### ADDENDUM NO. 5

#### **October 3, 2025**

# VALE FACILITY ADDITION/RENOVATIONS AND MAINTENANCE/IT FACILITY PROJECTS

#### TO: ALL BIDDERS OF RECORD

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications, and the Drawings dated September 4, 2025 by Gibraltar Design. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of pages ADD 5-1 through ADD 5-7 and attached and attached Addendum No. 5 from Gibraltar Design dated October 3, 2025, consisting of 5 pages and 8 Drawings.

#### A. <u>SPECIFICATION SECTION 00 00 20 - TABLE OF CONTENTS</u>

#### 1. **DELETE:**

Specification Section 12 25 00 - Roller Shades

#### B. SPECIFICATION SECTION 01 12 00 - MULTIPLE CONTRACT SUMMARY

#### **Under 3.03 Bid Categories**

#### A. BID CATEGORY NO. 1 - GENERAL TRADES

#### 1. **DELETE:**

Specification Section 12 25 00 - Roller Shades

#### 2. REVISE:

#### Clarification No. 12:

Regarding Specification Section 02 41 30 Minor Demolition for Remodeling; The Bid Category No. 3 Contractor is to provide all demolition, cutting and patching of Roof related work to include, but not limited to, membrane, fascia, coping, insulation, curbs, etc. The Bid Category No. 8 **Contractor** is responsible to provide all demolition, cutting and patching of Food Service related work. The **Bid Category No. 9 Contractor** is responsible to provide all demolition, cutting and patching of Plumbing related work to include, but not limited to, fixtures, piping, etc. The **Bid** Category No. 10 Contractor is responsible to provide all demolition, cutting and patching of Mechanical/HVAC related work to include, but not limited to, grilles, ductwork, units, piping, systems, etc. The Bid Category No. 11 Contractor is to provide all demolition, cutting and patching of Electrical related work to include, but not limited to, light fixtures, conduit, raceways, wiring, equipment, etc. The **Bid Category No. 1 Contractor** is responsible for all other demolition, removals and patching as indicated on the contract documents. Each of the contractors listed above is responsible for providing their own curbs. All flashing associated with roof openings shown on Drawing A-201, for both the new addition and the existing building, shall be provided by the **Bid Category No. 3 Contractor**. Any roof openings not shown on Drawing A-201 shall be the responsibility of the respective contractor creating the opening.

#### 3. **ADD**:

#### Clarification No. 23:

The **Bid Category No. 1 Contractor** is responsible for all bracing to masonry walls as shown on detail 11 in drawings S-001 (Maintenance) and S-403 (Vale).

#### Clarification No. 24:

The **Bid Category No. 1 Contractor** is responsible for the following: All existing pipe associated with STR. 2059 and 2068 shall be fully removed; any pipe located where the new building expansion shall be built is to be removed. The North invert on STR. 1231 shall be brick and mortared to cap the invert. The existing water main North of the hot tap assembly shall be removed including the vault. The North side of the hot tap assembly shall have a restrained cap and thrust block installed to terminate flow North.

#### C. BID CATEGORY NO. 3 - ROOFING

#### 1. **REVISE:**

#### Clarification No. 3:

Regarding Specification Section 02 41 30 Minor Demolition for Remodeling; The **Bid Category No. 3 Contractor** is to provide all demolition, cutting and patching of Roof related work to include, but not limited to, membrane, fascia, coping, insulation, curbs, etc. The Bid Category No. 8 Contractor is responsible to provide all demolition, cutting and patching of Food Service related work. The **Bid Category No. 9 Contractor** is responsible to provide all demolition, cutting and patching of Plumbing related work to include, but not limited to, fixtures, piping, etc. The Bid Category No. 10 Contractor is responsible to provide all demolition, cutting and patching of Mechanical/HVAC related work to include, but not limited to, grilles, ductwork, units, piping, systems, etc. The **Bid Category** No. 11 Contractor is to provide all demolition, cutting and patching of Electrical related work to include, but not limited to, light fixtures, conduit, raceways, wiring, equipment, etc. The Bid Category No. 1 Contractor is responsible for all other demolition, removals and patching as indicated on the contract documents. Each of the contractors listed above is responsible for providing their own curbs. All flashing associated with roof openings shown on Drawing A-201, for both the new addition and the existing building, shall be provided by the **Bid Category No. 3 Contractor**. Any roof openings not shown on Drawing A-201 shall be the responsibility of the respective contractor creating the opening.

#### E. BID CATEGORY NO. 5 - METAL STUDS/DRYWALL/CEILINGS

#### 1. **ADD**:

#### Clarification No. 4:

The **Bid Category No. 5 Contractor** is responsible for all spray on firestopping as indicated on drawing A-412 / Detail 1 & 2.

#### H. BID CATEGORY NO. 8 - FOOD SERVICES

#### 1. **REVISE:**

#### Clarification No. 3:

#### I. BID CATEGORY NO. 9 - PLUMBING

#### 1. **REVISE:**

#### Clarification No. 6:

#### J. BID CATEGORY NO. 10 - MECHANICAL

#### 1. **REVISE:**

#### Clarification No. 7:

#### K. BID CATEGORY NO. 11 - ELECTRICAL

#### 1. **REVISE:**

#### Clarification No. 9:



#### **ADDENDUM FIVE**

**Addendum Five (AD.05)** to the drawings and specifications prepared by Gibraltar Design for **Valparaiso Vale Facility Addition/Renovations and Maintenance/It Facility and Related Work** for Valparaiso Community Schools, Valparaiso, Indiana.

All Contractors bidding on this project shall read all of the items covered below and shall comply with all of the requirements as set forth, including any necessary refinements or additions generated by this Addendum and required by the intent of the original contract documents. All Contractors shall acknowledge on their bid form that they have received One, Two, Three and this Addendum and include the appropriate content of same within their bid proposal.

#### **SPECIFICATIONS**

#### 1. Specification Section 05 50 00 Miscellaneous Metals

- A. Add new Paragraph 3.3.H. as follows:
  - "H. Trench Drain Grating:
    - A. Provide and install Galvanized Bar Grating, 2-inch deep x 1/4-inch bars with 1 3/16-inch spacing with welded bars.
    - B. Provide and install Galvanized 2-inch x 2-inch x 5/16-inch steel angles with Nelson Studs at 8-inches on center full perimeter of trench edge."

#### 2. Specification Section 07 95 00

#### **Expansion Joint Systems**

- A. Revise Paragraph 2.3. as follows:
  - "2.3. Expansion Joint Systems
    - 1. Exterior Wall Joints: Aluminum frames with elastomeric seals.
      - a. Basis-of-Design Product: Balco; FCVS-2.
      - b. Nominal Joint Width: 2 inches.
      - c. Movement Capability: Plus or minus 100 percent.
      - d. Seals: Manufacturer's standard inner moisture barrier seal and exterior seal in gray or black color as selected by Architect.
    - 2. Interior Floor Joints: Stainless Steel frames, glide plate and finishes insert, Fire Rated.
      - a. Basis-of-Design Product: Balco; SS6FTP-2.
      - b. Nominal Joint Width: 2 inches.
      - c. Movement Capability: Plus or minus 50 percent to 100 percent.
      - d. Designed for Vinyl Floor Tile Finish in recessed portions.
    - 3. Interior Wall Joints: Stainless Steel frames, gliding plate, Fire Rated.
      - a. Basis-of-Design Product: Balco; 2HWD-2-MBW.



### Valparaiso Vale Facility Addition/Renovations And Maintenance/It Facility And Related Work

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- b. Nominal Joint Width: 2 inches.
- c. Movement Capability: Plus or minus 50 percent.
- 4. Exterior Roof Joints: Traditional roof bellow style.
  - a. Basis-of-Design Product: Balco; BRB Traditional or RRg Silicone.
  - b. Nominal Joint Width: 2 inches."

#### 3. Specification Section 12 25 00 Roller Shades

A. Delete specification section in its entirety.

#### 4. Specification Section 23 09 23 Temperature Controls

A. Add new Paragraph 2.12 as follows:

#### 2.12 CARBON MONOXIDE SENSING SYSTEM:

- A. Each bidder shall include in the scope of their bid a UL labeled control panel to be located as shown on plans the contract documents. Each panel shall include the starter and disconnect for the exhaust fans and louvers. The primary hand activated disconnect shall be located in the door of the panel. If the fan powered by the panel is either located 25 feet from the panel, or out of the direct line of sight from the panel, a second disconnect shall be located at the fan. All disconnects shall be supplied with lock-out hasps.
- B. This same panel shall include a carbon monoxide sensing system that will have not less than sensor probes located per the drawings. Verify exact location and installation requirements in field prior to rough-in.
- C. The probes shall be located 48" above the floor level. When any sensor detects 70% of the allowable NIOSH PEL (permissible exposure limits) levels of carbon monoxide or nitrogen dioxide in the space, an orange light (located on the control panel) shall illuminate as a warning. In addition, the makeup air fan shall be energized and remain on until such levels fall below 30% of the NIOSH levels. Interface the exhaust fans and louvers as required for a complete and proper installation.
- D. If any probe senses 100% of the allowable IOSHA or NIOSH levels of carbon monoxide or nitrogen dioxide, a 94 dBa horn shall cycle for 90 seconds and a red light shall sequence on and remain on until such levels fall below the NIOSH levels. The panel shall be fully adjustable as to the levels of detectable carbon monoxide allowing future changes in the "alert levels".
  - In addition to local horn and light, both makeup air fans shall be energized and remain on until such levels fall below 30% of the NIOSH levels. Interface the exhaust fans and louvers as required for a complete and proper installation.
  - 2. Remote horns and strobes shall activate.



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- E. The panels shall be painted bright red with customer engraved tags identifying all lights, buttons and alert horns.
- F. Each panel enclosure shall be NEMA-4X rated and supplied with a keyed lock.
- G. The starters, relays, disconnects, and components of the panel shall be American-made and locally available.
- B. Add new paragraph 4.15 as follows:

#### 4.15 MAKE UP AIR UNIT (MUA):

- A. The MUA system shall be provided with a factory furnished control system with LON or BACNET interface. Control system shall include discharge air temperature controls for a complete and operations system. The system shall be energized from the carbon monoxide sensing system.
- B. Provide interface to units LON or BACNET interface and install necessary field devices to properly control and monitor system. Coordinate installation and other requirements with the MUA system manufacturer. Parallel available alarms from control system to FMS.
- C. Install and wire components shipped loose with the MUA system. This includes but is not limited to the following items:
  - 1. MUA system control panel.
  - 2. Return and discharge air temperature sensors.
  - 3. Wiring between unit and control panel.
- C. Revise make UP Air Unit Point List as follows:



System: Various												D	DC I	NPU1	/OU	TPUT	SUM	MAR	Y TAE	LE												
Serves:							НА	RDW	/ARE														S	OFTW	/ARE							
Location:			0	UTPU	Г						NPUT	i							ALA	ARM						400		TION	DDO CD			
Graphics: Yes		Digito	al		And	ılog			Dig	ital		Α	nalo	g			ı	Digito	ıl		Α	nalo	g			APP	LICA	IION	PROGRA	4M2		
Point Description:	Start/Stop	Enable/Disable	Open/Close	Control	Set Point Adjustment	Electronic		Status	Alarm	KW Pulse	Temperature	Pressure	Flow	CO2	Parts per Million	Equipment Alam	Critical	Notification			High Limit	Low Limit	Run Time	Scheduled	Optimal Start Stop	Morning Warm Up	Demand Limit	Economizer	Provide points from Unit Controller	Graphic Control		Point History
VAV Box																																
Space Temp											Х										Х	Χ								Х	Х	
Space Temp Adj.					Х																									Χ	Χ	
Occup.Htg/Clg Setpoint					Χ																									ш.	Χ	
Unocc Htg/Clg Setpoint					Χ																									ш.	Χ	
Warmup cycle	X																								Χ					ш.		Χ
Box CFM												Χ	Χ																	Χ	Χ	
Volume Damper				Χ	Χ																										Χ	
Reheat Coil Valve				Χ	Χ								Χ																	Χ	Χ	
Zone CO2															Χ						Х										Χ	
Un-Occupied Override	$\perp$										Х																					_
Make UP Air Unit																																
Unit Controller	Х	Х	1		Х			Х	Х		H					Х	Х	Х											Х	Х	Х	=

#### **DRAWINGS**

#### **NEW MAINTENANCE AND IT BUILDING**

#### 5. Sheet C-104

- A. Added 4" diameter downspout pipes coming from the Maintenance & IT building.
- B. Connected the 4" diameter downspout pipes to STR.'s 102A, 102B, 102C, 104, and 104A.
- C. Revised Utility Notes #15 by striking through "refer to plumbing plan sheets for downspout connections to building"; reference was not needed.

