

ABBREVIATIONS - FIRE PROTECTION

BFP	BACKFLOW PREVENTER
BTV	BUTTERFLY VALVE
BV	BALL VALVE
CKV	CHECK VALVE
DN	DOWN
FBO	FURNISHED BY OWNER
FDC	FIRE DEPARTMENT CONNECTION
FL	FIRE LINE
FP	FIRE PROTECTION
GLV	GLOBE VALVE
GV	GATE VALVE
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
OS & Y	OUTSIDE SCREW & YOKE
TYP	TYPICAL

SPRINKLER DESIGN DATA

PROJECT NAME:	HARNETT COUNTY GOVERNMENT SERVICES CENTER		
PROJECT STREET ADDRESS:	W. CORNELIUS HARNETT BLVD, LILLINGTON, NC 27524		
SUITE #:	---	FLOOR #:	2
DESIGNED BY:	DEWBERRY	PHONE #:	919-881-9939
GENERAL OCCUPANCY:	---	HAZARD :	LH/OH 1
		CEILING HGT:	VARIABLES
		TOTAL BLDG. HGT:	41'-8"
		SYSTEM NO.:	

DESIGN SUMMARY					
	SYSTEM# 1	SYSTEM# 2	SYSTEM#	SYSTEM#	SYSTEM#
DESIGN METHOD:	XXX				
SYSTEM I.D. NO.:	XXX				
LOCATION:	XXX				
TYPE OF SYSTEM:	WET	WET			
HAZARD CLASS:	LIGHT	OH 1			
CRITERIA FROM:	NFPA 13	NFPA 13			
DESIGN AREA:	1500 S.F.	1500 S.F.			
K-FACTOR:	5.6	5.6			
SPACING OF HEADS:	225 S.F.	130 S.F.			
SPRINKLER AREA:	BY CONTRACTOR				
HOSE ALLOWANCE:	100				
# SPRINKLER DESIGN:	XXX				
REQUIREMENTS @:	XXX				
GPM REQ'D:	XXX				
PSI REQ'D:	XXX				
NODE #:	XXX				
SAFETY FACTOR @ NODE:	XXX				
GPM:	XXX				
PSI:	XXX				

WATER SUPPLY INFORMATION					
TESTED BY:	DEWBERRY				
DATE/TIME:	6/27/19				
PRESS. HYDRANT:	SEE TEST				
HYDRANT ELEV.:	SEE TEST				
FLOW HYDRANT:	SEE TEST				
STATIC (PSI):	76				
RESIDUAL (PSI):	56				
FLOW (GPM):	900				

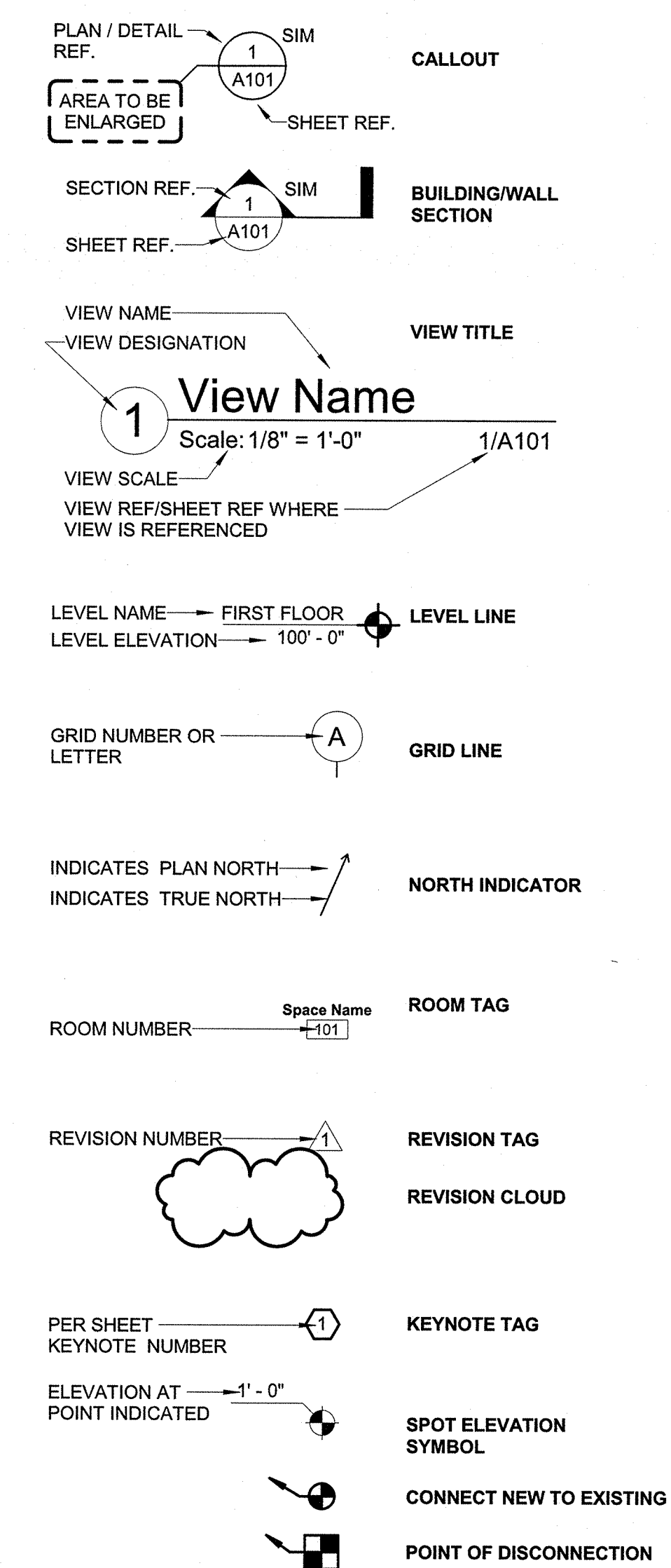
FIRE PUMP DATA					
RATED G.P.M.:	N/A	RATED PRESSURE:	N/A	DIESEL HP: 000	N/A
ELECTRIC VOLTS:	N/A	BOOST PRESSURE:	N/A	DISCHARGE FLOW:	N/A
RESIDUAL (PSI):	N/A	FLOW (GPM):	N/A	COMBINED GPM:	N/A
COMBINED STATIC:	N/A	COMBINED RESIDUAL:	N/A	SUCTION NODE:	N/A
				DISCHARGE NODE:	N/A

