PROJECT:

JUVENILE COURT SPRINKLER SYSTEM RETROFIT

RFP # 16-007-10

SHELBY COUNTY GOVERNMENT

616 ADAMS AVE.

MEMPHIS, TN 38103

INNOVATIVE • ENGINEERING
SERVICES, LLC

PHASE:

PHASE 1
1ST FLOOR STAIRWELLS & 2ND FLOOR MEDICAL (INCLUDES SPRINKLER HEADS, FCVA, DRAIN PIPING AND FLOOR DRAINS)
PHASE 2
2ND FLOOR GIRLS SOUTH & CONTROL ROOM (INCLUDES SPRINKLER HEADS, DRAIN PIPING AND FLOOR DRAINS)
PHASE 3
2ND FLOOR HOPE ACADEMY (INCLUDES SPRINKLER HEADS & FCVA)
PHASE 4
3RD FLOOR BOYS SOUTH WEST (INCLUDES SPRINKLER HEADS, FCVA, DRAIN PIPING AND FLOOR DRAINS)
PHASE 5
3RD FLOOR MEZZANINE BOYS SOUTH WEST (INCLUDES SPRINKLER HEADS AND FLOOR DRAINS)
PHASE 6
3RD FLOOR BOYS SOUTH EAST & DINING (INCLUDES SPRINKLER HEADS, FCVA, DRAIN PIPING AND FLOOR DRAINS)
PHASE 7
3RD FLOOR MEZZANINE BOYS SOUTH EAST (INCLUDES SPRINKLER HEADS AND FLOOR DRAINS)
PHASE 8
3RD FLOOR MEZZANINE BOYS NORTH WEST (INCLUDES SPRINKLER HEADS AND FLOOR DRAINS)
PHASE 9
3RD FLOOR MEZZANINE BOYS NORTH WEST (INCLUDES SPRINKLER HEADS AND FLOOR DRAINS)
PHASE 10
3RD FLOOR MEZZANINE BOYS NORTH EAST (INCLUDES SPRINKLER HEADS AND FLOOR DRAINS)
PHASE 11
3RD FLOOR BOYS NORTH EAST (INCLUDES SPRINKLER HEADS, FCVA AND FLOOR DRAINS)

SCOPE OF WORK:

1. REPLACE EXISTING SPRINKLER HEADS IN DETENTION AREAS WITH INSTITUTIONAL TYPE HEADS.
2. REPLACE EXISTING SHUTOFF VALVES AT FLOOR CONTROL VALVE ASSEMBLIES THAT SERVE DETENTION AREAS WITH ELECTRONIC CONTROL VALVES. THESE NEW VALVES SHALL BE OPERATED FROM A CONTROL PANEL LOCATED IN THE MAIN CONTROL ROOM.
3. INSTALL DRAIN PIPING FOR SPRINKLER SYSTEM.
4. INSTALL FLOOR DRAINS DETENTION AREAS.

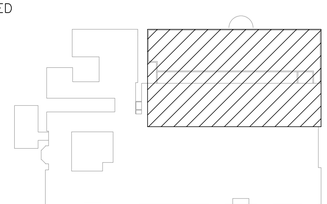
ALTERNATES:

1. REPLACE EXISTING SPRINKLER HEADS IN DESIGNATED LOCATIONS AS INDICATED IN DRAWINGS.

2. INSTALL FLOOR DRAINS AND ASSOCIATED PIPING IN DESIGNATED AREAS AS INDICATED IN DRAWINGS

NOTES:

1. THE PURPOSE OF THIS PROJECT IS TO HELP REDUCE FLOODING DURING INCIDENTS WHEN SPRINKLER HEADS ARE DAMAGED BY DETAINEES.



KEY PLAN

DRAWING INDEX

DWG #	DESCRIPTION
FP000	FIRE PROTECTION/PLUMBING GENERAL NOTES, LEGEND, AND DETAILS
FP101	FIRE PROTECTION GROUND FLOOR PLAN
FP102	FIRE PROTECTION SECOND FLOOR PLAN
FP103	FIRE PROTECTION THIRD FLOOR PLAN
FP104	FIRE PROTECTION THIRD FLOOR MEZZANINE PLAN
P101	PLUMBING GROUND FLOOR PLAN
P102	PLUMBING SECOND FLOOR PLAN
P103	PLUMBING THIRD FLOOR PLAN
P104	PLUMBING THIRD FLOOR MEZZANINE PLAN
E102	ELECTRICAL SECOND FLOOR PLAN
E103	ELECTRICAL THIRD FLOOR PLAN
E104	ELECTRICAL THIRD FLOOR MEZZANINE PLAN

CONSULTANTS

MECHANICAL/ELECTRICAL ENGINEER – INNOVATIVE ENGINEERING SERVICES, LLC
2787 STAGE CENTER DR. SUITE 101
BARTLETT, TN 38134
(901) 379 0500
www.innovativees-llc.com

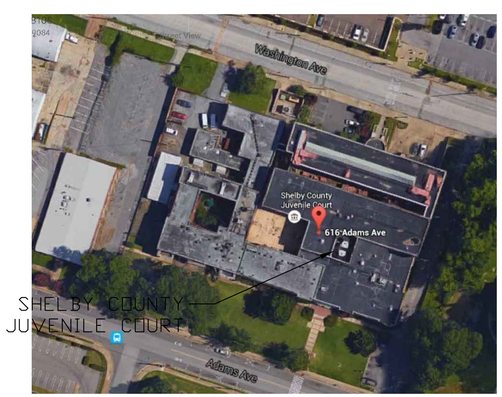
CODE NOTES

2009 INTERNATIONAL BUILDING CODE W/ LOCAL AMENDMENTS
2012 INTERNATIONAL EXISTING BUILDING CODE W/ LOCAL AMENDMENTS
2008 NATIONAL ELECTRIC CODE W/ LOCAL AMENDMENTS
2009 INTERNATIONAL FIRE CODE W/ LOCAL AMENDMENTS
2009 INTERNATIONAL PLUMBING CODE W/ LOCAL AMENDMENTS
ASHRAE 62 – 2007

ATTENTION:

THE CONTRACTOR SHALL BE AWARE THAT ONCE THESE PLANS HAVE BEEN SUBMITTED FOR LOCAL CODE PLAN REVIEW AND LOCAL CODE PLAN REVIEW HAS APPROVED THE DRAWINGS FOR CONSTRUCTION PERMIT ISSUE, THE DESIGN PARAMETERS AND LAYOUT OF EQUIPMENT CANNOT BE CHANGED OR MODIFIED IN THE FIELD. ALL CHANGES TO THE DESIGN PARAMETERS AND LAYOUT OF EQUIPMENT ARE REQUIRED TO BE ACCOMPLISHED UNDER THE DIRECTION OF A REGISTERED ENGINEER AND SEALED BY THE SAME. REVISED PLANS, WITH CHANGES IDENTIFIED, SHALL BE RESUBMITTED FOR LOCAL CODE PLAN REVIEW.

VICINITY MAP



PIPING SYMBOL LEGEND

PIPING

- CAPPED
- DOWN THROUGH FLOOR
- DROP (OR RISE)
- FLEX CONNECTOR
- FLOW ARROW
- FS — FLOW SWITCH
- PIPE GUIDE
- PIPING BRANCH TAKEOFF
- P — PRESSURE GAUGE
- TS — TAMPER SWITCH
- UNION
- UP (THROUGH SLAB ABOVE)
- UP & DOWN (THROUGH FLOOR SLAB)

SPRINKLERS

- UPRIGHT / PENDENT SPRINKLER
- CONCEALED INSTITUTIONAL SPRINKLER
- SIDE WALL INSTITUTIONAL SPRINKLER

VALVES

- ALARM CHECK VALVE
- BALL VALVE
- BUTTERFLY VALVE
- FIRE DEPARTMENT HOSE VALVE
- CHECK VALVE
- DPV — DRY PIPE VALVE
- DCVA — DOUBLE CHECK VALVE ASSEMBLY
- FIRE DEPARTMENT CONNECTION
- GATE VALVE
- ISOLATION VALVE
- FIRE HOSE CABINET WITH FIRE DEPARTMENT VALVE
- PREACTION CONTROL VALVE
- FCVA — FLOOR CONTROL VALVE ASSEMBLY
- GATE VALVE
- STRAINER
- PIV — POST INDICATOR VALVE
- FD — FLOOR DRAIN