#### 6. Sheet SB-101

A. Reverse the arrow slope indicated in the trench drain so that the trench drains south.

#### 7. Sheet A-101

A. Reverse Architectural Plan Note A23 to read "TRENCH DRAIN. REFER TO DETAIL 3/S-301".

#### 8. Sheet M-001

A. Add carbon monoxide sensor symbol to symbol list.

#### 9. Sheet M-101

- A. ADD carbon monoxide control panel and sensor locations.
- B. Add thermostat locations for unit heaters UH-1 and EUH-1.
- C. Add thermostat location for rooftop unit RT-2.

#### 10. Sheet M-601

A. Revised Note #3 in the Mechanical Equipment Schedule.

#### 11. Sheet T-001

A. Removed references to intercom devices from symbol list.



#### 12. Sheet T-101

A. Removed intercom equipment (speakers) from plan.

#### **VALE FACILITY ADDITION**

#### 13. Sheet AD-101

- A. Add Demolition Plan Keynote D78 to read "CAREFULLY REMOVE EXISTING WALL HUNG ATHLETIC EQUIPMENT (BACKBOARDS TO REMAIN). OWNER TO DETERMINE WHICH EQUIPMENT IS REINSTALLED AFTER WALL FINISH IS COMPLETE."
- B. Add Keynote D78 to Multipurpose Room.

#### 14. Sheet A-101, A-102 and A-103

A. Modify Architectural Plan Keynote A32 to begin with "OWNER TO ...".

#### 15. Sheet A-701, A-702 and A-703

A. Remove the reference "ROLLER SHADES" from the Equipment Plan Legend.

#### 16. Sheet A-801, A-802 and A-803

- A. Modify Plan Note 25 to begin with "OWNER TO ..."
- B. Modify Plan Note 29 to begin with "OWNER TO ..."

#### 17. Sheet P-501

A. Revised the Incoming Domestic Water Service Diagram to show 6" domestic water line into the building and transitioning to a 3" water service.

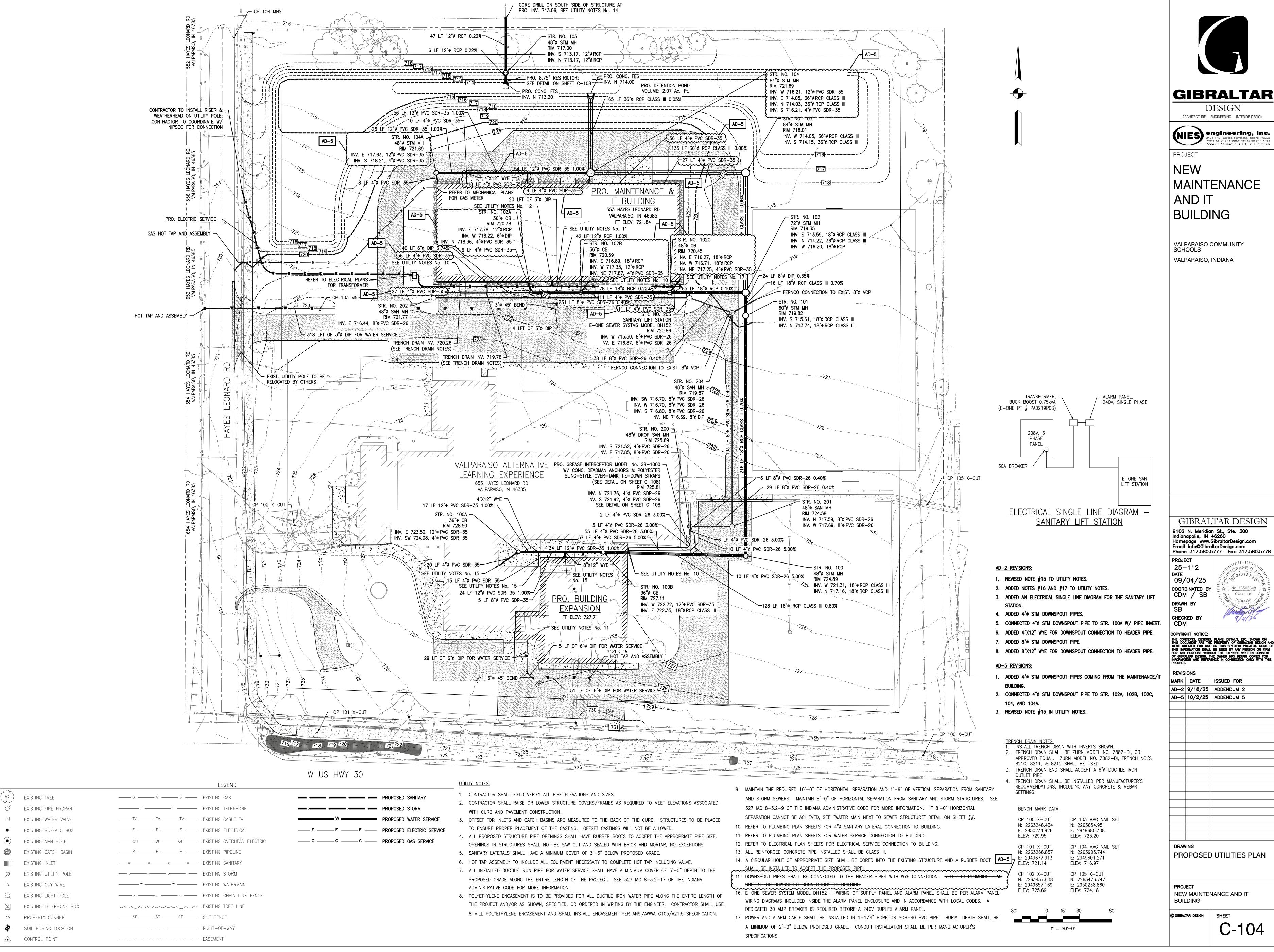
#### 18. Sheet P-502

A. Revised the Domestic Water Riser Diagram to show 6" domestic water line into the building and transitioning to a 3" water service.

Pages 1 through 5, inclusive, and eight (8) full size drawings constitute the total makeup of **Addendum Five**.



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DESIGN

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# MAINTENANCE AND IT BUILDING

VALPARAISO COMMUNITY SCHOOLS VALPARAISO, INDIANA

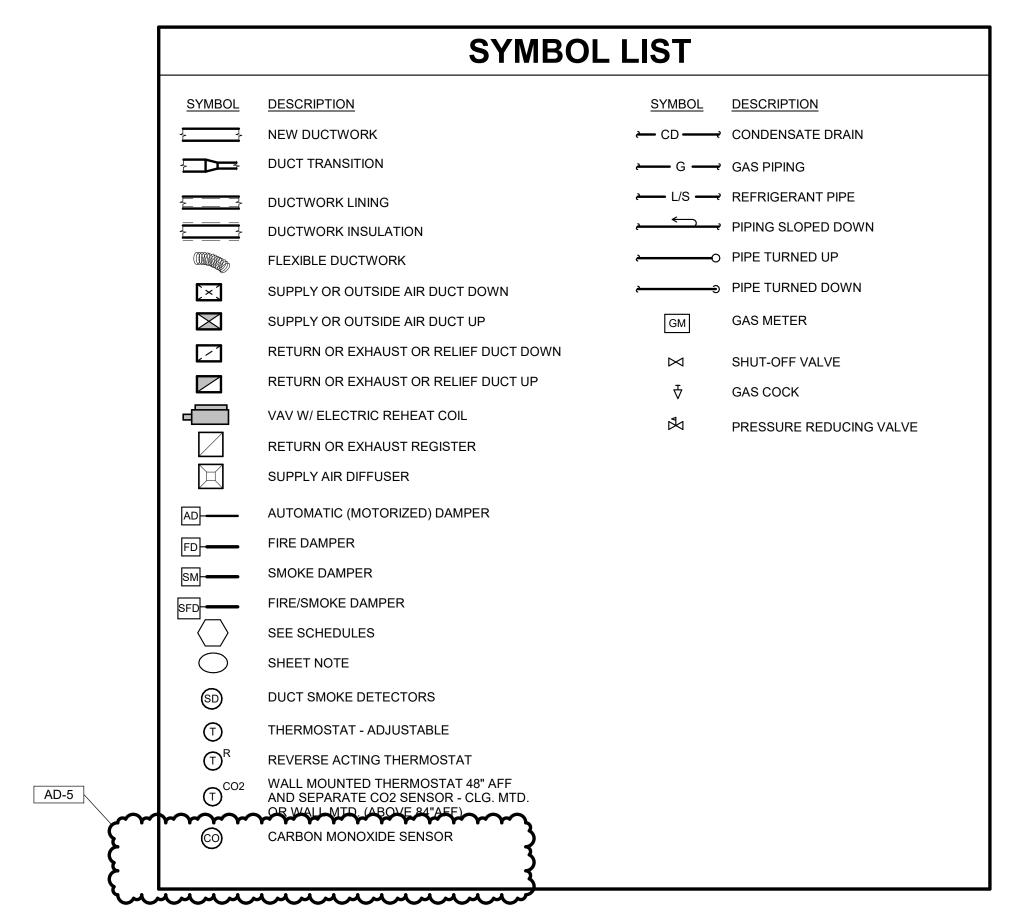
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25-112 09/04/25 COORDINATED BY CDM / SB

REVIS	IONS	
MARK	DATE	ISSUED FOR
AD-2	9/18/25	ADDENDUM 2
AD-5	10/2/25	ADDENDUM 5
DRAW	/ING	

NEW MAINTENANCE AND IT

© GIBRALTAR DESIGN SHEET C-104



# **ABBREVIATIONS LIST**

```
AD AUTOMATIC (MOTORIZED) DAMPER
     AIR CONDITIÒNING
AFF ABOVE FINISHED FLOOR
AMS AIRFLOW MEASURING STATION
BDD BACKDRAFT DAMPER
BJA BETWEEN JOIST ABOVE
BRD BAROMETRIC RELIEF DAMPER
CAT CONDENSING AIR TEMPERATURE
CD CONDENSATE DRAIN
CFH CUBIC FEET PER HOUR
 CFM CUBIC FEET PER MINUTE
     CONDENSING UNIT
     DOWN
     DIRECT EXPANSION
EAT ENTERING AIR TEMPERATURE
EC ELECTRICAL CONTRACTOR
EDB ENTERING DRY BULB TEMPERATURE
ER EXHAUST/RETURN
ESP EXTERNAL STATIC PRESSURE
EWB ENTERING WET BULB TEMPERATURE
EWT ENTERING WATER TEMPERATURE
EXH EXHAUST
FC FLEXIBLE CONNECTION
FD FIRE DAMPER
FPM FEET PER MINUTE
FMS FACILITY MANAGEMENT SYSTEM
     NATURAL GAS
GEF GENERAL EXHAUST FAN
HP HORSE POWER
     HERTZ
     LIQUID
LAT LEAVING AIR TEMPERATURE
LDB LEAVING DRY BULB TEMPERATURE
LV LOUVER
LWB LEAVING WET BULB TEMPERATURE
LWT LEAVING WATER TEMPERATURE
MBH 1,000 BTU/HOUR
MC MECHANICAL CONTRACTOR
MOD MODULATING
NK NECK
NTS NOT TO SCALE
O/A OUTSIDE AIR
OAI OUTSIDE AIR INTAKE
OBD OPPOSED BLADE DAMPER
PRV PRESSURE REDUCING VALVE
     PRESSURE SENSOR
PSI POUNDS PER SQUARE INCH
R/A RETURN AIR
RPM REVOLUTIONS PER MINUTE
RT ROOFTOP UNIT
     SUCTION
S/A SUPPLY AIR
SFD SMOKE-FIRE DAMPER
SHC SENSIBLE HEAT CAPACITY
T/A TRANSFER AIR
     TOILET EXHAUST FAN
TJA THRU JOIST ABOVE
TSP TOTAL STATIC PRESSURE
TYP TYPICAL
UD UNDERCUT DOOR
     UNIT HEATER
     VENT
VAV VARIABLE AIR VOLUME
WC WATER COLUMN
WPD WATER PRESSURE DROP
```

