. Controls: Built-in Thermostat.
- B. Electrical Connection: Factory wire motors and controls for a single field connection with disconnect switch.

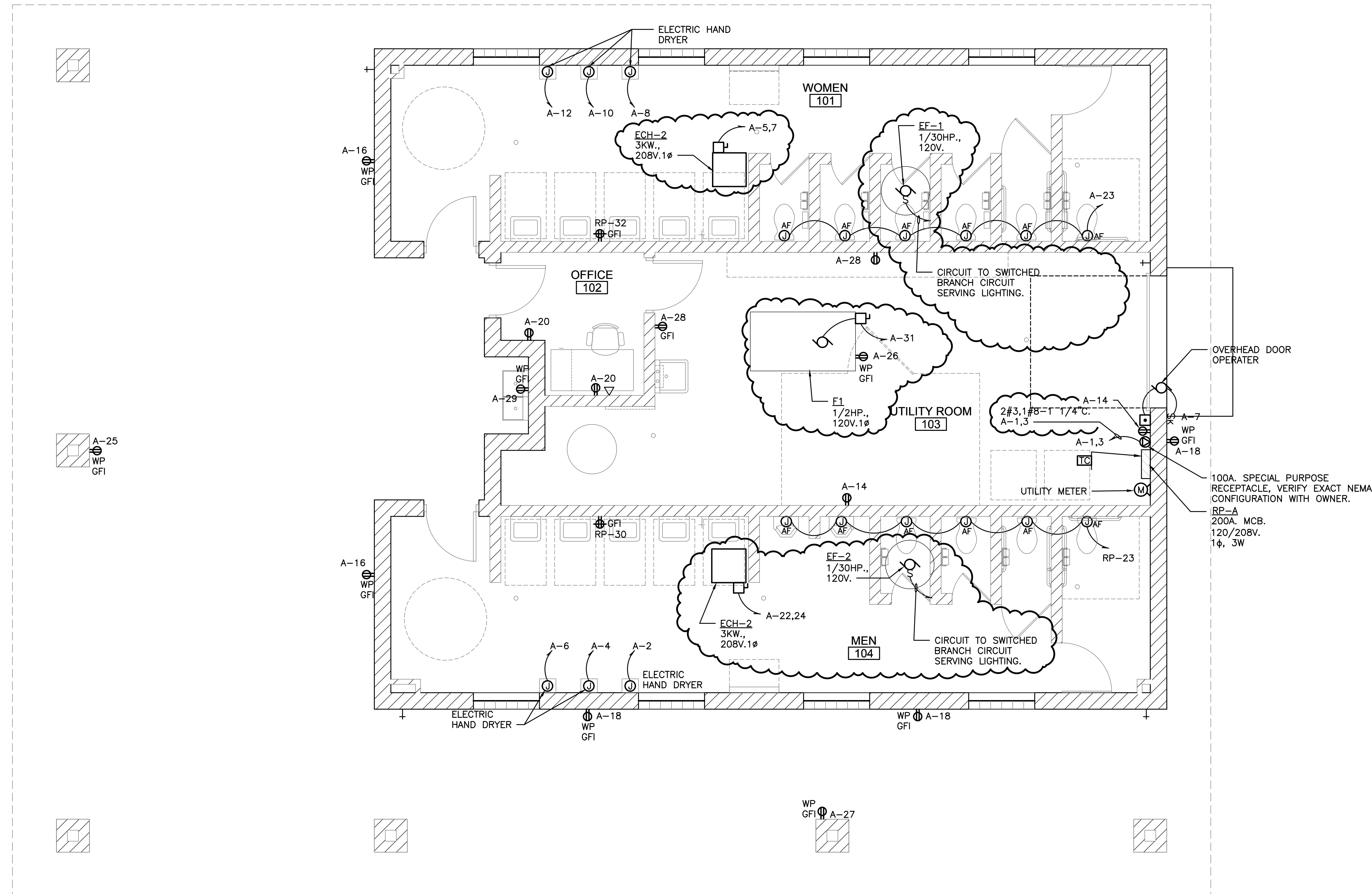
## **PART 3 - EXECUTION**

### **3.1 INSTALLATION**

- A. Install wall and ceiling unit heaters to comply with NFPA 90A.
- B. Install wall and ceiling unit heaters level.
- C. Ground equipment according to Section 260526 "Grounding and Bonding for Electrical Systems."
- D. Connect wiring according to Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

