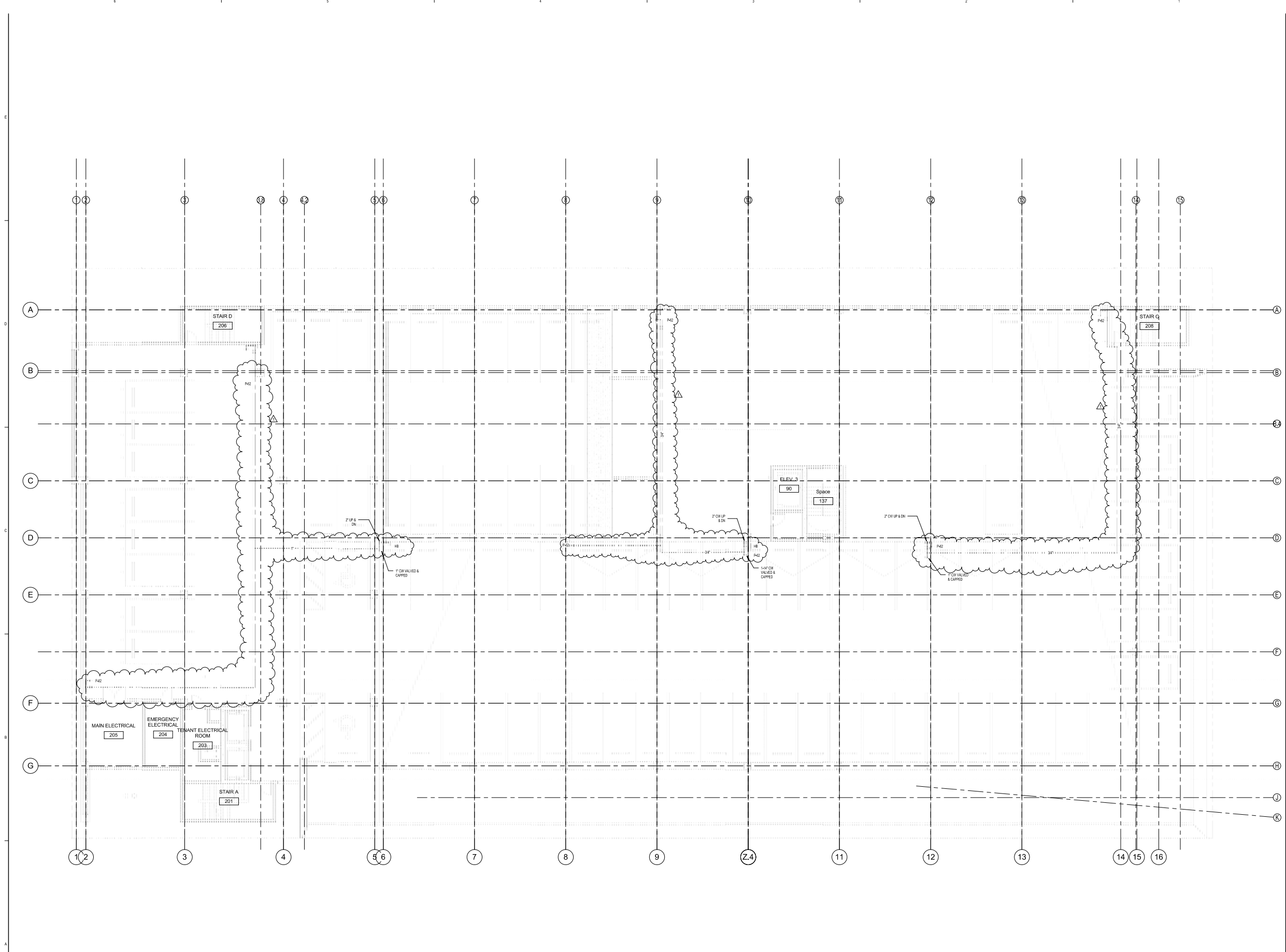




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Revisions

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Level 2 - Supply

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Revisions

Revisions		NO	REVISION	DATE
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3		3	REVISION	11/20/14
4		4	REVISION	11/20/14
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Revisions

8	ZONING & GENERAL REVISIONS	11/12/15
5	DERM COMMENTS	07/06/15
1	REVISED PERMIT COMMENTS	11/26/14
NO	ISSUE	DATE

ISSUE	DATE
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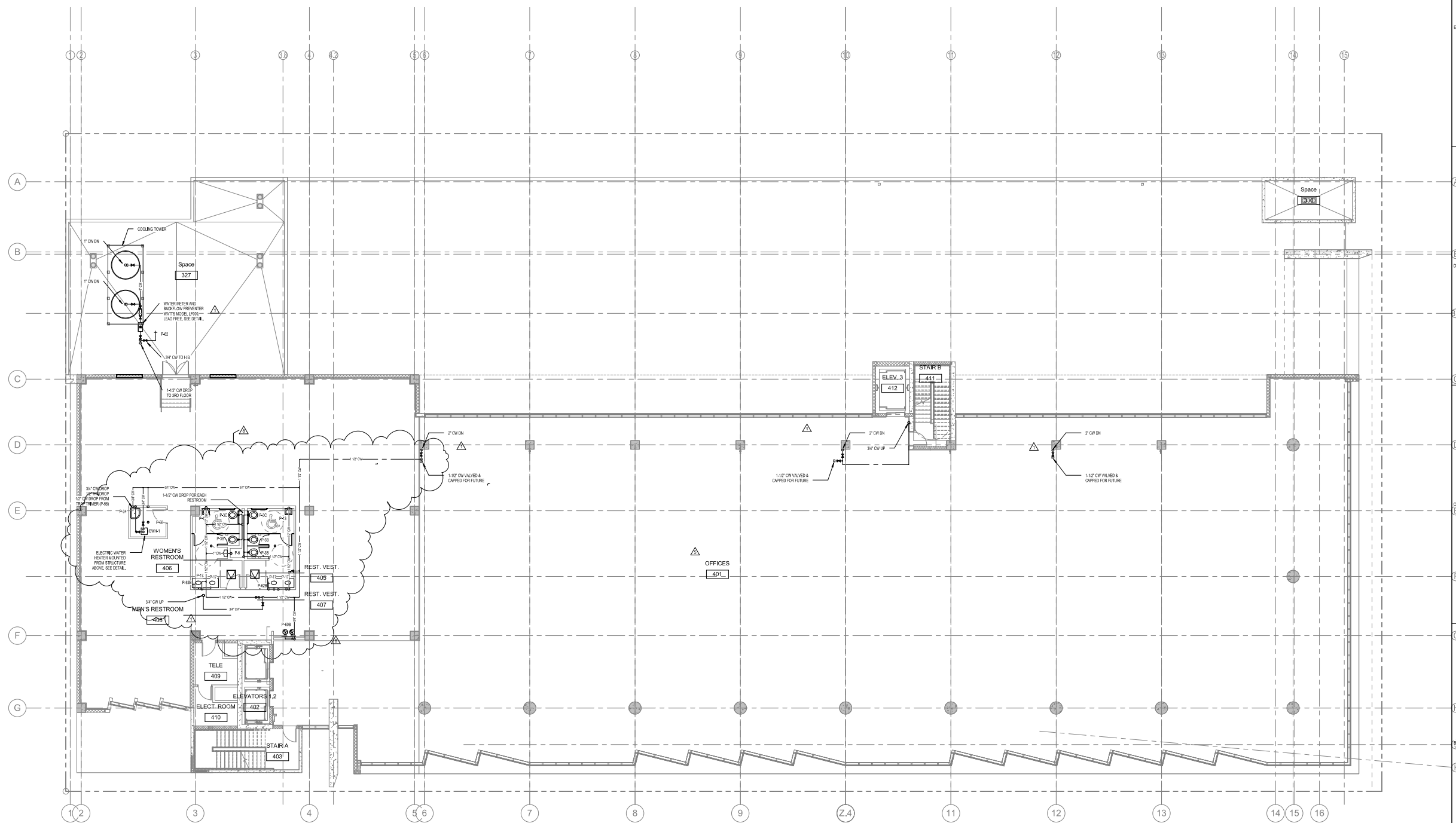
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Job Number	810408,009
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Level 4 - Supply

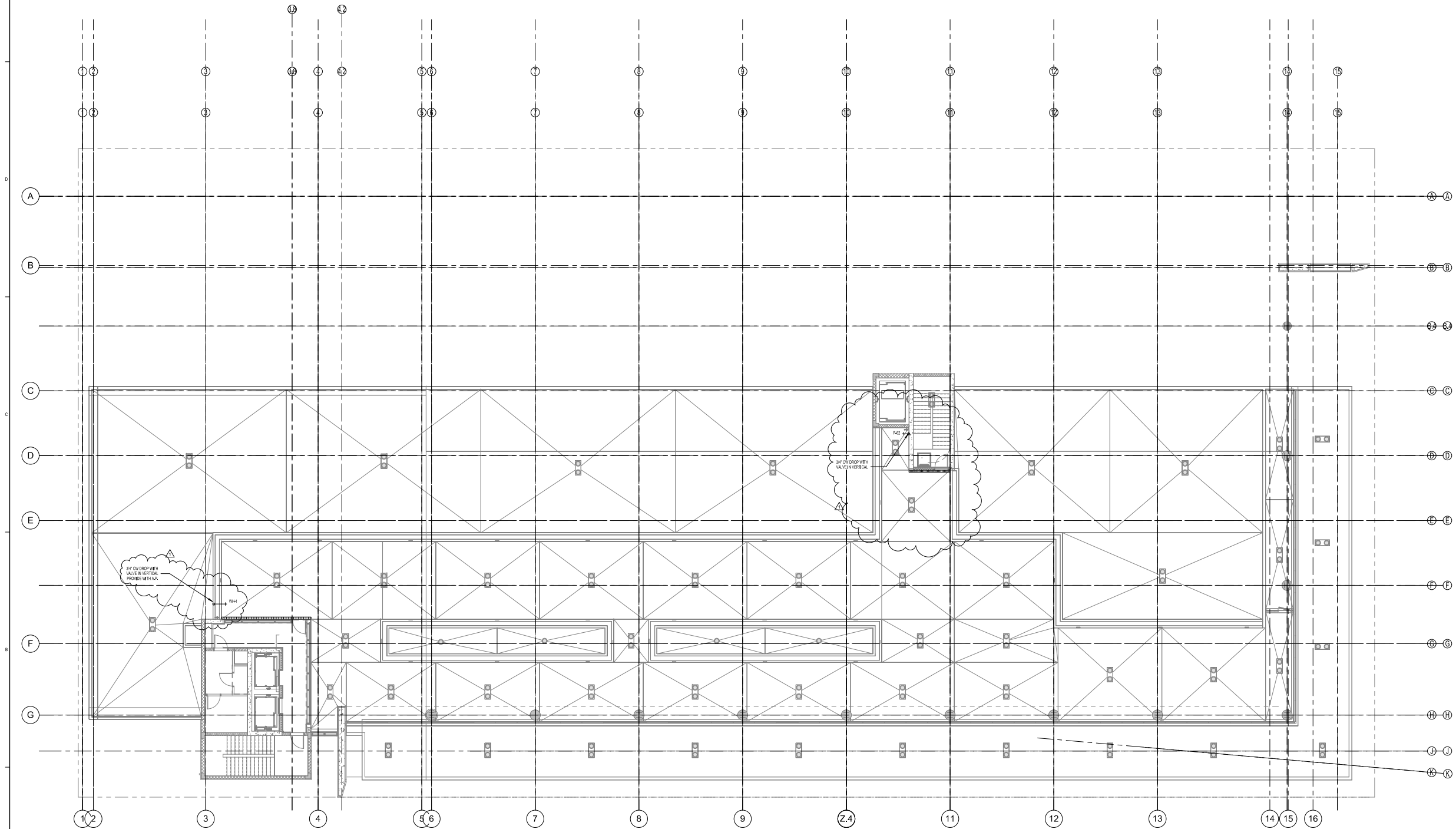
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1 LEVEL 04 - Supply.
1/8" = 1'-0"



1 LEVEL 05 - Supply
1/8" = 1'-0"

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Revisions

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Level 5 - Supply

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Revisions

13	CITY OF MIAMI BEACH PERMIT COMMENTS	10/21/20
11	CITY OF MIAMI BEACH PERMIT COMMENTS	09/26/20
8	CONTRACT & GENERAL REVISIONS	11/12/19
7	RE CHANGES	08/14/19
2	QA/QC REVISIONS	11/28/14
1	REVISED PERMIT COMMENTS	11/20/14
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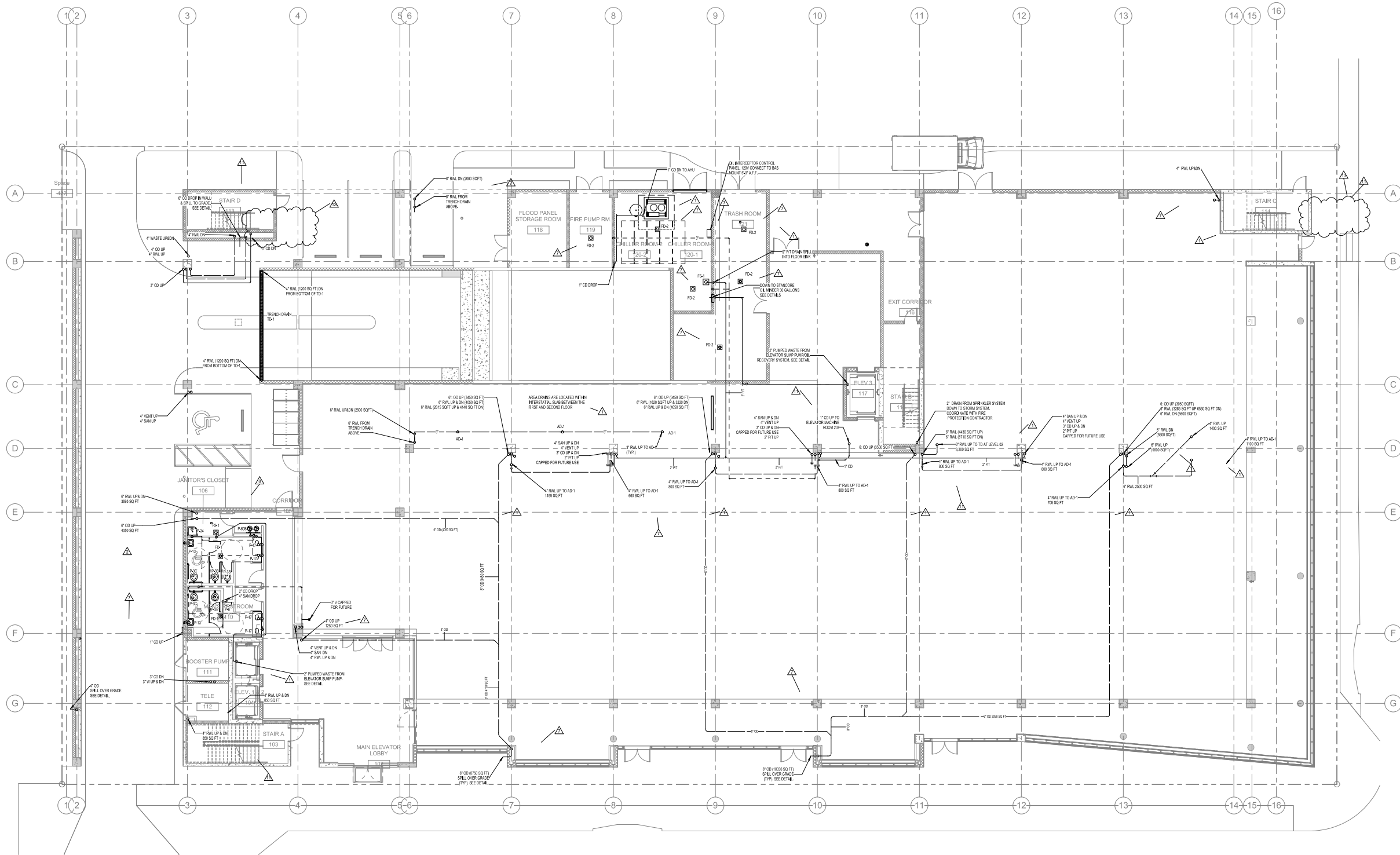
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Level 1 - Waste &
Storm