## **GENERAL NOTES**

- WORK SHALL COMPLY WITH LOCAL, MUNICIPAL, AND STATE HVAC CODES.
- THE SCOPE OF WORK SPECIFIED HEREIN AND IN THE SPECIFICATIONS SHALL BE PERFORMED UNDER THE DIRECTION OF A CONSTRUCTION MANAGER. REFER TO THE CONSTRUCTION MANAGER'S INSTRUCTIONS AND DIRECTIONS FOR DETAILS RELATING TO THE EXACT SCOPE OF EACH TRADE. ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND CONSTRUCTION MANAGER'S DIRECTIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR CLARIFICATION. THE ARCHITECT/ENGINEER'S DECISION SHALL BE FINAL.
- LAYOUT IS DIAGRAMMATIC AND CONTRACTOR SHALL INSTALL DUCTWORK, PIPING AND EQUIPMENT TO MEET ACTUAL FIELD CONDITIONS. REVIEW PROJECT SPECIFICATIONS BEFORE STARTING ANY WORK. SUBMIT SHOP DRAWINGS OF WORK AS PER SPECIFICATIONS.
- LAYOUT WORK TO AVOID CONFLICTS BETWEEN DUCTWORK, LIGHTING, CEILINGS, PIPING AND BUILDING STRUCTURE.
- COORDINATE EQUIPMENT ELECTRICAL REQUIREMENTS (VOLTAGES, PHASE, LOAD, ETC.) BEFORE ORDERING ANY EQUIPMENT.
- SOME CEILING SPACES ARE RETURN AIR PLENUMS AS INDICATED ON PLANS. EXAMINE PLENUM BEFORE CEILING IS INSTALLED (OR REPLACED) AND COORDINATE THE SEALING OF OPENINGS AROUND PIPING, DUCTWORK, CONDUIT, ETC., AND OPENINGS TO OUT-OF-DOORS AND ADJACENT SPACES. COORDINATE THE INSTALLATION OF PARTITIONS/DIVIDERS WITHIN CEILING SPACE AS REQUIRED TO CONFINE RETURN PLENUM TO AREAS INDICATED.
- COORDINATE EXACT LOCATION OF CEILING REGISTERS, GRILLES AND DIFFUSERS WITH LIGHTING LAYOUT, SPRINKLER HEADS, AND CEILING GRID. SEE ARCHITECTURAL REFLECTED CEILING PLAN. VERIFY EXACT LOCATION IN FIELD PRIOR TO INSTALLATION. VERIFY CEILING STYLES AND TYPES BEFORE ORDERING REGISTERS. GRILLES AND DIFFUSERS. PROVIDE APPROPRIATE FRAME STYLES AS REQUIRED TO MATCH CEILING STYLE AND TYPES. SET ADJUSTABLE BLADES AS REQUIRED FOR OPTIMUM AIR PATTERN AND TO PREVENT DRAFTS. THE MINIMUM DISTANCE BETWEEN SUPPLY DIFFUSERS/REGISTERS AND SMOKE OR HEAT DETECTORS IS TO BE A MINIMUM OF 3'. COORDINATE WITH FIRE ALARM SYSTEM AS REQUIRED.
- ROUTE DUCTWORK AS HIGH AS POSSIBLE TO AVOID CONFLICTS WITH OTHER TRADES. ROUTE DUCTWORK BETWEEN AND THROUGH JOIST SPACES AND BETWEEN LIGHT FIXTURES AS REQUIRED. VERIFY CONDITIONS AND DUCTWORK ROUTING IN FIELD PRIOR TO INSTALLATION.
- DUCTWORK, PIPING, EQUIPMENT, ETC. SHALL NOT BE SUPPORTED FROM THE BOTTOM CHORD OF ENGINEERED JOISTS WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL
- FLEXIBLE DUCTWORK SHALL BE UL LABELED FOR USE IN RETURN AIR PLENUM. ACOUSTICAL FLEXIBLE DUCTWORK AT THE INLET TO AIR DIFFUSERS MAY BE USED. FLEXIBLE CONNECTIONS SHALL BE 5'-0" MAXIMUM LENGTH, AND SHALL BE SUPPORTED WHERE REQUIRED TO PREVENT MOVEMENT.
- PROVIDE MANUAL BALANCING DAMPERS AT EACH LOW PRESSURE SUPPLY AIR, RETURN AIR AND EXHAUST DUCTWORK TAKE-OFF INCLUDING TAKEOFFS TO EACH AIR DISTRIBUTION DEVICE. DAMPERS SHALL HAVE LOCKING QUADRANT REGULATORS WITH SPRING LOADED END BEARING. INSTALLATION SHALL BE RATTLE FREE. BE RESPONSIBLE FOR LOCATING BALANCING DEVICES AND COORDINATE LOCATIONS FOR TESTING AND BALANCING.
- TRANSFER AIR RETURN GRILLES TO CEILING RETURN PLENUM ARE TO BE PROVIDED WITH A 90 DEGREE MITERED ELBOW ACOUSTICALLY LINED WITH 1/2" THICK DUCT LINER. SEE DETAIL ON PLANS.
- RETURN AIR OPENINGS AND TRANSFER AIR OPENINGS IN CEILING PLENUMS ARE TO BE COVERED BY 1/2" X 1/2" SCREEN MESH. PROVIDE ADDITIONAL TRANSFER AIR OPENINGS THROUGH WALLS DIVIDING CEILING RETURN PLENUMS. TRANSFER AIR OPENINGS TO BE SIZED FOR A MAXIMUM VELOCITY OF 500 FPM AT PEAK CONDITIONS. PROVIDE FIRE OR SMOKE/FIRE DAMPERS IN OPENINGS AS NECESSARY.
- LOCATE VAV BOXES IN ACCESSIBLE LOCATIONS. ARRANGE CONTROLS OF VAV BOX AS REQUIRED FOR MAXIMUM ACCESSIBILITY. PROVIDE ACCESS DOORS WHEN REQUIRED. MEDIUM PRESSURE DUCTWORK TAKE-OFFS TO VAV BOXES SHALL BE MADE WITH 45 DEGREE TAKE-OFF FITTINGS, CONICAL FITTINGS, AND/OR ENLARGED ENTRANCE LOW LOSS TAKE-OFF FITTINGS. PROVIDE MINIMUM 2'-0" STRAIGHT INLET DUCT TO UPSTREAM OF VAV BOXES. PROVIDE DUCTWORK TRANSITION FROM VAV BOX OUTLET TO DUCT SIZE DOWNSTREAM OF VAV BOX INDICATED ON PLAN.
- VERIFY EXACT THERMOSTAT AND SENSOR LOCATIONS IN FIELD PRIOR TO ROUGH-IN OR INSTALLATION. CONTROL WIRING TO BE ROUTED IN CONDUIT.
- PROVIDE AGA APPROVED GAS REGULATOR AT EQUIPMENT REQUIRING LOWER GAS PRESSURE THAN PROVIDED. INCLUDING PIPING BRANCHES SERVING EXISTING EQUIPMENT AND APPLIANCES TO REMAIN. EXTEND GAS REGULATOR VENTS LINE SIZE TO ATMOSPHERE AS REQUIRED. DO NOT COMBINE VENT LINES.
- REFRIGERANT PIPING INSTALLATION INCLUDING SIZING IS TO BE AS PER MANUFACTURER'S RECOMMENDATIONS FOR THE ACTUAL FIELD ROUTING AND FOR THE EQUIPMENT PROVIDED. PROVIDE ALL SUCTION LINE TRAPS, SOLENOID VALVES, SIGHT GLASSES AND FILTER/DRIERS AS PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
- PVC PIPING INSTALLED IN PLENUM CEILING SPACES IS TO BE COVERED WITH MATERIAL THAT HAS A COMPOSITE FLAME-SPREAD RATING OF NOT OVER 25 AND A SMOKE-DEVELOPMENT RATING OF NOT OVER 50 IN ACCORDANCE WITH INTERIM FEDERAL STANDARD NO. 00136A (COMM.-NSB) INCLUDING COVERINGS, MASTICS, AND ADHESIVES.
- PROVIDE CONCRETE EQUIPMENT PADS FOR EQUIPMENT INDICATED ON DRAWINGS. COORDINATE LOCATIONS BEFORE INSTALLATION. PADS ARE TO BE DESIGNED WITH REINFORCEMENT TO HANDLE THE WEIGHT OF THE EQUIPMENT BEING SUPPORTED. EXTERIOR CONCRETE PADS TO BE PROVIDED WITH FROST WALLS (MINIMUM OF 48" BELOW GRADE).
- PROVIDE WATERTIGHT 4" HIGH CONCRETE CURBS AROUND DUCTWORK AND PIPING FLOOR OPENINGS IN MECHANICAL ROOMS LOCATED ABOVE FINISHED SPACES.
- PROVIDE CONDENSATE PIPING FROM ROOF TOP HVAC UNITS. COOLING COIL DRAIN PANS, CONDENSATE PUMPS, HUMIDIFIERS, FURNACES, ETC. AS REQUIRED TO ROOF, NEAREST DRAIN OR TO WHERE INDICATED ON DRAWINGS. THE PIPING IS TO BE THE SAME SIZE AS THE EQUIPMENT CONNECTION SIZE. PROVIDE TRAPS IN CONDENSATE PIPING PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
- PROVIDE CONDENSATE PUMPS, RECEIVERS, PIPING AND ELECTRICAL CONNECTIONS AS REQUIRED AT EQUIPMENT WHERE EQUIPMENT DRAINS CANNOT BE DRAINED BY GRAVITY DUE TO FIELD CONDITIONS.
- PROVIDE VENT PIPING FROM ALL GAS PRESSURE REDUCING STATIONS. PIPING TO BE ROUTED TO THE EXTERIOR OF BUILDING AS REQUIRED. MULTIPLE RELIEFS ARE TO BE PIPED INDIVIDUALLY, NOT GROUPED TOGETHER IN A COMMON HEADER. THE PIPING IS TO BE SAME SIZE AS RELIEF CONNECTION TO EQUIPMENT. TERMINATION LOCATION TO
- MEET ALL CODE REQUIREMENTS AND BE APPROVED BY ARCHITECT. PROVIDE RELIEF VENT PIPING FOR REFRIGERATION EQUIPMENT. PIPING TO BE ROUTED TO THE EXTERIOR OF BUILDING AS REQUIRED. MULTIPLE RELIEFS ARE TO BE PIPED INDIVIDUALLY, NOT GROUPED TOGETHER IN A COMMON HEADER. THE PIPING IS TO BE SAME SIZE AS RELIEF CONNECTION TO EQUIPMENT. TERMINATION LOCATION TO MEET CODE REQUIREMENTS AND BE APPROVED BY ARCHITECT.
- PROVIDE A WATERTIGHT SHEET METAL DRIP PAN OVER ELECTRICAL EQUIPMENT INSTALLED UNDER OR NEAR PIPING SYSTEMS. DRIP PAN TO EXTEND MINIMUM 3" OVER FRONT AND SIDES OF ELECTRICAL EQUIPMENT AND BE PITCHED AT A MINIMUM 30 DEGREE ANGLE. SEAL DRIP PAN WATERTIGHT TO WALL



DESIGN

(219) 924-8400

ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT:

# MAINTENANCE AND IT BUILDING

VALPARAISO COMMUNITY SCHOOLS VALPARAISO, IN

100% CD SET

### GIBRALTAR DESIGN 9102 N. Meridian St., Ste. 300 Indianapolis, IN 46260

Homepage: www.GibraltarDesign.com Email: info@GibraltarDesign.com Phone 317.580.5777 Fax 317.580.5778 PROJECT 25-112