END OF SECTION 238239.19





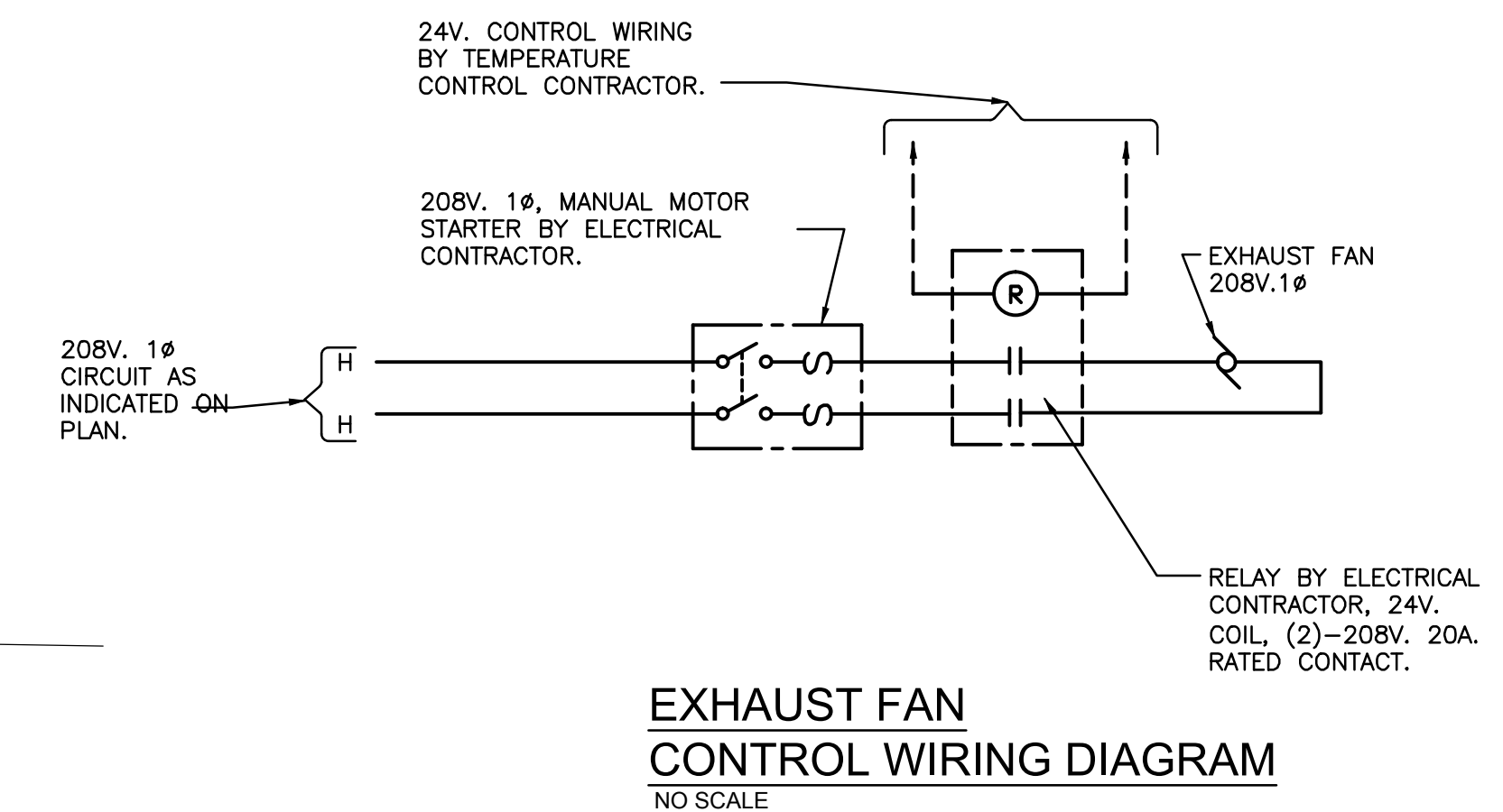
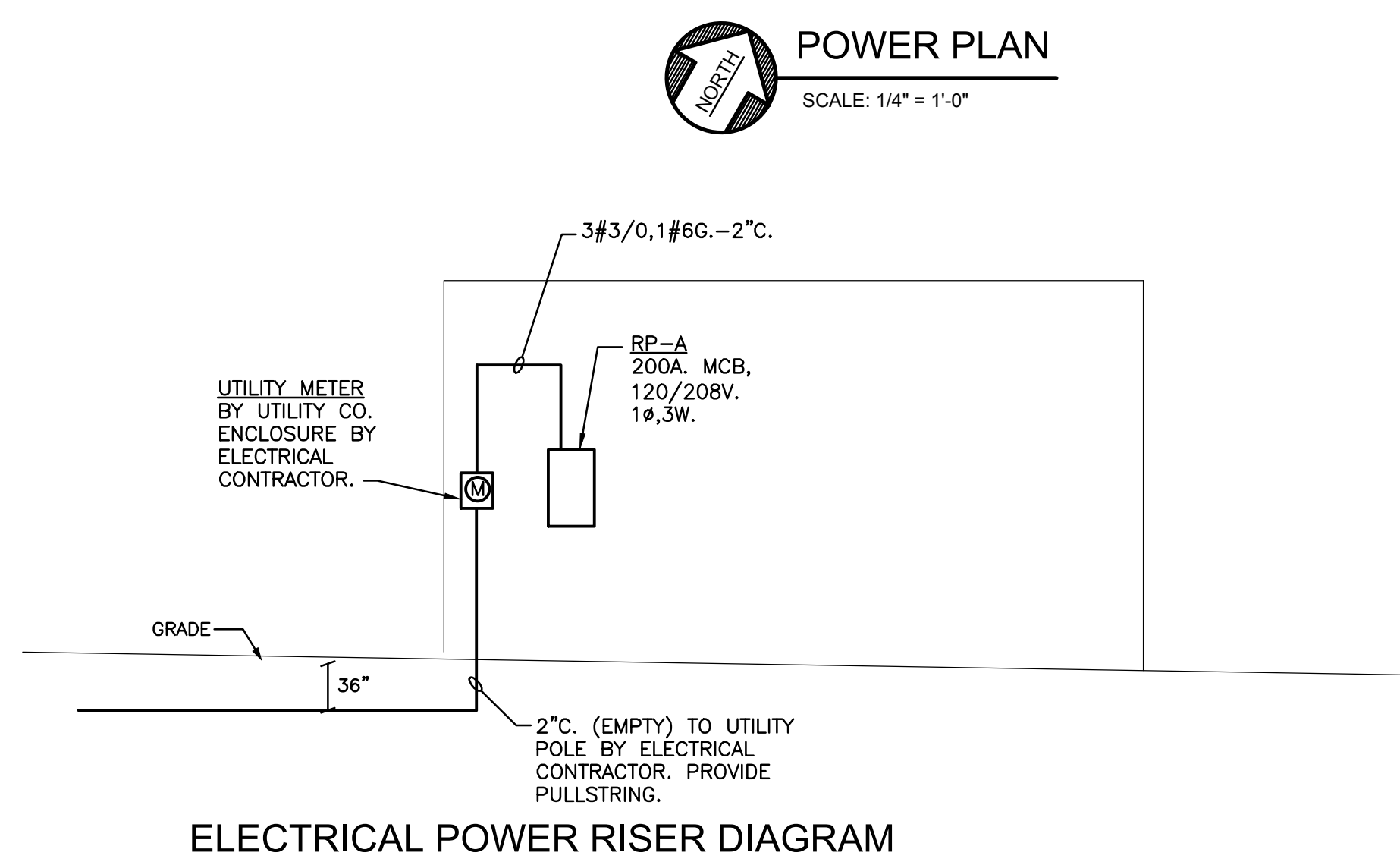