Sheet

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1 LEVEL 01 - Waste & Storm

1/8" = 1'-0"

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Revisions

13	CITY OF MIAMI BEACH PERMIT COMMENTS	10/21/20 16
11	CITY OF MIAMI BEACH PERMIT COMMENTS	08/26/20 16
8	ZONING & GENERAL REVISIONS	11/12/20 15
7	VE CHANGES	08/14/20 15
2	QA/QC REVISIONS	11/26/14
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Level 2 - Waste & Storm

Sheet
P-202

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Revisions

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11	CITY OF MIAMI BEACH PERMIT COMMENTS	08/28/20 16
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7	VE CHANGES	08/14/20 15
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ISSUE	DATE
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Level 3 - Waste & Storm

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Revisions

13	CITY OF MIAMI BEACH PERMIT COMMENTS	10/21/20
11	CITY OF MIAMI BEACH PERMIT COMMENTS	09/26/20
8	CONTRACT & GENERAL REVISIONS	11/12/19
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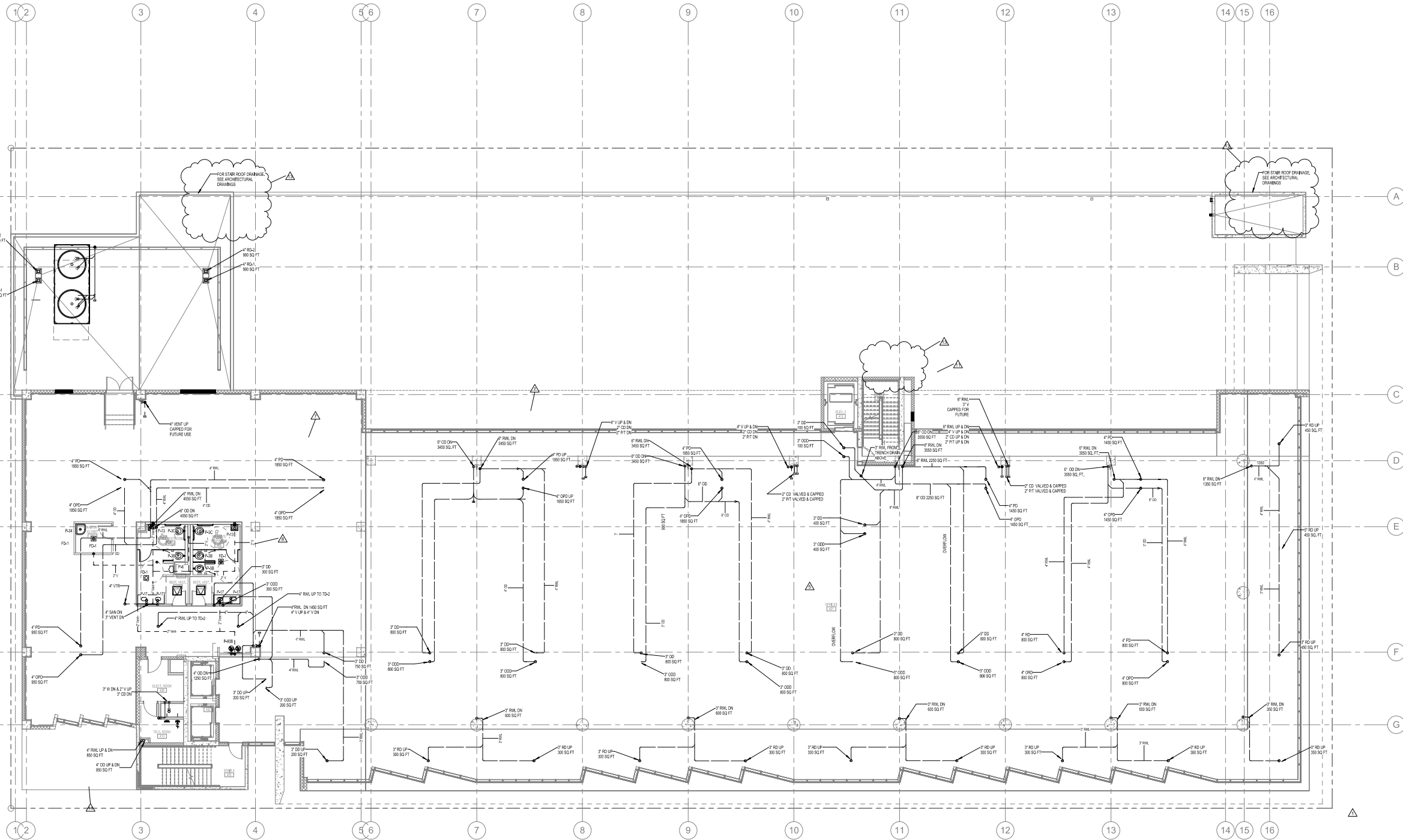
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Level 4 - Waste &
Storm

Sheet

P-204



1 LEVEL 04 - Waste & Storm
1/8\"/>

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Revisions

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NO	ISSUE	DATE

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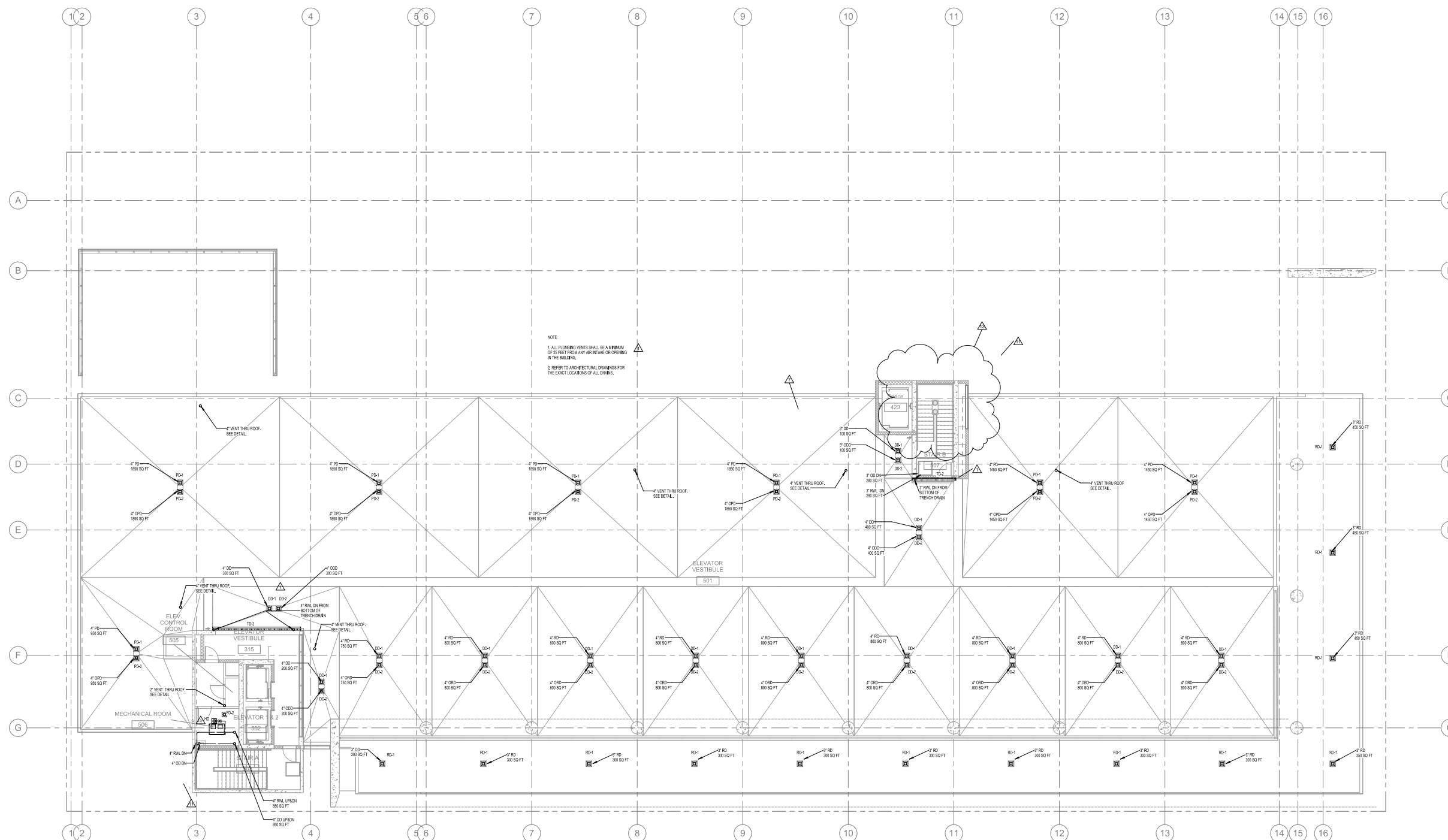
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Level 5 - Waste & Storm

Sheet

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1 LEVEL 05 - Waste & Storm
1/8" = 1'-0"

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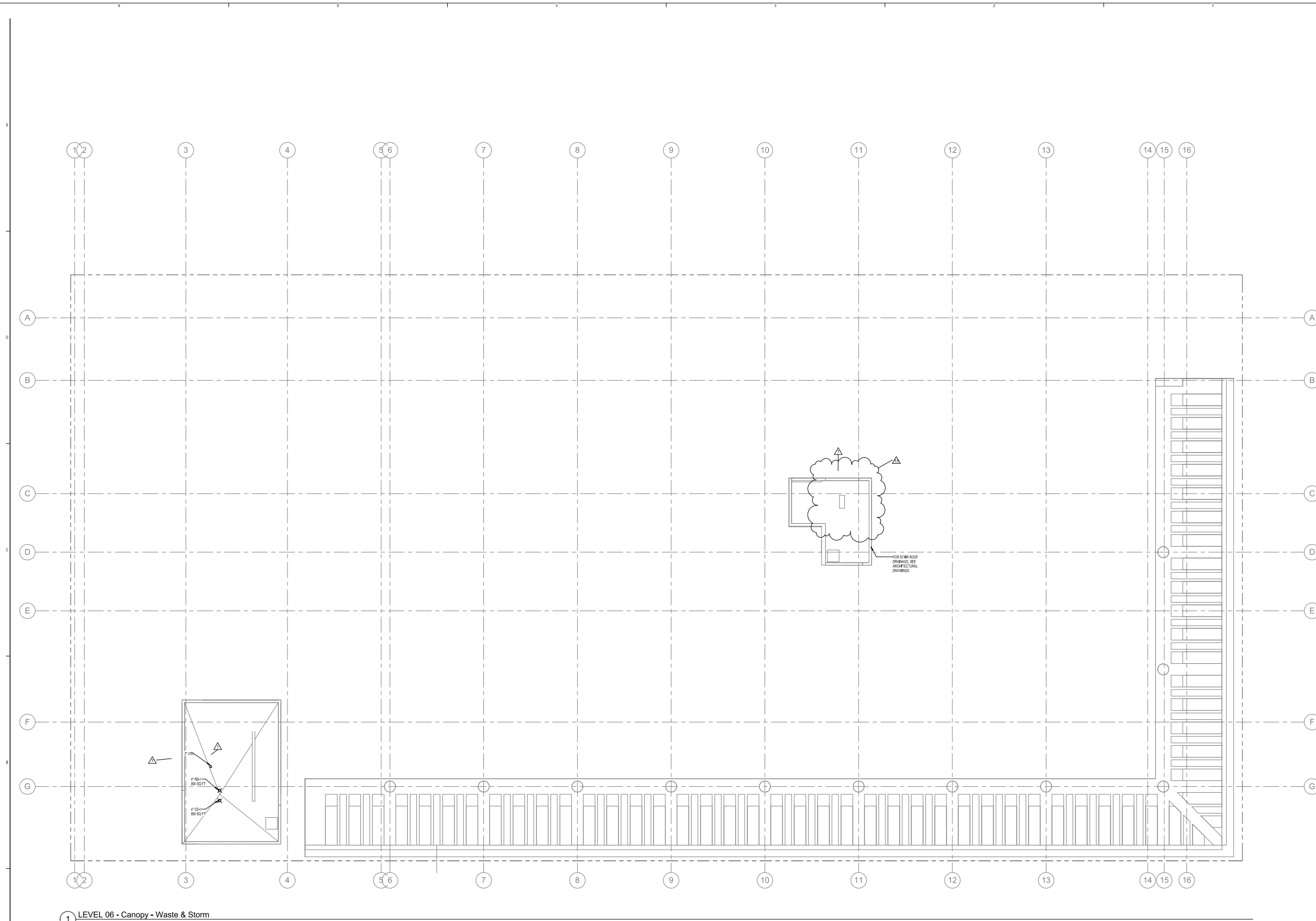
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**Level 6 Canopy -
Waste & Storm**