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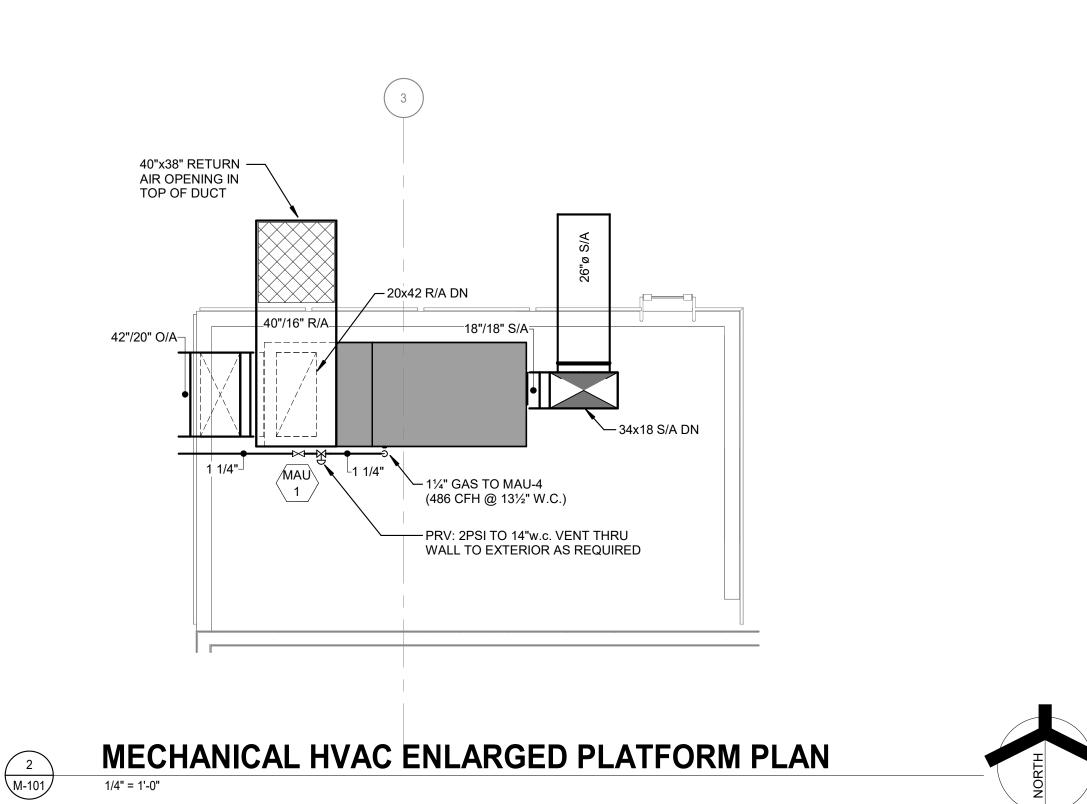
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MECHANICAL NOTES, SYMBOLS & ABBREVIATIONS

NEW MAINTENANCE AND IT BUILDING





SLEEVE & SEAL VENT PIPE WETHERTIGHT. TERMINATE w/
HORIZONTAL VENT/COMBUSTION AIR TERMINAL KIT.

COMBUSTION AIR INTAKE/TYPE 'B' VENT TO CONCENTRIC KIT.
TERMINATE WITH VERTICAL VENT

# **GENERAL NOTES**

CONTRACTOR SHALL COORDINATE ALL LOVER LOCATIONS WITH PRE-ENGINEERED BUILDING STRUCTURE



DESIGN

ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

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PROJECT:

MAINTENANCE AND IT BUILDING

VALPARAISO COMMUNITY SCHOOLS VALPARAISO, IN

100% CD SET

GIBRALTAR DESIGN

9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
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25-112
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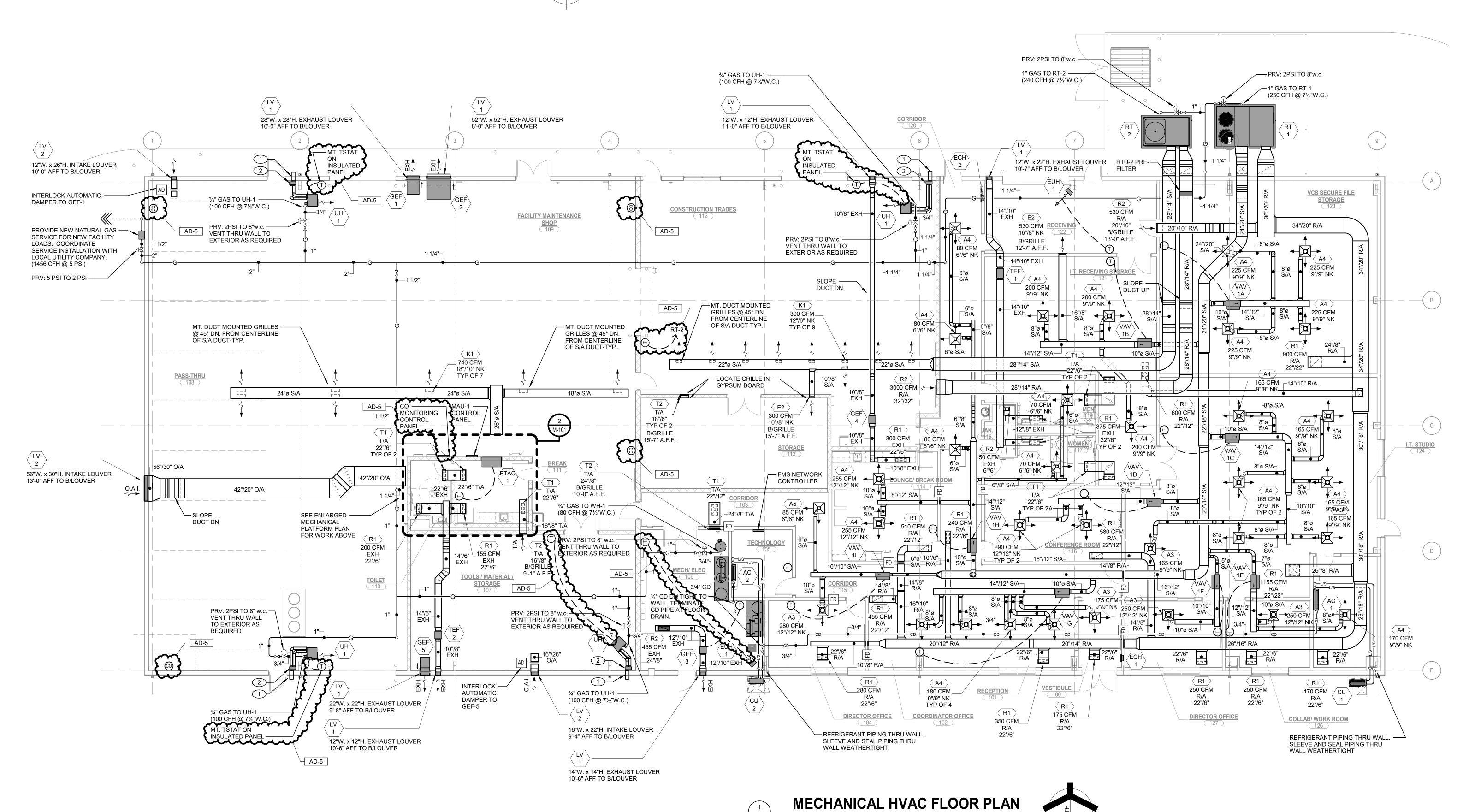
DRAWING
MECHANICAL HVAC FIRST
FLOOR PLAN

PROJECT
NEW MAINTENANCE AND IT
BUILDING

© GIBRALTAR DESIGN

M-101

SHEET



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					OAI P	AN MOTOR DATA		EXHAUST F	ANS	DX C	OOLING EQUIPME	NT/COIL DATA		GAS FIRED	D HEATING EQU	IPMENT DATA	LOAD			ELE	CTRICAL DATA DISCONNECT SWITCH:	STA	ARTER:			
AG	MANUFACTURER	MODEL	DESCRIPTION  GRADE MOUTED GAS FIRED HEATING / DX		<b>FM CFM TSI</b> 510 935 4.5			ESP BHP	HP RPM	MBH SHC EDE 221.95 187.68 78.	B EWB LDB	3 LWB CA	T STAGES	MBH MBI (IN) (OU	.,, .	311 0171020	HP MCA FL		<b>VOLT F</b> 208	PHASE	PROV. BY: HZ M.C. E.C.	TYPE	PROV. BY: M.C. E.C.	UNITS CONTROLLED BY FMS	EQUIPMEN WEIGHT	REMARKS
-1	TRANE	YZK240A3SBL	COOLING PACKAGED HVAC UNIT (VAV)		000 735 3.8		1770			106.7 80.42 79.5							63		208					TSTAT		NOTE 2
.2	TRANE	YZK120A3SBH	COOLING PACKAGED HVAC UNIT (SZVAV)  SUSPENDED DIRECT FIRED GAS FIRED		180 5180 1.8		5							486 388				0.2 25	208	3 (	60			INTERLOCK TO GEF-2		NOTE 3
J-1	TRANE	DFOA-115-HRB	MAKEUP AIR UNIT	21.1 SEER2						24							22	37	208	1 (	60			INTERLOCK TO AC-1	155	NOTE 4
1	MITSUBISHI	PUY-AH24NL	GRADE MOUNTED CONDENSING UNIT	21.1 SEER2						12							16	27	208	1 (	60			INTERLOCK TO AC-2	100	NOTE 4
2 1	MITSUBISHI  MITSUBISHI	PUY-AK12NL PKA-A24NL	GRADE MOUNTED CONDENSING UNIT  WALL MOUNTED DX COOLING ONLY UNIT	6	35					24									208	1 (	60			TSTAT	46	NOTE 5
2	MITSUBISHI	PKA-AL12NL	WALL MOUNTED DX COOLING ONLY UNIT	2	15					12									208	1 (	60			TSTAT	28	NOTE 5
-1	STERLING	XF-100	SUSPENDED GAS FIRED UNIT HEATER	1	600		1/10 1050							100 83	3		6	.4 15	120	1 (	60			TSTAT	215	<varies></varies>
F-1	GREENHECK	AER-20-03-060 5-VG	WALL MOUNTED GENERAL EXHAUST FAN				335	0.3 .05	1/4 941								4.8	15	120	1 (	60			FMS	175	NOTE 7
F-2	GREENHECK	AER-42-03-030 0-VG	WALL MOUNTED GENERAL EXHAUST FAN				518	0.3 .66	1 1028								16.2	25	120	1 (	60			INTERLOCK TO CO SENSORS	400	NOTE 8
F-3	GREENHECK	SQ-7-M1-VG	SUSPENDED INLINE GENERAL EXHAUST FAN				455	0.5 0.07	1/2 2132								8.2	15	120	1 (	60			REVERSE ACTING TSTAT	100	NOTE 9
F-4	GREENHECK	SQ-95-VG	SUSPENDED INLINE GENERAL EXHAUST FAN				300	0.5 0.08	1/6 1457								3.5	15	120	1 (	60			WALL SWITCH	75	NOTE 9
F-5	GREENHECK	SE1-14-440-VG	WALL MOUNTED GENERAL EXHAUST FAN				560	0.3 0.13	1/2 1075								8.2	15	120	1 (	60			FMS	125	NOTE 7
F-1	GREENHECK	SQ-99-VG	SUSPENDED INLINE TOILET EXHAUST FAN				800	0.5 0.31	1 1808								16.2	25	120	1 (	60			FMS	125	NOTE 9
F-2	GREENHECK	SQ-90-VG	SUSPENDED INLINE TOILET EXHAUST FAN				355	0.5 0.08	1/6 1621								3.5	15	120					FMS		NOTE 9
AC-1	TRANE	PTEF1501HAA	PACKAGED TERMINAL AIR CONDITIONING UNI	T 10.4 EER						14.2			~~~~				30		208	1 (	60	_		TSTAT	130	NOTE 10
	DE WITH:  FEEDBAG  DIGITAL  S/A & PO  NON-FUS  BACNET II  HINGED  POWERE  STAINLE  MODULA  METAL M  CONDEN  VAV HEA  HAIL COI  FILTERS  GRADE N	H: FEEDBACK SIGNAL w/ IECC 2015 COMPLIANT LOW LEAK ECONOMIZER DAMPER DIGITAL SCROLL (LEAD ONLY) OR VARIABLE SPEED COMPRESSORS S/A & POW EXH DIRECT DRIVE FANS W/VFD, NON-FUSED DISCONNECT SWITCH BACHELINTON CARD PHASE & BROWN-OUT PROTECTION HINGED ACCESS DOORS POWERED EXHAUST FAN W/BLDG PRESSURIZATION CONTROL, STAINLESS STEEL HEAT EXCHANGER MODULATING GAS w/HIGH TURNDOWN (10:1 MINIMUM) METAL MESH OUTSIDE AIR INTAKE HOOD FILTER CONDENSER FAN w/VFD w/HEAD PRESSURE CONTROL & SITE GLASS VAV HEATING & COOLING HAIL CONDENSER COIL GUARD PROTECTION FILTERS: 4" MERV 13 & 2" MERV 8 GRADE MOUNTING CURB CATIONS FOR ADDITIONAL INFORMATION.  NOTE 2: PROVIDE WITH:  INTEGRATED ECONOMIZER WITH DIFFERENTIAL ENTHALPY SENSORS  INTEGRATED ECONOMIZER WITH DIFFERENTAL ENTHALPY SENSORS  INTEGRATED ECONOMIZER WITH A SECULOMETER OF AN WITH DIFFERENTIAL ENTHALPY SENSORS  INTEGRATED ECONOMIZER WITH DIFFERENT ECONOMIZER WITH ECONOMIZER WITH ECONOMIZER WITH ECONOMI					S R DAMPER	OTE 3: ROVIDE WITH: D ROVIDE WITH: C	OISCONNECT SEEMOTE CONTERLOOK TO D.A. AND RETUON OR BACNE SETURN AND ECCEPTABLE NOW AMBIENT VIND BAFFLES IAIL GUARDS 8" HIGH EQUIF	SWITCH FROL PANEL DLATION HANGI CO SENSOR JRN DAMPERS ET INTERFACE DISCHARGE AIF MANUFACTURE GREENHECK, CONTROLS FO	ERS WITH ACT R TEMPER ERS IF EQU DAIKIN AN	FUATORS.  RATURE SEN UAL IN ALL R ID VALENT.  COOLING CAF	SORS. ESPECTS:	SEE SP  NOTE 6 PROVIE  SEE SP  NOTE 7 PROVIE  -10°F	DE WITH:  VIECIFICAT  DE WITH:  VIECIFICAT  DE WITH:  VIECIFICAT  SUBJECT  SUBJECT	IBRATION ONCENTE ERTICAL ( IONS FOR ISCONNE HUTTER /ALL BOX	ISOLATIC RIC VENT CONCENT ADDITIO  CT SWITC	NAL REQUIREMENTS.  ON HANGERS KIT FRIC VENTING/ ROOF TERMIN/ NAL REQUIREMENTS.	ATION S	PROVIDE WITH:  OTE 10:  PROVIDE WITH:  PROVIDE WITH:  PROVIDE WITH:  OTE 10:  PROVIDE WITH:  OTE 10:  PROVIDE WITH:  OTE 10:  PROVIDE WITH:  OTE 10:  PROVIDE WITH:  OTE 10:	ISCONNECT SWITCH HUTTER FALL BOX W/MOTOR SIDE GUARI ANS TO BE CONTROLLED ON/OF YSTEM. ONS FOR ADDITIONAL REQUIRE ISCONNECT SWITCH CM MOTOR WITH POTENTIOMET OTORIZED DAMPER BRATION ISOLATION HANGERS ONS FOR ADDITIONAL REQUIRE	F BY CO SE				

