

No.	REVISION/SUBMISSION	DATE

Mechanical/Electrical/Plumbing Engineer

GERARD ASSOCIATES
CONSULTING ENGINEERS, D.P.C.
223 MAIN STREET, GOSHEN NY 10924
TEL: (845) 291 1272
info@GerardAssociates.com www.GerardAssociates.com
GA21063

Structural Engineer

SZEWCZAK ASSOCIATES
CONSULTING ENGINEERS
200 Fisher Drive Avon, Connecticut
phone 860.677.4570 fax 860.676.0814

Liscum McCormack VanVoorhis LLP
181 CHURCH STREET
POUGHKEEPSIE, NEW YORK 12601
ARCHITECTURE PLANNING INTERIORS PHONE 845-452-2268 FAX 845-452-3752

PROJECT
**NEW FIRE STATION FOR
ROMBOUT FIRE DISTRICT - STATION 2
NYS ROUTE 52, FISHKILL, NY**

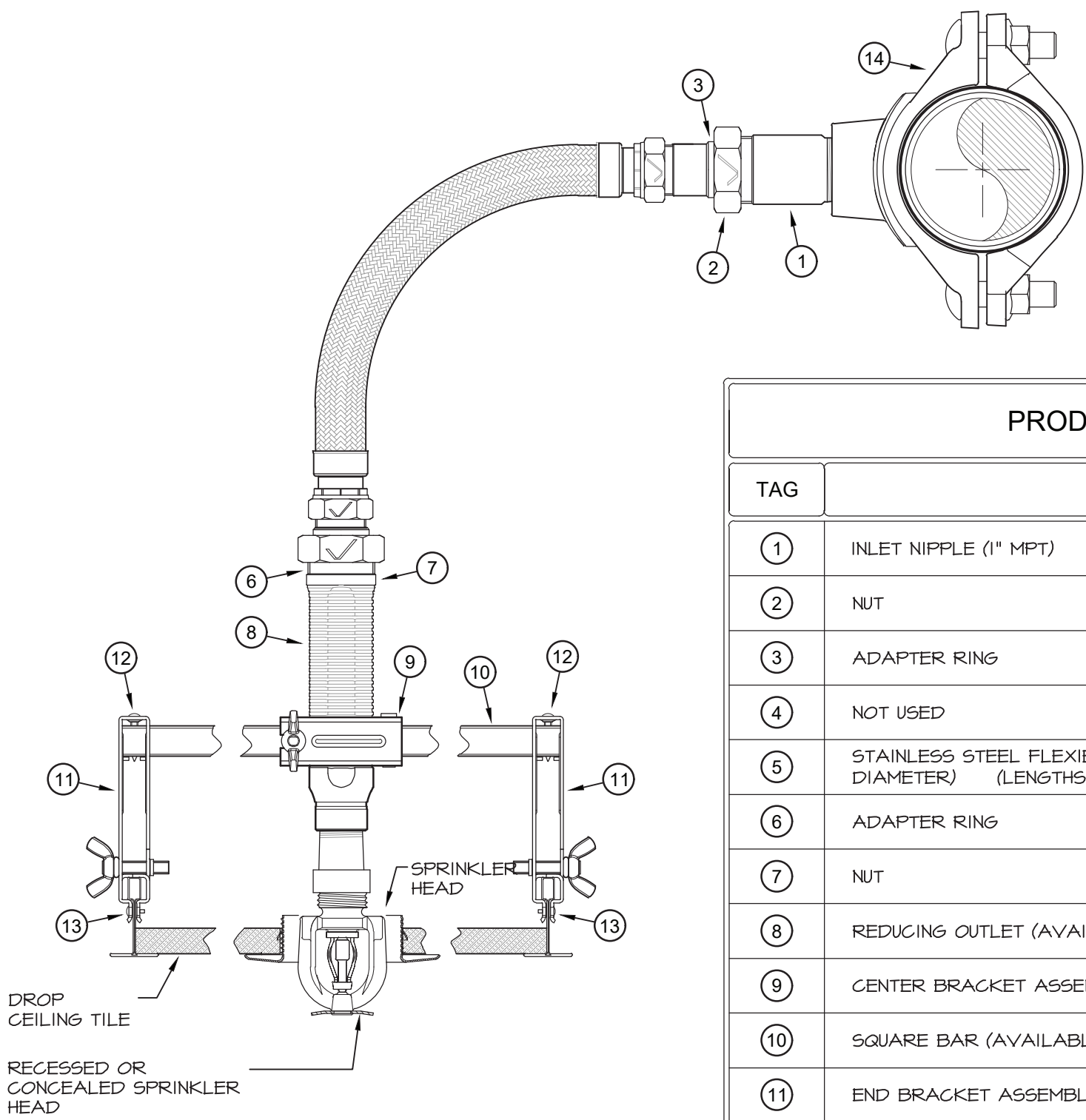
DRAWING
**FIRE PROTECTION:
PROPOSED MEZZANINE**