GENERAL NOTES

1. THE SCOPE OF WORK FOR THIS PROJECT IS TO BE DONE IN PHASES. COORDINATION IS REQUIRED TO KEEP NON-CONSTRUCTION AREAS IN OPERATION. OVERNIGHT, EARLY MORNING AND WEEKEND WORK MAY BE REQUIRED.
2. CONTRACTOR SHALL INSTALL ALL PLUMBING SYSTEMS IN STRICT ACCORDANCE WITH APPLICABLE CODES (LOCAL/STATE FIRE CODES, NFPA, ETC.).
3. CONTRACTOR SHALL COORDINATE ALL SYSTEMS WITH ALL OTHER TRADES, SO AS NOT TO CAUSE INTERFERENCES.
4. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY CONNECTIONS FOR SIZE, LOCATION, DEPTH AND INSTALL ALL SYSTEMS IN ACCORDANCE WITH CONDITIONS FOUND (PRIOR TO BEGINNING INSTALLATION). ANY PART OF SPRINKLER SYSTEMS INSTALLED INCORRECTLY DUE TO NOT VERIFYING SAME SHALL BE REMOVED AND CORRECTED AT THE EXPENSE OF THE CONTRACTOR.
5. CONTRACTOR SHALL GUARANTEE ENTIRE SYSTEM FOR A PERIOD OF ONE YEAR AFTER FINAL DATE OF ACCEPTANCE.
6. PROVIDE SEALANT AROUND ALL PENETRATIONS THROUGH FIRE RATED FLOORS & WALLS SO AS TO MAINTAIN FIRE INTEGRITY IN EVENT OF FIRE.
7. CONTRACTOR SHALL VISIT SITE AND VERIFY ALL CONDITIONS PRIOR TO BIDDING PROJECT.
8. CONTRACTOR SHALL INSTALL ALL SPRINKLER AND PLUMBING SYSTEMS IN A GOOD WORKMANSHIP MANNER.
9. CONTRACTOR SHALL REVIEW ENTIRE SET OF DOCUMENTS INCLUDING PLUMBING & ELECTRICAL PLANS AND ADVISE ARCHITECT IN WRITING PRIOR TO BEGINNING CONSTRUCTION IF THERE ARE ANY CODE VIOLATIONS, SPACE CONFLICTS, AND/OR OTHER COORDINATION CONFLICTS WITH OTHER TRADES. THE BUILDING SHALL BE SPRINKLERED IN ACCORDANCE WITH APPLICABLE CODES.
10. THESE DRAWINGS ARE DIAGRAMMATIC AND SHOW GENERAL SPRINKLER LAYOUTS AND PIPE ROUTING ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PREPARE DETAILED SHOP DRAWINGS WHERE SPACE AND/OR COORDINATION AREAS ARISE AND TO CONFIRM ALL SPACE ALLOCATIONS.
11. CONTRACTOR SHALL COORDINATE WITH OWNER AS TO SHUT DOWN PERIOD OF EXISTING SERVICES SO AS NOT TO INTERFERE WITH EXISTING OPERATIONS.
12. CONTRACTOR SHALL COORDINATE ALL ELECTRICAL CHARACTERISTICS OF ELECTRICAL OPERATED EQUIPMENT WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING SAME. THIS APPLIES TO VOLTAGE, PHASE, RATED CAPACITIES, ETC.
13. CONTRACTOR SHALL OFFSET ALL PIPING AS REQUIRED TO PROPERLY INSTALL SPRINKLER SYSTEMS.
14. AT COMPLETION OF PROJECT, THE CONTRACTOR SHALL FLUSH SYSTEM OUT THOROUGHLY.
15. CONTRACTOR SHALL VERIFY ALL CONNECTIONS OF MISC. EQUIPMENT FURNISHED BY OTHERS PRIOR TO INSTALLING SAME AND MAKE ALL CONNECTIONS FOR SAME.
16. INFORMATION OF EXISTING SERVICES WAS OBTAINED FROM SITE SURVEYS. CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF EXISTING SERVICES SHOWN ON DRAWINGS INCLUDING ALL OTHER WORK TO BE PERFORMED WITH RESPECT TO DRAWINGS PRIOR TO PRICING, FABRICATION OR ACTUAL CONSTRUCTION.
17. REPAIR TO THE SATISFACTION OF THE OWNER ANY DAMAGE TO OR ALTERATIONS OF THE EXISTING STRUCTURE DUE TO FIRE PROTECTION. THIS INCLUDES FILLING AND PATCHING HOLES LEFT BY REMOVAL OF SPRINKLER PIPING.
18. SLEEVES SHALL BE INSTALLED WHERE PIPING PASSES THROUGH STRUCTURE. ALL HOLES THROUGH CONCRETE SHALL BE CORE-DRILLED. VERIFY LOCATION WITH THE OWNER/ARCHITECT BEFORE COMMENCING ANY WORK.
19. ALL PIPING SHALL BE TESTED AND PROVEN TIGHT BEFORE PIPE IS CONCEALED.
20. DO NOT INSTALL ANY PIPING OVER THE TOP OF ANY ELECTRICAL PANELS ELECTRICAL EQUIPMENT.
21. INCLUDE IN BID ANY AND ALL COSTS ASSOCIATED WITH REROUTING EXISTING PIPING OR DUCTWORK TO ACCOMMODATE NEW PIPING INSTALLATION.
22. IN ORDER TO ACCESS SPRINKLERS, THE HARD CEILINGS, LIGHTING, ETC MAY HAVE TO BE REMOVED. REPAIR AS NEEDED TO RETURN TO EXISTING CONDITION.
23. WORK BEING DONE IN THE DETENTION CELLS AND OPEN AREA CAN NOT BE DONE SIMULTANEOUSLY.
24. CONTRACTOR SHALL NOTIFY FACILITY PERSONNEL (1) WEEK IN ADVANCE FOR WORKING IN A DIFFERENT AREA OR REQUIRED SYSTEM SHUTDOWNS.

SEISMIC NOTES

1. PIPING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH LOCAL SEISMIC ZONE REQUIREMENTS.
2. PROVIDE SEISMIC RESTRAINT FOR BUILDING ELEMENTS AS REQUIRED IN LOCAL SEISMIC ZONE AND AS REQUIRED BY STATE FIRE MARSHALL AND OTHER GOVERNING AUTHORITIES.
3. CONTRACTOR SHALL OBTAIN SERVICES OF AN INDEPENDENT CONTRACTOR TO ADVISE AND SUPERVISE ALL INSTALLATION OF SEISMIC RESTRAINTS SYSTEM SO AS TO BE ASSURED THAT FINAL INSTALLATION OF SYSTEM MEETS AND/OR EXCEEDS LOCAL SEISMIC ZONE REQUIREMENTS. SUBMIT DETAILED SHOP DRAWINGS OF SAME FOR APPROVAL PRIOR TO BEGINNING INSTALLATION OF SYSTEMS. DETAILED SHOP DRAWINGS SHALL BE DESIGNED & SEALED BY A LICENSED ENGINEER OF THE STATE WHERE STRUCTURE IS LOCATED.

FIRE PROTECTION NOTES

1. SPRINKLE AREAS AS INDICATED ON DRAWINGS PER NFPA FIRE PREVENTION CODE WITH LATEST SUPPLEMENTS AND REVISIONS AND PER OWNER'S INSURANCE CARRIER.
2. HYDRAULICALLY CALCULATE SYSTEM WITH A MINIMUM DENSITY NOTED IN SPECIFICATIONS.
3. THE AUTOMATIC SPRINKLER CONTRACTOR SHALL PROVIDE ALL NECESSARY OFFSETS, RAISES OR DROPS, IN PIPING AND AUXILIARY DRAINS REQUIRED BY BUILDING CONDITIONS WHETHER OR NOT SHOWN ON THE PLANS.
4. THE INFORMATION GIVEN HEREIN AND ON PLANS IS AS EXACT AS COULD BE SECURED FOR BIDDING PURPOSES, BUT ITS ACCURACY IS NOT GUARANTEED. THE AUTOMATIC SPRINKLER CONTRACTOR MUST EXAMINE THE JOB CONDITIONS AND VERIFY ALL MEASUREMENTS, ELEVATIONS, CLEARANCES, PIPE SIZES, ETC., BEFORE STARTING WORK.
5. ALL BACKGROUND INFORMATION IS SHOWN FOR COORDINATION PURPOSES ONLY. REFER TO PROPER DRAWINGS FOR EXACT LOCATIONS, SIZES, AND QUANTITIES OF OTHER TRADES' WORK.
6. ACTIVATION OF FLOW ALARM DEVICE SHALL CAUSE GENERAL ALARM THROUGHOUT THE FACILITY. ELECTRICAL WIRING BY DIVISION 16.

DESIGN INFORMATION

WATER FLOW TEST RESULTS:

86 PSI STATIC PRESSURE
80 PSI RESIDUAL PRESSURE
1193 GPM FLOWING
4356 GPM @ 20 PSI
TEST CONDUCTED ON 07/21/15 BY MLGW

TEST CONDUCTED ON HYDRANT ON ADAMS DIRECTLY IN FRONT OF BUILDING.

DESIGN DATA:

OCCUPANCY CLASSIFICATION:	LIGHT HAZARD
DENSITY:	0.10 GPM/FT²
AREA OF APPLICATION:	1500 FT²
COVERAGE PER SPRINKLER:	200 FT²
NO. OF SPRINKLERS:	15
HOSE STREAMS:	100 GPM
TOTAL DEMAND:	1250 GPM

DESIGN CRITERIA:

OWNER:	SHELBY COUNTY GOVERNMENT
PROJECT:	JUVENILE COURT SPRINKLER SYSTEM RETROFIT
LOCATION:	616 ADAMS AVE. MEMPHIS, TN 38103
OCCUPANCY TYPE:	I-3; INSTITUTIONAL
BUILDING HEIGHT:	(4 STORIES)
BUILDING SQUARE FOOTAGE:	PRIX
SEISMIC EXPOSURE GROUP:	GROUP II
SEISMIC PERFORMANCE CATEGORY:	CATEGORY SP
APPLICABLE CODES:	NFPA 13, 13R, 14 AND IBC (2009 EDITION)

SYMBOLS LEGEND

- X / AXXX — DRAWING NUMBER / SHEET NUMBER — DETAIL SECTION DESIGNATION
- X / XX — REVISION DESIGNATION
- X / AXXX — DRAWING NUMBER / SHEET NUMBER — DETAIL DESIGNATION
- FPP-1 — EQUIPMENT DESIGNATION

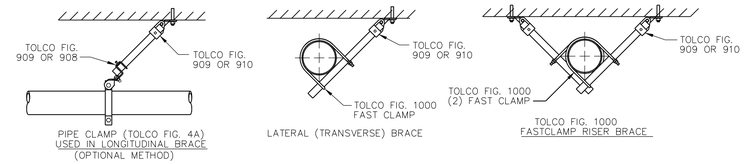
DRAWING LIST

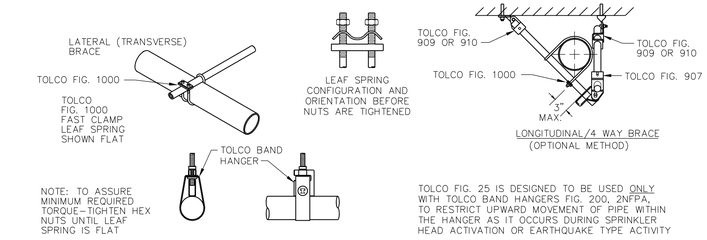
FIRE PROTECTION

FP000 FIRE PROTECTION GENERAL NOTES, LEGEND AND DETAILS
FP101 FIRE PROTECTION GROUND FLOOR PLAN
FP102 FIRE PROTECTION SECOND FLOOR PLAN
FP103 FIRE PROTECTION THIRD FLOOR PLAN
FP104 FIRE PROTECTION THIRD FLOOR MEZZANINE PLAN

PLUMBING

P101 PLUMBING GROUND FLOOR PLAN
P102 PLUMBING SECOND FLOOR PLAN
P103 PLUMBING THIRD FLOOR PLAN
P104 PLUMBING THIRD FLOOR MEZZANINE PLAN





NOTE: TO ASSURE MINIMUM REQUIRED TORQUE-TIGHTEN HEX NUTS UNTIL LEAF SPRING IS FLAT

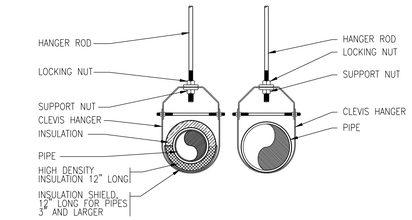
Note:
Tolco Fig. 1000 Fast Clamps Underwriters Laboratories Listed, Must Be Used With Tolco U.L. Listed Attachments

Provide Tolco Restraints Or Approved Equal As Required.