		VA۱	/ TE	RN	IIN	AL	SC	ΗE	DU	LE	- E	LEC	CTF	RIC	RE	HE	AT		
:					COOLI	NG CFM			ELECTRIC	CAL HEAT	ING COIL	_			ELE	CTRICAL	DATA		
			MIN.	ZONE													DISCONN.	SWITCH	
			INLET	O/A	MAX	MIN	MAX	MIN					MAX				PROV		
TAG	MANUFACTURER	MODEL	DIA.	CFM	CFM	CFM	CFM	CFM	KW	EAT	LAT	STAGES	APD	VOLT	PHASE	HZ	MC	EC	REMARKS
RT-1																			
1A	NAILOR	D30RE	10"	106	900	665	887	665	8.5	60	90	SCR	0.1	208 V	1	60	X		NOTE 1
1B	NAILOR	D30RE	10"	89	1125	855	1120	855	10.5	60	90	SCR	0.1	208 V	1	60	х		NOTE 1
1C	NAILOR	D30RE	10"	211	1155	476	634	476	6	60	90	SCR	0.1	208 V	1	60	х		NOTE 1
1D	NAILOR	D30RE	8"	134	580	134	383	383	2.5	60	80	SCR	0.1	208 V	1	60	х		NOTE 2
1E	NAILOR	D30RE	7"	52	420	315	421	383	4	60	90	SCR	0.1	208 V	1	60	Х		NOTE 1
1F	NAILOR	D30RE	5"	43	250	151	251	251	2.5	60	90	SCR	0.1	208 V	1	60	Х		NOTE 1
1G	NAILOR	D30RE	10"	125	895	618	826	618	8	60	90	SCR	0.1	208 V	1	60	х		NOTE 1
1H	NAILOR	D30RE	10"	108	890	603	781	603	5	60	80	SCR	0.1	208 V	1	60	Х		NOTE 2
11	NAILOR	D30RE	6"	64	365	227	304	251	3	60	90	SCR	0.1	208 V	1	60	х		NOTE 1

					FAN DATA	ELEC HEA EQUIP DA	TING ./COIL						ELECTI	RICAL DA								
									LO	AD						CT SWITCH: V. BY:	S	TARTER: PROV			FOLUDIATION	
TAG	MANUFACTURER	MODEL		DESCRIPTION	S/A CFM	MBH	KW	HP	MCA	FLA	МОСР	VOLT	PHASE	HZ	M.C.	E.C.	TYPE	M.C.	E.C.	UNITS CONTROLLED BY	EQUIPMENT WEIGHT	REMARKS
EUH-1	OUELLET	OHVU05008AM	SUSPEND	ED ELECTRIC UNIT HEATER	310	17.6	5			25		208	1	60						TSTAT	50	NOTE 1
ECH-1	OUELLET	OAWH04008-TAV	WALL MOUNT	ED ELECTRIC CABINET HEATER	160	13.6	4			15		208	1	60						INTEEGRAL TSTAT	25	NOTE 2
ECH-2	OUELLET	OAWH04000-TAV	WALL MOUNT	ED ELECTRIC CABINET HEATER	160	10.2	3			20		208	1	60						INTEEGRAL TSTAT	25	NOTE 2
	DE WITH:  VIBRATION  DISCONNI  THERMOS	N ISOLATION HANGI ECT SWITCH STAT R ADDITIONAL REQI		NOTE 2: PROVIDE WITH: INTEGRAL THEF DISCONNECT S' SEE SPECIFICATIONS FOR ADD	WITCH	EQUIRE	EMENTS	3.														

$\bigcirc$		G	RILLE, REGIST	ER, & DIF	FUSER S	CHED	ULE
TAG	MANUFACTURER	MODEL	DESCRIPTION	AIR PATTERN	MOUNTING	SIZE	REMARKS
А3	NAILOR	6500	SUPPLY CEILING DIFFUSER	3-WAY	2' x 2' LAY-IN PANEL	SEE PLANS	-
A4	NAILOR	6500	SUPPLY CEILING DIFFUSER	4-WAY	2' x 2' LAY-IN PANEL	SEE PLANS	-
A5	NAILOR	6500	SUPPLY CEILING DIFFUSER	2-WAY CORNER	2' x 2' LAY-IN PANEL	SEE PLANS	-
E2	NAILOR	61DH	SUPPLY REGISTER	DOUBLE DEFLECTION	SURFACE-MOUNTED	SEE PLANS	-
K1	NAILOR	61DHC	SUPPLY REGISTER	DOUBLE DEFLECTION	DUCT-MOUNTED	SEE PLANS	-
R1	NAILOR	6145H	RETURN/EXHAUST REGISTER	LOUVERED GRILLE	LAY-IN PANEL	SEE PLANS	-
R2	NAILOR	6145H	RETURN/EXHAUST REGISTER	LOUVERED GRILLE	SURFACE-MOUNTED	SEE PLANS	-
T1	NAILOR	6145H	RETURN/EXHAUST REGISTER	LOUVERED GRILLE	LAY-IN PANEL	SEE PLANS	-
T2	NAILOR	6145H	RETURN/EXHAUST/T.A. GRILLE	LOUVERED GRILLE	SURFACE-MOUNTED	SEE PLANS	-

	>		L(	OUVER	SCHEDULE
TAG	MANUFACTURER	MODEL	DESCRIPTION	SIZE	REMARKS
LV-1	NAILOR	1606D	EXHAUST AIR LOUVER	SEE DRAWINGS	ALUMINUM KYNAR 500 CUSTOM FINISH. SUBMIT COLOR CHARTS FOR APPROVAL.
LV-2	NAILOR	1606D	OUTSIDE AIR INTAKE LOUVER	SEE DRAWINGS	ALUMINUM KYNAR 500 CUSTOM FINISH. SUBMIT COLOR CHARTS FOR APPROVAL.

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TAG	QUANTITY	DESCRIPTION	LOCATION	PER UNIT	TOTAL CAPACIT
RT-1	1	GRADE MOUTED GAS FIRED HEATING / DX COOLING PACKAGED HVAC UNIT (VAV)	OUTDOORS	250	250
RT-2	1	GRADE MOUTED GAS FIRED HEATING / DX COOLING PACKAGED HVAC UNIT (SZVAV)	OUTDOORS	240	240
MAU-1	1	SUSPENDED DIRECT FIRED GAS FIRED MAKEUP AIR UNIT	PASS-THRU 108	486	486
UH-1	4	SUSPENDED GAS FIRED UNIT HEATER	PASS-THRU 108, CONSTRUCTION 112, TOOLS/MATERIAL/STORAGE 107	100	400
WH-1	1	80 MBH, 77 GPH @ 100f., 75 GAL. STORAGE	MECH/ELEC 106	80	80

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PROJECT:

NEW MAINTENANCE AND IT BUILDING

VALPARAISO COMMUNITY SCHOOLS VALPARAISO, IN

100% CD SET

GIBRALTAR DESIGN

9102 N. Meridian St., Ste. 300 Indianapolis, IN 46260 Homepage: www.GibraltarDesign.com Email: info@GibraltarDesign.com Phone 317.580.5777 Fax 317.580.5778 PROJECT