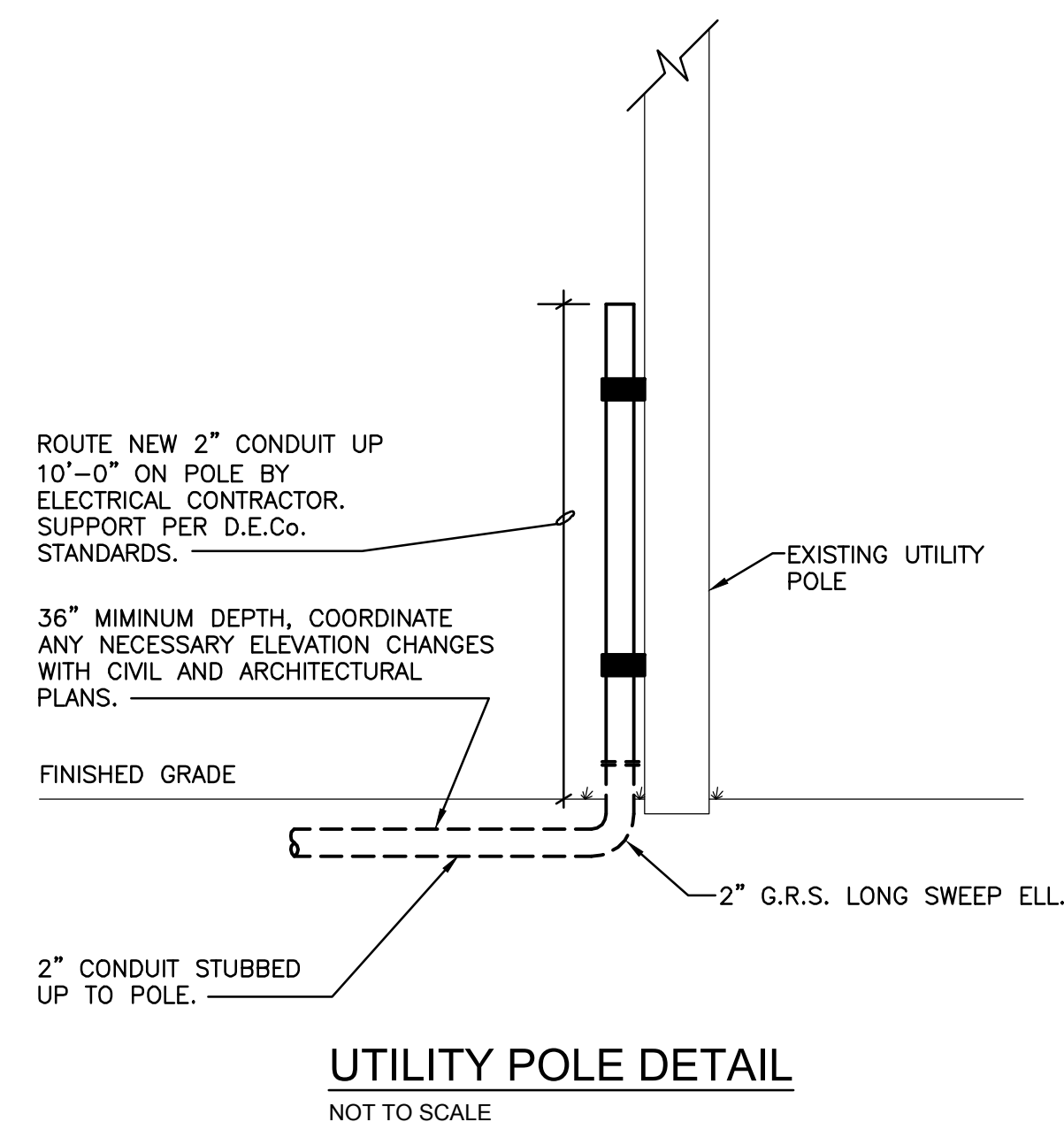
Client:  
**CITY OF DEARBORN**