Sheet
P-206

1 LEVEL 06 - Canopy - Waste & Storm
1/8" = 1'-0"



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Revisions

12	PERMIT COMMENTS	10/11/20
10	UNDERGROUND UTILITIES AND COLUMN RELOCATION	8/30/2017
8	ZONING & GENERAL REVISIONS	11/12/20
1	REVISED PERMIT COMMENTS	11/20/14
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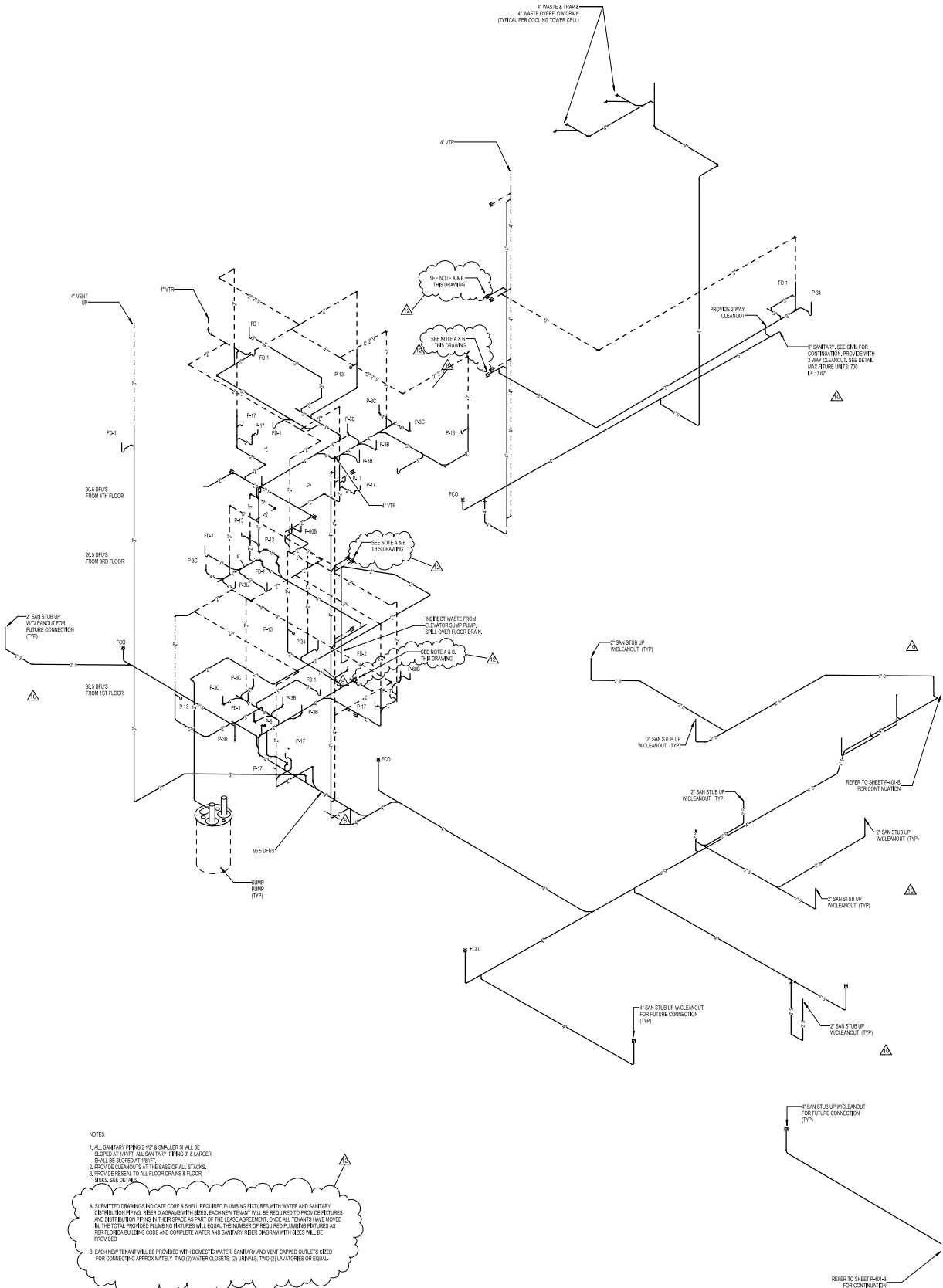
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Isometric Riser
Diagrams -
WASTE/VENT

Sheet

P-401 - A



- NOTES:
1. ALL SANITARY PIPING 2\"/>
 2. PROVIDE CLEANOUTS AT THE BASE OF ALL STACKS.
 3. PROVIDE RESEAL TO ALL FLOOR DRAIN & FLOOR DRAIN TRAPS SEE DETAIL.
- A. SUBMITTED DRAWINGS INDICATE CORE & SHELL REQUIRED PLUMBING FEATURES WITH WATER AND SANITARY DISTRIBUTION PIPING. RISES EXHAUST TYPICAL, BUT REQUIRE TO PROVIDE PRESSURES AND DISTRIBUTION PIPING IN THEIR SPACE AS PART OF THE LEASE AGREEMENT. ONCE ALL TENANTS HAVE MOVED IN, THE TOTAL PROVIDED PLUMBING FEATURES WILL EQUAL THE NUMBER OF REQUIRED PLUMBING FEATURES AS PER FLORIDA BUILDING CODE AND COMPLETE WATER AND SANITARY RISES DIAGRAM WITH SIZES WILL BE PROVIDED.
- B. EACH NEW TENANT WILL BE PROVIDED WITH DOMESTIC WATER, SANITARY AND VENT CAPPED OUTLETS SIZED FOR CONNECTING APPROXIMATELY TWO (2) WATER CLOSETS, TWO (2) URINALS, TWO (2) LAVATOIRES OR EQUAL.

1 ISOMETRIC RISER DIAGRAM WASTE VENT - A

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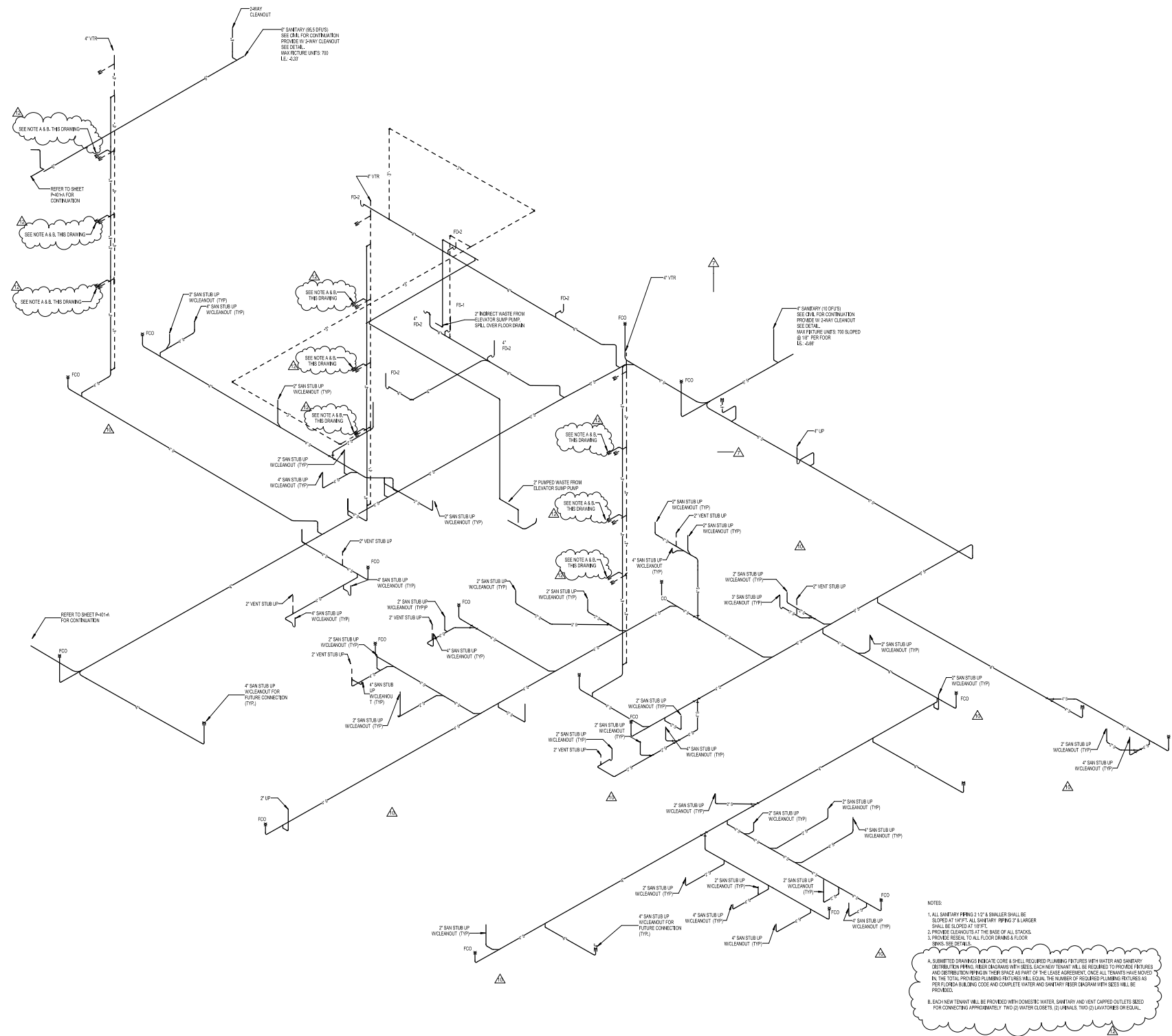
Isometric Riser

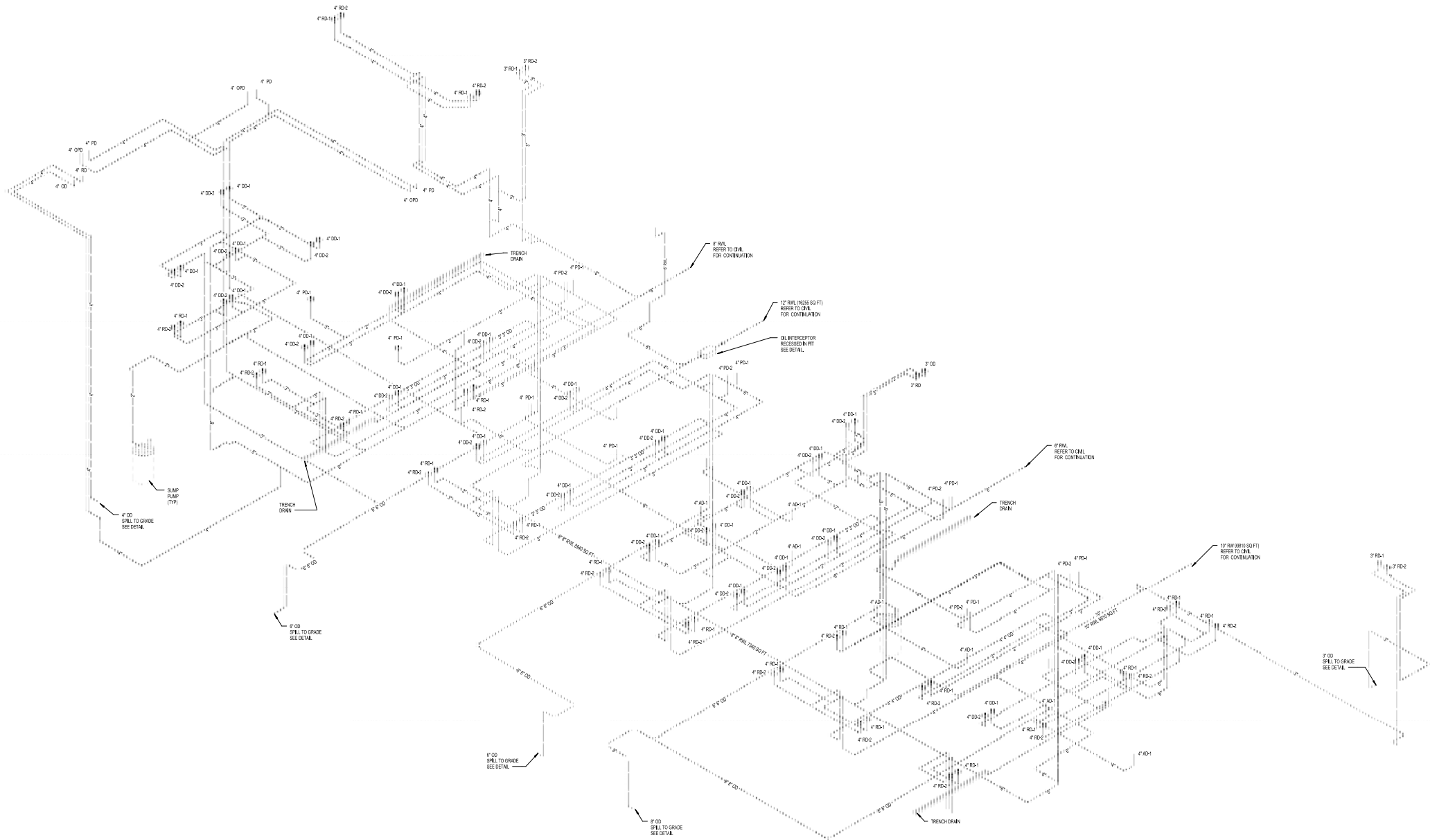
Diagrams -

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1 ISOMETRIC STORM

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Isometric Riser
Diagrams - STORM