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MECHANICAL SCHEDULES

PROJECT
NEW MAINTENANCE AND IT
BUILDING

# **TECHNOLOGY GENERAL NOTES**

- WORK SHALL COMPLY WITH LOCAL, STATE AND NATIONAL ELECTRIC CODES, AMERICANS WITH DISABILITIES ACT.
- REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR ADDITIONAL TECHNOLOGY INFORMATION AND REQUIREMENTS. IN ALL CASES DEVICE MOUNTING HEIGHTS AND LOCATIONS SHALL CONFORM TO THE LATEST AMERICANS WITH DISABILITIES FEDERAL STANDARDS.
- EXCAVATION NECESSARY FOR COMPLETION OF WORK SHALL BE PROVIDED. COORDINATE WITH ONE ANOTHER TO SHARE TRENCHES WHEREVER POSSIBLE.
- REFER TO THE PLANS FOR ADDITIONAL TECHNOLOGY WORK AND REQUIREMENTS.
- COORDINATE PHASING OF WORK AND PROVIDE TEMPORARY SERVICES AS REQUIRED FOR THE IMPLEMENTATION OF WORK WHILE MAINTAINING SERVICES TO PORTIONS OF BUILDING TO
- SCHEDULE WORK TO AVOID DOWNTIME AND INCONVENIENCE TO OWNER. OWNER;S EXISTING FACILITY SHALL REMAIN IN OPERATION AT ALL TIMES. REQUIRED SHUT DOWN OF EXISTING FACILITY UTILITIES SHALL BE SCHEDULED WITH OWNER'S OPERATING PERSONNEL.
- LAYOUT IS DIAGRAMMATIC. INSTALL DEVICES, CONDUIT AND EQUIPMENT TO MEET ACTUAL FIELD CONDITIONS. REVIEW PROJECT SPECIFICATIONS BEFORE STARTING WORK AND SUBMIT COMPLETE SHOP DRAWINGS AS PER SPECIFICATIONS.
- VISIT SITE PRIOR TO BID TO DETERMINE AND VERIFY EXISTING INTERIOR AND EXTERIOR TECHNOLOGY SYSTEMS TO VERIFY QUANTITIES AND LOCATIONS OF EXISTING SYSTEMS TO DETERMINE FULL EXTENT OF WORK. INCLUDE THE NECESSARY MODIFICATIONS TO THE EXISTING CONDITIONS (INCLUDING CEILINGS, WALLS, FLOORS, PIPES, CONDUIT, ROOF WORK. ETC.) AS REQUIRED, TO ALLOW FOR PROPER INSTALLATION OF WORK. ADJUST INSTALLATION TO MEET FIELD CONDITIONS AS REQUIRED FOR A COMPLETE AND PROPER INSTALLATION. NO EXTRAS WILL BE ALLOWED AFTER BIDDING FOR ANY REWORD OF EXISTING FIELD CONDITIONS TO RESOLVE CONFLICTS OR NOT FULL UNDERSTANDING THE SCOPE OF THE WORK REQUIRED. EXISTING EQUIPMENT, CONDUIT, PIPING, ETC. SHALL BE REMOVED AS NOTES ON DRAWINGS AND AS REQUIRED TO MEET NEW SCOPE OF WORK.
- HIDDEN CONDITIONS IDENTIFIED THROUGH THE COURSE OF CONSTRUCTION SHALL BE IMMEDIATELY BROUGHT TO ATTENTION IN WRITTEN FORM FOR REVIEW AND DIRECTION. FAILURE TO DO SO SHALL REQUIRE THE CHANGES AND COSTS TO CORRECT SAID HIDDEN CONDITION TO BE COMPLETED AT NO COST. EXISTING EQUIPMENT NOT IDENTIFIED SHALL BE BROUGHT TO ATTENTION FOR REVIEW AS TO WHETHER THE EQUIPMENT SHALL REMAIN AND BE RECONNECTED TO THE NEW SERVICES, BE RELOCATED, BE ABANDONED, ETC.
- REMOVE AND REINSTALL EXISTING CEILINGS NOT BEING REPLACED (INCLUDING LIGHTS, MOTION SENSORS, FIRE ALARM DEVICES AND ANY OTHER TECHNOLOGY DEVICES AS REQUIRED.) WHERE NECESSARY TO PERFORM WORK. THIS ALSO INCLUDES EXISTING CEILINGS OF PLASTER, DRYWALL, ETC. COORDINATE WORK IN CEILING SPACE SO AS TO MINIMIZE THE AMOUNT OF CEILINGS WHICH MUST BE REMOVED AND REINSTALLED. REVIEW THE ENTIRE SET OF CONTRACT DOCUMENTS IN ORDER TO FULLY UNDERSTAND AND INCLUDE CEILING WORK NECESSARY FOR WORK ON THE PROJECT. WHEN THE WORK IS COMPLETED IN THE SPACE, REINSTALL OR PATCH EXISTING CEILINGS, REINSTALL DEVICES AND EQUIPMENT AND REPAIR DAMAGE AS REQUIRED TO COMPLETELY MATCH EXISTING CONDITIONS. REPAIR OR REPLACE ANY DAMAGE CAUSED TO EXISTING CEILING AREAS.
- REMOVE EXISTING CONSTRUCTION AS REQUIRED AT EXISTING WALLS, FLOORS, PIPE CHASES, SURFACES, FINISHES, ETC. WHICH ARE AFFECTED. REPAIR EXISTING SURFACES AFFECTED, TO MATCH EXISTING SURFACE OF EQUAL OR BETTER QUALITY TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
- COORDINATE NEW INSTALLATIONS WITH EXISTING SYSTEMS.

THE DIVISION 27 AND DIVISION 28 CONTRACTORS.

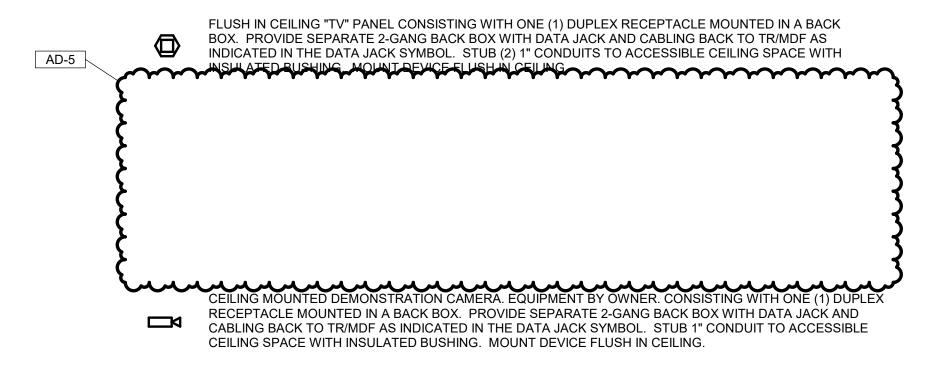
UNDER DIVISION 27.

- EXISTING TECHNOLOGY DEVICES, CONDUIT, ETC., SHALL BE REMOVED AS NOTED ON DRAWINGS AND AS REQUIRED TO MEET NEW SCOPE OF WORK, EXISTING TECHNOLOGY EQUIPMENT SHALL REMAIN PROPERTY OF THE OWNER AND SHALL BE PROPERLY STORED ON SITE, OR DESIGNATED TO BE ABANDONED AND REMOVED FROM SITE AS DIRECTED BY OWNER.
- PERFORM CUTTIN AND PATCHING OF EXISTING FLOOR SLABS AND WALLS AS REQUIRED FOR THE INSTALLATION OF TECHNOLOGY SYSTEMS.
- EXISTING TECHNOLOGY DEVICES WITHIN WALLS TO BE REMOVED SHALL BE DISCONNECTED COMPLETELY. VERIFY EXACT CONDITIONS AND REQUIREMENTS IN FIELD.
- WHERE INDICATED ON THE DRAWINGS IN UNFINISHED SPACES, RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO WALL.
- NO RACEWAYS SHALL BE INSTALLED WITHIN 6" OF STEAM, HOT WATER PIPES OR SIMILAR HEAT PRODUCING APPLIANCES.
- PROVIDE PULL WIRE IN EACH RACEWAY IN WHICH WIRING IS NOT INSTALLED.
- COVERS OF JUNCTION OR PULL BOXES SHALL BE ACCESSIBLE AND IDENTIFIED PER SPECIFICATIONS. JUNCTION OR PULL BOXES AND THE LIKE SHALL BE INDEPENDENTLY SUPPORTED TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.
- UNLESS OTHERWISE NOTED, DEVICE ELEVATIONS REFER TO CENTER LINE OF JUNCTION BOX. VERIFY JUNCTION BOX LOCATIONS WITH FINAL EQUIPMENT LAYOUT PRIOR TO ROUGHING IN
- LOW VOLTAGE DEVICE ROUGH-INS SHALL BE THE RESPONSIBILITY OF THE DIVISION 26 CONTRACTOR. CABLING, EQUIPMENT, FACEPLATES, ETC. SHALL BE THE RESPONSIBILITY OF
- FOR COORDINATION PURPOSES, OCCASSIONALLY AN ITEM OF WORK WILL BE SHOWN ON THE E SERIES DRAWINGS AND THE T SERIES DRAWINGS. REQUEST A CLARIFICATION FOR ANY ITEMS THAT APPEAR UNCLEAR AS TO QUANTITY OR CONTRACT RESPONSIBILITY. EXAMPLE: ELECRICAL DEVICES ARE SHOWN ON T SERIES SHEETS FOR COORDINATION AND SPACING PURPOSES; THE ELECTRICAL OUTLETS AND POWER EQUIPMENT IS THE RESPONSIBILITY OF DIVISION 26. LIKEWISE. SOME TELECOMMUNICATIONS CONDUITS APPEAR ON E SERIES SHEETS FOR SPACE COORDINATION; TELECOMMUNICATIONS PATHWAY AND SPACES ARE COVERED

# **SYMBOL LIST**

## COMMUNICATIONS

- DUPLEX DATA OUTLET WITH (2) 3/4" CONDUITS STUBBED INTO ACCESSIBLE CEILING SPACE WITH INSULATED BUSHING - MOUNTED 18" A.F.F. WHEN MOUNTED ADJACENT TO AN ELECTRICAL RECEPTACLE OR AS NOTED. PROVIDE CAT-6 PLENUM CABLE, FROM EACH JACK, TO NEAREST TR OR MDF LOCATION INDICATED ON PLANS. TERMINATE WITH RJ-45 JACK. TEST AND LEAVE 10'
- DUPLEX DATA OUTLET FOR WIRELESS ACCESS POINTS LOCATED ABOVE ACCESSIBLE CEILING WAP SPACE AND 6" ABOVE THE GRID OR TIGHT TO THE ROOF DECK WHERE NO CEILINGS EXIST. PROVIDE 3/4" CONDUIT STUBBED INTO ACCESSIBLE CEILING SPACE WITH INSULATED BUSHING. PROVIDE CAT-6A PLENUM CABLE, FROM EACH JACK, TO NEAREST MDF OR TR LOCATION INDICATED ON PLANS. TERMINATE WITH RJ-45 CAT-6 JACK, TEST AND LEAVE 10' SLACK LENGTH.
- DUPLEX DATA OUTLET MOUNTED IN WIREMOLD #525 SERIES ABOVE FLOOR BOX. PROVIDE FLOOR BOX AND ADAPTER TO MOUNT TO BOX. ROUTE (2) 3/4" CONDUITS INTO ACCESSIBLE CEILING SPACE WITH INSULATED BUSHING. PROVIDE CAT-6 PLENUM CABLE, FROM EACH JACK, TO NEAREST TR OR MDF LOCATION INDICATED ON PLANS. TERMINATE WITH RJ-45 JACK. TEST AND
- AIPHONE EXTERIOR DOOR INTERCOM SYSTEM (AIPHONE IX-DVF). MOUNTED 48" A.F.F. PROVIDE BACK BOX WITH 3/4" CONDUIT ROUTED TO THE ACCESSIBLE CEILING SPACE. PROVIDE CAT-6 PLENUM CABLE, FROM EACH STATION, TO NEAREST MDF LOCATION INDICATED ON PLANS. TERMINATE WITH RJ-45 JACK. TEST AND LEAVE 10' SLACK LENGTH.
- AIPHONE INTERIOR DOOR INTERCOM SYSTEM (AIPHONE IX-MV SERIES INTERCOM SYSTEM). PROVIDE BACK BOX WITH 3/4" CONDUIT ROUTED TO THE ACCESSIBLE CEILING SPACE, PROVIDE CAT-6 PLENUM CABLE. FROM EACH STATION. TO NEAREST MDF LOCATION INDICATED ON PLANS. TERMINATE WITH RJ-45 JACK. TEST AND LEAVE 10' SLACK LENGTH. PROVIDE SELECTIVE DOOR/GATE RELEASE. PROVIDE ADDITIONAL BUTTON TO SELECTIVELY UNLOCK DOORS IN VESTIBULE CONSISTENT WITH OWNER
- FLUSH IN WALL "TV" PANEL CONSISTING WITH ONE (1) DUPLEX RECEPTACLE MOUNTED IN A BACK BOX. PROVIDE SEPARATE 2-GANG BACK BOX WITH DATA JACK AND CABLING BACK TO TR/MDF AS INDICATED IN THE DATA JACK SYMBOL. STUB (2) 1" CONDUITS TO ACCESSIBLE CEILING SPACE WITH INSULATED BUSHING. MOUNT DEVICE AT 7'-0" A.F.F. AND COORDINATE MOUNTING HEIGHT WITH THE ARCHITECTURAL ELEVATIONS.

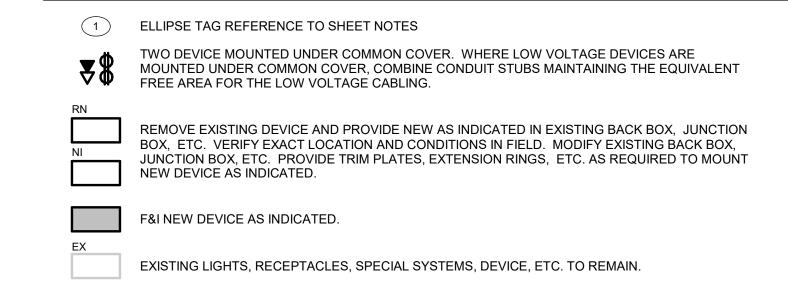


- WIREMOLD #V4000 SERIES RACEWAY VERTICAL RISER.
- TELE-POWER POLE. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL REQUIREMENTS.