IS COPY OF WATER TEST DATA INCLUDED WITH CALCULATIONS? YES NO
IS STORAGE HEIGHT GREATER THAN 12 FEET? YES NO

GENERAL NOTES - FIRE PROTECTION

- ALL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION. FIRE PROTECTION CONTRACTOR SHALL COORDINATE ROUTING OF ALL PIPING WITH EXISTING CONDITIONS, AND OTHER TRADES WORK AND SHALL PROVIDE ANY NECESSARY OFFSETS, RE-ROUTING, ETC. REQUIRED FOR A COMPLETE AND COORDINATED INSTALLATION.
- SPRINKLER CONTRACTOR SHALL INSTALL A DRAIN AT ALL RISER LOCATIONS AS WELL AS ALL LOW POINTS IN THE SYSTEM. AN INSPECTOR'S TEST DRAIN SHALL BE INSTALLED ON THE SYSTEM. SPRINKLER PIPING SHALL SLOPE DOWN TO DRAIN LOCATIONS.
- SPRINKLER HEADS SHALL BE SPACED PER NFPA 13, 2013. QUICK RESPONSE HEADS SHALL BE UTILIZED. ALL SPACES ARE LIGHT HAZARD UNLESS NOTED OTHERWISE.
- SPRINKLER CONTRACTOR SHALL VERIFY LATEST ARCHITECTURAL LAYOUTS PRIOR TO INSTALLATION OF SYSTEM.
- THE ENTIRE SPRINKLER SYSTEM SHALL BE TESTED AT 200 PSI FOR A MINIMUM OF 2 HOURS UPON COMPLETION OF INSTALLATION. ALL LEAKS SHALL BE PROPERLY SEALED OR CORRECTED PRIOR TO TURNOVER TO OWNER.
- ALL INSTALLATION, MATERIALS AND EQUIPMENT UTILIZED IN THIS INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OUTLINED IN NFPA 13, CHAPTER 12, "SYSTEM COMPONENTS", AS WELL AS NFPA 14.
- FIRE RATED PENETRATIONS ARE REQUIRED, AND SHALL BE INSTALLED PER THE FIRE STOPPING DETAILS INDICATED.
- PIPING ELEVATIONS ARE TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO START OF CONSTRUCTION.
- SPRINKLER CONTRACTOR SHALL ROUTE PIPING AS CLOSE TO BUILDING STRUCTURE (FLOORS, WALLS, COLUMNS, AND BEAMS) AS POSSIBLE, AND SHALL COORDINATE INSTALLATION WITH ALL OTHER TRADES.
- SPRINKLER CONTRACTOR SHALL COORDINATE INSTALLATION OF ALL ACCESS DOORS AND HATCHES WITH GENERAL CONTRACTOR.
- ONLY NEW MATERIALS AND EQUIPMENT ARE TO BE INSTALLED, AND SHALL BE OF THE LATEST DESIGN FROM EACH MANUFACTURER. ONLY EQUIPMENT AND MATERIALS APPROVED AND LISTED BY UL AND THE UNDERWRITER ARE TO BE INSTALLED. ONLY MATERIALS AND EQUIPMENT MANUFACTURED WITHIN THE UNITED STATES WILL BE INSTALLED. ALL SPRINKLER SYSTEM COMPONENTS SHALL HAVE A WORKING PRESSURE SUITABLE FOR THE CONDITIONS INDICATED BY THE FLOW TEST.
- COORDINATE ALL SHUTDOWNS OF EXISTING UTILITIES IN ADVANCE WITH THE OWNER.
- THE DRAWINGS ARE DIAGRAMMATIC. EXACT ROUTING MAY VARY BASED UPON FIELD CONDITIONS. INSTALL ALL NEW WORK TO AVOID INTERFERENCE WITH OTHER TRADES. REVIEW DESIGN DOCUMENTS PRIOR TO BID AND INCLUDE ALL OFFSETS THAT WILL BE NECESSARY TO PROPERLY INSTALL PIPING.
- THE CLASS 1 MANUAL WET STANDPIPE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 14, THE LATEST CITY, COUNTY, AND STATE BUILDING CODE REQUIREMENTS, AS WELL AS LOCAL BUILDING INSPECTOR REQUIREMENTS.
- THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT/ENGINEER A COMPLETE SET OF AS-BUILT PLANS INDICATING ALL CHANGES ENCOUNTERED DURING CONSTRUCTION.
- ALL PIPE PENETRATIONS THROUGH RATED WALLS OR FLOORS SHALL BE SEALED, USING A UL LISTED SYSTEM, IN A MANNER THAT EQUALS THE RATING OF THE WALL. REFER TO UL DETAILS PROVIDED.
- ALL PIPING 2 1/2" AND LARGER SHALL BE SCHEDULE 10 BLACK STEEL PIPING AND FITTINGS WITH ROLLED GROOVE JOINTS. ALL PIPING 2" AND SMALLER SHALL BE SCHEDULE 40 BLACK STEEL AND FITTINGS WITH THREADED JOINTS.
- ALL ARMOVERS SHALL BE 1" IN SIZE. ARMOVERS EXCEEDING 2'-0" IN LENGTH SHALL BE SUPPORTED WITH HANGERS PER NFPA 13.
- ALL WORK SHALL COMPLY WITH THE NORTH CAROLINA DEPARTMENT OF INSURANCE OFFICE OF STATE FIRE MARSHAL FIRE SPRINKLER STANDARD, WHICH IS UTILIZED IN THESE CONTRACT DOCUMENTS. TO OBTAIN A COPY OF THE FULL STANDARD, PLEASE SEE [WWW.NCDOI.COM/OSFM/ENGINEERING/DOCUMENTS/SPRINKLER\(2009\).PDF](http://WWW.NCDOI.COM/OSFM/ENGINEERING/DOCUMENTS/SPRINKLER(2009).PDF)