TOLCO FIG. 25 IS DESIGNED TO BE USED ONLY WITH TOLCO BAND HANGERS FIG. 200, 2NFPA, TO RESTRICT UPWARD MOVEMENT OF PIPE WITHIN THE HANGER AS IT OCCURS DURING SPRINKLER HEAD ACTIVATION OR EARTHQUAKE TYPE ACTIVITY

TOLCO FIG. 25 SURGE RESTRAINER
TYPE 1- FOR USE WITH 1" AND 1 1/4" PIPE AND HANGER.
TYPE 2- FOR USE WITH 1 1/2" AND 2" PIPE AND HANGER

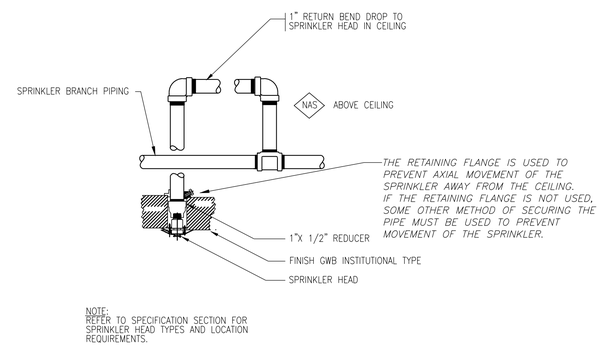
1 SEISMIC RESTRAINT COMPONENTS
SCALE: NTS



HANGER ROD SCHEDULE	
PIPE SIZE	ROD SIZE
UP TO 2"	3/8" DIA.
2 1/2" THRU 3"	1/2" DIA.
4" AND 5"	5/8"
6" THRU 8"	3/4"
12"	7/8"

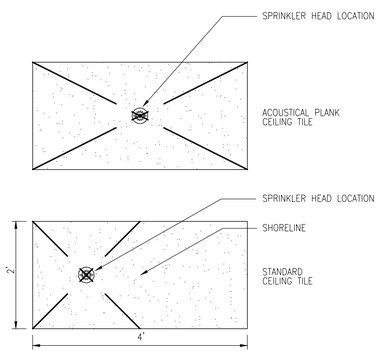
HANGER ROD SPACING	
PIPE SIZE	MAX. ALLOWABLE SPACING
1"	7'
1-1/4"	8'
1-1/2"	9'
2"	10'
2-1/2"	11'
3" THRU 8"	12'
10" & 12"	15"

2 FIRE PROTECTION/PLUMBING PIPE HANGER INSTALLATION
SCALE: NTS

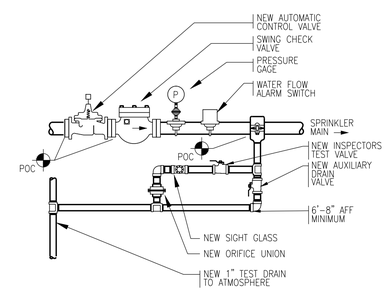


NOTE:
REFER TO SPECIFICATION SECTION FOR SPRINKLER HEAD TYPES AND LOCATION REQUIREMENTS.

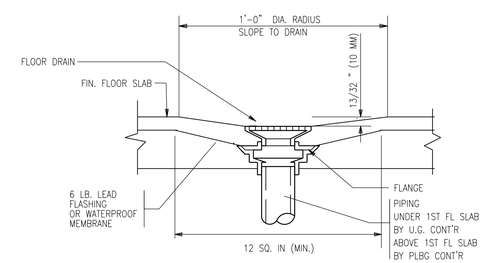
3 SECURITY-TYPE SPRINKLER HEAD RETURN BEND DROP
SCALE: NTS



4 LOCATION OF SPRINKLER HEAD IN CEILING PANEL
SCALE: NTS



5 FLOOR CONTROL VALVE ASSEMBLY
SCALE: NTS



6 FLOOR DRAIN IN EXISTING FLOOR
SCALE: NTS

REVISION

Mark	Date	Description

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SERVICES, LLC
2787 Stage Center Dr., Suite 101
Bartlett, Tennessee 38134
901-379-0500
www.innovativees-llc.com

PROJECT NAME
SHELBY COUNTY GOVERNMENT
JUVENILE COURT
SPRINKLER SYSTEM RETROFIT
616 ADAMS AVE. MEMPHIS, TN 38103
RFP # 16-007-10

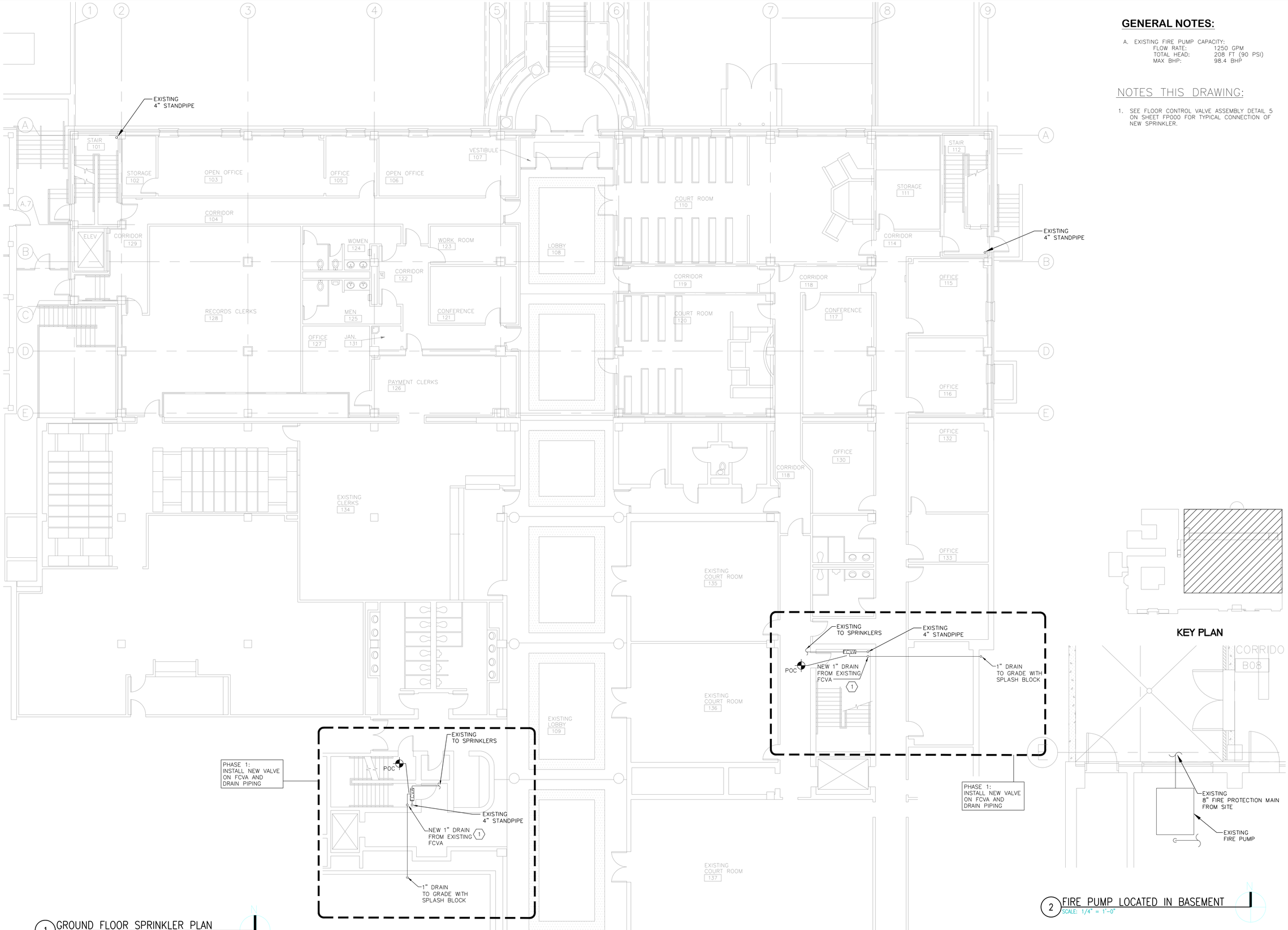
Client
SHELBY COUNTY GOVERNMENT
160 North Main Street
Memphis, TN 38103

Seal:

Drawing Title
FIRE PROTECTION/ PLUMBING GENERAL NOTES LEGEND, AND DETAILS

Project No.:	14122
Scale:	1/8"=1'-0"
Drawn By:	PTH
Approved By:	JEW
Filename:	616 ADAM SPRINKLER SYSTEM RETROFIT
Date:	08/17/15

Sheet Number
FP000



1 GROUND FLOOR SPRINKLER PLAN
SCALE: 1/8" = 1'-0"

2 FIRE PUMP LOCATED IN BASEMENT
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

A. EXISTING FIRE PUMP CAPACITY:
FLOW RATE: 1250 GPM
TOTAL HEAD: 208 FT (90 PSI)
MAX BHP: 98.4 BHP

NOTES THIS DRAWING:

1. SEE FLOOR CONTROL VALVE ASSEMBLY DETAIL 5 ON SHEET FP000 FOR TYPICAL CONNECTION OF NEW SPRINKLER.

REVISION

Mark	Date	Description

INNOVATIVE • ENGINEERING SERVICES, LLC
2787 Stage Center Dr., Suite 101
Bartlett, Tennessee 38134
901-379-0500
www.innovativees-llc.com

PROJECT NAME

SHELBY COUNTY GOVERNMENT JUVENILE COURT SPRINKLER SYSTEM RETROFIT

616 ADAMS AVE. MEMPHIS, TN 38103
RFP # 16-007-10

Client

SHELBY COUNTY GOVERNMENT
160 North Main Street
Memphis, TN 38103

Seal:

Drawing Title

FIRE PROTECTION GROUND FLOOR PLAN

Project No.:	14122
Scale:	1/8"=1'-0"
Drawn By:	PTH
Approved By:	JEW
Filename:	616 ADAM SPRINKLER SYSTEM RETROFIT
Date:	08/17/15