# **SECURITY**

- SECURITY SYSTEM DOOR CONTACT ROUGH-IN ONLY ROUTE 3/4"C FROM THE ACCESSIBLE CEILING SPACE AND STUR INTO THE DOOP MULLION. SPACE AND STUB INTO THE DOOR MULLION.
- CARD ACCESS CONTROLLER PROVIDE BACK BOX MOUNTED 42" A.F.F. WITH 3/4"C. ROUTED TO THE ACCESSIBLE CEILING SPACE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- ELECTRIC DOOR STRIKE STUB 3/4" CONDUIT FROM THE ACCESSIBLE CEILING SPACE TO THE DOOR MULLION FOR WIRING. INTERFACE WIRING FROM THE DOOR STRIKE TO THE DOOR ACCESS SYSTEM FOR A COMPLETE AND PROPERLY OPERATING SYSTEM.
- INTERIOR CEILING MOUNTED SURVEILLANCE CAMERA. EQUIPMENT BY OWNER. PROVIDE 2-GANG BACK BOX WITH SINGLE GANG MUD RING WITH 3/4"C. ROUTED TO THE ACCESSIBLE CEILING SPACE. PROVIDE CAT-6 PLENUM CABLE, FROM EACH JACK, TO NEAREST TR LOCATION INDICATED ON PLANS. TERMINATE WITH RJ-45 JACK. TEST AND LEAVE 10' SLACK LENGTH.
- EXTERIOR SURVEILLANCE CAMERA MOUNTED 12'-0" A.F.F., EQUIPMENT BY OWNER, VERIFY HEIGHT IN FIELD. PROVIDE 2-GANG BACK BOX WITH SINGLE GANG MUD RING WITH 3/4"C. ROUTED TO THE ACCESSIBLE CEILING SPACE. PROVIDE CAT-6 PLENUM CABLE, FROM EACH JACK, TO NEAREST TR WP LOCATION INDICATED ON PLANS. TERMINATE WITH RJ-45 JACK. TEST AND LEAVE 10' SLACK LENGTH.
- DOOR OPERATOR PUSH BUTTON FURNISHED BY OTHERS. WIRED AND INSTALLED BY CONTRACTOR. PROVIDE TWO (2) GANG BACK-BOX MOUNTED AT 42" A.F.F. WITH 3/4"C. ROUTED DOOR OPERATOR.

# SHEET SYMBOLS



EXISTING LIGHTS, RECEPTACLES, SPECIAL STSTEINS, DEVICE, ETG. TO DE LEMOTES, ETC. AND IN ITS ENTIRETY. REMOVE ALL ASSOCIATED SURFACE MOUNTED CONDUIT, OUTLETS, ETC. AND BLANK-OFF FLUSH WITH NEW OR EXISTING CONSTRUCTION. SEE GENERAL NOTES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

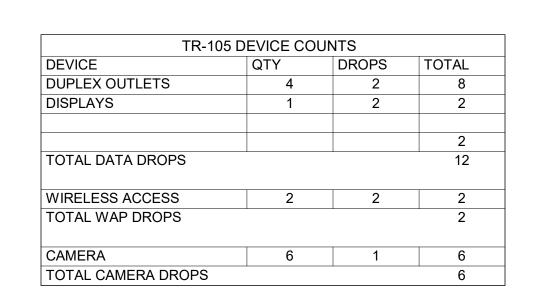
REMOVE EXISTING LIGHTS, RECEPTACLES, SPECIAL SYSTEMS, DEVICES, ETC. AND RELOCATE

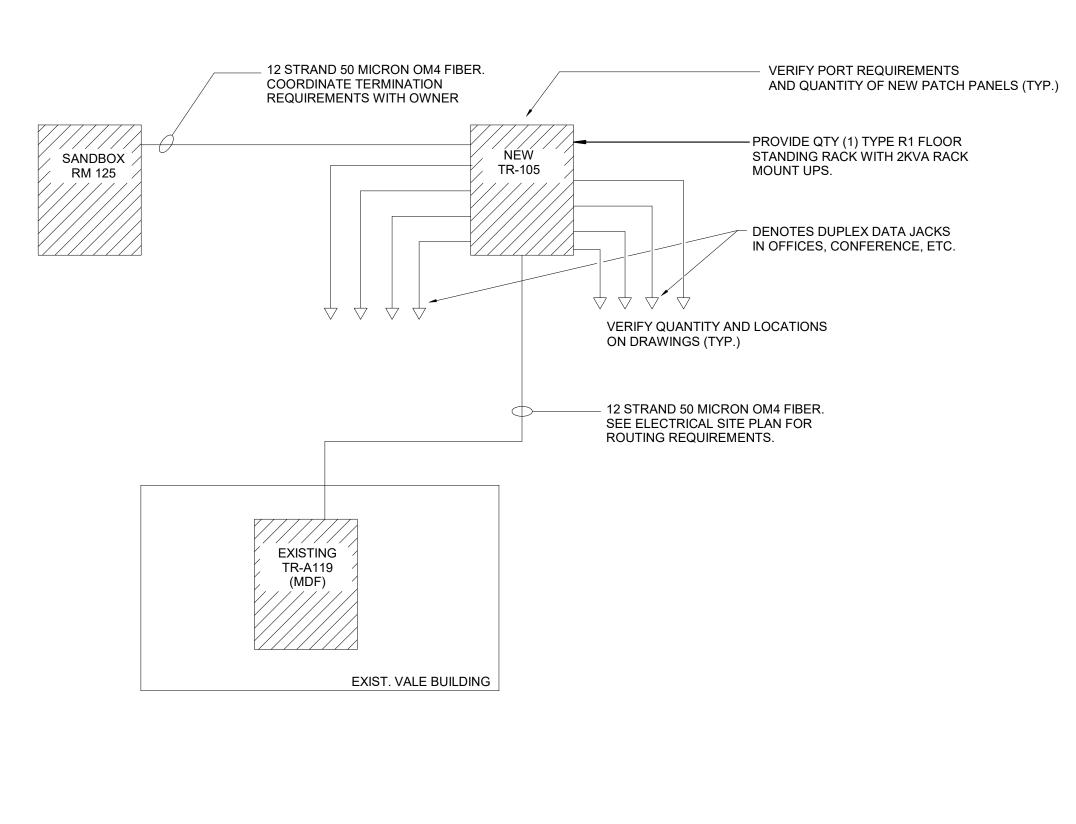
EXISTING LIGHTS, RECEPTACLES, SPECIAL SYSTEMS, DEVICE, ETC. TO BE REMOVED COMPLETE

\_\_\_\_ TO NEW LOCATION COMPLETE AS REQUIRED. NEW LOCATION OF EXISTING RELOCATED LIGHTS, RECEPTACLES, SPECIAL SYSTEMS, DEVICE, ETC. EXTEND CONDUIT, WIRE, CABLE, ETC. COMPLETE AS REQUIRED TO NEW LOCATION FOR A

COMPLETE AND PROPER INSTALLATION.

# NETWORK CABLING DIAGRAM





ELECTRICAL CONTRACTOR SHALL PROVIDE GROUNDING AND BONDING FOR ALL DATA AND VOICE SYSTEMS AND THIS SHALL COMPLY WITH THE GROUNDINGAND BONDING REQUIREMENTS OF EIA/TIA 60T. ALL BONDING CONDUCTORS SHALL BE MINIMUM #4 AWG. INSULATED COPPER. PROVIDE A GROUNDING BUS BAR AT EACH CLOSET LOCATION.

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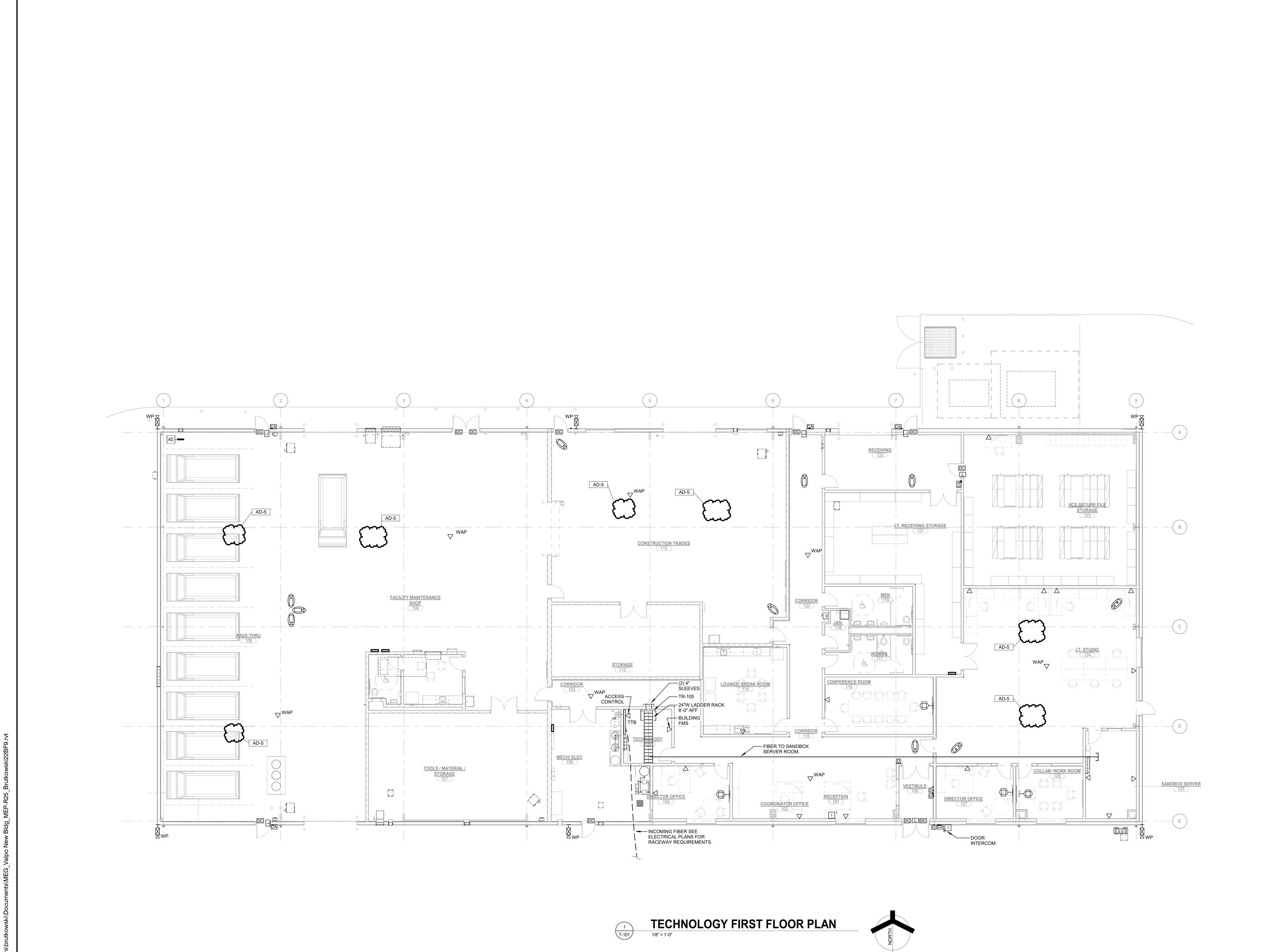
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TECHNOLOGY NOTES, SYMBOLS & ABBREVIATIONS