SEAL	DRAWN BY RL/KC	PROJECT NUMBER 18142
	CHECKED BY JT/GH <td>DATE 11-30-22</td>	DATE 11-30-22
	DRAWING NUMBER	

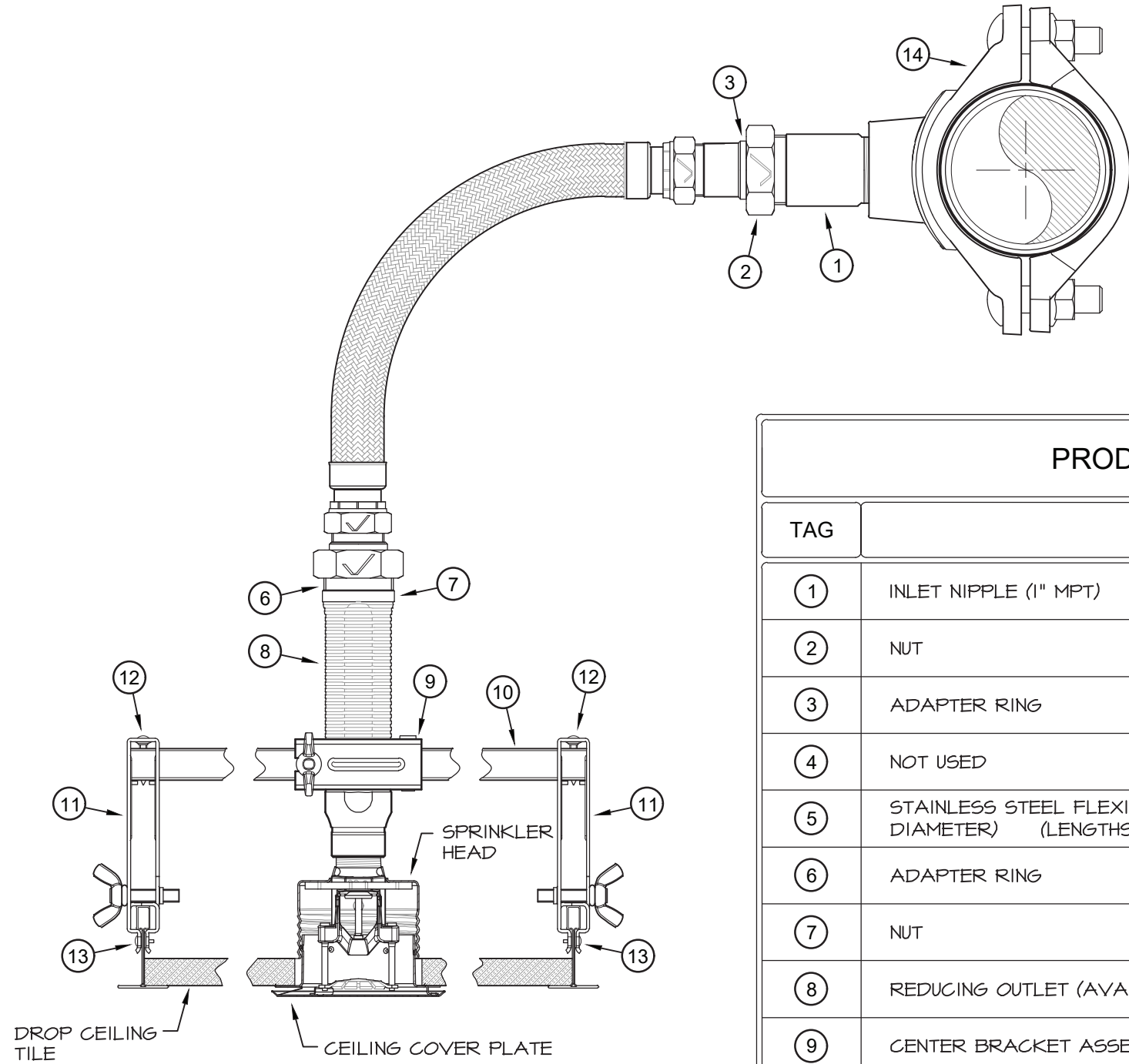
FPI01

FILE H:\2021\GA21063

POSITIONING OF SPRINKLERS	
DISTANCE FROM SPRINKLERS TO SIDE OF OBSTRUCTION (A)	MAXIMUM ALLOWABLE DISTANCE OF DEFLECTOR ABOVE BOTTOM OF OBSTRUCTION (IN) (B)
LESS THAN 1 FT.	0
1 FT. TO LESS THAN 1 FT. 6 IN.	2½"
1 FT. 6 IN. TO LESS THAN 2 FT.	3½"
2 FT. TO LESS THAN 2 FT. 6 IN.	5½"
2 FT. 6 IN. TO LESS THAN 3 FT.	7½"
3 FT. TO LESS THAN 3 FT. 6 IN.	9½"
3 FT. 6 IN. TO LESS THAN 4 FT.	12
4 FT. TO LESS THAN 4 FT. 6 IN.	14
4 FT. 6 IN. TO LESS THAN 5 FT.	16½"
5 FT. TO LESS THAN 5 FT. 6 IN.	18
5 FT. 6 IN. TO LESS THAN 6 FT.	20
6 FT. TO LESS THAN 6 FT. 6 IN.	24
6 FT. 6 IN. TO LESS THAN 7 FT.	30
7 FT. TO LESS THAN 7 FT. 6 IN.	35