DEARBORN MICHIGAN

Project Title:  
**FORD FIELD COMFORT STATION**

Date: 04-25-2016 Issued for:  
03-22-2017 BIDS & PERMITS  
04-03-2017 ADDENDUM NO.1  
ADDENDUM NO.3

N:\215062.01\Ford Field Comfort Station\Sheets\Electrical\E3.0 POWER PLAN.dwg, 4/3/2017 3:46:59 PM, DWG To PDF.p3



Drawn: KG Designed: JC  
Checked: JC Approved: JC

CAD Drawing File:  
Copyright © 2014  
NSA Architects, Engineers, Planners

Project Number: **215062.00**

Sheet Title:  
**POWER PLAN**

Sheet Number: **E3.0**

GRILLE, REGISTER AND DIFFUSER SCHEDULE							
TAG	BASIS OF DESIGN	TYPE	CFM RANGE	NECK SIZE	SURFACE MODULE	MAX NC	NOTES
S-1	TITUS, TDC	SUPPLY	0-160	6"	12x12	30	1
S-2	TITUS, TDC	SUPPLY	0-160	6"	24X24	30	1
S-3	TITUS, TDC	SUPPLY	300-500	10"	24X24	30	1
E-1	TITUS, 350R	EXHAUST	50-350	10"x10"	12"x12"	30	1
R-1	TITUS, PAR	RETURN	500-700	12"x12"	24"x24"	30	1
R-2	TITUS, PAR	RETURN	100-300	8"x8"	12"x12"	30	1

NOTES:  
1) OPPOSED BLADE VOLUME DAMPER, WHITE FINISH

FAN SCHEDULE												
TAG	BASIS OF DESIGN	LOCATION	SERVICE	TYPE	CFM	E.S.P.	DRIVE	MOTOR DATA				COMMENTS
								HP	VOLTS	PHASE	Hz	
EF-1/EF-2	GREENHECK G-080 G	ROOF	FACILITY	CENTRIFUGAL	300	0.25	DIRECT	1/30	120	1	60	1,2,3

NOTES:  
1) PROVIDE DISCONNECT SWITCH, BACK-DRAFT DAMPER, AND BIRDSCREEN.  
2) PROVIDE ROOF CURB.  
3) INTERLOCK WITH LIGHT SWITCH

FURNACE SCHEDULE										
TAG	LOCATION	BASIS OF DESIGN		E.S.P.	CFM	HEATING SECTION		ELECTRICAL		NOTES/ACCESSORIES
		MANUFACTURER	MODEL			INPUT (MBH)	OUTPUT (MBH)	VOLTS / PH / HZ	HP	
F-1	UTILITY ROOM	TRANE	TUH1B080A9H31A	0.50	1200	80	76	120/1/60	1/2	1,2

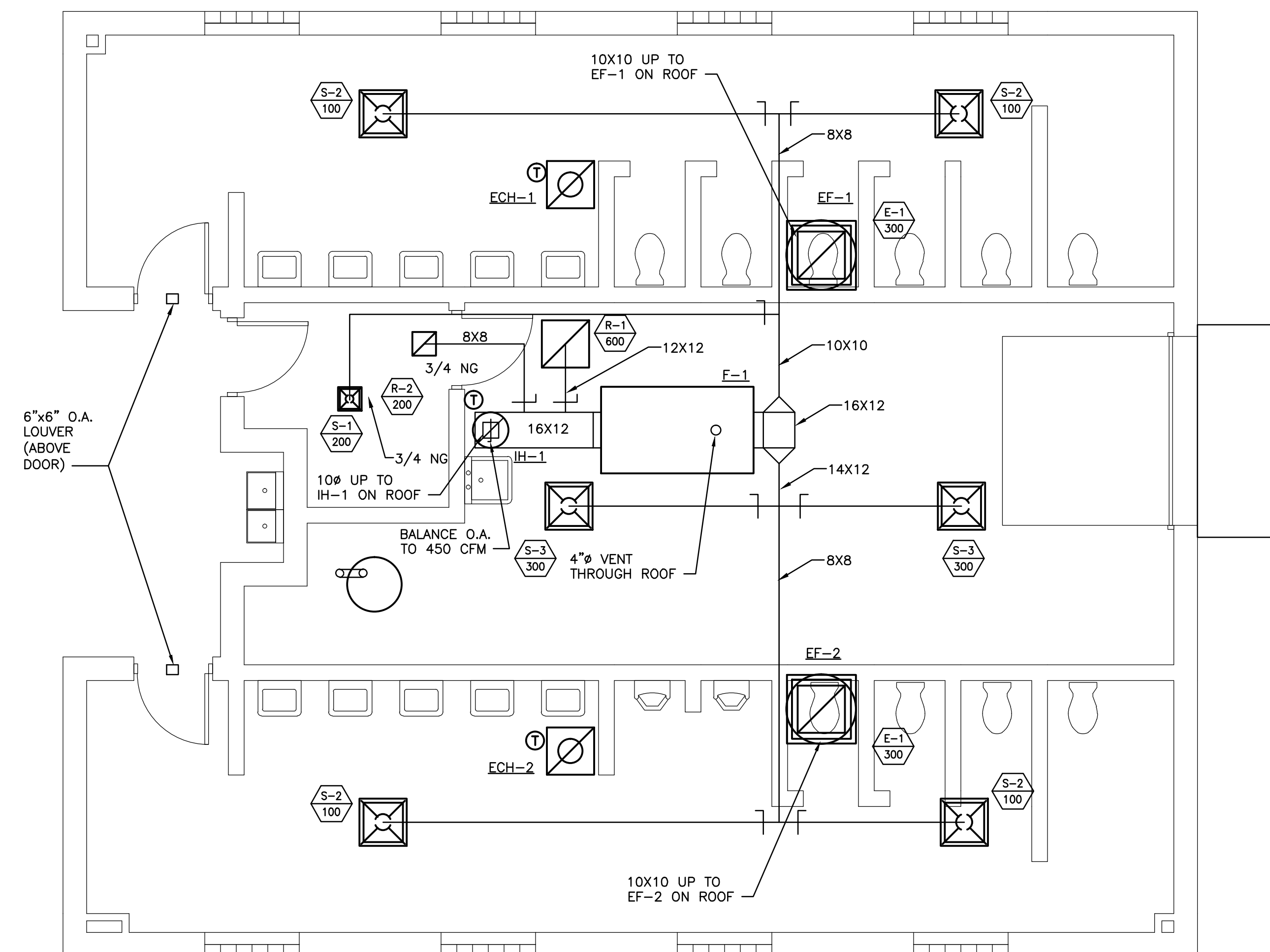
NOTES:  
1) UNIT TO BE MOUNTED BETWEEN TRUSSES, SUPPORTED BY SPRING/ISOLATION MOUNTS AT FOUR CORNERS.  
2) PROVIDE DISCONNECT SWITCH, DIGITAL TEMPERATURE ROOM SENSOR