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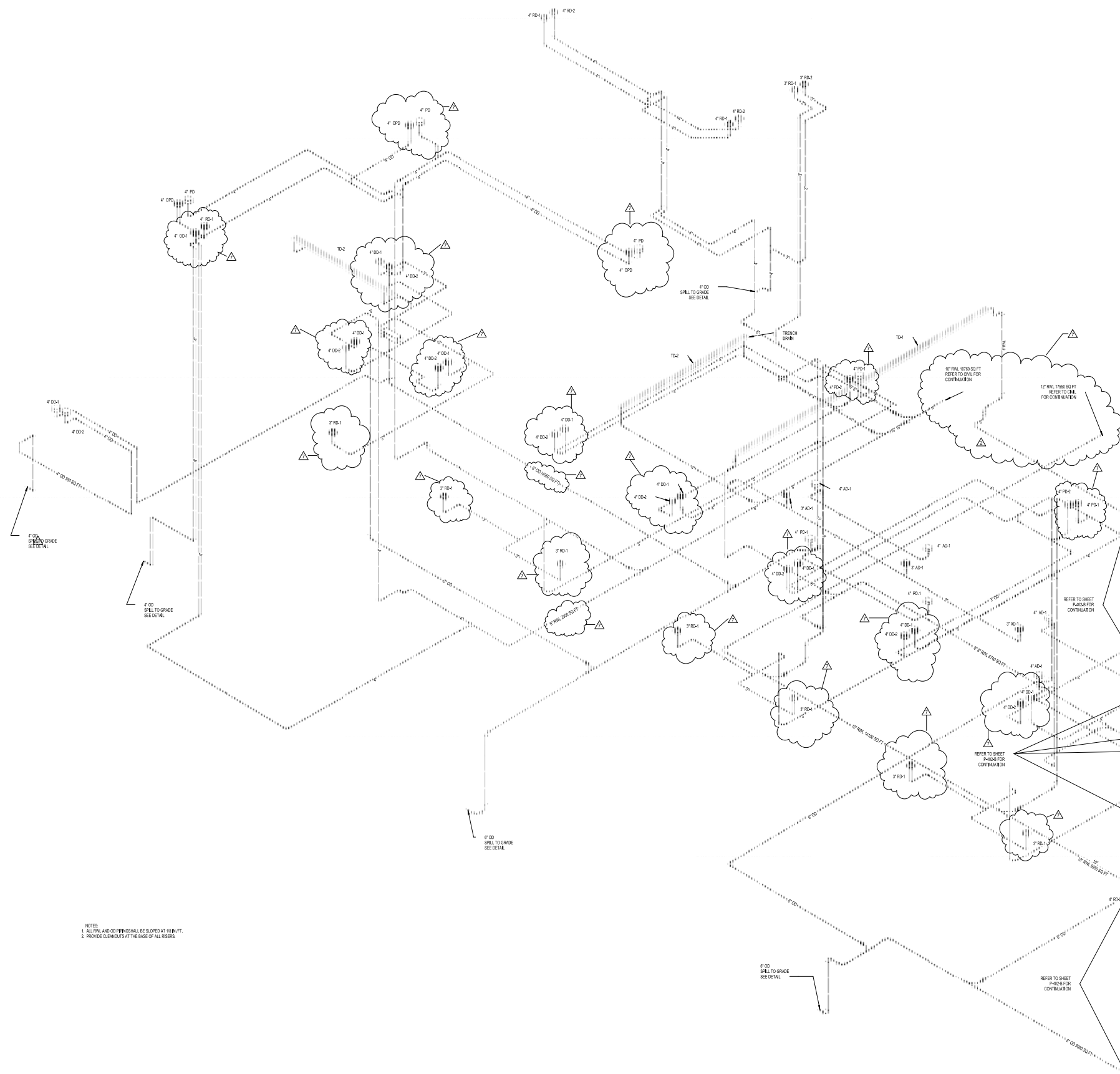
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**Isometric Riser
Diagrams - STORM**

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NOTES:
1. ALL RISE AND OD PIPING SHALL BE SLOPED AT 1/8 IN/FT.
2. PROVIDE CLEANOUTS AT THE BASE OF ALL RISERS.

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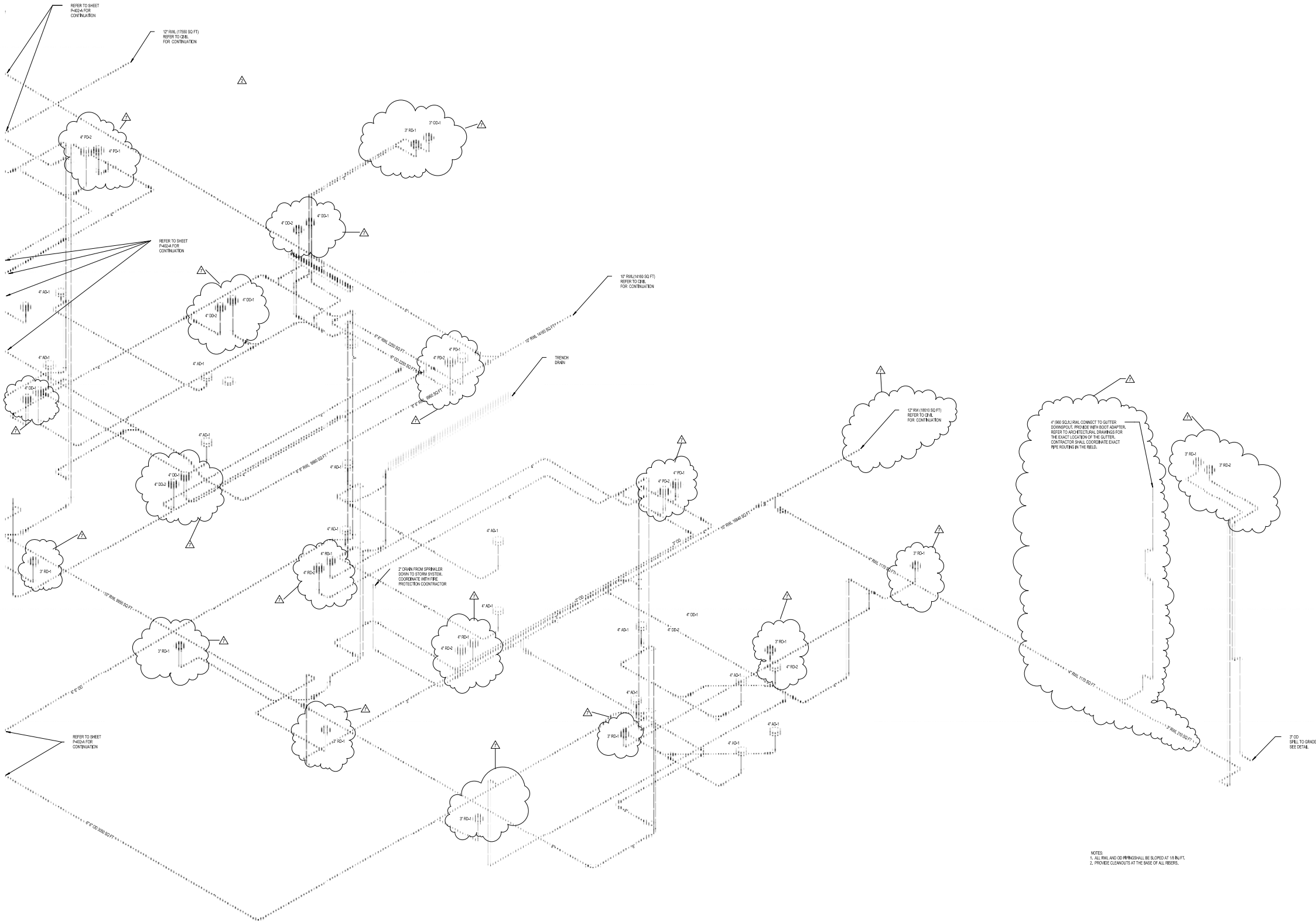
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Job Number	810405.000
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Isometric Riser
Diagrams - STORM

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NOTES:
1. ALL R/W AND C/D R/W SHALL BE SLOPED AT 1% INLET.
2. PROVIDE CLEANSOUTS AT THE BASE OF ALL RISERS.

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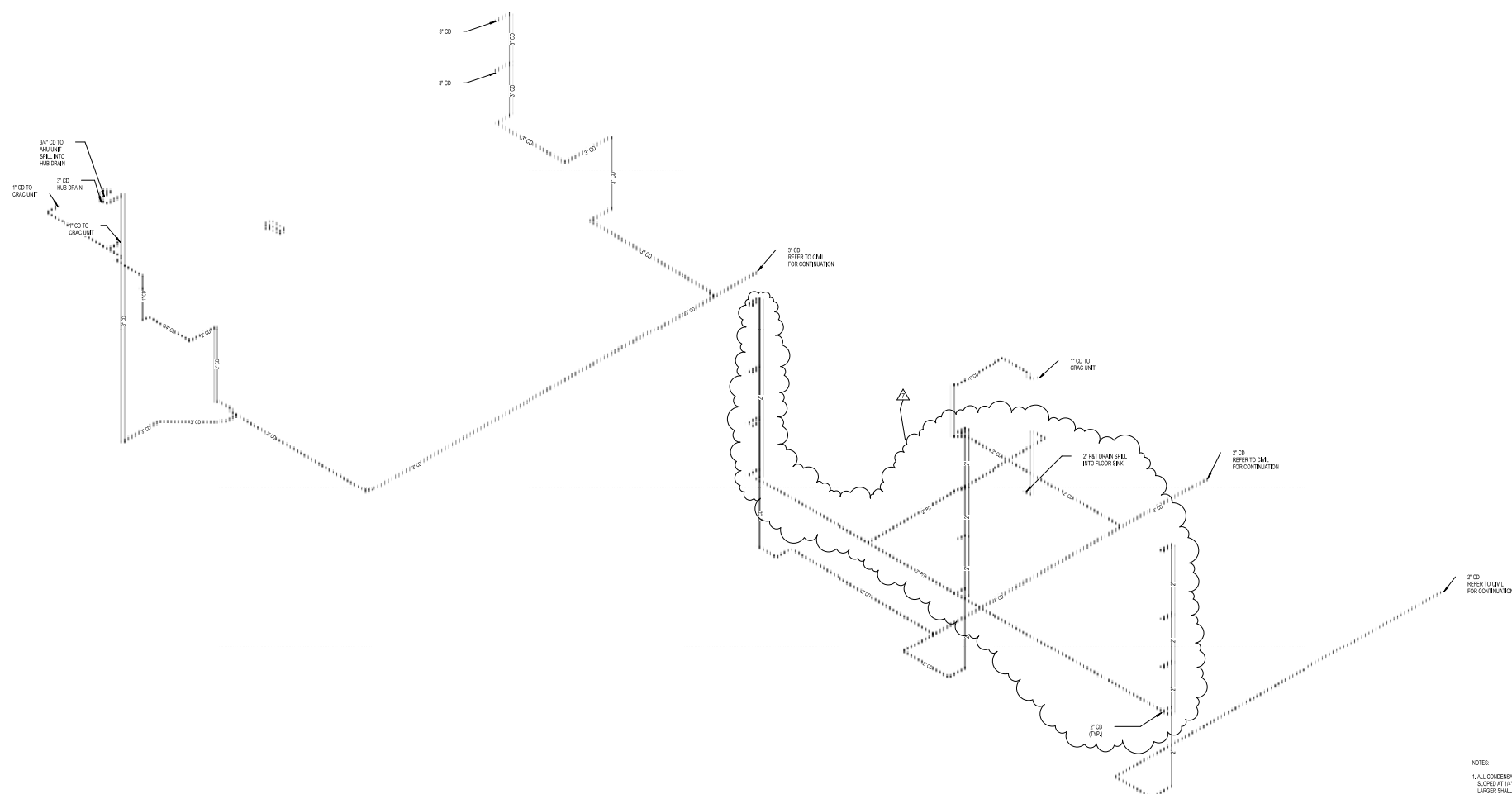
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Job Number	810408,000
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Isometric Riser Diagrams

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NOTES:

1. ALL CONDENSATE PIPING 2 1/2" & SMALLER SHALL BE SLOPED AT 1/8"FT. ALL CONDENSATE PIPING 3" & LARGER SHALL BE SLOPED AT 1/16"FT.
2. PROVIDE CLEANOUTS AT THE BASE OF CONDENSATE RISERS

1 ISOMETRIC RISER DIAGRAM CONDENSATE

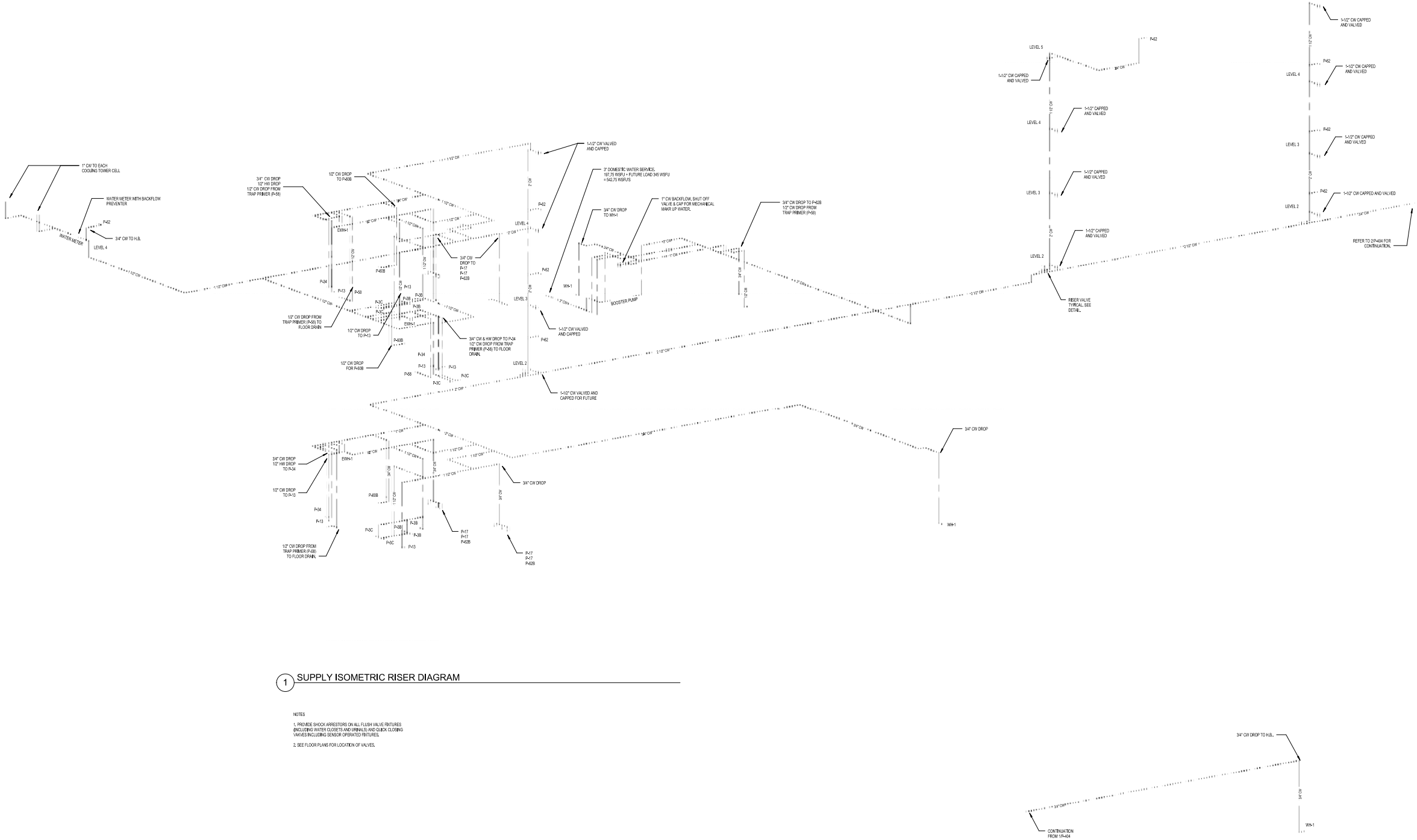
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Isometric Riser
Diagrams