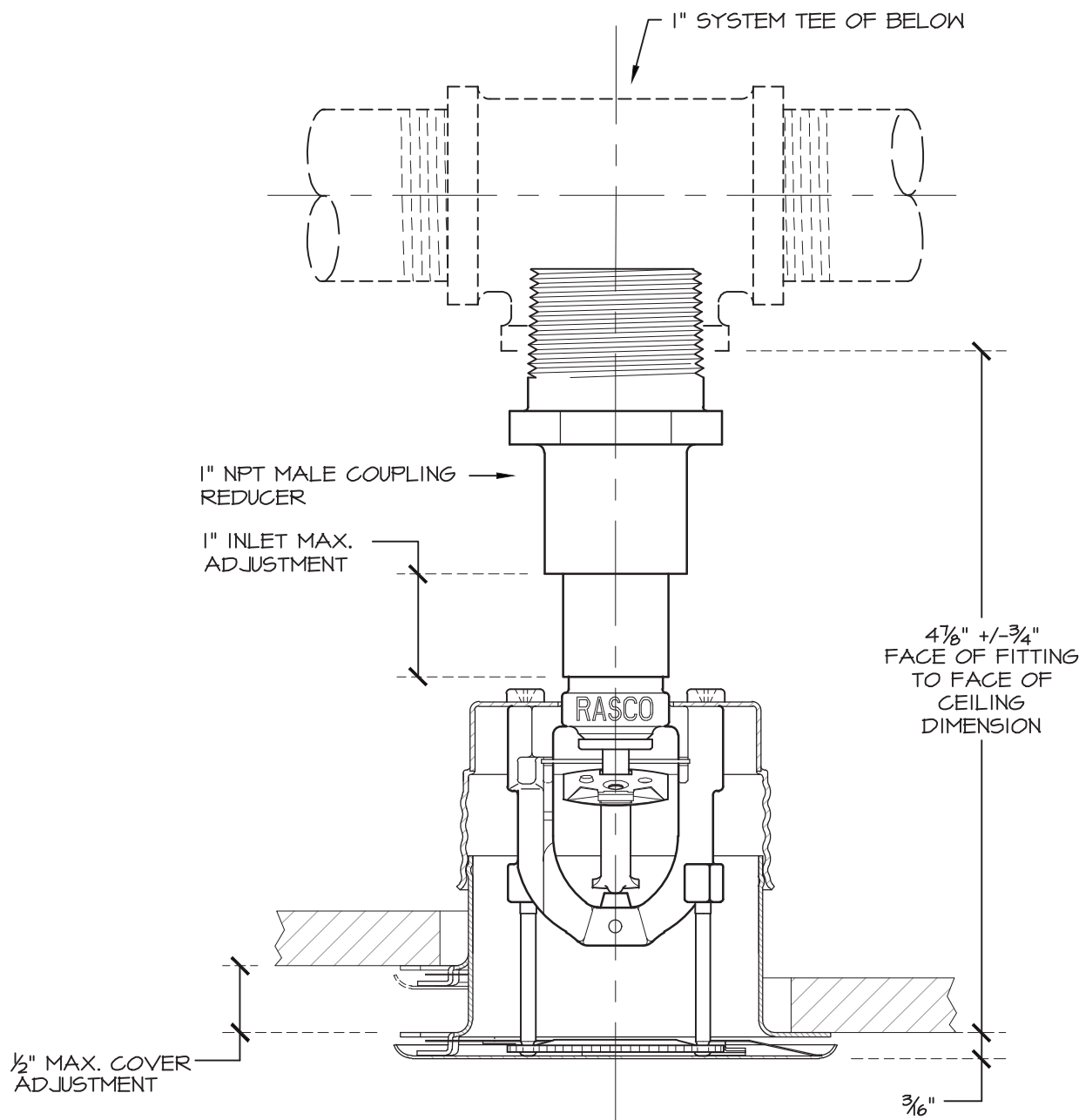


PRODUCT LEGEND	
TAG	DESCRIPTION
1	INLET NIPPLE (1" FMPT)
2	NUT
3	ADAPTER RING
4	NOT USED
5	STAINLESS STEEL FLEXIBLE UNBRAIDED HOSE (1/8" NOMINAL DIAMETER) (LENGTHS AVAILABLE 31", 36", 48", 60", & 72")
6	ADAPTER RING
7	NUT
8	REDUCING OUTLET (AVAILABLE 1/2" OR 3/4" FMPT)
9	CENTER BRACKET ASSEMBLY
10	SQUARE BAR (AVAILABLE IN 24" AND 48" LENGTHS)
11	END BRACKET ASSEMBLY
12	SHEET METAL SCREW
13	#8 X 1/2-INCH SELF-TAPPING SCREW
14	MECHANICAL-T OUTLET