INTAKE HOOD							
TAG	BASIS OF DESIGN	MODEL	TYPE	CFM RANGE	SIZE	THROAT DIA	NOTES
IH-1	GREENHECK	GRSF-10	INTAKE	450	20"	10"	1

NOTES:  
1) PROVIDE INSECT/BIRD SCREEN, AND BACK-DRAFT DAMPER.

ELECTRIC CEILING HEATER SCHEDULE						
TAG	BASIS OF DESIGN	LOCATION	HEATING CAPACITY	ELECTRICAL		COMMENTS
				VOLTS/PHASE		
ECH-1/ECH-2	MARKEL F3485A1	TOILET RM	5 KW	208/1		1,2

NOTE 1: INTEGRAL BUILT IN ADJUSTABLE THERMOSTAT, DISCONNECT SWITCH  
NOTE 2: RECESS MOUNTED CEILING HEATER



**HVAC FLOOR PLAN**  
SCALE: 1/4" = 1'-0"

**GENERAL NOTES**

- PRIOR TO PURCHASE OF ANY MECHANICAL EQUIPMENT, MECHANICAL CONTRACTOR TO VERIFY EXACT SERVICE VOLTAGE (208V. VS. 240V.) WITH ELECTRICAL CONTRACTOR.
- RUN SUPPLY/EXHAUST/RETURN DUCTWORK ABOVE CEILING. PROVIDE INSULATION IN UNCONDITIONED SPACE.
- MOUNT F-1 FLUSH TO BOTTOM CHORD OF TRUSS. COORDINATE WITH STRUCTURAL.