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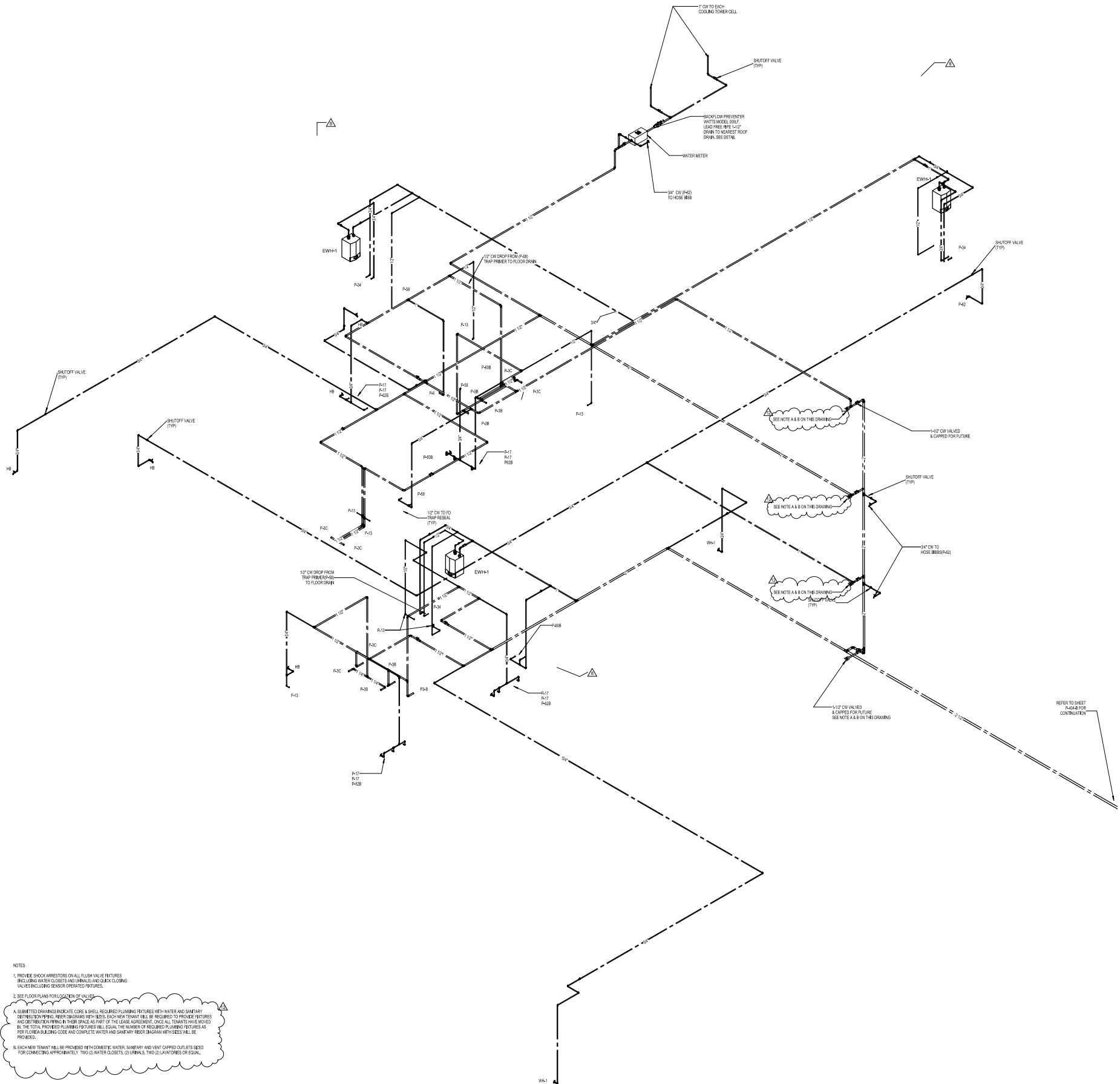
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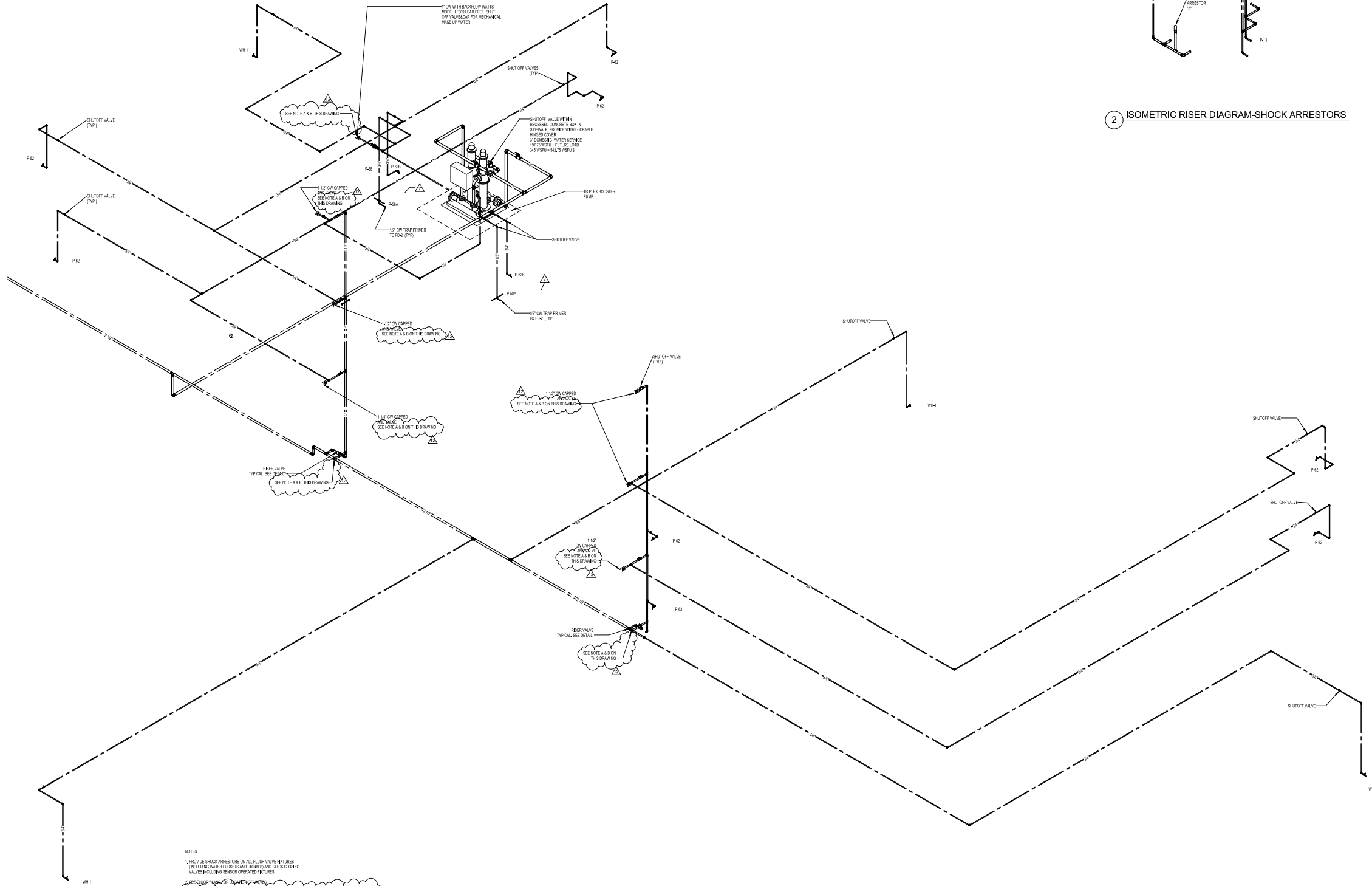
Isometric Riser
Diagrams - SUPPLY

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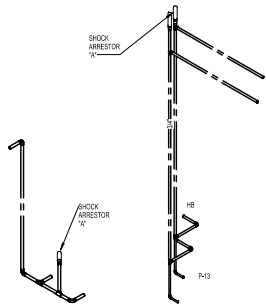
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2 ISOMETRIC RISER DIAGRAM-SHOCK ARRESTORS



NOTES

1. PROVIDE SHOCK ARRESTORS ON ALL FLUSH VALVE FITURES INCLUDING WATER CLOSERS AND URINALS AND QUICK CLOSING VALVES INCLUDING SENSOR OPERATED FITURES.

2. PROVIDE SHOCK ARRESTORS ON ALL FLUSH VALVE FITURES INCLUDING WATER CLOSERS AND URINALS AND QUICK CLOSING VALVES INCLUDING SENSOR OPERATED FITURES.

3. SUBMITTED DRAWINGS INDICATE CORE & SHELL REQUIRED PLUMBING FITURES WITH WATER AND SANITARY DISTRIBUTION TYPING. RISES DIAGRAM WITH SEEDS. EACH NEW TENANT WILL BE REQUIRED TO PROVIDE FITURES AND DISTRIBUTION PIPING IN THEIR SPACE AS PART OF THE LEASE AGREEMENT. ONCE ALL TENANTS HAVE INDICATED, THE TOTAL PROVIDED PLUMBING FITURES WILL EQUAL THE NUMBER OF REQUIRED PLUMBING FITURES AS PER FLORIDA BUILDING CODE AND COMPLETE WATER AND SANITARY RISES DIAGRAM WITH SEEDS WILL BE PROVIDED.

4. EACH NEW TENANT WILL BE PROVIDED WITH DOMESTIC WATER, SANITARY AND VENT CAPPED OUTLETS SEED FOR CONNECTING APPROXIMATELY TWO (2) WATER CLOSERS, TWO (2) URINALS, TWO (2) LAVATORIES OR EQUAL.

1 ISOMETRIC RISER DIAGRAM-SUPPLY - B

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FIRE PROTECTION SYSTEM DESIGN CRITERIA
(Per Chapter 61G15-32.003 and 61G15-32.004)

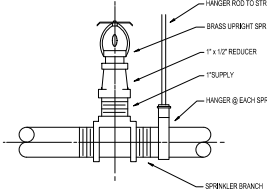
- Provide a wet type fire sprinkler system and standpipe system for 100% sprinkler with quick response sprinkler heads and fire hose coverage of the entire five story building. Sprinkler system shall be automatic inclusive of electric fire pump. All tamper and flow switches shall be integrated into the fire alarm control panel.
- The fire protection system shall be based on an automatic wet sprinkler system throughout the entire facility using the municipal water source provided by Miami Beach & Miami Dade County. Refer to Civil Engineering for point of connection, fire standing fire department connections and backflow prevention locations and details. Connection is to a 10" circulating water main. Incoming fire service shall be a minimum of 30 to the fire pump suction.
- Each of the stairwells shall be provided with a standpipe. The department valves at each level shall terminate with a foot manifold with fire department connections. In addition, to provide fire hose coverage of 130 feet (100 foot hose and 30 foot stream) intermediate standpipes shall be provided between the stairwells with fire department valve cabinets located at each level. Refer to plans.
- The combined fire sprinkler system and wet manual stand pipe system shall be served by a 750 GPM electric fire pump on an emergency power source. Provide ULL Listed and delta fire pump controller and transfer switch. Provide jockey pump and controller.
- Sprinkler heads shall be ULL Listed quick response type, concealed in areas with finished ceilings, sidewall for base of elevator pits and brass upright in exposed areas. K-Factor of 5.6, usable line rating of 180°F and rated for 175 PSI working pressure. Sprinkler heads located outdoors exposed to ambient conditions shall be Nickel-Teflon coated. Provide 12 spare sprinkler heads of each type in a cabinet with head wrench located in the fire pump room.
- Occupancy classification for the building will be Light Hazard and Ordinary Hazard Group 1.
 - Light Hazard: Offices, Corridors, Public Spaces, Meeting and Rest Rooms. Minimum design density shall be 0.10 GPM per Sq. Ft. over a minimum 900 Sq. Ft. per NFPA 13, 11.2.3.2.3.1 with a maximum head coverage of 225 Sq. Ft. and a maximum head spacing of 15 feet.
 - Ordinary Hazard Group 1: Mechanical Electrical Rooms, Trash Rooms, Shell Spaces, Parking Garage, and Janitor's Closets. Minimum design density shall be 0.15 GPM per Sq. Ft. over a minimum 900 Sq. Ft. per NFPA 13, 11.2.3.2.3.1 with a maximum head coverage of 130 Sq. Ft. and a maximum head spacing of 15 feet.
- No ceiling exceeds 20 feet in height.
- Sprinkler zones shall be limited to 32,000 Sq. Ft.
- Provide ULL Listed pressure regulating fire department valves and floor control valves on the discharge side of the fire pump. Maximum outlet pressure for fire department valves shall be 100 PSI and 165 PSI for all floor control valves. All piping material and fittings between fire pump discharge and valve inlet shall be rated for 300 PSI working pressure. All piping on the suction side of the pump and downstream of floor control valves shall be rated for 175 PSI working pressure.
- Acceptance testing of system shall be as follows:
 - Fire Pump per NFPA 20, 2007 Edition, Chapter 14.
 - Standpipe per NFPA 14, 2007 Edition, Chapter 11 including above ground and underground test certificates and field setting of valves under drum pressure.
 - Test all tamper switches for trouble signal at fire alarm panel when partial to full closure occurs.
 - Set all flow switches retard setting to a maximum 90 seconds for flow alarm condition at the alarm panel.
 - Verify fire pump activation upon flow from test station.
 - Sprinkler and standpipe piping shall be hydrostatically tested at 200 PSI for 2 hours. Systems operating at 175 PSI shall be tested at 50 PSI over the working pressure.
- Applicable codes for the fire protection system design:
 - NFPA 13, 2007 Edition
 - NFPA 14, 2007 Edition
 - NFPA 20, 2007 Edition
 - Florida Building Code, 2010 Edition
 - Florida Fire Prevention Code, 2010 Edition
- All piping shall be support from ULL Listed swivel or chain type hanger with spacing in accordance with NFPA 13, 12 foot maximum spacing and a minimum one hanger per section of pipe and a hanger on all armovers exceeding one foot in length. Hangers shall be secured to concrete structure with masonry inserts and capable of supporting the pipe weight plus 250 pounds. All hangers shall be independent of supporting or attaching to other trades. All risers shall be provided with pipe clamps at each floor level.
- All aboveground piping shall be ULL Listed for the service schedule 10 A135 and ULL Listed lightweight threaded pipe. All piping shall have an interior coating to inhibit MIC growth. Underground fire service shall be cement lined ductile with Mega-Lug couplings and thrust blocking at all changes in direction. Piping shall be cast iron for 175 PSI working pressure or not grooved mechanical coupling. All fittings between pump discharge and floor control valve inlet shall be 300 PSI working pressure.
- To the best of the Engineer's knowledge there is not an issue with microbiological induced corrosion (MIC) contaminants in the water source. However, the piping is specified with a MIC inhibited coating as a precautionary measure.