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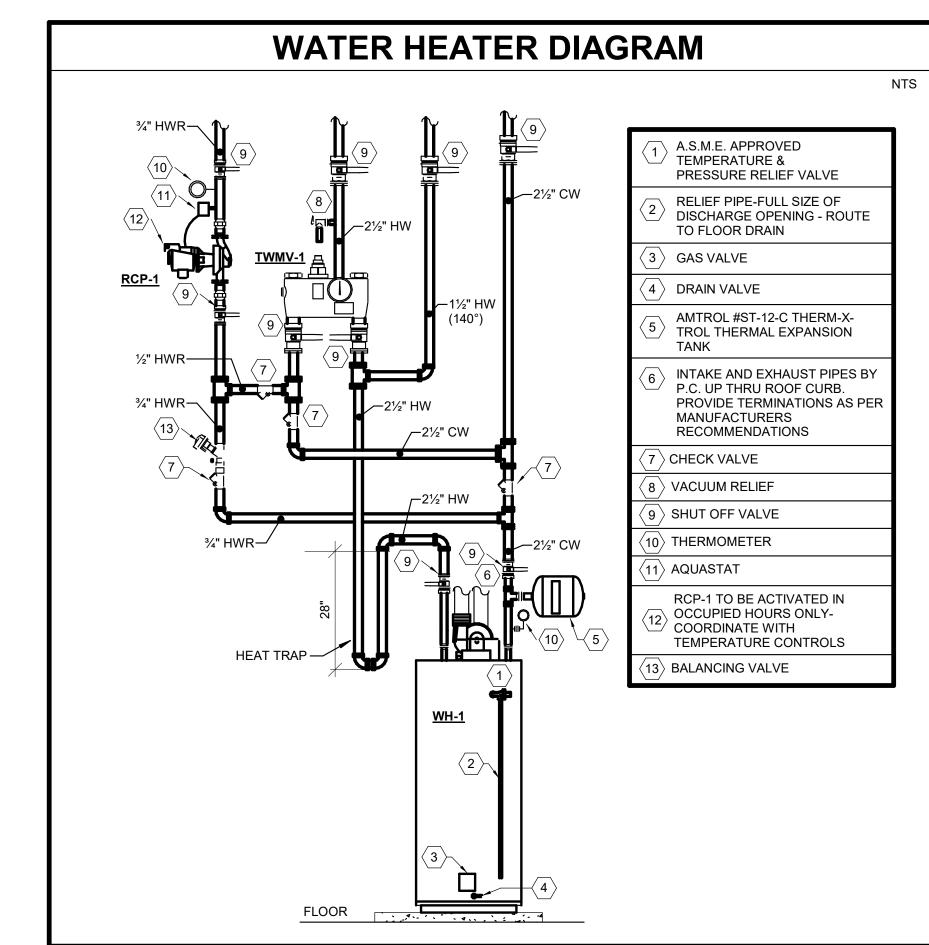
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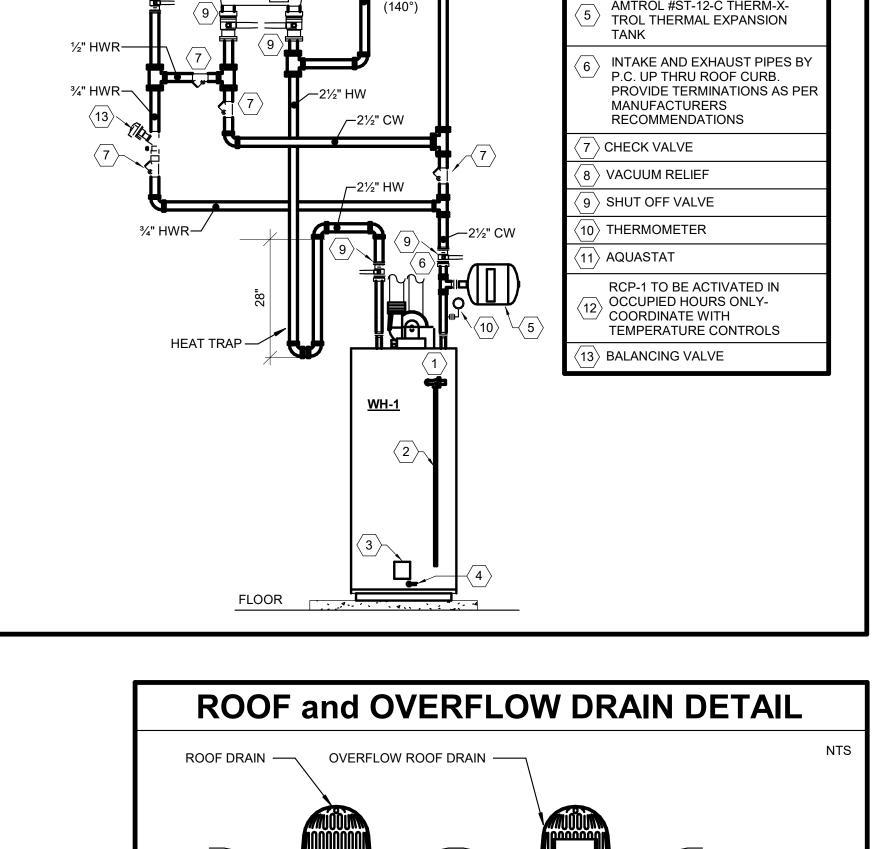
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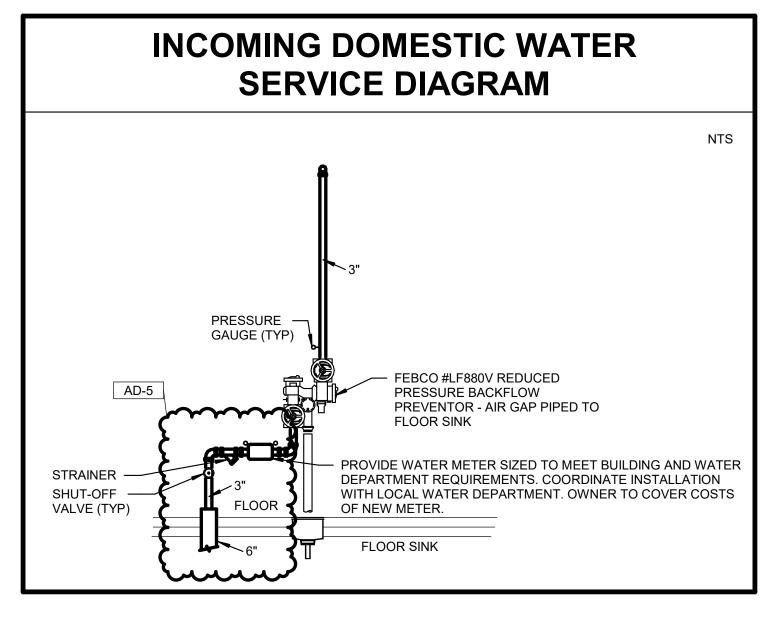
T-101





STORM PIPING —

CLEANOUT (TYP) —



STORM PIPING



VALE ADDITION RENOVATION

PROJECT:

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METRAFLEX #201 EXPANSION JOINT

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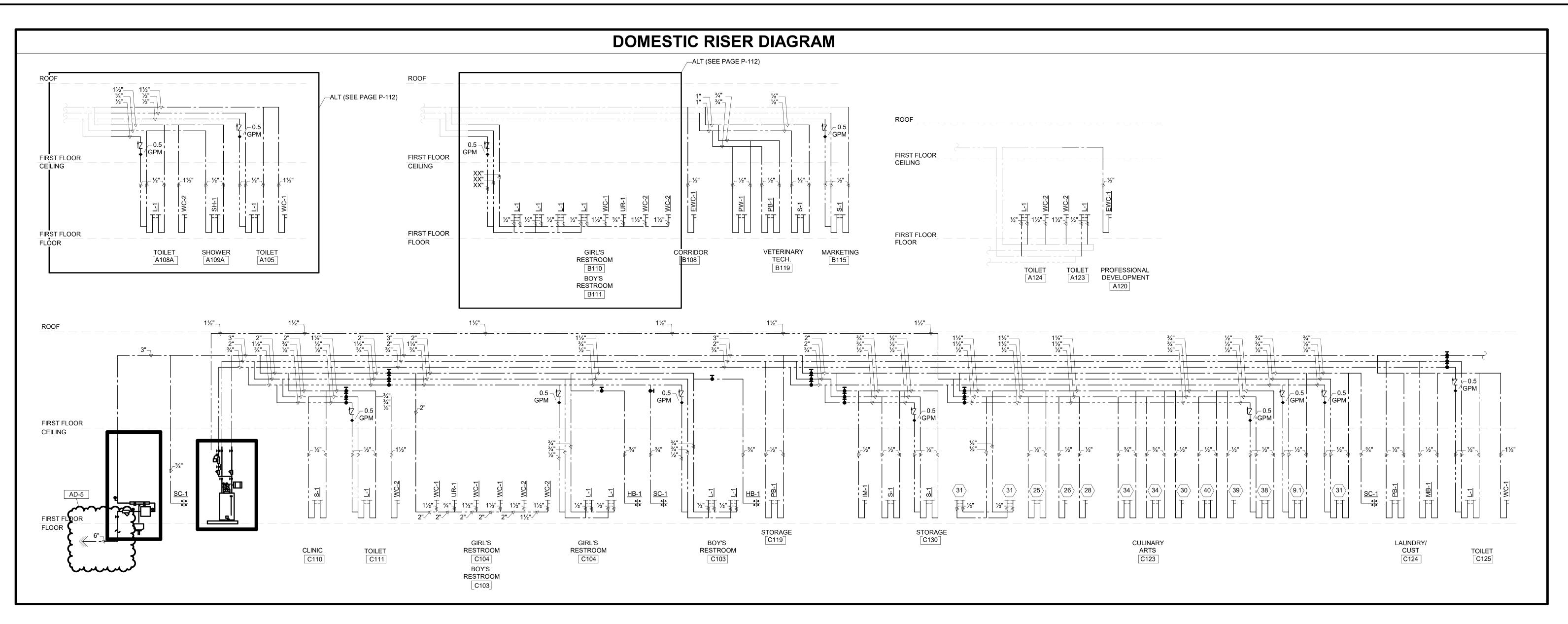
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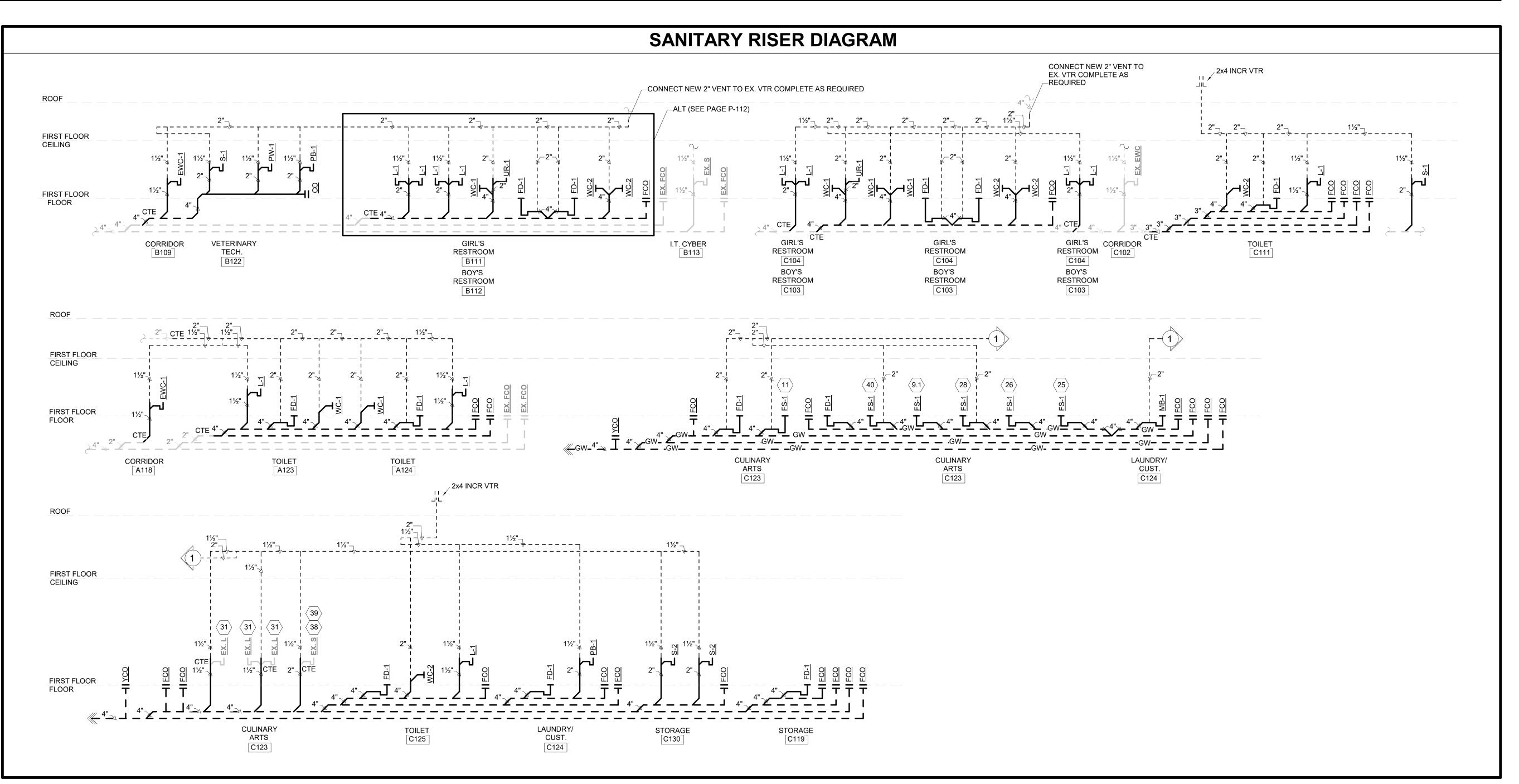
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PLUMBING DETAILS

VALE ADDITION AND RENOVATION







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PLUMBING RISER DIAGRAMS

VALE ADDITION AND RENOVATION