STANDARD DETAILING SYMBOLS

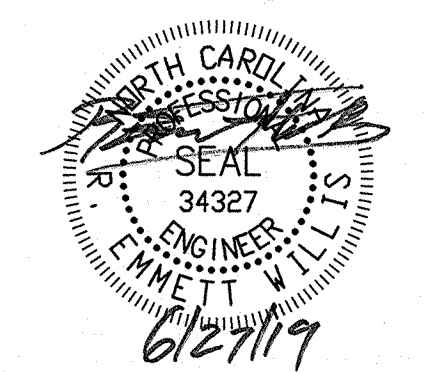


DRAWING LIST - FIRE PROTECTION

- F-001 FIRE PROTECTION SYMBOLS, ABBREVIATIONS & NOTES
 - F-112 FIRST FLOOR RCP PLAN
 - F-122 SECOND FLOOR RCP PLAN
 - F-501 DETAILS
- TOTAL SHEETS: 4

FIRE PROTECTION PIPING SYMBOLS

SYMBOL	DESCRIPTION
{-ABBV.-}	PIPE WITH SYSTEM ABBREVIATION
•	PENDANT SPRINKLER
•	PENDANT SPRINKLER ON DROP
X	PENDANT SPRINKLER ON DROP WITH GUARD
X	PENDANT SPRINKLER WITH GUARD
o	UPRIGHT SPRINKLER
•	UPRIGHT SPRINKLER ON SPRING
X	UPRIGHT SPRINKLER ON SPRING WITH GUARD
X	UPRIGHT SPRINKLER WITH GUARD
v	WALL MOUNTED SPRINKLER
o	WINDOW PENDANT SPRINKLER
□	FLOW LIMITER
⊥	FIRE VALVE
{-B-}	BALL VALVE
{-B-}	BALANCING VALVE
{-B-}	BACKWATER VALVE
{-B-}	BUTTERFLY VALVE
{-B-}	CHECK VALVE WITH FLOW DIRECTION INDICATED
{-B-}	CONTROL VALVE
{-B-}	GATE VALVE
{-B-}	GLOBE VALVE
{-B-}	OSY VALVE
{-B-}	3-WAY VALVE
(SD 01) (F 02)	RISER ID TAG
□	WATER FLOW SWITCH
<	FIRE DEPARTMENT CONNECTION 2-WAY BODY
≠	FIRE DEPARTMENT CONNECTION 3-WAY EXTENDED
<	FIRE DEPARTMENT CONNECTION FLUSH OUTLET 2-WAY BODY
≠	FIRE DEPARTMENT CONNECTION FLUSH OUTLET 3-WAY BODY
≠	FIRE DEPARTMENT CONNECTION STAND ALONE DOUBLE
□	FIRE HOSE VALVE CABINET
(XX)	HYDROLIC REFERENCE NODE
⊕	FIRE ALARM BELL
⊕	HEAT DETECTOR



ISSUE FOR CONSTRUCTION DOCUMENTS

ISSUE DATE: 06.27.2019

REVISIONS:

NO.	REASON	DATE

PROJECT TEAM

PRINCIPAL IN CHARGE: MBW

PROJECT MANAGER: GAM

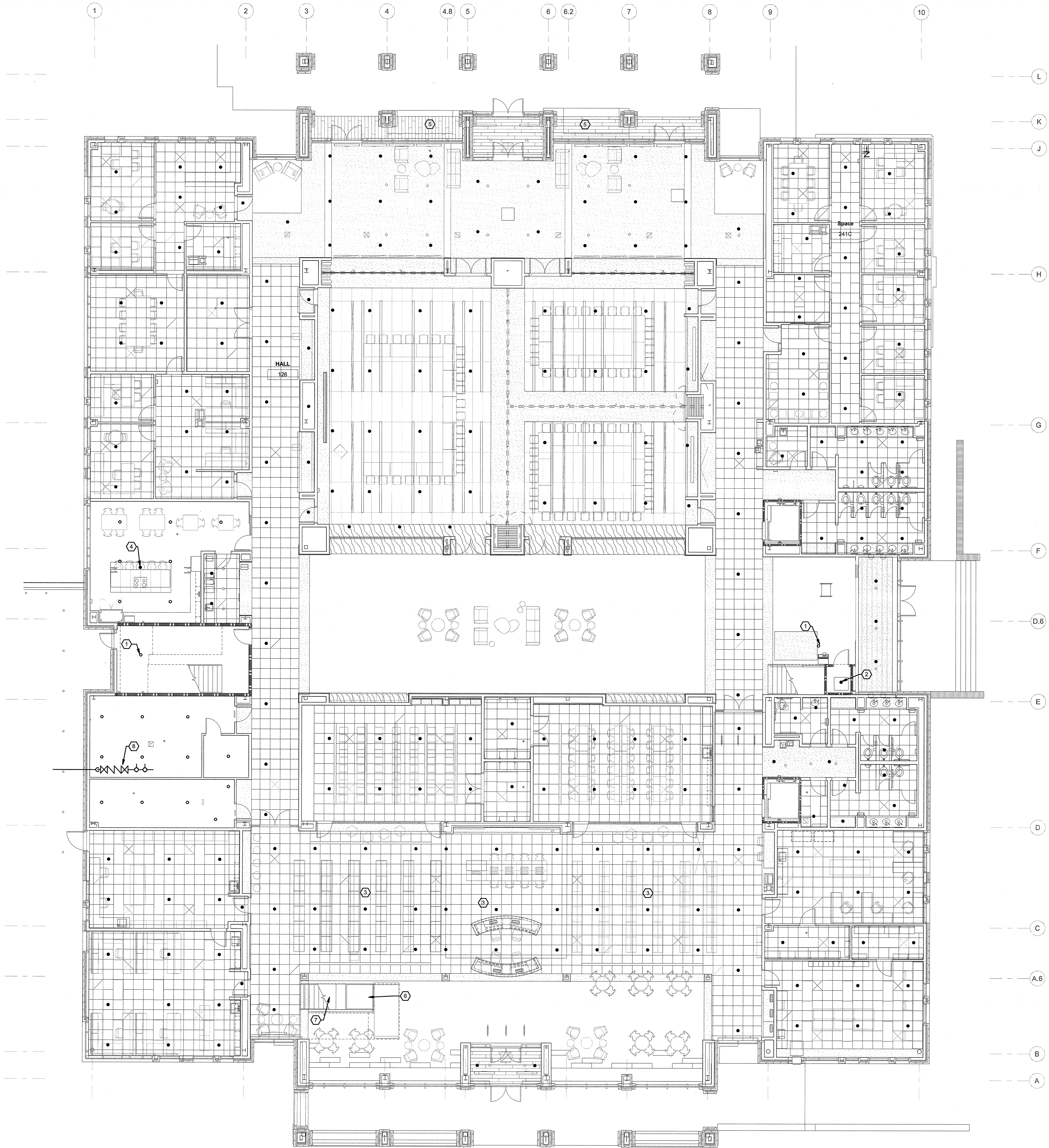
DESIGN TEAM: ART, REW

PROJECT NAME: HARNETT COUNTY GOVERNMENT SERVICES CENTER

PROJECT NO.: 514-8066-00

SHEET TITLE: FIRE PROTECTION SYMBOLS, ABBREVIATIONS & NOTES

SHEET NUMBER: F-001



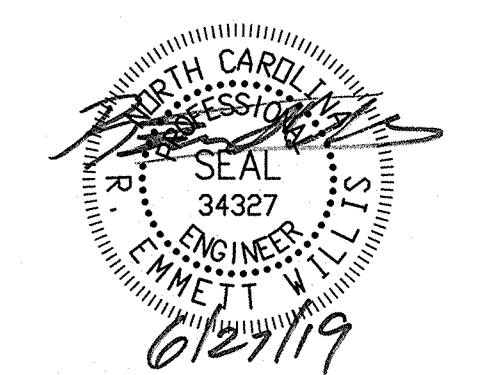
KEYED NOTES:

- 1 PROVIDE UPRIGHT SPRINKLER COVERAGE UNDER STAIRS.
- 2 PROVIDE SPRINKLER HEAD IN SMALL ROOM UNDER STAIRS.
- 3 TRIANGULAR CEILING TILES IN THIS AREA WILL HAVE SPECIAL LAYOUT FOR SPRINKLER HEAD SEE 41F-501 FOR MORE INFORMATION.
- 4 PENDENT SPRINKLER HEAD IN THE DROP CEILING.
- 5 PROVIDE DRY FLEXIBLE PENDANT FOR COVERAGE UNDER OVERHANG DUE TO SPRINKLERED OCCUPANCY ABOVE.
- 6 PROVIDE CONCEALED PENDENT UNDER EXPOSED STAIR LANDING.
- 7 PROVIDE TAMPER RESISTANT INSTITUTIONAL SPRINKLER LOCATED IN READING NOOK LOCATED UNDER STAIRS.
- 8 6" RPDA FOR FIRE SERVICE. SEE DETAIL 11F-501 FOR MORE INFORMATION.