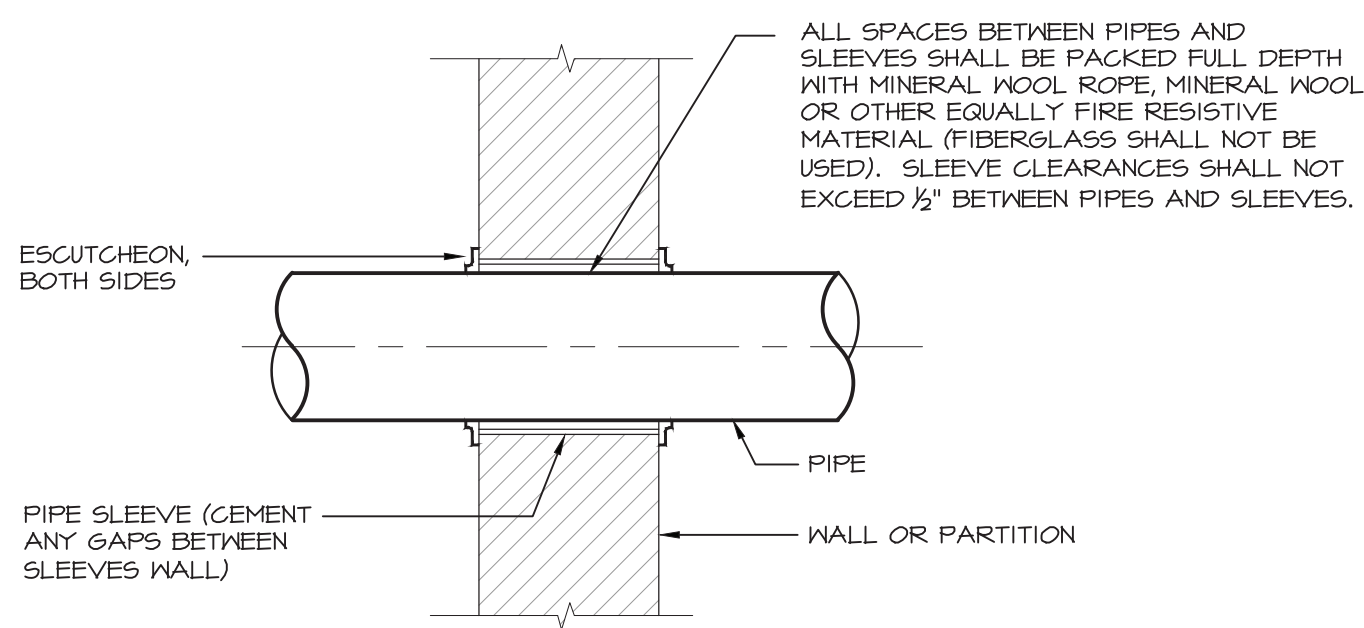


PRODUCT LEGEND	
TAG	DESCRIPTION
1	INLET NIPPLE (1" FMPT)
2	NUT
3	ADAPTER RING
4	NOT USED
5	STAINLESS STEEL FLEXIBLE UNBRAIDED HOSE (1/8" NOMINAL DIAMETER) (LENGTHS AVAILABLE 31", 36", 48", 60", & 72")
6	ADAPTER RING
7	NUT
8	REDUCING OUTLET (AVAILABLE 1/2" OR 3/4" FMPT)