Sheet Number

FP101

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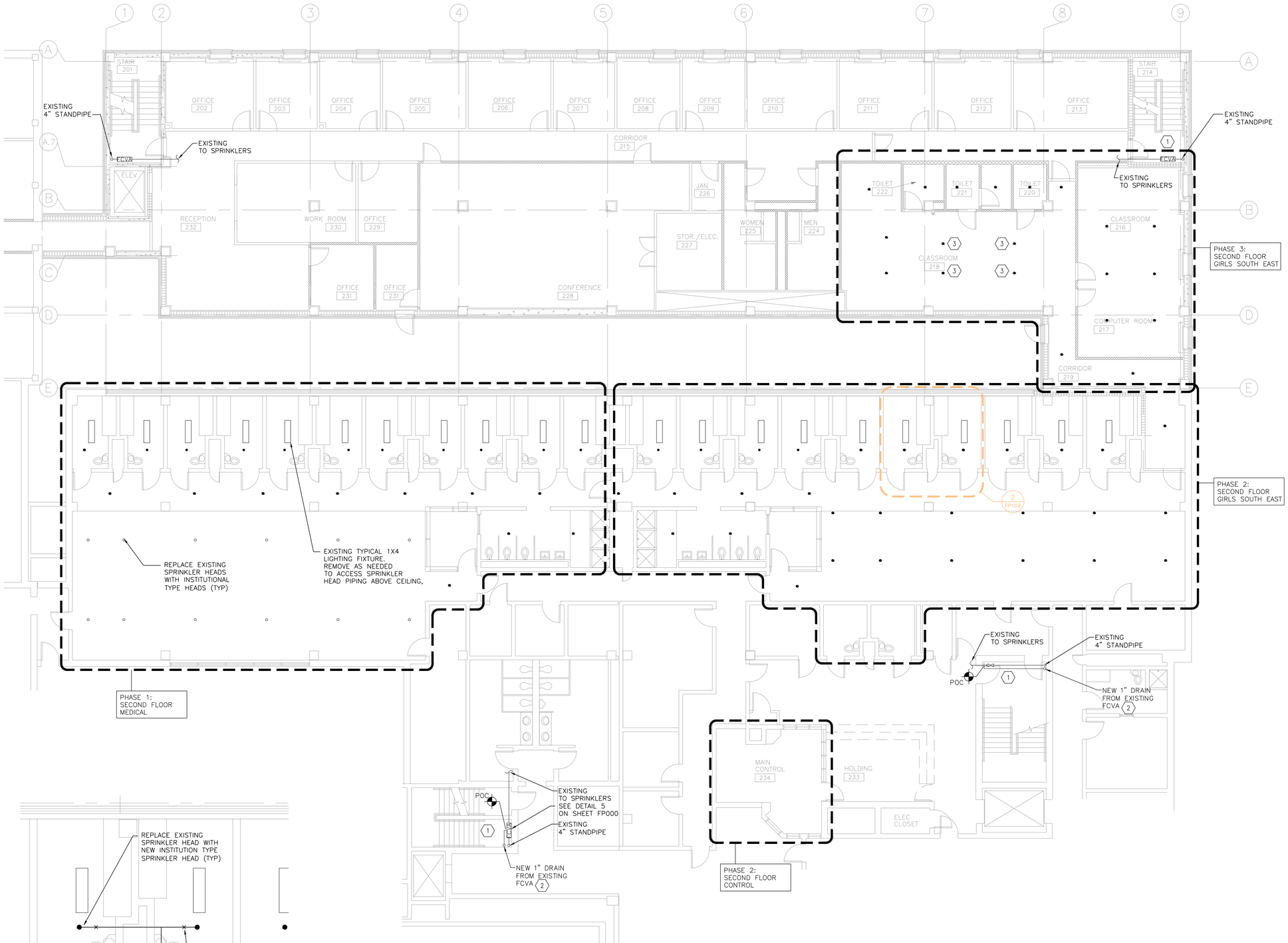
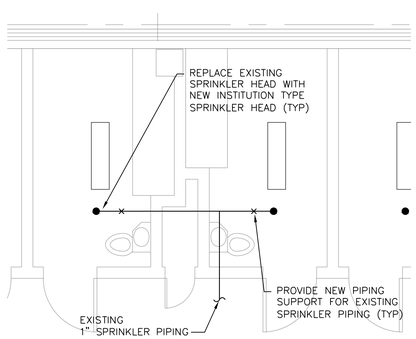


1 SECOND FLOOR SPRINKLER PLAN
SCALE: 1/8" = 1'-0"



2 TYPICAL DETENTION ROOM SPRINKLER PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

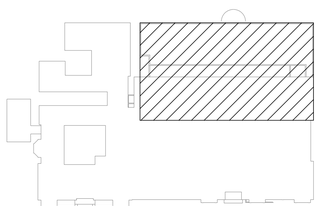
A. REPLACE ALL SPRINKLER HEADS SHOW WITH INSTITUTIONAL-TYPE SPRINKLER HEAD AS SPECIFIED.

NOTES THIS DRAWING:

1. REMOVE EXISTING SHUTOFF VALVE WITH AUTOMATIC SHUTOFF VALVE AS SHOWN IN DETAIL 5 ON SHEET FP000.
2. SEE FLOOR CONTROL VALVE ASSEMBLY DETAIL 5 ON SHEET FP000 FOR TYPICAL CONNECTION OF NEW SPRINKLER DRAIN.
3. RELOCATE NEW SPRINKLER HEADS AS SHOWN. CENTER SPRINKLERS HEADS IN EXISTING TILE. SEE DETAIL 4 ON SHEET FP000.

SEQUENCE OF OPERATIONS:

1. IN THE EVENT THAT A SPRINKLER HEAD IS DAMAGED AND WATER IS DISCHARGED, THE ALARM WILL SOUND.
2. PERSONNEL IN THE DETENTION AREA SHALL VERIFY IF THERE IS AN ACTUAL FIRE.
3. IF THERE IS A FIRE, PERSONNEL SHALL FOLLOW NORMAL FIRE EVENT PROCEDURES. IF THERE IS NOT A FIRE, PERSONNEL IN THE DETENTION AREA SHALL CONTACT THE MAIN CONTROL ROOM.
4. PERSONNEL IN THE MAIN CONTROL ROOM SHALL TURN THE SWITCH FOR VALVE IN THE DESIGNATED AREA TO CLOSE. THIS WILL CLOSE THE VALVE, STOPPING FLOW TO THE DAMAGED SPRINKLER HEAD.
5. ONCE THE SPRINKLER HEAD IS REPAIRED/REPLACED THE VALVE SHALL BE SWITCHED BACK TO OPEN.
6. IN THE EVENT OF A LOSS OF POWER, THE VALVES SHALL REMAIN OPEN, AS THEY SHALL BE FAIL TO OPEN.



KEY PLAN

REVISION

Mark	Date	Description

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616 ADAMS AVE. MEMPHIS, TN 38103
RFP # 16-007-10

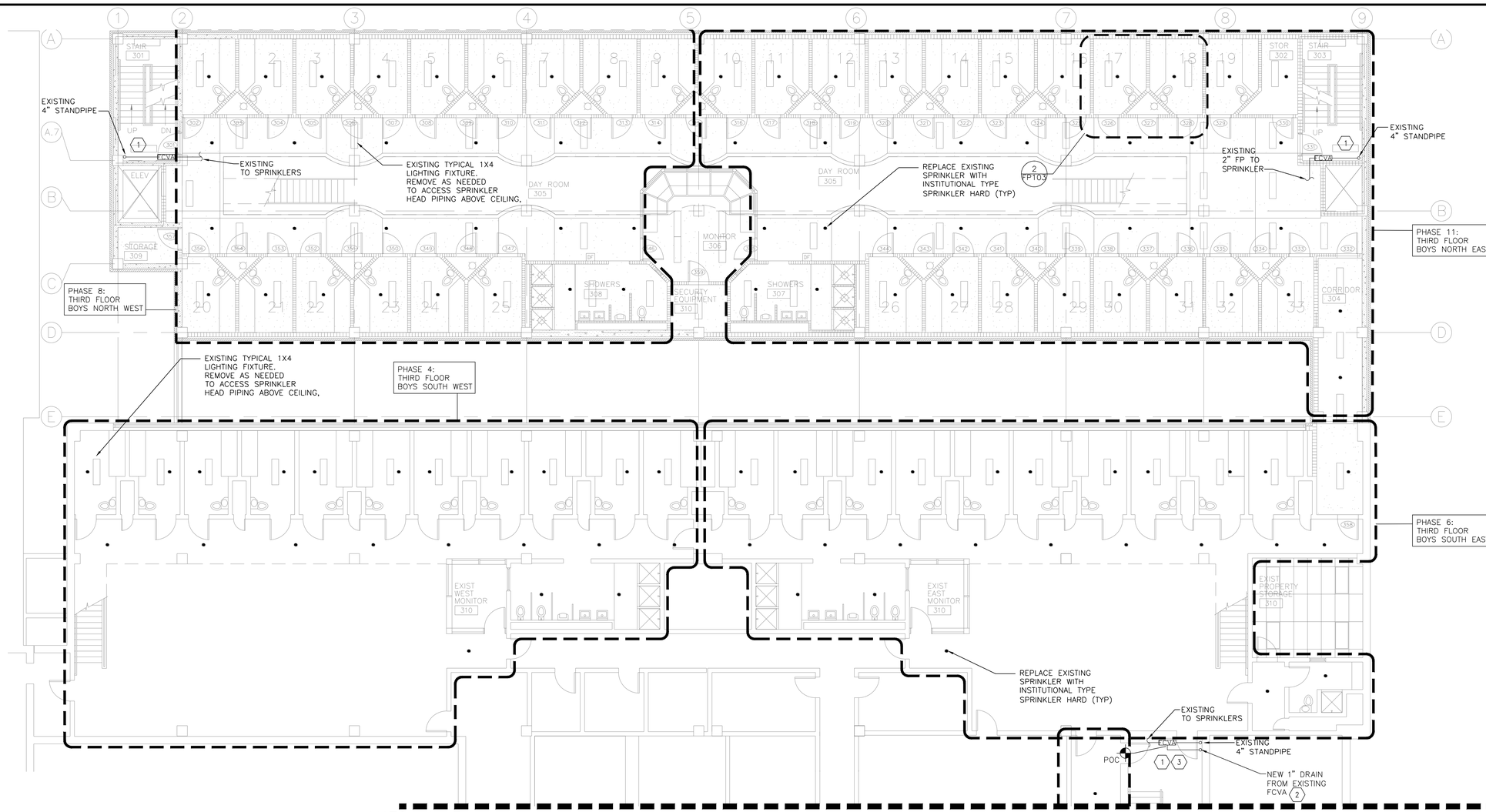
Client
SHELBY COUNTY GOVERNMENT
160 North Main Street
Memphis, TN 38103

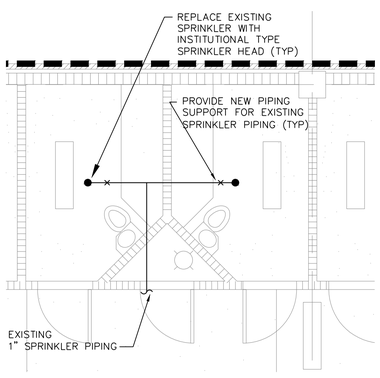
Seal:

Drawing Title
FIRE PROTECTION SECOND FLOOR PLAN

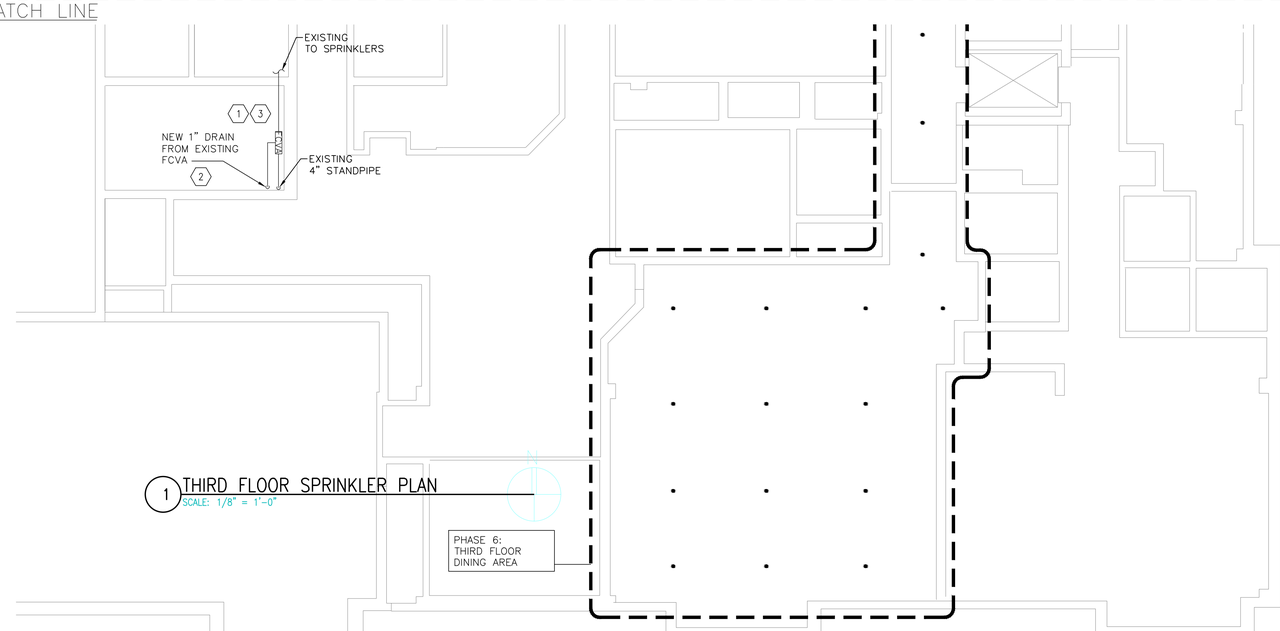
Project No.:	14122
Scale:	1/8"=1'-0"
Drawn By:	PTH
Approved By:	JEW
Filename:	616 ADAM SPRINKLER SYSTEM RETROFIT
Date:	08/17/15

Sheet Number
FP102





2 TYPICAL DETENTION ROOM SPRINKLER PLAN
SCALE: 1/4" = 1'-0"



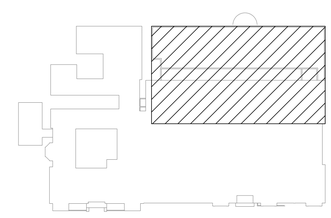
1 THIRD FLOOR SPRINKLER PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. REPLACE ALL SPRINKLER HEADS SHOW WITH INSTITUTIONAL-TYPE SPRINKLER HEAD AS SPECIFIED.

NOTES THIS DRAWING:

1. REPLACE EXISTING SHUTOFF VALVE WITH ELECTRONIC AUTOMATIC SHUTOFF VALVE AS SHOWN IN DETAIL 5 ON SHEET FP000.
2. SEE FLOOR CONTROL VALVE ASSEMBLY DETAIL 5 ON SHEET FP000 FOR TYPICAL CONNECTION OF NEW SPRINKLER DRAIN.
3. PROVIDE 1" DRAIN PIPING FROM FCVA



KEY PLAN

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www.innovativees-llc.com

PROJECT NAME

SHELBY COUNTY GOVERNMENT JUVENILE COURT SPRINKLER SYSTEM RETROFIT

616 ADAMS AVE. MEMPHIS, TN 38103
RFP # 16-007-10

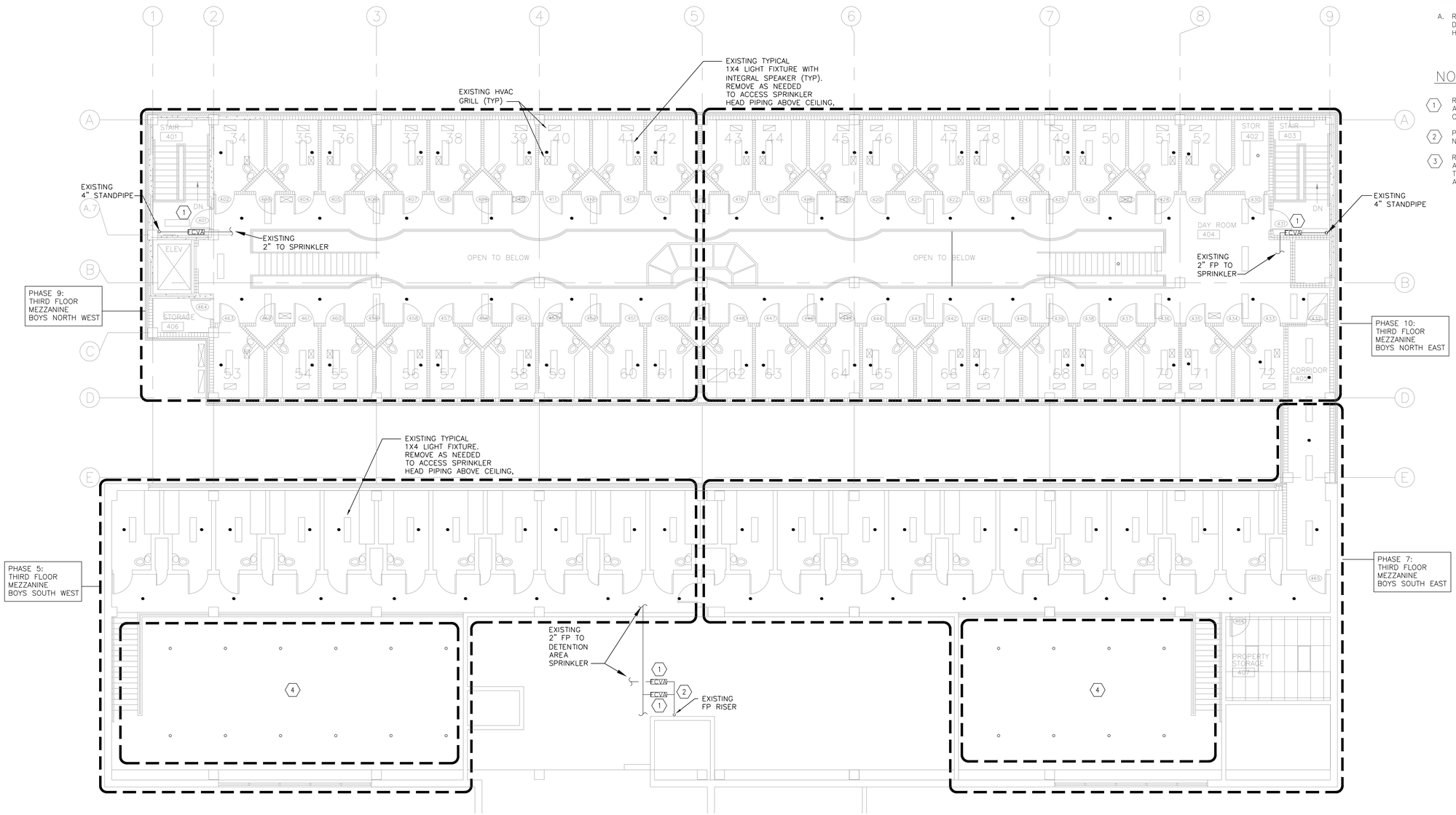
Client
SHELBY COUNTY GOVERNMENT
160 North Main Street
Memphis, TN 38103

Seal:

Drawing Title
FIRE PROTECTION THIRD FLOOR PLAN

Project No.:	14122
Scale:	1/8"=1'-0"
Drawn By:	PTH
Approved By:	JEW
Filename:	616 ADAM SPRINKLER SYSTEM RETROFIT
Date:	08/17/15

Sheet Number
FP103



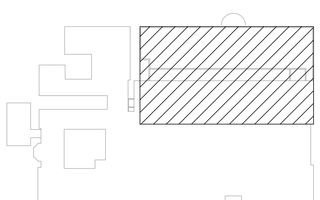
1 THIRD FLOOR MEZZANINE PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. REPLACE EXISTING SPRINKLER HEADS SHOWN ON DRAWING WITH INSTITUTIONAL-TYPE SPRINKLER HEADS AS SPECIFIED.

NOTES THIS DRAWING:

1. REPLACE EXISTING MANUAL SHUTOFF VALVE WITH AUTOMATIC SHUTOFF VALVE AS SHOWN IN DETAIL 5 ON SHEET FP000.
2. PROVIDE 1" DRAIN PIPING FROM EACH FCVA TO NEAREST FLOOR DRAIN IN MECHANICAL ROOM.
3. REPLACE EXISTING SPRINKLER HEADS IN THIS AREA AND PROVIDE SPRINKLER GUARD FOR EACH HEAD. THE WORK IN THIS AREA SHALL BE ADD ALTERNATIVE #1.



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616 ADAMS AVE. MEMPHIS, TN 38103
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Client

SHELBY COUNTY GOVERNMENT
160 North Main Street
Memphis, TN 38103

Seal:

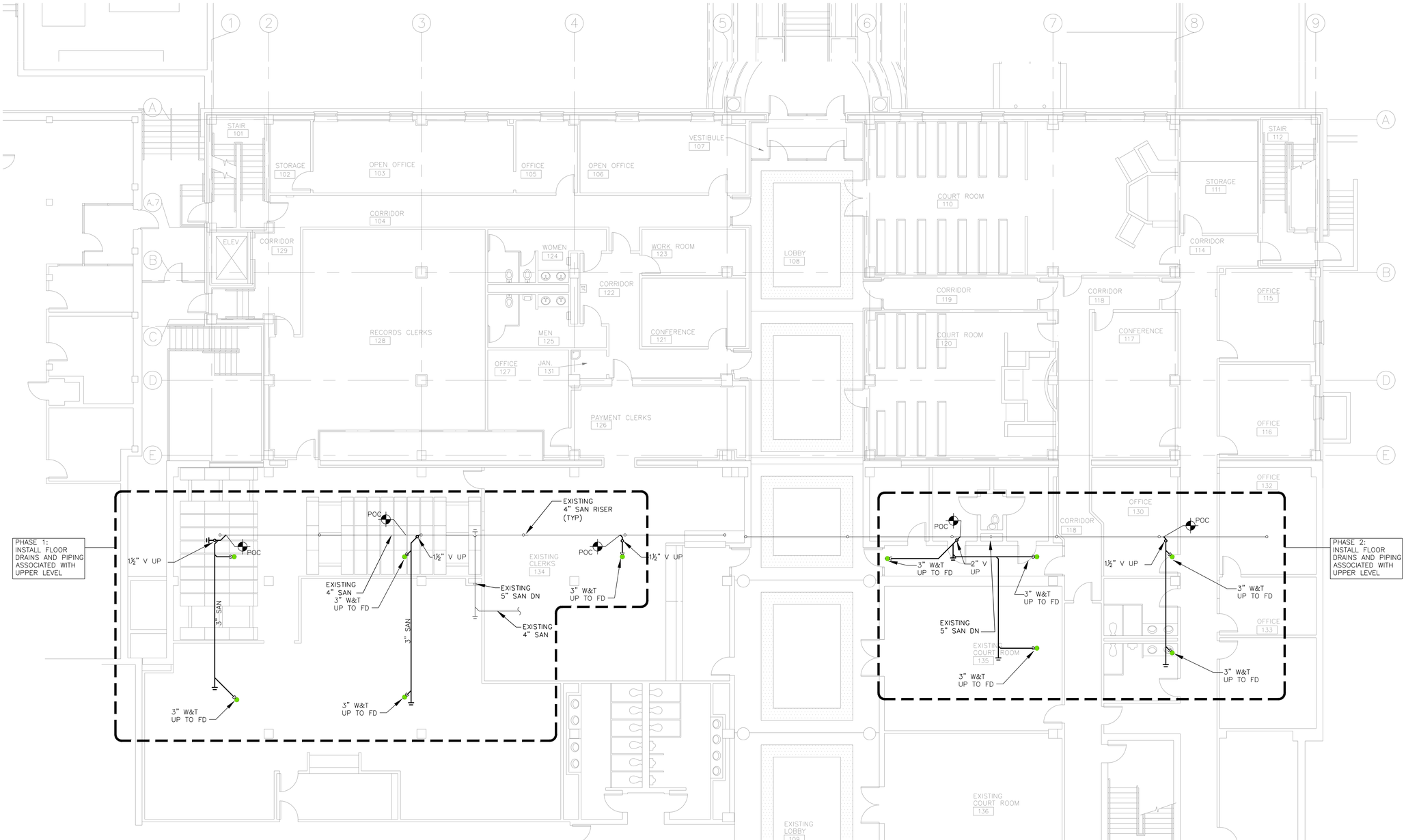
Drawing Title

FIRE PROTECTION THIRD FLOOR MEZZANINE PLAN

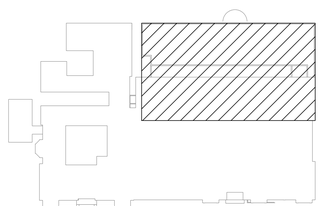
Project No.:	14122
Scale:	1/8"=1'-0"
Drawn By:	PTH
Approved By:	JEW
Filename:	616 ADAM SPRINKLER SYSTEM RETROFIT
Date:	08/17/15

Sheet Number

FP104



1 GROUND FLOOR PLAN
SCALE: 1/8" = 1'-0"



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616 ADAMS AVE. MEMPHIS, TN 38103
RFP # 16-007-10

Client

SHELBY COUNTY GOVERNMENT
160 North Main Street
Memphis, TN 38103

Seal:

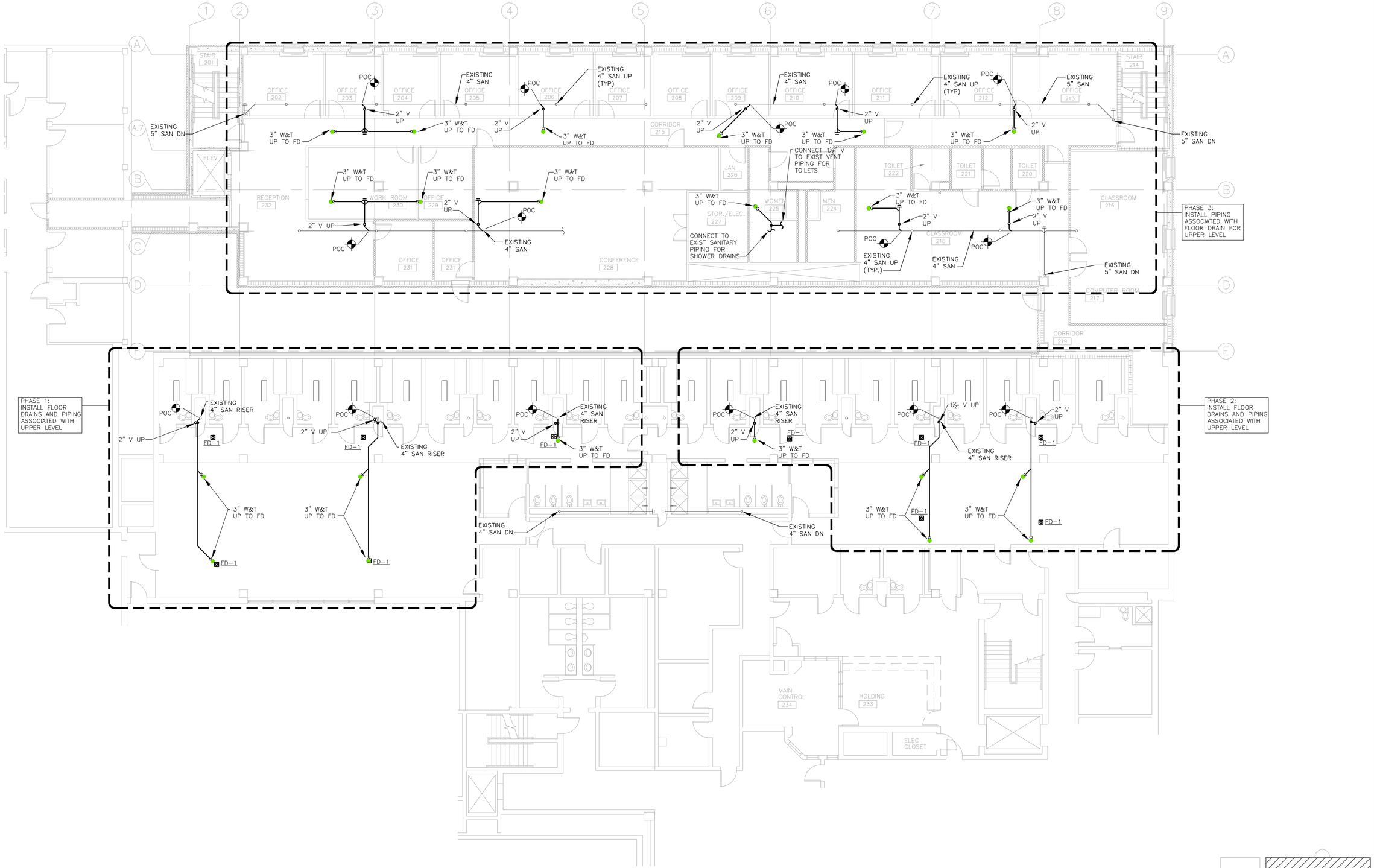
Drawing Title

PLUMBING GROUND FLOOR PLAN

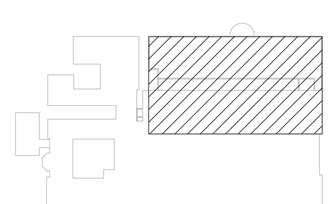
Project No.:	14122
Scale:	1/8"=1'-0"
Drawn By:	PTH
Approved By:	JEW
Filename:	616 ADAM SPRINKLER SYSTEM RETROFIT
Date:	08/17/15

Sheet Number

P101



1 SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"



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Client

SHELBY COUNTY GOVERNMENT
160 North Main Street
Memphis, TN 38103

Seal:

Drawing Title

PLUMBING SECOND FLOOR PLAN

Project No.:	14122
Scale:	1/8"=1'-0"
Drawn By:	PTH
Approved By:	JEW
Filename:	616 ADAM SPRINKLER SYSTEM RETROFIT
Date:	08/17/15

Sheet Number

P102

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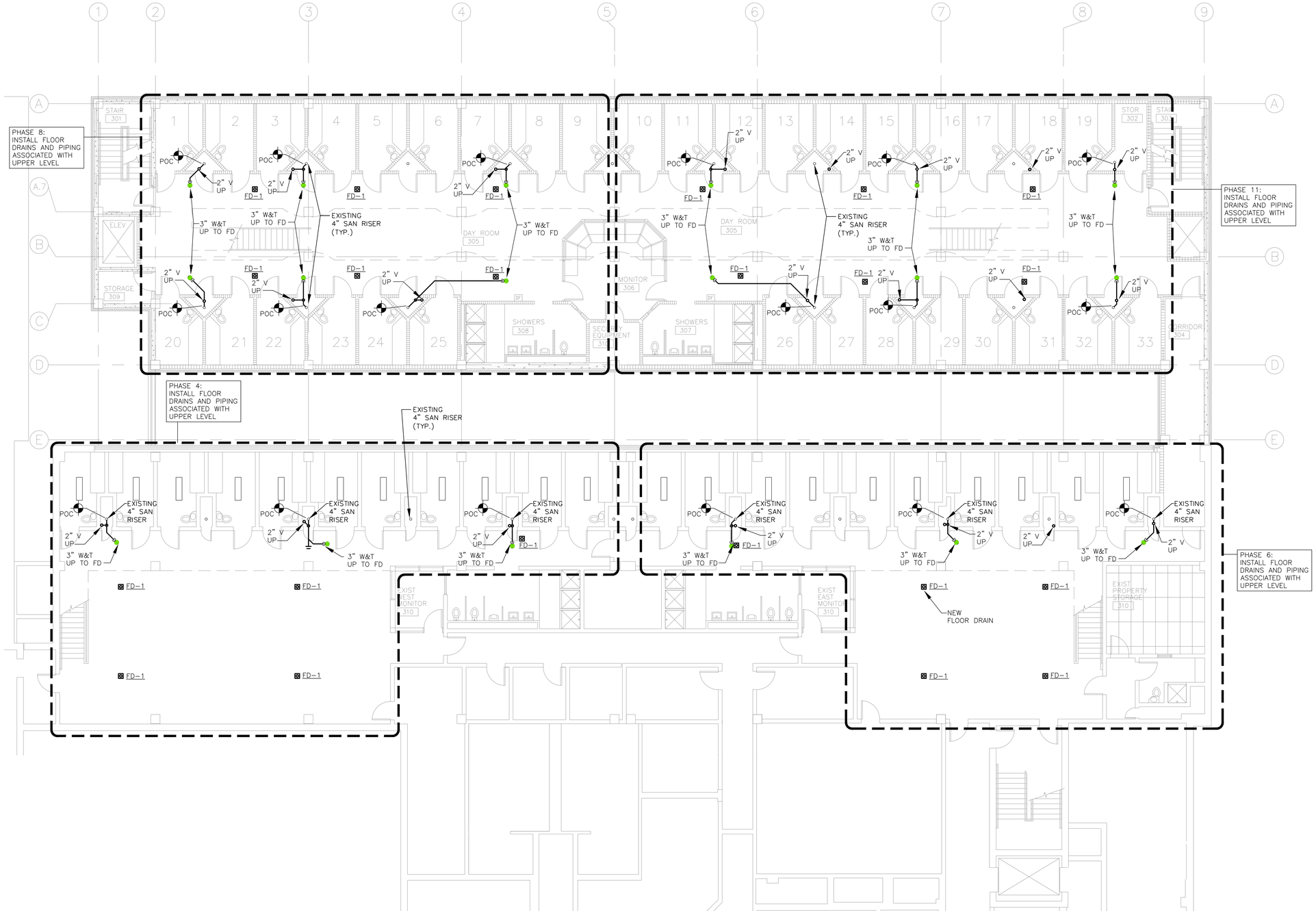
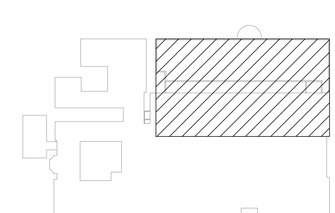