○ RATED WALLS & PARTITIONS

1-HOUR FIRE BARRIER	2-HOUR FIRE BARRIER	3-HOUR FIRE BARRIER	1-HOUR FIRE & SMOKE BARRIER	2-HOUR FIRE & SMOKE BARRIER	3-HOUR FIRE & SMOKE BARRIER
2-HOUR FIRE WALL	3-HOUR FIRE WALL	4-HOUR FIRE WALL	0.5-HOUR FIRE PARTITION	1-HOUR FIRE PARTITION	
0-HOUR SMOKE PARTITION			1-HOUR SMOKE BARRIER		

2 FIRST FLOOR FIRE PROTECTION FLOOR PLAN
Scale: 1/8" = 1'-0"



ISSUE FOR
CONSTRUCTION DOCUMENTS

ISSUE DATE
06.27.2019

REVISIONS

NO.	REASON	DATE

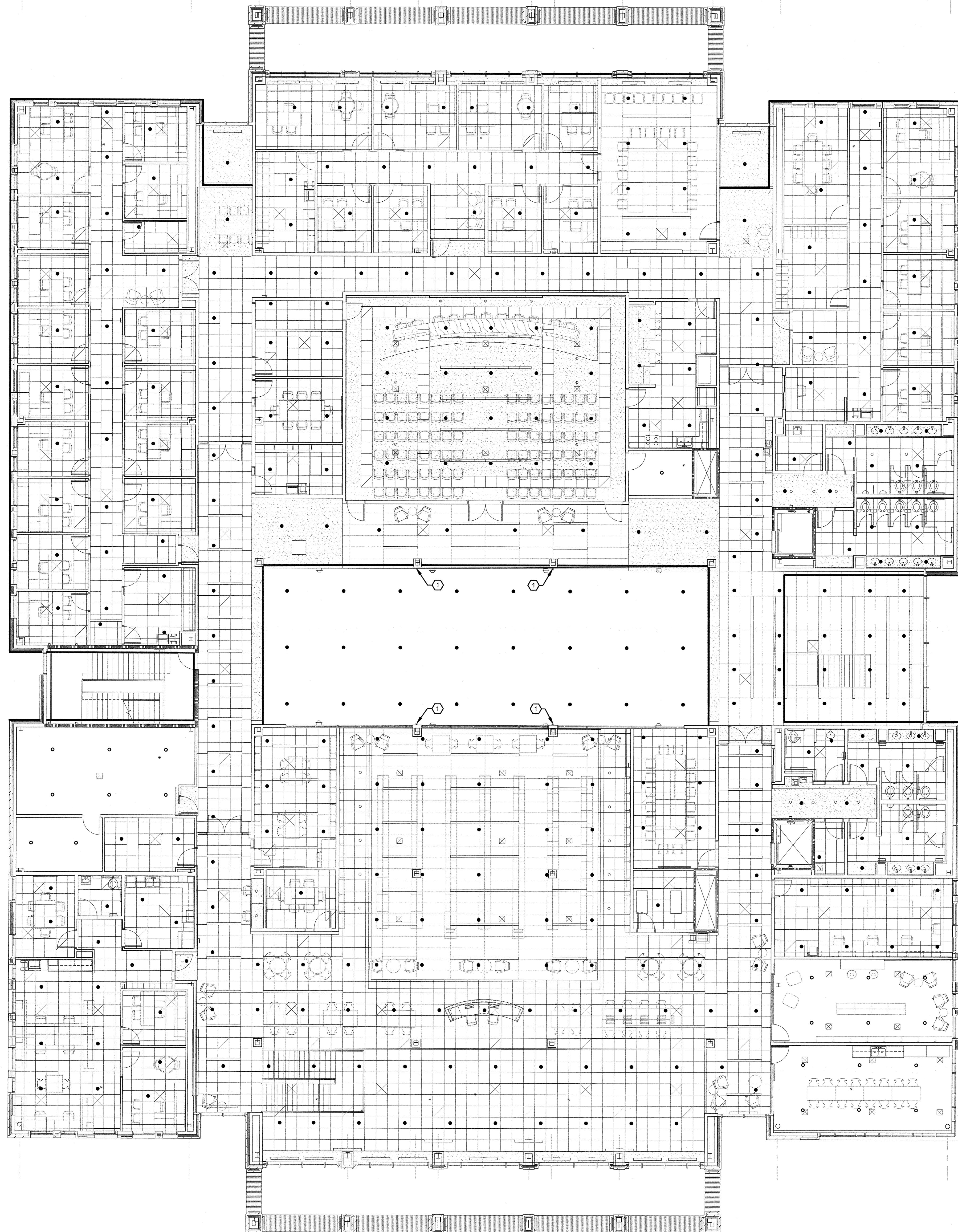
PROJECT TEAM
PRINCIPAL IN CHARGE
MBW
PROJECT MANAGER
GAM
DESIGN TEAM
ART, REW

PROJECT NAME
HARNETT COUNTY GOVERNMENT SERVICES CENTER

PROJECT NO.
514-8066-00

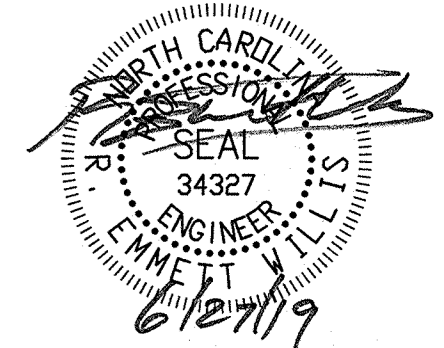
SHEET TITLE
FIRST FLOOR RCP PLAN

SHEET NUMBER
F-112



KEYED NOTES:

1 PIPING TO BE ROUTED WITHIN COLUMN WRAP UP TO SPRINKLER HEADS IN CLEAR STORY.



ISSUE FOR
CONSTRUCTION DOCUMENTS

ISSUE DATE
06.27.2019

REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
MBW
PROJECT MANAGER
GAM
DESIGN TEAM
ART, REW

PROJECT NAME
HARNETT COUNTY
GOVERNMENT SERVICES
CENTER

PROJECT NO.
514-8066-00

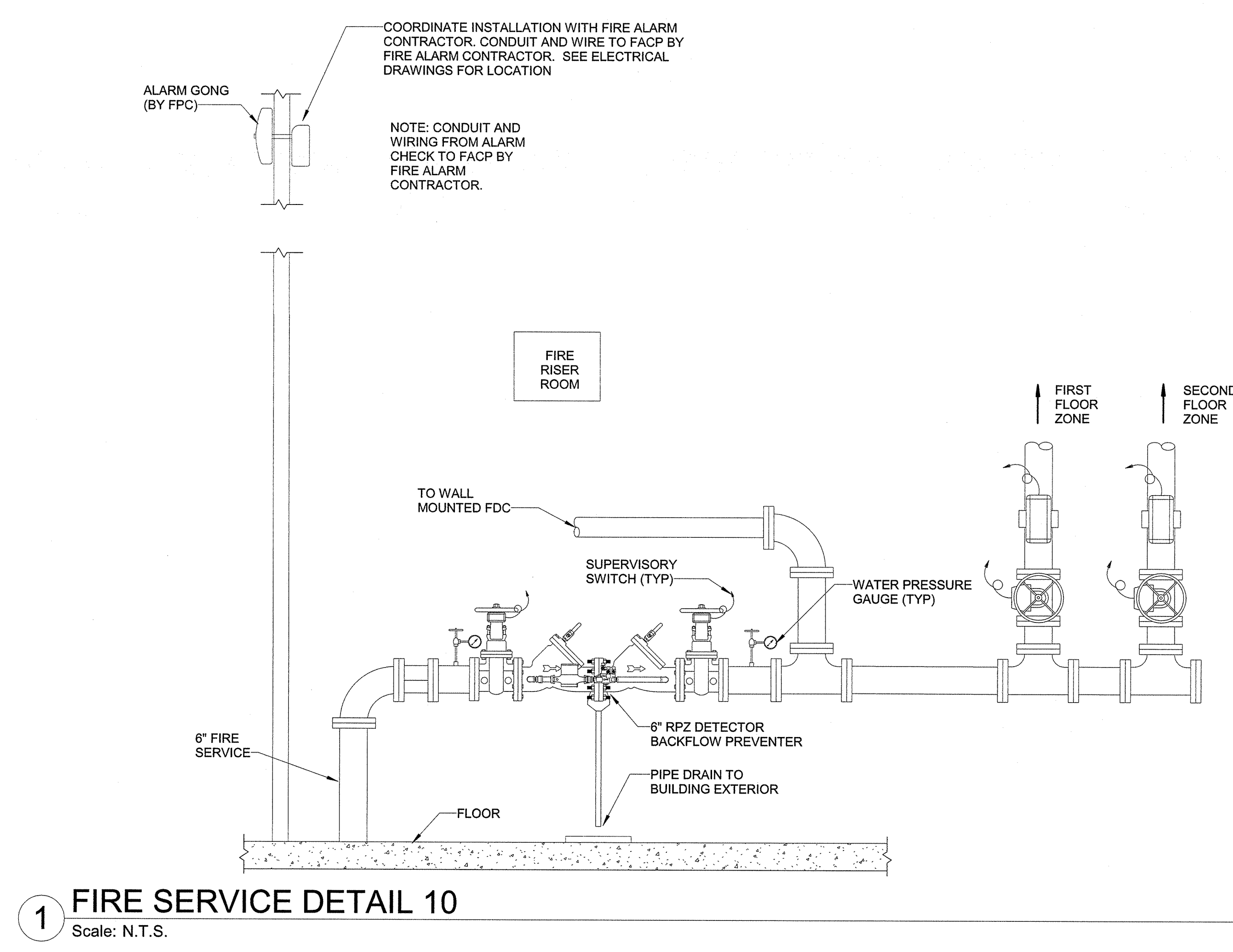
SHEET TITLE
SECOND FLOOR RCP
PLAN

SHEET NUMBER
F-122