9	CENTER BRACKET ASSEMBLY
10	SQUARE BAR (AVAILABLE IN 24" AND 48" LENGTHS)
11	END BRACKET ASSEMBLY
12	SHEET METAL SCREW
13	#8 X 1/2-INCH SELF-TAPPING SCREW
14	MECHANICAL-T OUTLET

1 SPRINKLER HEAD HORIZONTAL OBSTRUCTION CHART
NOT TO SCALE



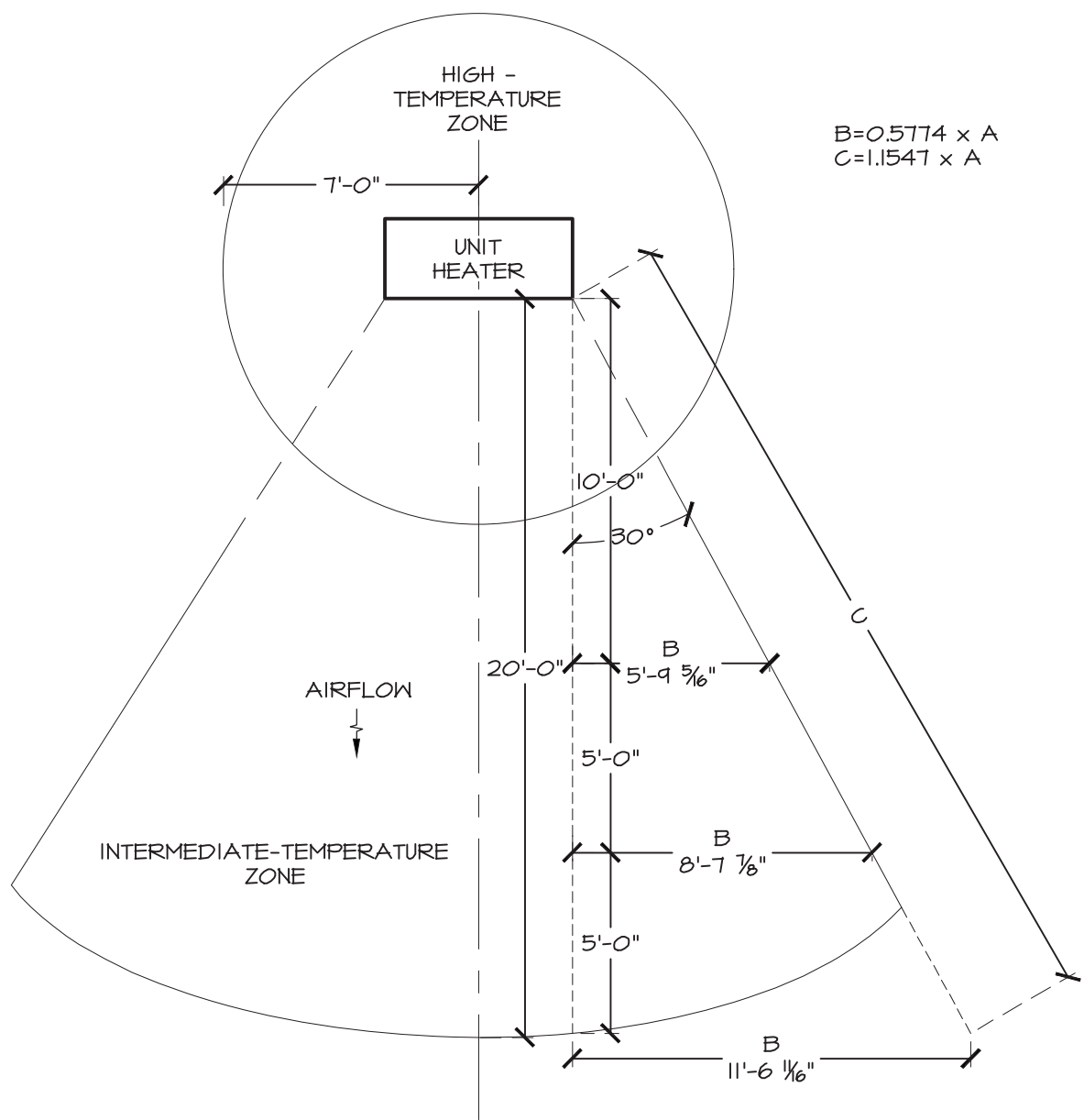
2 CONCEALED SPRINKLER HEAD DETAIL
NOT TO SCALE