Client:  
CITY OF DEARBORN

DEARBORN MICHIGAN

Project Title:  
FORD FIELD COMFORT STATION

Date: 03-18-2016  
04-25-2016  
04-03-2017

Issued for:  
OWNER REVIEW  
BIDS & PERMITS  
ADDENDUM NO. 3

Drawn: SR  
Checked: DC

Designed: SR  
Approved: BKJ

CAD Drawing File:  
Copyright © 2014  
NSA Architects, Engineers, Planners

Project Number:  
215062.00

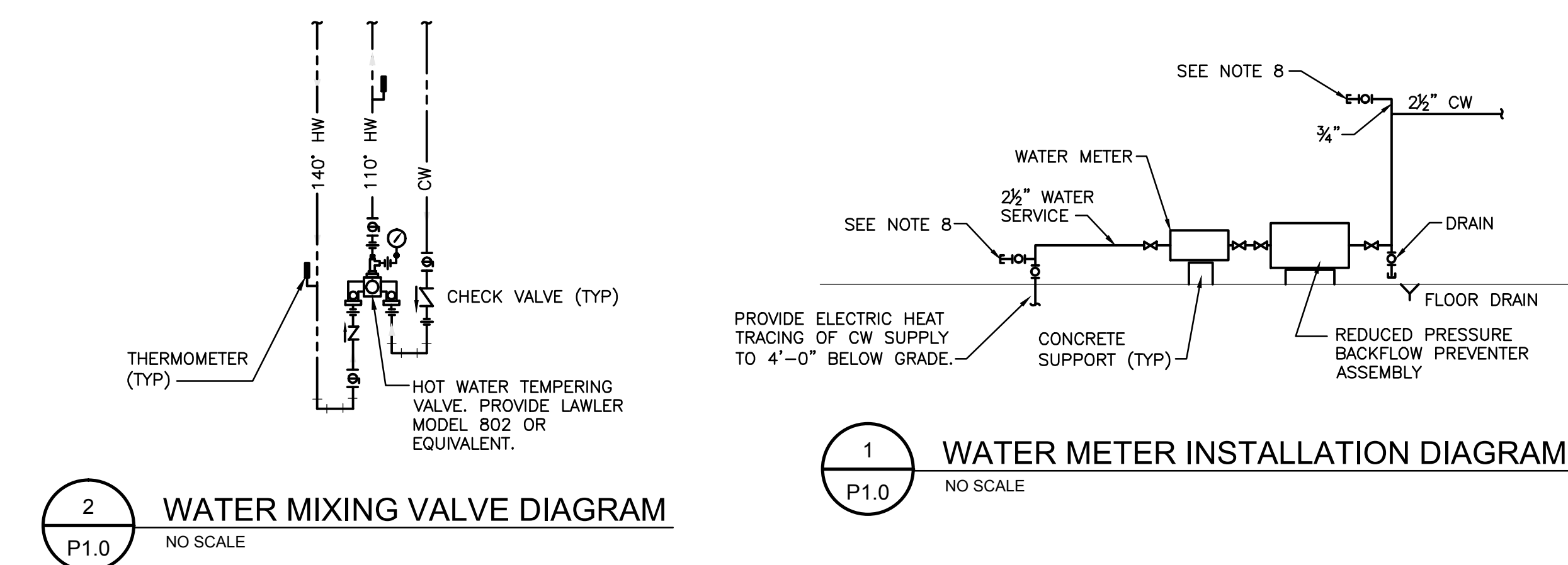
Sheet Title:  
HVAC PLAN

Sheet Number:  
M1.0

PLUMBING FIXTURE SCHEDULE							
TAG	FUNCTION	CW	HW	WASTE	VENT	MANUFACTURER	REMARKS
WC-1	WATER CLOSET	1"	-	4"	2"	AMERICAN STANDARD MADERA FLOWISE	FLOOR MOUNTED, ELONGATED BOWL WITH TOP 1-1/2" TOP SPUD, 16-1/2" RIM HEIGHT, WHITE VITREOUS CHINA, ADA COMPLIANT. LOW CONSUMPTION WITH 1.1-1.8GPF SLOAN 110 ES-3 FLUSHOMETER, WITH AMERICAN STANDARD 5901.100 TOILET SEAT. PROVIDE HERCULES #90214 WAX RING COMBO PACK.
UR-1	URINAL	3/4"	-	2"	2"	MANSFIELD CASCADE 410HE	WHITE VITREOUS CHINA, WALL MOUNTED WITH EXTENDED SIDES, 3/4" TOP SPUD, TWO CONCEALED HANGERS AND BOLTS, INTEGRAL TRAP. PROVIDE SLOAN MODEL OPTIMA SENSOR ACTIVATED FLUSHOMETER, MODEL 186-1 DFB ESS OR URINAL SHALL BE ADA COMPLIANT.
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	MANSFIELD 2018HBNS	WALL MOUNTED WHITE VITREOUS CHINA, ADA COMPLIANT, PROVIDE DOUBLE LEVER FAUCET WITH AERATOR, AMERICAN STANDARD COLONY SOFT 2275.500, ADA COMPLIANT. PROVIDE R19 VALVE STOPS WITH REMOVABLE BONNET, PERFORATED DRAIN STRAINER AND TRAP ASSEMBLY WITH PROTECTIVE PIPE COVERS EQUAL TO TRUEBRO 102. FAUCET TO BE CHROME FINISH, WITH RENEWABLE SEATS AND DISKS OR CARTRIDGE STYLE.
SS-1	SERVICE SINK (MOP SINK)	1/2"	1/2"	2"	1-1/2"	FIAT 63M	MUSTEE MODEL 63M, 24"X24"X10" DEEP, ONE-PIECE MOLDED DURASTONE STRUCTURAL FIBERGLASS, 3" PVC SCH.80 DRAIN SEAL, INTGRALLY MOLDED, STAINLESS STEEL STRAINER, HOSE AND BRACKET (65.7), MOP HANGER (65.6). FAUCET: ZURN, MODEL Z843M1-RC, ROUGH CHROME PLATED WITH VACUUM BREAKER, 1/4 TURN CERAMIC DISC CARTRIDGES, INTEGRAL SERVICE STOPS WITH ADJUSTABLE CENTERS, 3/4" HOSE THREADED OUTLET, PAIL HOOK AND ADJUSTABLE WALL BRACE.
EWC-1	ELECTRIC WATER COOLER	1-1/2"	-	1-1/2"	1-1/2"	ELKAY VRCTLDDWS	ADA, ELECTRIC WATER COOLER, STAINLESS STEEL CONSTRUCTION, INCLUDE VANDAL-RESISTANT BUBBLER, BOTTLE FILLING UNIT SHALL INCLUDE AN AUTOMATIC 20-SECOND SHUT-OFF TIMER, QUICK FILL RATE 1.5 GPM, LAMINAR FLOW, VANDAL-RESISTANT PUSHBUTTON ACTIVATION, REAL DRAIN SYSTEM. PROVIDE 1/4 TURN SHUT-OFF VALVE.
FD-1	FLOOR DRAIN	-	-	-	-	NEPTUNE	CONSTRUCTED OF LEAD FREE RILSAN NYLON-COATED DUCTILE IRON WHICH IS CHEMICAL AND CORROSION RESISTANT. RATED AT 150 PSI WORKING PRESSURE, STAINLESS STEEL STRAINER PLATE AND COVER BOLTS. INLINE SERVICEABILITY. PREVENTION OF DEBRI SUCH AS STONES OR PEBBLES GREATER THAN 3/16" IN DIAMETER FROM ENTERING OR DAMAGING WATER METER.
BFP-1	BACKFLOW PREVENTER	2"	-	-	-	ZURN WILKINS 375	REDUCED PRESSURE PRINCIPAL ASSEMBLY, ASSE LISTED 1013 AND IAMPO LISTED. REINFORCED NYLON HOUSING, SUPPLIED WITH CAST BRONZE BALL VALVES AND SILICONE SEAT DISC ELASTOMERS. 2" SIZE WITH A MAXIMUM WORKING WATER PRESSURE = 175 PSI, RATED TO 180 DEG. F MAXIMUM WORKING TEMPERATURE.
HB-1	HOSE BIBB	1/2"	-	-	-	WOODFORD MODEL 65	HOSE BIBB, SINGLE CHECK ANTI-SIPHON BACKFLOW PROTECTION, FREEZELESS, WITH 3/4" THREADED HOSE NOZZLE AND TEE KEY OPERATION.