FIRE PROTECTION AS-BUILTS NOTE

FIRE PROTECTION CONTRACTOR IS REQUIRED TO SUBMIT FIRE PROTECTION AS-BUILT PLANS UPON COMPLETION OF THE PROJECT. COMPLETION DURING THE OWNER RECEIVING A TOP AND FIRE INSPECTOR HAS REVIEWED AND APPROVED THE INSTALLATION.

AS BUILTS SHALL BE SUBMITTED IN ELECTRONIC FORMAT IN EITHER AUTOCAD FORMAT OR SCANNED FILES IN PDF FORMAT.

AS BUILTS SHALL BE LEGIBLE AND NEAT. AS BUILTS WILL BE RETAINED BY ARCHITECT AND ENGINEER FOR RECORD OF CHANGES TO THE SYSTEM. AS BUILTS WILL BE SUBMITTED TO OWNER THROUGH ARCHITECT AND ENGINEER.



UPRIGHT SPRINKLER HEAD

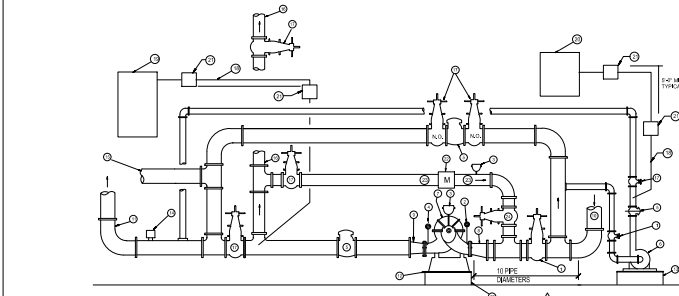
SPRINKLER HEAD LEGEND

TYPE	K-FACTOR	TEMP.	LOCATION	REMARKS	
CONCEALED	5.6	155°	ALL LOCATIONS	SPRINKLER HEADS SHALL BE FM GLOBAL APPROVED.	
UPRIGHT	5.6	155°	ELECTRIC ROOMS	PROVIDE HEAD GUARDS	
SE sidewall	5.6	200°	ELEVATOR SHAFTS & MACHINE ROOMS		
CONCEALED	5.6	200°	EXTERIOR	PROVIDE CORROSION RESISTANT NICKEL TEFLOX	

SPRINKLER NOTES

- ALL FIRE PROTECTION SYSTEM SHALL BE IN COMPLIANCE WITH THE STATE AND LOCAL FIRE CODES AND ORDINANCES AND AS PER NFPA 13 - 2007, NFPA 14 - 2007, NFPA 20 - 2007 & NFPA 24 - 2007 EDITION REQUIREMENTS.
- MAKE ALL OFFSETS REQUIRED AS PER JOB CONDITIONS.
- CONTRACTOR TO PROVIDE AND TURN OVER TO THE OWNER AT LEAST (12) SPARE SPRINKLERS OF EACH TYPE AND TEMPERATURE RATING BEING INSTALLED.
- PROVIDE SPRINKLER HEADS ON HEADS IN ELECTRICAL ROOMS, SWITCHGEAR ROOMS, GENERATOR & MECHANICAL ROOMS AND ALL EXPOSED CEILING.
- ALL SPRINKLER HEADS SHALL BE CENTERED AND PRESENT A NEAT AND BALANCED PATTERN IN ALL CEILING TILES UNLESS SHOWN OTHERWISE.
- PROVIDE AND MAINTAIN A MINIMUM CLEARANCE OF 18" BETWEEN THE BOTTOM OF THE SPRINKLER DEFLECTOR AND THE TOP OF STORAGE, FILE, SHELVING, ETC.
- ALL SPRINKLER HEADS MOUNTED IN CEILING SHALL BE LOCATED A MINIMUM OF 4" AWAY FROM ANY WALLS, CEILING HEIGHT CHANGES OR ANY OTHER VERTICAL INTERSECTING STRUCTURAL SURFACE.
- CONTRACTOR SHALL COORDINATE WITH STRUCTURE AND OTHER TRADES BEFORE INSTALLING SPRINKLER WORK.
- SEE SPRINKLER SCHEDULE FOR SPRINKLER HEAD TYPES.
- INSTALL PIPING TIGHT TO STRUCTURE WHERE POSSIBLE.
- SPRINKLER SYSTEM TO BE INSTALLED BY A STATE CERTIFIED FIRE PROTECTION CONTRACTOR.
- SPRINKLER PIPING SHALL BE ULL LISTED THREADABLE THINWALL AND/OR RATED XL 1" THROUGH 3" AND SCHEDULE 40 BLACK STEEL ASTM A133 ULL LISTED FOR PIPING 4" AND LARGER. ALL EXTERIOR SPRINKLER PIPING AND FITTINGS SHALL BE HOT DIPPED ZINC COATED GALVANIZED. UNDERGROUND FIRE SERVICE PIPING AND FITTINGS TO PUMP SUCTION FLANGE SHALL BE CEMENT LINED DUCTILE IRON WITH BITUMINOUS SEAL COAT ON INSIDE AND OUTSIDE OF PIPE. PUSH-ON JOINTS WITH JOINT RESTRAINT AS NEEDED. MEGA LUG DUCTILE IRON MECHANICAL JOINT WITH RESTRAINER GLAND, OR FASTITE FITTING WITH FAST GRIP GASKET. SEE SPECIFICATIONS FOR MORE INFORMATION.
- SYSTEM DESIGNED FOR LIGHT HAZARD OCCUPANCY EXCEPT FOR ORDINARY HAZARD GROUP 1 OCCUPANCY IN ELECTRICAL, MECHANICAL, TEL. SHELLED SPACES, PARKING GARAGE, AND STORAGE ROOMS UNLESS OTHERWISE NOTED ON PLANS. SYSTEM CALCULATED TO THE STREET MAIN UTILIZING A FLOW TEST TAKEN NO MORE THAN 180 DAYS BEFORE INSTALLATION.
- PAIN RED ALL EXPOSED FIRE RISERS, INSPECTORS TESTS ASSEMBLIES & DRAIN RISERS.
- CONTRACTOR SHALL COORDINATE WITH ALL DISCIPLINES INVOLVED SO AS TO AVOID ANY PIPE ROUTING PROBLEMS.
- SEAL PENETRATIONS OF FIRE RATED WALLS, CEILINGS AND FLOORS IN ACCORDANCE WITH U.L. FIRE RESISTANCE INDEX FOR THROUGH PENETRATION FIRE STOP SYSTEMS. COORDINATE REQUIREMENTS WITH ARCHITECTURAL PLANS AND SPECIFICATIONS.
- FIRE PROTECTION CONTRACTOR SHALL PREPARE A SET OF COORDINATION SHOP DRAWINGS BASED ON PIPE SIZES SHOWN FOR ALL LEVELS COORDINATED WITH ALL THE ENGINEERING DISCIPLINES AND FIRE PROTECTION PIPING. THESE SHOP DRAWINGS SHALL BE SUBMITTED TO BHA FOR APPROVAL PRIOR TO FABRICATION OR INSTALLATION.
- ALL GROOVES AND SCREWED FITTING SHALL BE APPROVED BY AN ENGINEER WHO RESERVES THE RIGHT TO DISAPPROVE ANY FITTING. ALL FITTING TYPES SHALL BE FROM THE SAME MANUFACTURER.
- PROVIDE SPRINKLERS ABOVE AND BELOW DUCTWORK, CONDUIT, PIPING, ETC. 48" IN WIDTH AND LARGER. THIS INCLUDES SYSTEMS LOCATED ADJACENT TO EACH OTHER WHICH THEIR COMBINED WIDTH ALONG WITH BELOW GROUND GENERATOR WULFERS IS 48" OR LARGER.
- SCHEDULE 40 PIPING AND FLEXIBLE SPRINKLER HEAD DROPS ARE NOT APPROVED OR ACCEPTED PRODUCTS.
- CONTRACTOR SHALL INSTALL FIRE PROTECTION SYSTEMS IN ACCORDANCE WITH NFPA 13, 14, 20 & 24. CONTRACTOR SHALL PROVIDE A COPY OF ALL TEST REPORTS PER NFPA TO THE ENGINEER FOR APPROVAL PRIOR TO THE PROJECT CLOSE OUT.
- CUTTING OF STRUCTURAL AND/OR ARCHITECTURAL MEMBERS TO BE DONE ONLY WITH THE WRITTEN APPROVAL OF THE ARCHITECT AND STRUCTURAL ENGINEER.
- SPRINKLER HEADS ARE TO BE COORDINATED WITH ALL LIGHTING FIXTURES AND STRUCTURAL SYSTEM.
- SPRINKLER HEADS SHALL BE A MINIMUM OF 12" FROM ANY DIFFUSER PER NFPA 13.
- CONTRACTOR SHALL PROVIDE PROVISIONS FOR FLUSHING SPRINKLER PIPING PER NFPA 13, 8.4.14.5. SHOW LOCATIONS OF FLUSHING CONNECTIONS ON SPRINKLER SHOP DRAWINGS.
- CONTRACTOR SHALL COORDINATE EXACT LOCATION OF FIRE EXTINGUISHERS WITH THE ARCHITECTURAL LIFE SAFETY DRAWINGS.
- CAUTION: MATERIAL SUBMITTALS AND SHOP DRAWINGS SHALL BE SUBMITTED TO ARCHITECT/ENGINEER FOR APPROVAL AND SHALL BE APPROVED BEFORE ANY INSTALLATION.
- PROVIDE A PERMANENTLY ATTACHED NAME TAG STATING THE REQUIRED DESIGN CRITERIA FOR EACH HYDRAULICALLY DESIGNED SYSTEM.
- IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOUND BETWEEN THESE PLANS, OTHER ENGINEERING PLANS AND THE ARCHITECTURAL PLANS PRIOR TO FINAL BID PRICE OR FINAL PERMITTING.
- IN CASE OF DISPUTE OR DOUBT AS TO INTENT OF DRAWINGS OR SPECIFICATIONS, OBTAIN ARCHITECT/ENGINEER'S DECISION BEFORE PROCEEDING WITH WORK OR BID INVOLVED. FAILURE TO FOLLOW THIS INSTRUCTION SHALL CONSTITUTE LIABILITY FOR DAMAGE TO OTHER WORK AND FOR REMOVING AND REPAIRING DEFECTIVE OR MISLOCATED WORK IN PROPER MANNER.
- BEFORE SUBMITTING PROPOSAL OR BID, EXAMINE ALL DRAWINGS AND SPECIFICATIONS RELATING TO THIS PROJECT. THE AMOUNT OF SPACE AVAILABLE FOR PIPING, EQUIPMENT AND CONNECTING SERVICES, THE SITE OF THE WORK, THE REQUIREMENTS TO CORRELATE THE FIRE PROTECTION WORK WITH THAT OF OTHER TRADES AND THE TIME SCHEDULE NECESSARY TO PERFORM THAT WORK.
- PIPE SHALL BE REAMED AND CLEANED BEFORE ASSEMBLY, AND AFTER ASSEMBLY, THE ENTIRE PIPING SYSTEM SHALL BE FLUSHED CLEAN.
- PRESSURE TEST PIPING AT 200 PSIG FOR A MINIMUM OF TWO HOURS. IF LEAKS ARE FOUND THEN CONTRACTOR SHALL FIX LEAKS AND TEST AGAIN. CONTRACTOR SHALL ALSO PROVIDE ALLOWANCE IN BID FOR PRESSURE TESTING OF EXISTING PIPING SHOWN TO REMAIN AT 200 PSIG FOR A MINIMUM OF 2 HOURS. ALLOWANCE SHALL INCLUDE TYPING LEAKS AND RETESTING.
- PIPING SHALL NOT BE RUN OVER ANY ELECTRICAL PANELS, ELECTRICAL EQUIPMENT AND PHONE PANELS.
- PROVIDE HANGERS ON ALL ARMOVERS OF 12" OR MORE IN LENGTH AND PER NFPA 13.
- WARRANTY/GUARANTEE
 - THE CONTRACTOR SHALL WARRANTY/GUARANTEE AND MAINTAIN THE STABILITY OF WORK AND MATERIALS AND KEEP SAME IN PERFECT REPAIR AND CONDITION FOR THE PERIOD OF ONE YEAR.
 - DEFECTS OF ANY KIND DUE TO FAULTY WORK OR MATERIALS, APPEARING DURING THE ABOVE MENTIONED PERIOD, MUST BE IMMEDIATELY REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE TO THE ENTIRE SATISFACTION OF THE OWNER AND ENGINEER. SUCH RECONSTRUCTION AND REPAIRS SHALL INCLUDE DAMAGE TO THE FINISH OR FURNISHING OF THE BUILDING RESULTING FROM THE ORIGINAL DEFECT OR REPAIR THEREOF.
- THE FIRE PROTECTION CONTRACTOR SHALL KEEP A SET OF MARKED UP DRAWINGS AS THE JOB PROGRESSES. NO MAJOR CHANGE SHALL BE MADE TO FIRE PROTECTION DESIGN/ENGINEERING UNLESS IT HAS BEEN COORDINATED, DRAWN AND SUBMITTED FOR APPROVAL.
- SPRINKLERS IN AREAS WITH EXPOSED STRUCTURE (OBSTRUCTED CONSTRUCTION) SHALL BE INSTALLED WITH DEFLECTOR 1" BELOW BOTTOM OF THE BEAM (MAXIMUM 2" BELOW ROOF DECK) PER NFPA 13.
- CONTRACTOR SHALL COORDINATE WITH FIRE ALARM CONTRACTOR FOR FIRE ALARM DEVICES INCLUDING FLOW AND TAMPER SWITCHES.