1 THIRD FLOOR PLAN
SCALE: 1/8" = 1'-0"



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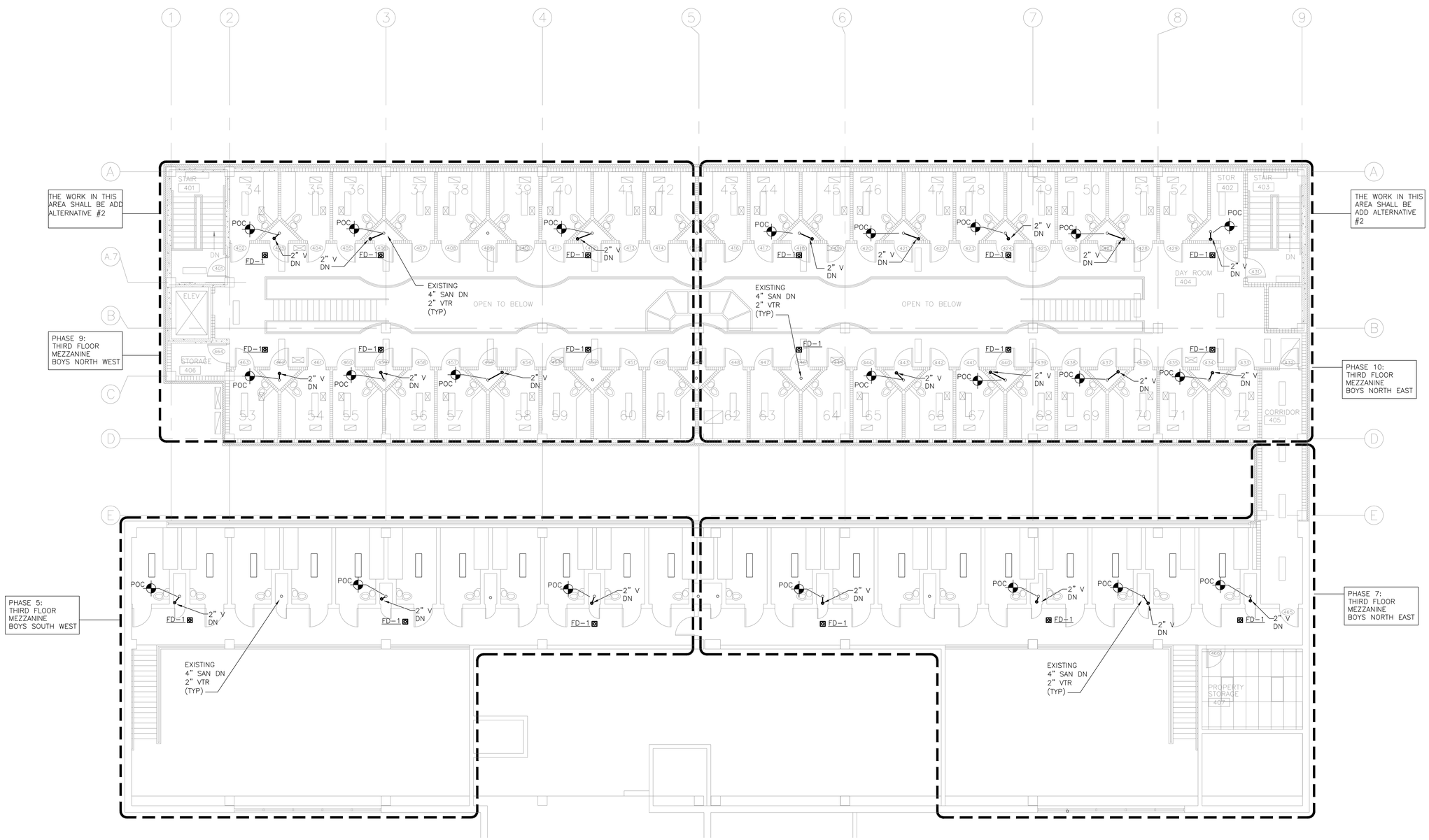
160 North Main Street
Memphis, TN 38103

Seal:

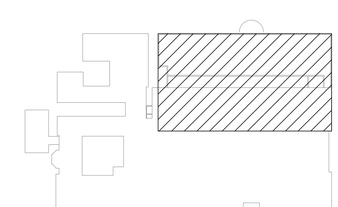
Drawing Title
PLUMBING
THIRD
FLOOR PLAN

Project No.:	14122
Scale:	1/8"=1'-0"
Drawn By:	PTH
Approved By:	JEW
Filename:	616 ADAM SPRINKLER SYSTEM RETROFIT
Date:	08/17/15

Sheet Number
P103



1 THIRD MEZZANINE FLOOR PLAN
SCALE: 1/8" = 1'-0"



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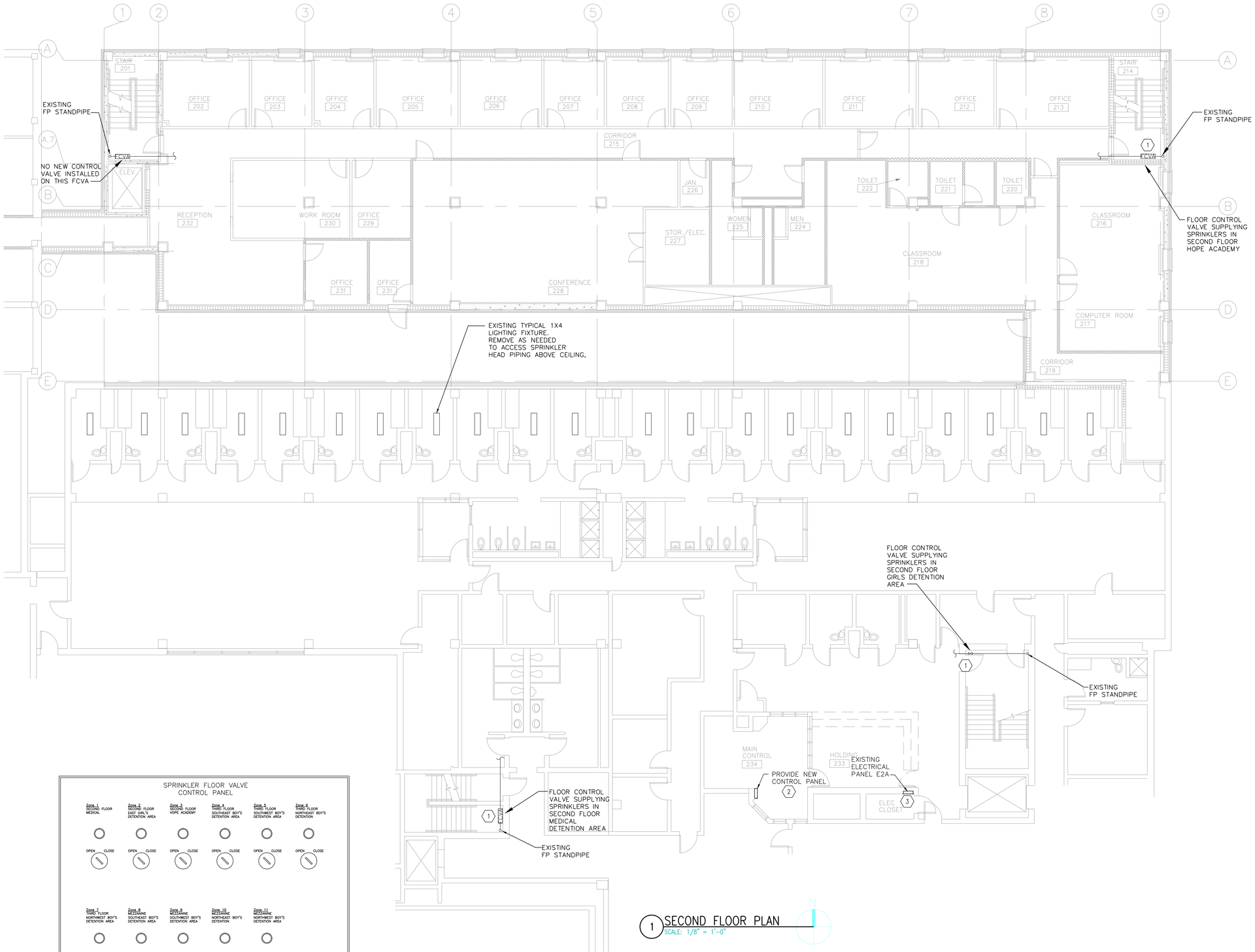
Memphis, TN 38103

Seal:

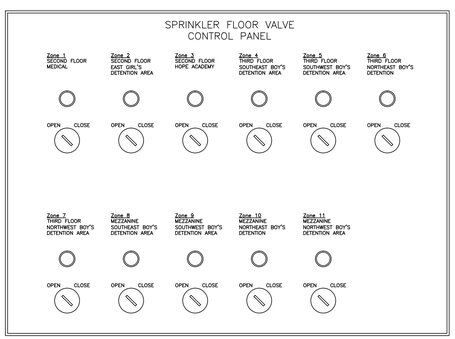
Drawing Title
PLUMBING
THIRD FLOOR
MEZZANINE PLAN

Project No.:	14122
Scale:	1/8"=1'-0"
Drawn By:	PTH
Approved By:	JEW
Filename:	616 ADAM SPRINKLER SYSTEM RETROFIT
Date:	08/17/15

Sheet Number
P104



1 SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"



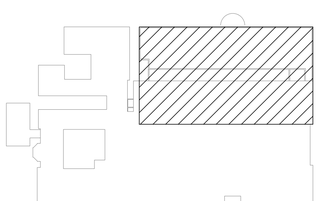
2 NEW SPRINKLER VALVE CONTROL PANEL
SCALE: 1/2" = 1'-0"

NOTES THIS DRAWING:

1. PROVIDE POWER TO NEW ELECTRONIC VALVE ON EXISTING FLOOR CONTROL VALVE ASSEMBLY (FCVA). VALVE SHALL BE CONTROLLED FROM NEW CONTROL PANEL IN MAIN CONTROL ROOM ON SECOND FLOOR. SEE THIS SHEET FOR CONTROL PANEL LOCATION & LAYOUT.
2. INSTALL NEW CONTROL PANEL FOR ELECTRIC CONTROL VALVES (APPROX 54" AFF). COORDINATE PANEL LOCATION WITH EXISTING PANELS AND EQUIPMENT. PROVIDE POWER FROM PANEL E2A CIRCUIT 28 SHOWN ON THIS SHEET.
3. PROVIDE MINIMUM 100 VA, CLASS 2, 20V TO 24VAC TRANSFORMER IN ELECTRICAL ROOM. PANEL MAY BE ORDERED WITH INTEGRAL TRANSFORMER AS AN OPTION.