DOMESTIC HOT WATER HEATER SCHEDULE									
TAG	BASIS OF DESIGN	LOCATION	CAPACITY GAL.	GAS DATA		HEATING CAPACITY		ELECTRICAL	COMMENTS
				TYPE	INPUT CFH	RECOVERY GPH	TEMP RISE	VOLTS/PHASE	
WH-1	A.O. SMITH CYCLONE BTH-120A MXI	UTILITY RM	60	N. GAS	120	157	88	120/1	1,2,3,4

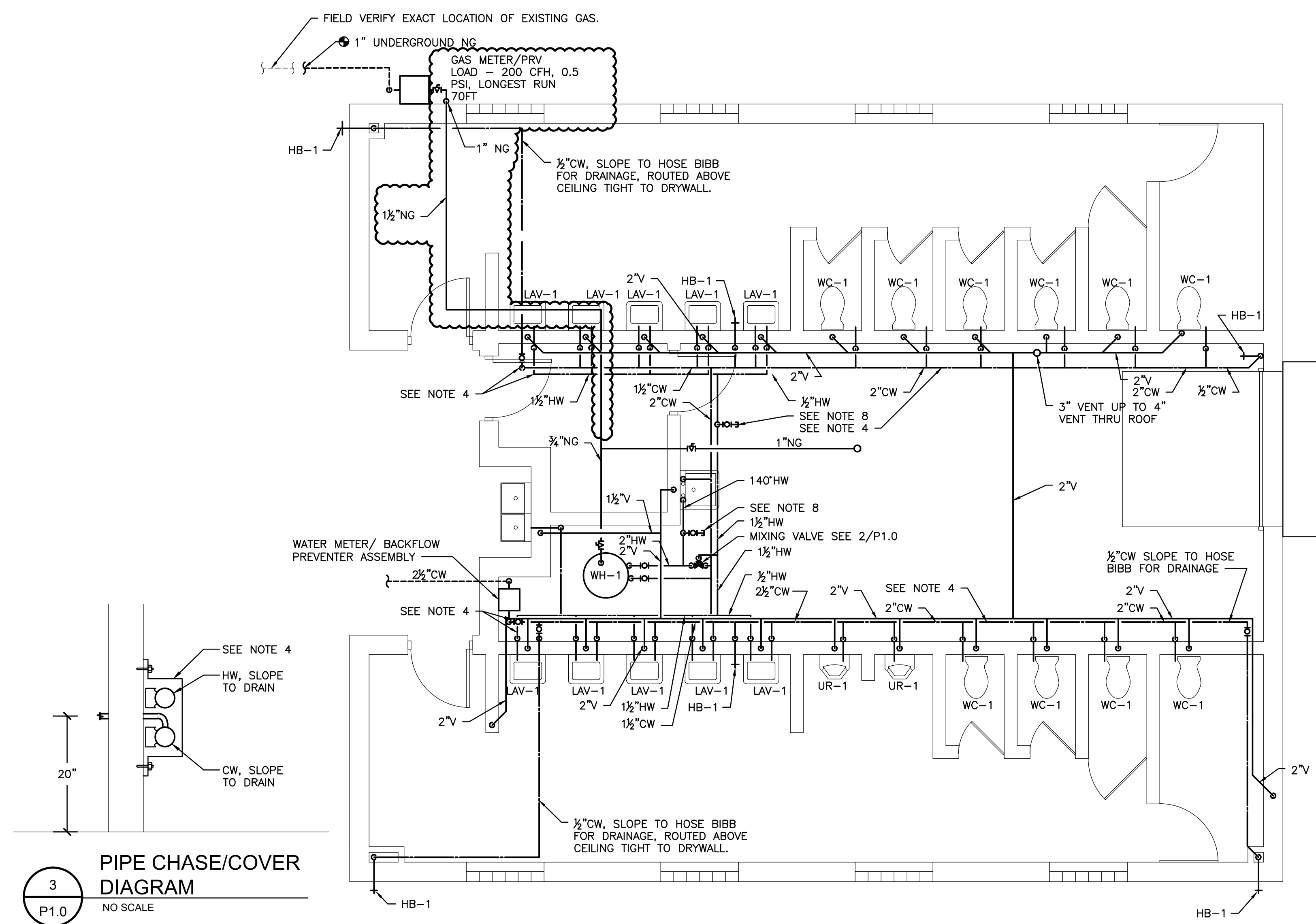
- 1) PROVIDE P&T RELIEF VALVE TO FLOOR DRAIN. SET HEATER AT 140°F
- 2) PROVIDE SYSTEM LAWLER #802 MIXING VALVE WITH 1" HW AND CW INLETS, AND 1 1/4" OUTLET.
- 3) PROVIDE GAS PRESSURE REGULATOR FOR 1 PSI GAS MAIN PRESSURE.
- 4) LOW WATER CUTOFF AND CONDENSATE NEUTRALIZATION KIT.