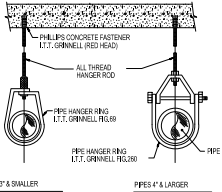
PIPING SCHEMATIC AT ELECTRIC FIRE PUMP



NTS

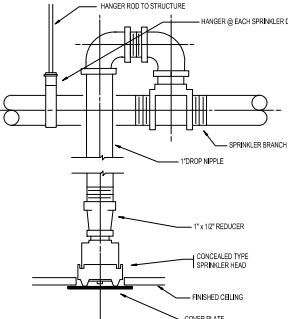
FIRE PROTECTION LEGEND SYMBOLS AND ABBREVIATIONS

ETR	LIGHT LINE INDICATES EXISTING PIPE TO REMAIN
CTE	CONNECT TO EXISTING
F	FIRE PROTECTION MAIN
FSP	FIRE STANDPIPE (WET)
SPR	WET SPRINKLER PIPE
SD	SPRINKLER DRAIN
PA	PRE ACTION SPRINKLER PIPE
O	UPRIGHT SPRINKLER HEAD
*	PENDENT SPRINKLER HEADS
▲	SEWALL SPRINKLER HEAD
✕	EXISTING SPRINKLER HEAD TO BE REMOVED
— —	CAPPED PIPE
— — —	WATERTIGHT SLEEVE
—○—	UP
—○—	PIPE UP
—○—	PIPE DOWN
→	ARROW INDICATES DIRECTION OF FLOW
RM	ROOF MANHOLE
∇	NON INDICATING VALVE
∇	INDICATING VALVE WITH SUPERVISORY SWITCH
DE	HOSE END DRAIN VALVE
CV	CHECK VALVE
VW	VALVE IN VERTICAL
FS	FLOW SWITCH
FV	FIRE DEPARTMENT VALVE
FCVA	FLOOR CONTROL VALVE ASSEMBLY
FDC	FIRE DEPARTMENT CONNECTION
AFV	ABOVE FINISHED FLOOR
PIV	POST INDICATOR VALVE
RCV	FREE STANDING FIRE DEPARTMENT CONNECTION RISER CONTROL VALVE



PIPE HANGER DETAIL

PERMIT SET



TYPICAL SPRINKLER DROP

FIRE PROTECTION DRAWING INDEX

SHEET #	DESCRIPTION
FR-01	LEGENDS, SCHEDULES, NOTES & DETAILS - FIRE PROTECTION
FR-02	DETAILS - FIRE PROTECTION
FR-101	LEVEL 1 - FIRE PROTECTION
FR-102	LEVEL 2 - FIRE PROTECTION
FR-103	LEVEL 3 - FIRE PROTECTION
FR-104	LEVEL 4 - FIRE PROTECTION
FR-105	LEVEL 5 - FIRE PROTECTION
FR-106	CANOPY LEVEL - FIRE PROTECTION

17	PERMIT COMMENTS & FIELD COORDINATION	04/10/17
NO	ISSUE	DATE

Sheet Information

Date	Issued: September 4, 2014
Job Number	810409.000
Drawn	Author
Checked	DAP
Approved	Approved

Legends, Schedules, Notes, & Details - Fire Protection

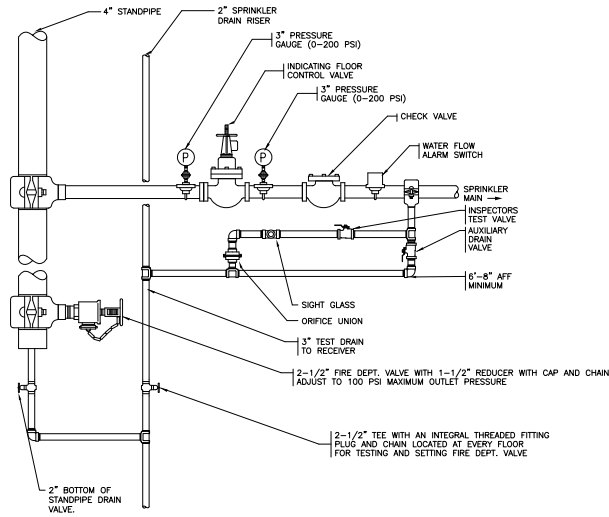
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FP-001

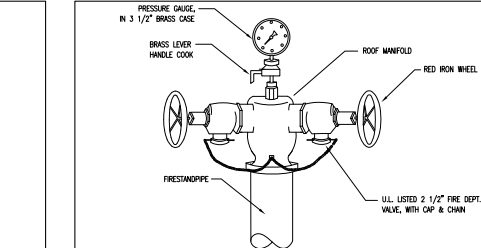
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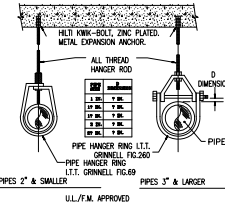
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FLOOR CONTROL VALVE ASSEMBLY

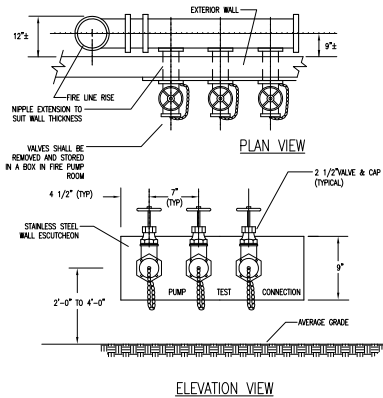


ROOF MANIFOLD DETAIL

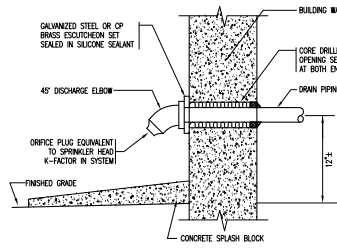


- NOTES:
1. ALL EXTERIOR HANGERS SHALL BE STAINLESS STEEL INCLUDING CLAMPS, THREADED RODS, NUTS & BOLTS.
 2. ALL INTERIOR HANGERS SHALL BE GALVANIZED INCLUDING CLAMPS, THREADED RODS, NUTS & BOLTS.
 3. ALL HANGERS SHALL BE U.L. LISTED.

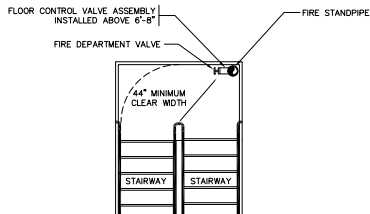
PIPE HANGER DETAIL



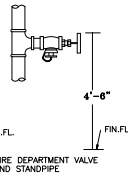
FLUSH WALL MOUNTED FIRE PUMP TEST CONNECTION



SPRINKLER TEST DRAIN DISCHARGE



FIRE STANDPIPE LOCATION



FIRE EQUIPMENT MOUNTING HEIGHT

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PERMIT
SET

Revisions

1	Revised Permit Comments	11/26/14
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Date	July 3rd, 2014	
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Approved	WBS	

DETAILS - FIRE
PROTECTION

Sheet
FP-002

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1 305.666.5258

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1 305.529.1112

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Revisions

18	PERMIT COMMENTS & FIELD COORDINATION	07/21/17
17	PERMIT COMMENTS & FIELD COORDINATION	04/10/17
16	CS AND TJ FIELD COORDINATION	03/3/17
14	City of Miami Beach Comments	01/09/2017
13	CITY OF MIAMI BEACH PERMIT COMMENTS	10/21/2016
1	REVISED PERMIT COMMENTS	11/28/14
NO	ISSUE	DATE

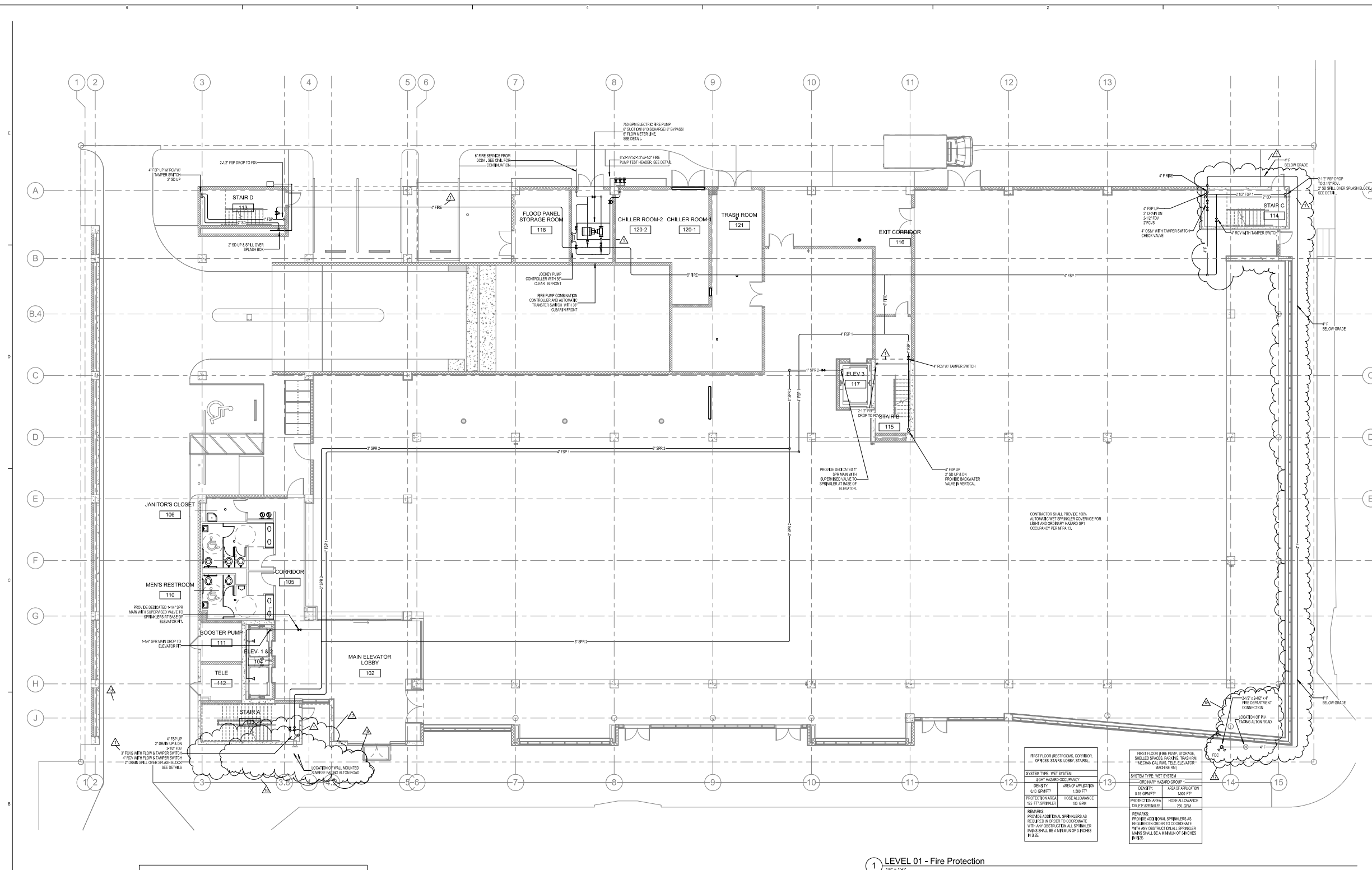
ISSUE	DATE
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Checked	Checker
Approved	Approver

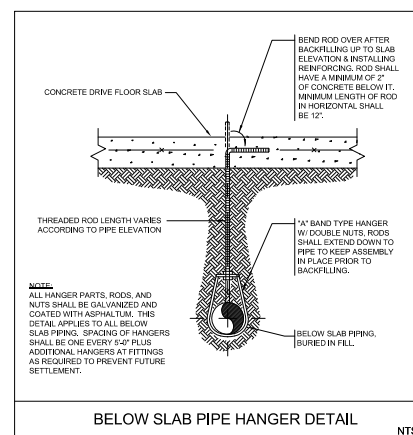
Level 1 - Fire Protection

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FP-101

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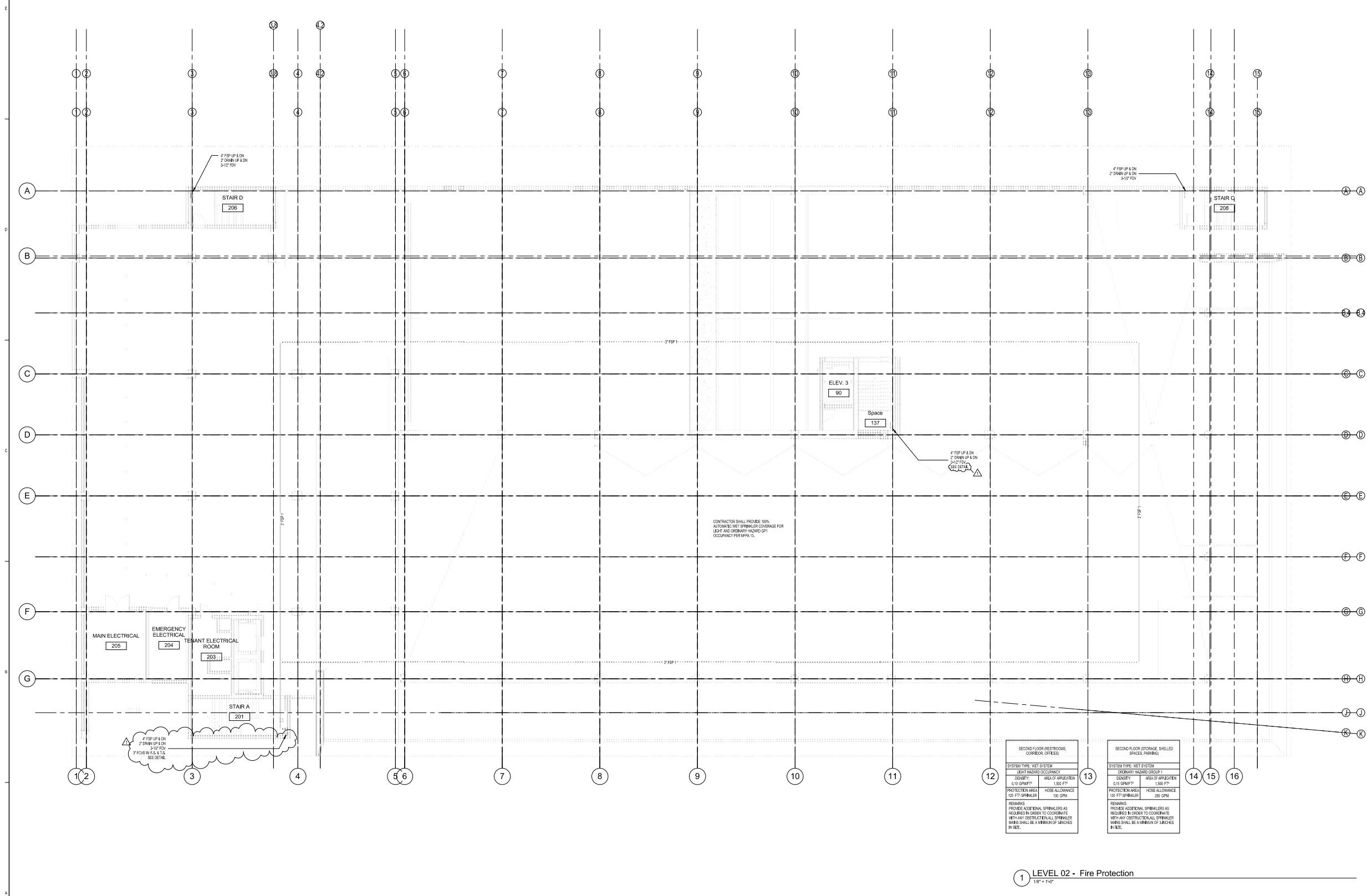


1 LEVEL 01 - Fire Protection



BELOW SLAB PIPE HANGER DETAIL

NT:



SECOND FLOOR (RESTROOMS, CORRIDOR, OFFICES)			
SYSTEM TYPE: WET SYSTEM			
LIGHT HAZARD OCCUPANCY			
DENSITY: 0.15 GPM/FT ²	AREA OF APPLICATION: 1,000 FT ²		
PROTECTION AREA: 100 FT ² SPRINKLER	HOSE ALLOWANCE: 100 GPM		
REMARKS:			
PROVIDE ADDITIONAL SPRINKLERS AS REQUIRED IN ORDER TO COORDINATE WITH ANY OBSTRUCTION ALL SPRINKLER WARE SHALL BE A MINIMUM OF 3 INCHES IN SIZE.			