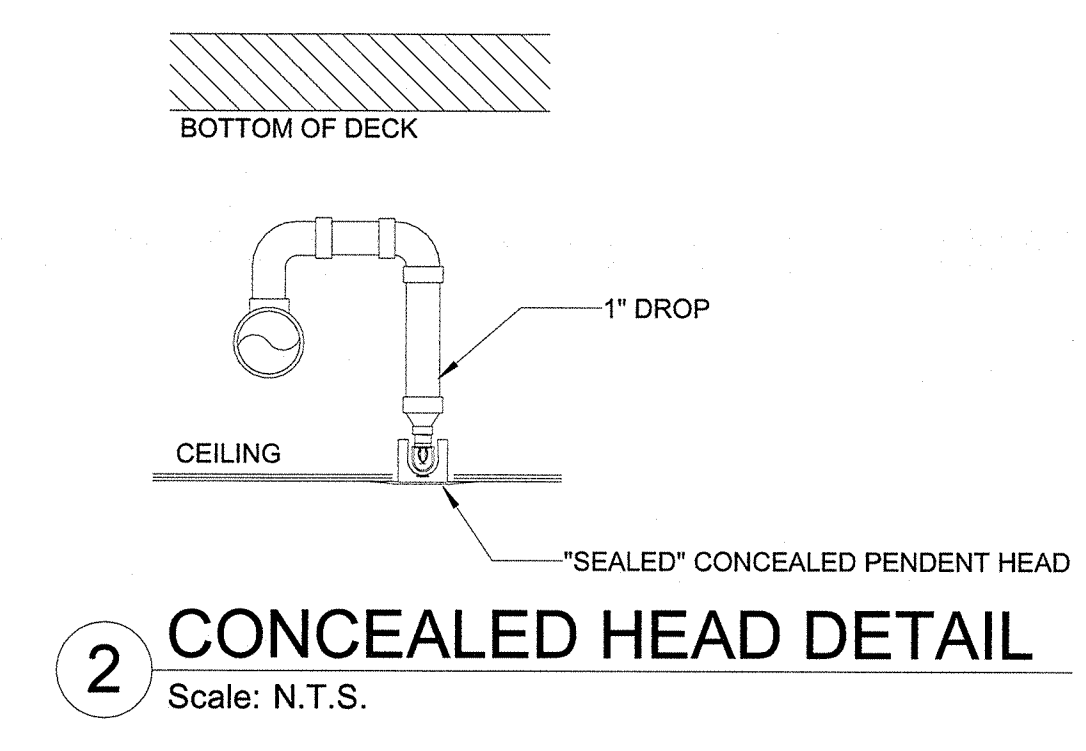
○ RATED WALLS & PARTITIONS

1-HOUR FIRE BARRIER	1-HOUR FIRE & SMOKE BARRIER
2-HOUR FIRE BARRIER	2-HOUR FIRE & SMOKE BARRIER
3-HOUR FIRE BARRIER	3-HOUR FIRE & SMOKE BARRIER
2-HOUR FIRE WALL	0.5-HOUR FIRE PARTITION
3-HOUR FIRE WALL	1-HOUR FIRE PARTITION
4-HOUR FIRE WALL	
0-HOUR SMOKE PARTITION	1-HOUR SMOKE BARRIER

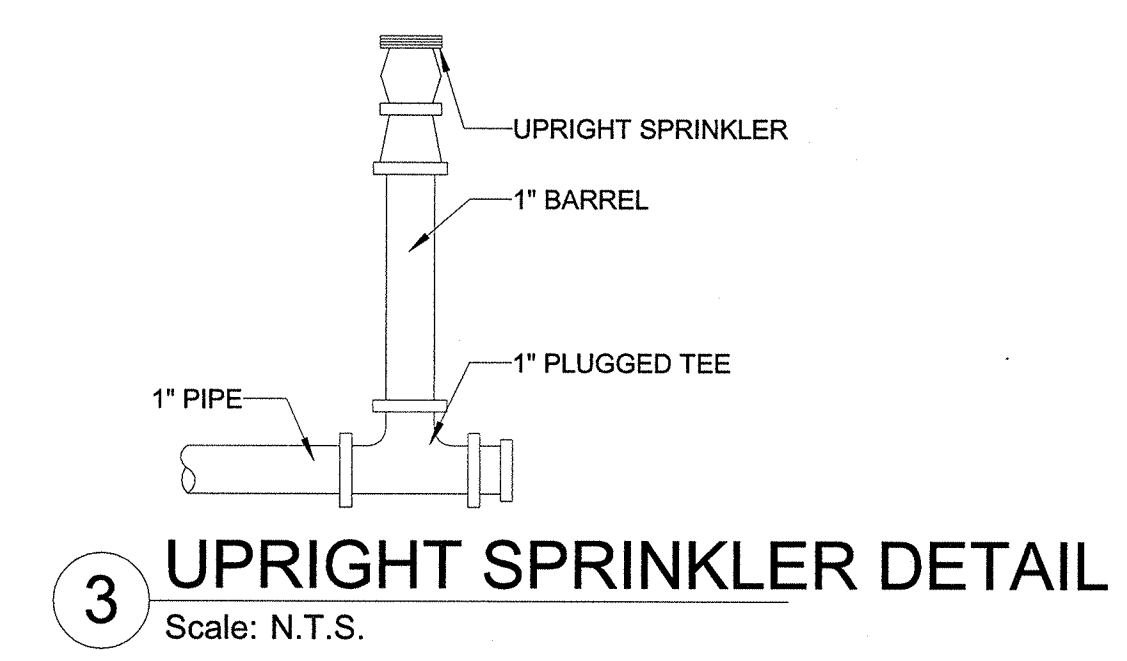
2 FIRE PROTECTION SECOND FLOOR PLAN
Scale: 1/8" = 1'-0"