1 WATER METER INSTALLATION DIAGRAM  
NO SCALE

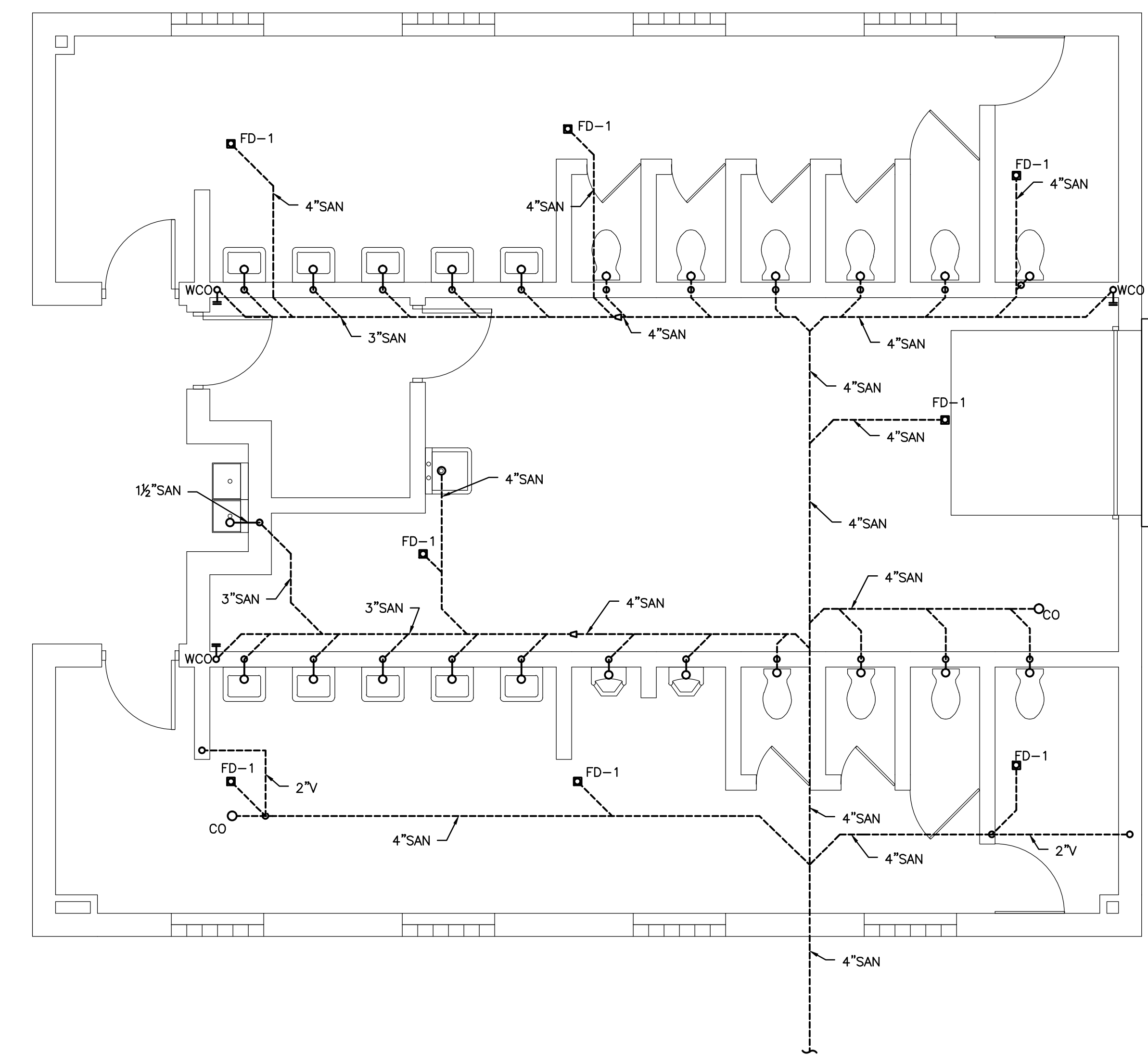
2 WATER MIXING VALVE DIAGRAM  
NO SCALE

- GENERAL NOTES:**
1. THE CONTRACTOR SHALL PROVIDE R19 VALVE STOPS WITH REMOVAL BONNETS AS REQUIRED BY OWNER FOR DRAINING.
  2. ALL PLUMBING TO BE INSTALLED AND SLOPED FOR GRAVITY DRAINAGE AND SEASONAL SHUTDOWN.
  3. PROVIDE HANGERS FOR ALL PIPING.
  4. PROVIDE 4"x14", 16 GAUGE GALVANIZED PIPE COVER/CHASE MOUNTED AT 26" AFF TO TOP.
  5. PROVIDE A MANUAL MAIN GAS SHUT-OFF VALVE.
  6. PROVIDE ACCESS PANELS FOR VALVES LOCATED ABOVE CEILING.
  7. ROUTE VENTING IN WALLS AND ABOVE CEILING.
  8. PROVIDE THREADED PIPE CONNECTION AND CAP, FOR CONNECTION OF COMPRESSED AIR SUPPLY FOR WINTERIZING OF SYSTEM.



3 PIPE CHASE/COVER DIAGRAM  
NO SCALE

PLUMBING PLAN FLOOR PLAN - ABOVE GROUND  
SCALE: 1/4" = 1'-0"



PLUMBING PLAN FLOOR PLAN - UNDERGROUND  
SCALE: 1/4" = 1'-0"

Client:  
CITY OF DEARBORN

DEARBORN MICHIGAN

Project Title:  
FORD FIELD COMFORT STATION

Date: 03-18-2016  
04-25-2016  
04-03-2017

Issued for:  
OWNER REVIEW  
BIDS & PERMITS  
ADDENDUM NO. 3

Drawn: SR  
Checked: DC

Designed: SR  
Approved: BKJ

CAD Drawing File:  
Copyright © 2014  
NSA Architects, Engineers, Planners

Project Number:  
215062.00

Sheet Title:  
PLUMBING FLOOR PLAN

Sheet Number:  
P1.0