SECOND FLOOR (STORAGE, SHIELDED SPACES, PARKING)			
SYSTEM TYPE: WET SYSTEM			
ORDINARY HAZARD GROUP 1			
DENSITY: 0.15 GPM/FT ²	AREA OF APPLICATION: 1,000 FT ²		
PROTECTION AREA: 100 FT ² SPRINKLER	HOSE ALLOWANCE: 250 GPM		
REMARKS:			
PROVIDE ADDITIONAL SPRINKLERS AS REQUIRED IN ORDER TO COORDINATE WITH ANY OBSTRUCTION ALL SPRINKLER WARE SHALL BE A MINIMUM OF 3 INCHES IN SIZE.			

1 LEVEL 02 - Fire Protection
1/8" = 1'-0"

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Revisions

NO.	REVISION	DATE
1	REVISED PERMIT COMMENTS	11/06/14

NO.	REVISION	DATE
1	REVISED PERMIT COMMENTS	11/06/14

Level 2 - Fire Protection

Sheet
FP-102

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1	REVISED PERMIT COMMENTS	11/09/14

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1	ISSUE	DATE

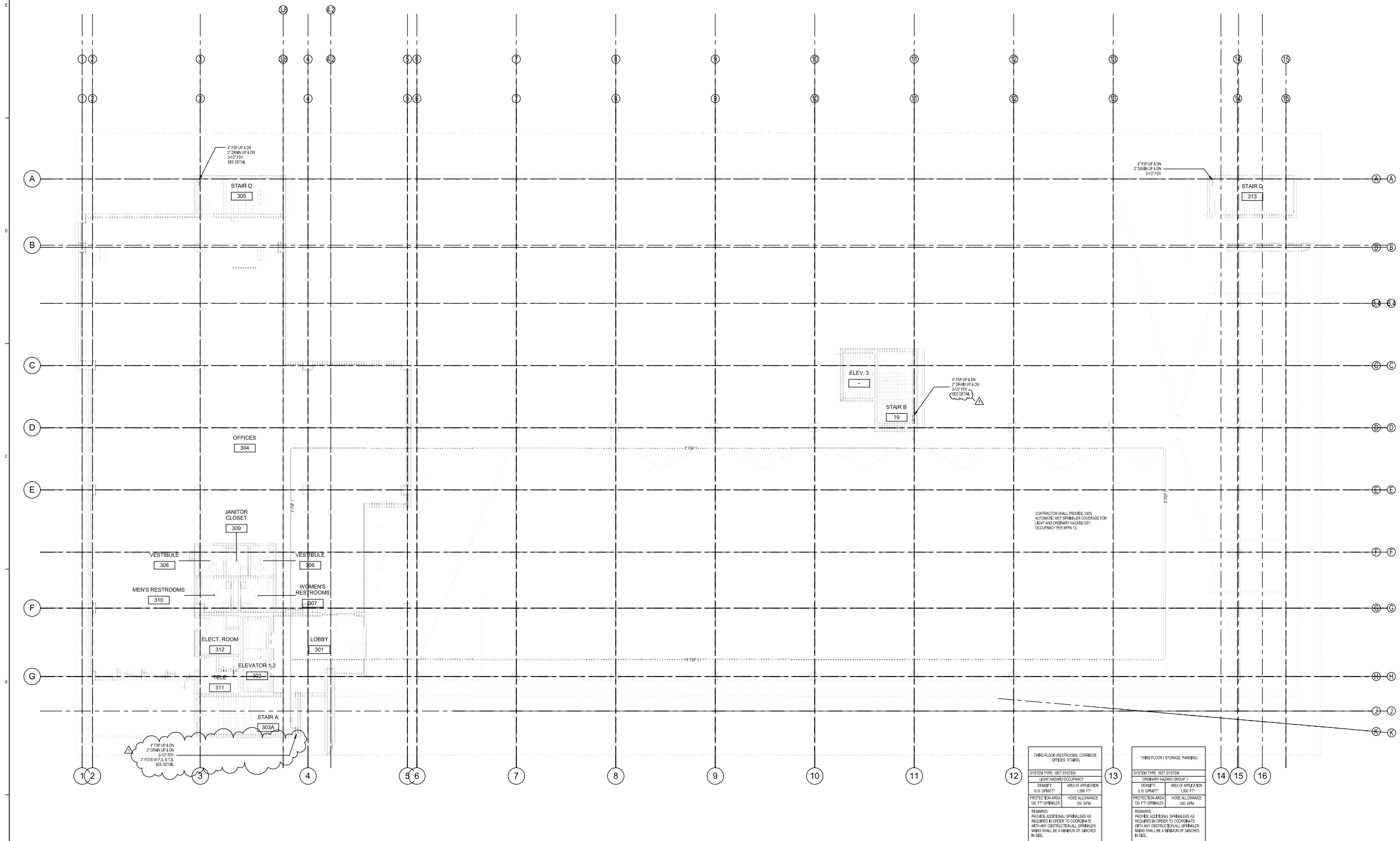
Sheet Information

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Approved	Approver
	Title

Level 3 - Fire
Protection

Sheet
FP-103

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1 LEVEL 03 - Fire Protection
1/8" = 1'-0"



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1 305.666.9209

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PERMIT
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Revisions

S	DERM COMMENTS	03/06/13
T	REVIEWED PERMIT	11/09/14
NO	COMMENTS	DATE

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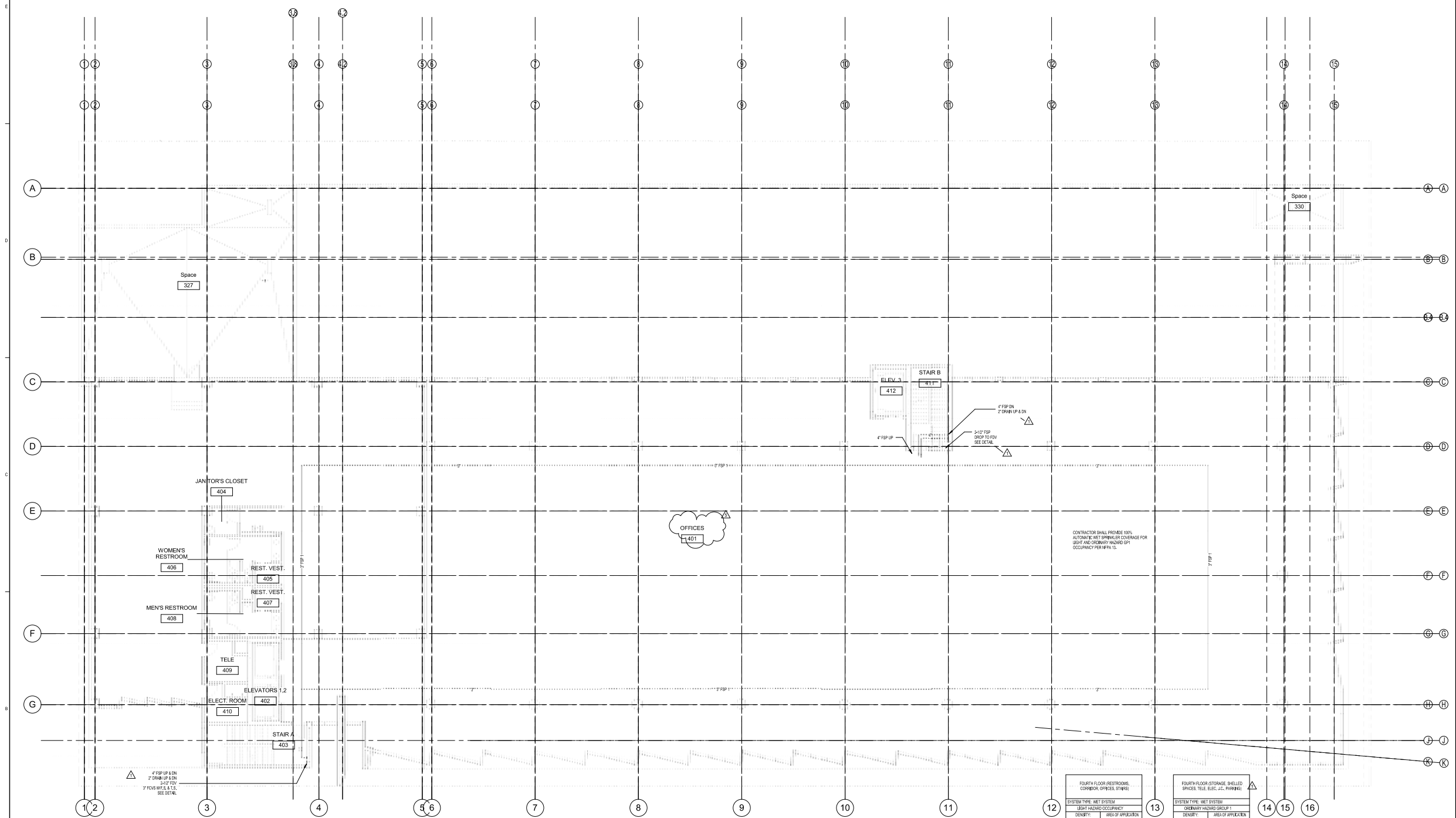
Date	09/02/14
Job Number	810408.000
Drawn	Author
Checked	Checker
Approved	Approver
Title	

Level 4 - Fire
Protection

Sheet

FP-104

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1 LEVEL 04 - Fire Protection
1/8" = 1'-0"



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1 954.315.3899

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Revisions

NO.	REVISION PERMIT COMMENTS	DATE
1	11/20/2014	11/20/14

Sheet Information

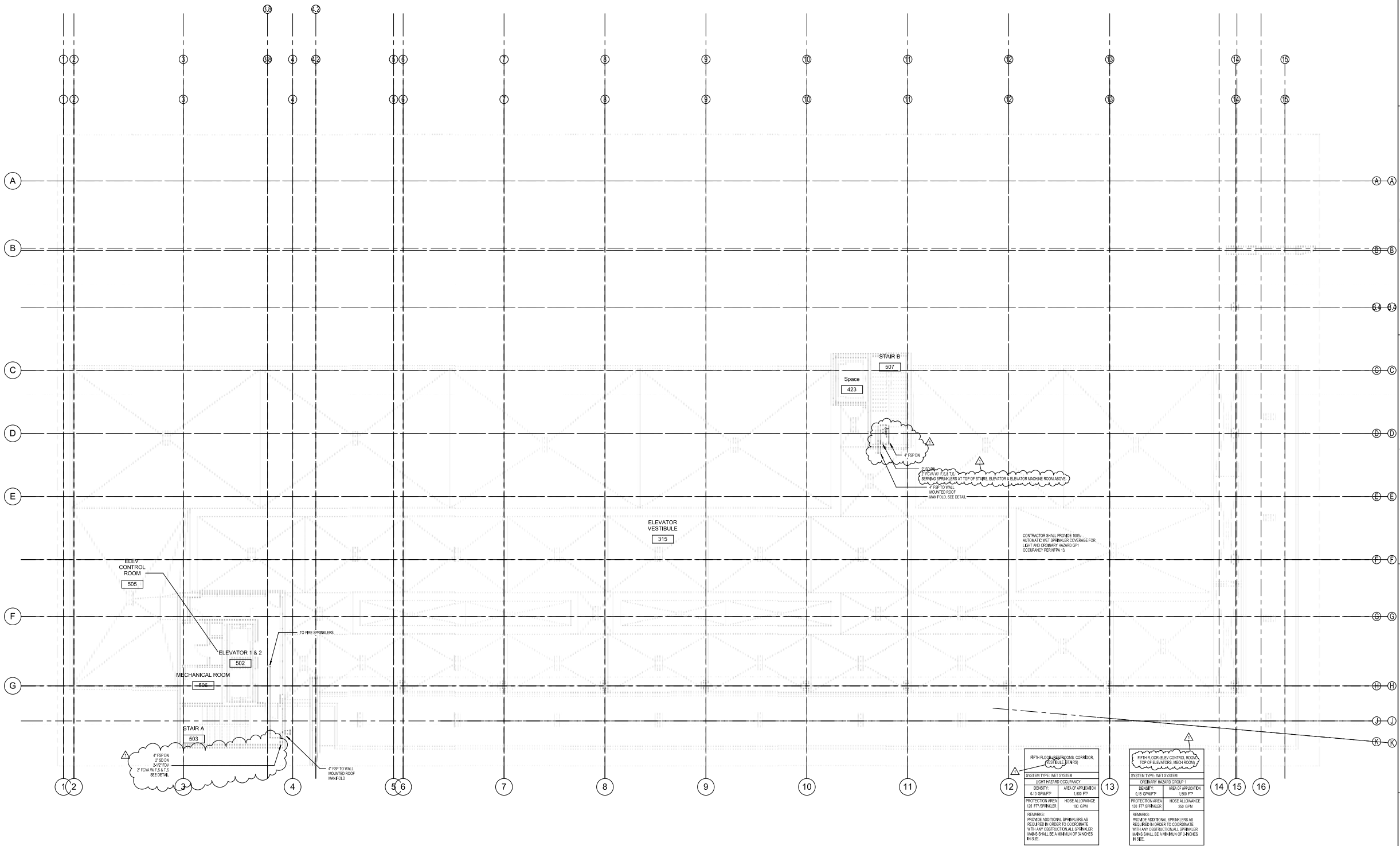
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Drawn	Author
Checked	Checker
Approved	Approver

Title

Level 5 - Fire
Protection

Sheet
FP-105

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1 LEVEL 05 - Fire Protection
1/8" = 1'-0"



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