FCVA PANEL SPECIFICATIONS

1. FCVA PANEL SHALL BE A MINIMUM 24"X18" NEMA 1 WITH SPACE FOR (11) SWITCHES, NOTIFICATION LIGHT AND ZONE NAME. PANEL MAY INCLUDE TRANSFORMER. PANEL MAY BE SIMILAR TO KELE NSTA2620VA200.
2. SWITCHES SHALL BE KNOB STYLE 2 POSITION SIMILAR TO KELE NWAL-212.
3. PILOT LIGHT SHALL BE RED LED, 24V, SIMILAR TO KELE AP1M222-R.
4. ZONE NAME AND DESCRIPTION SHALL BE PERMANENTLY ENGRAVED ON A WHITE PLASTIC LABEL. LETTERS SHALL BE 1/2" TALL FOR THE ZONE NAME AND 5/16" TALL FOR DESCRIPTION.



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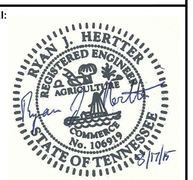
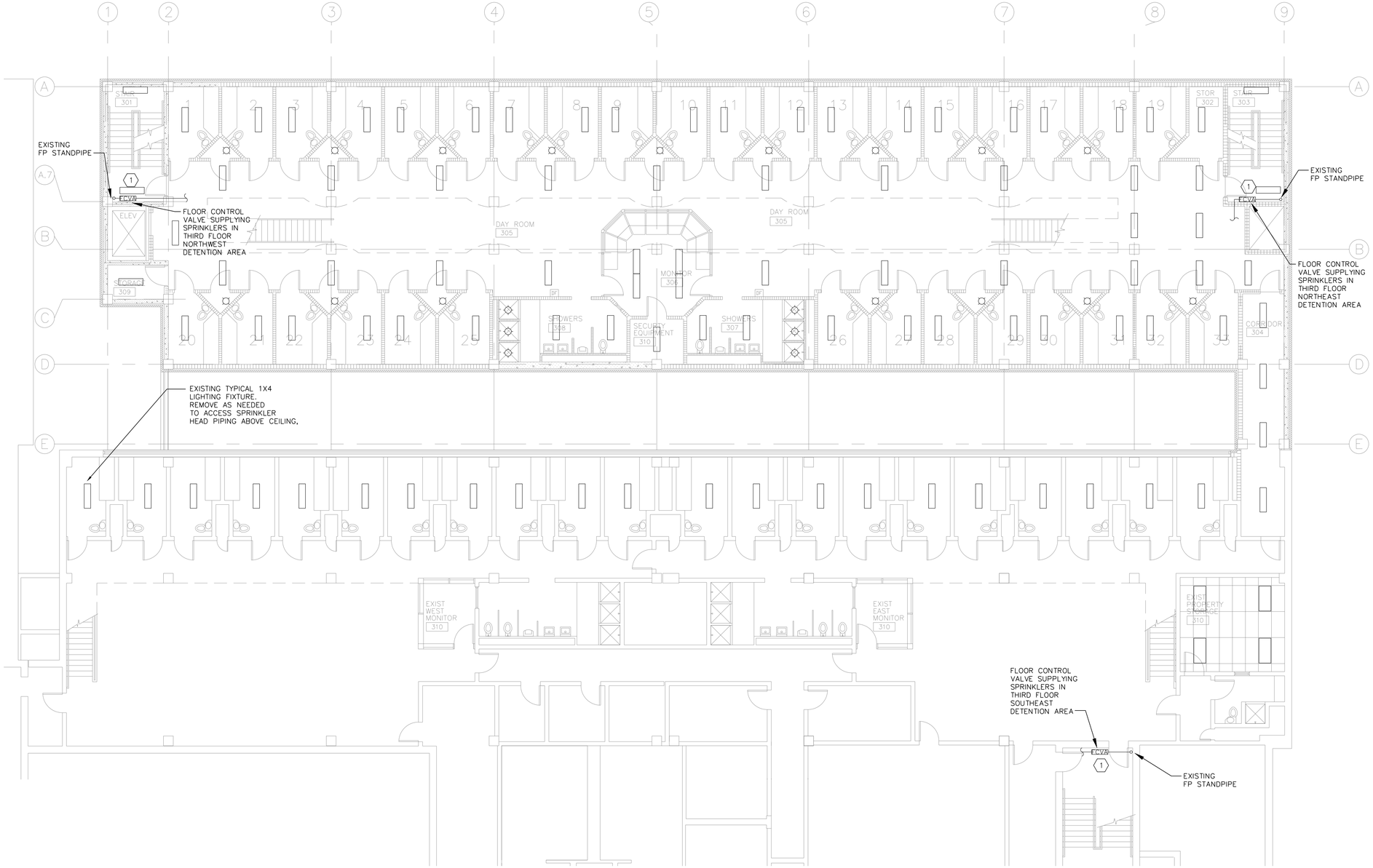


Drawing Title
ELECTRICAL SECOND FLOOR PLAN

Project No.:	14122
Scale:	1/8"=1'-0"
Drawn By:	SA
Approved By:	RJH
Filename:	616 ADAM SPRINKLER SYSTEM RETROFIT
Date:	08/17/15

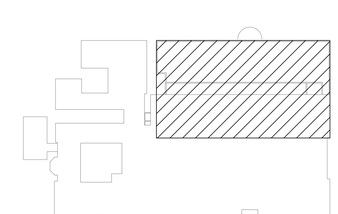
Sheet Number
E102



1 THIRD FLOOR PLAN
SCALE: 1/8" = 1'-0"

NOTES THIS DRAWING:

1. PROVIDE POWER TO NEW ELECTRONIC VALVE ON EXISTING FLOOR CONTROL VALVE ASSEMBLY (FCVA). VALVE SHALL BE CONTROLLED FROM NEW CONTROL PANEL IN MAIN CONTROL ROOM ON SECOND FLOOR. SEE SHEET E102 FOR CONTROL PANEL LOCATION & LAYOUT.



KEY PLAN

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616 ADAMS AVE. MEMPHIS, TN 38103
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Client
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160 North Main Street
Memphis, TN 38103

Seal:

RYAN J. HERTTER
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 106919
STATE OF TENNESSEE
8/17/15

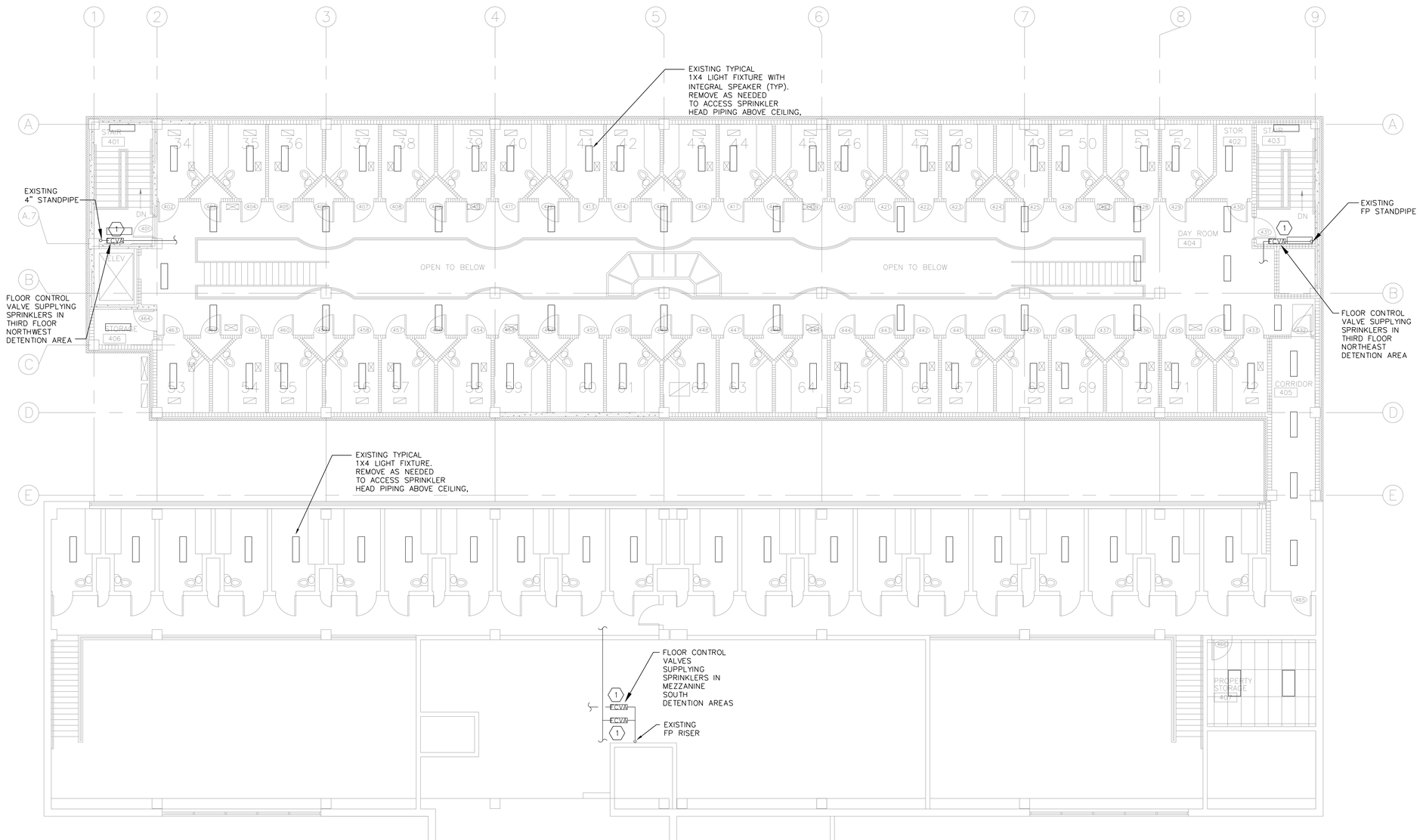
Drawing Title
ELECTRICAL
THIRD FLOOR PLAN

Project No.:	14122
Scale:	1/8"=1'-0"
Drawn By:	SA
Approved By:	RJH
Filename:	616 ADAM SPRINKLER SYSTEM RETROFIT
Date:	08/17/15

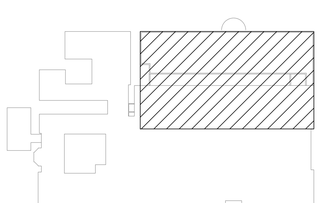
Sheet Number
E103

NOTES THIS DRAWING:

1. PROVIDE POWER TO NEW ELECTRONIC VALVE ON EXISTING FLOOR CONTROL VALVE ASSEMBLY (FCVA). VALVE SHALL BE CONTROLLED FROM NEW CONTROL PANEL IN MAIN CONTROL ROOM ON SECOND FLOOR. SEE SHEET E102 FOR CONTROL PANEL LOCATION & LAYOUT.



1 THIRD FLOOR MEZZANINE PLAN
SCALE: 1/8" = 1'-0"



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Seal:

RYAN J. HERTTER
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 106919
STATE OF TENNESSEE
8/17/15

Drawing Title
ELECTRICAL THIRD FLOOR MEZZANINE PLAN

Project No.:	14122
Scale:	1/8"=1'-0"
Drawn By:	SA
Approved By:	RJH
Filename:	616 ADAM SPRINKLER SYSTEM RETROFIT
Date:	08/17/15

Sheet Number
E104