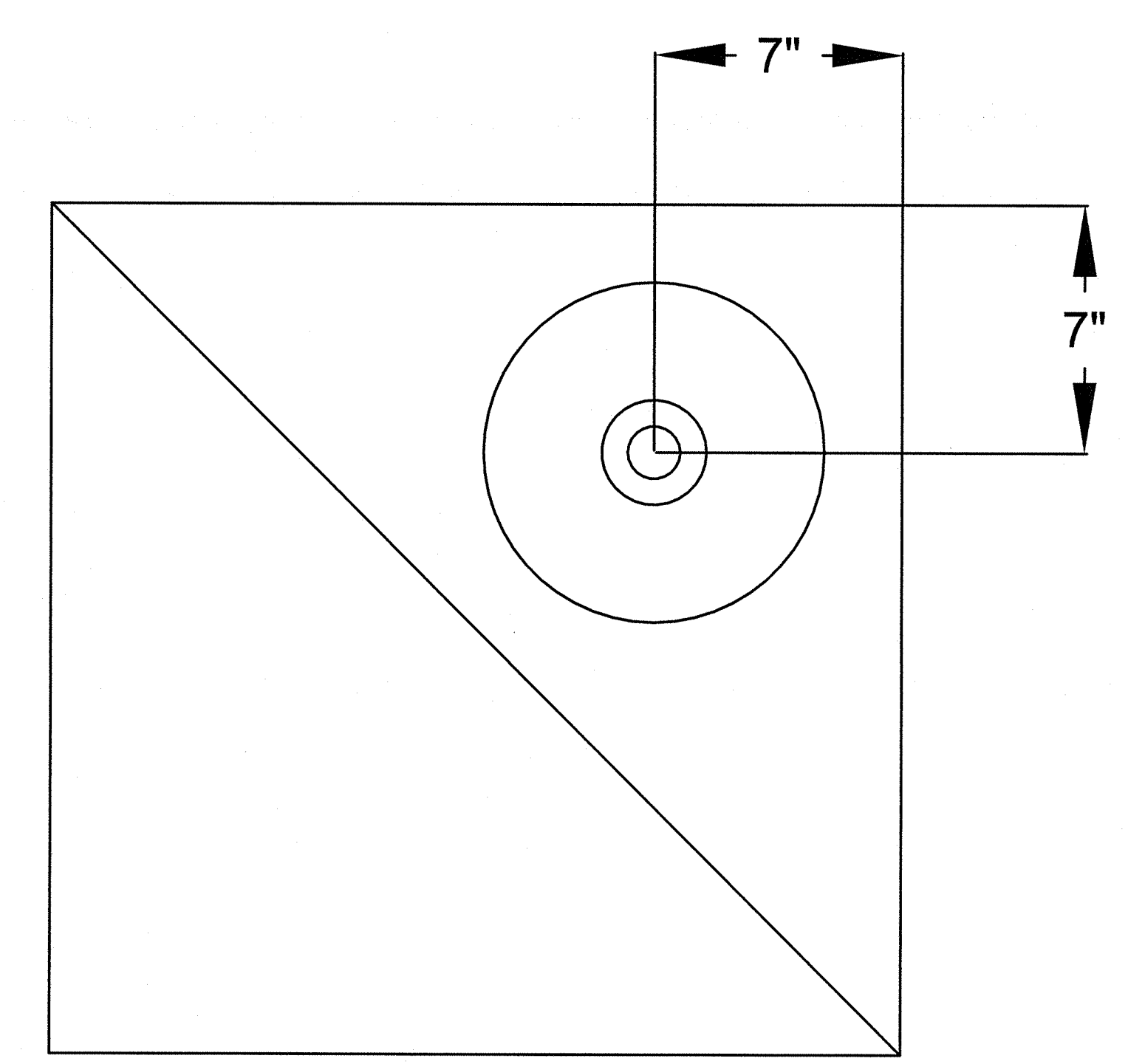
1 FIRE SERVICE DETAIL 10
Scale: N.T.S.



2 CONCEALED HEAD DETAIL
Scale: N.T.S.



3 UPRIGHT SPRINKLER DETAIL
Scale: N.T.S.



NOTE:

- CENTER HEADS IN TRIANGULAR SECTIONS OF CEILING GRID AS INDICATED.

4 HEAD PLACEMENT DETAIL - TRIANGULAR CEILING
Scale: N.T.S.