NOTE:
THIS DETAIL ALSO APPLICABLE TO INTERIOR NON-WATER PROOF FLOOR CONSTRUCTION. FOR WATER PROOF FLOOR CONSTRUCTION AND OTHER CONSTRUCTION - SEE SPECIFICATIONS.

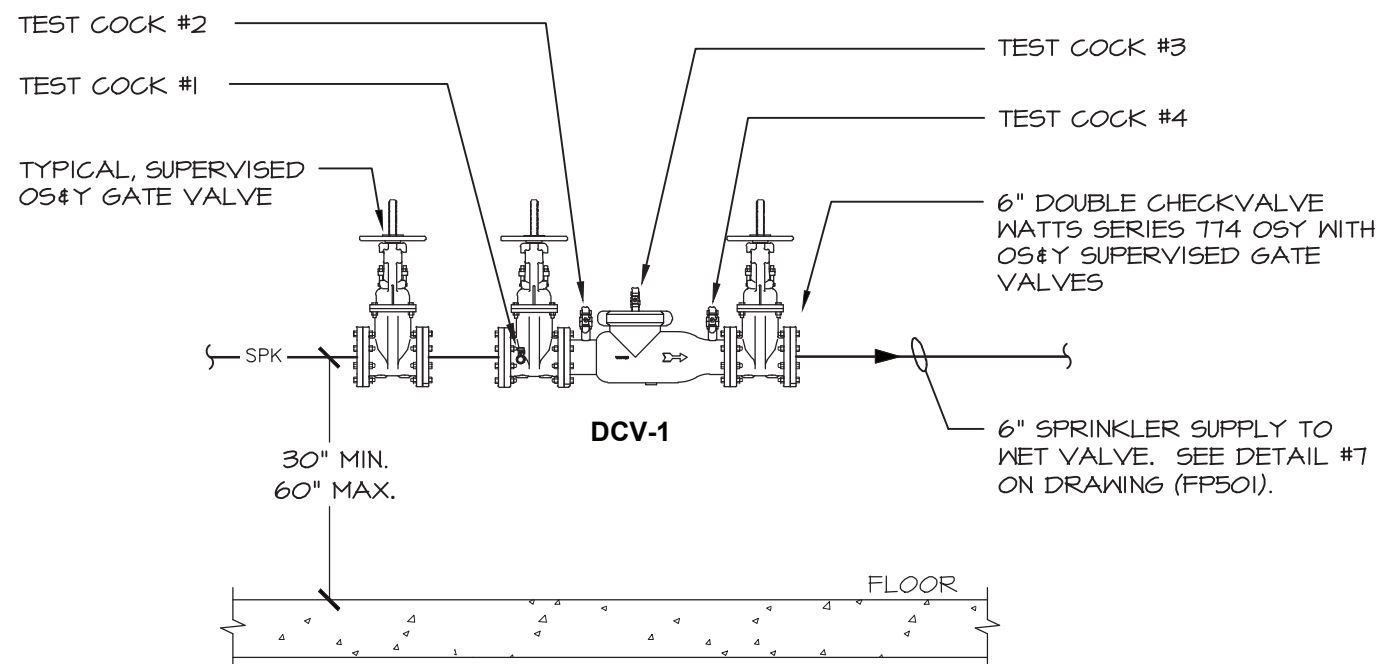
3 FIRE RATED PARTITION AND WALL PENETRATION DETAIL
NOT TO SCALE

4 TYPICAL FLEXIBLE HOSE SPRINKLER ASSEMBLIES FOR PENDANT HEADS
NOT TO SCALE



5 SPRINKLER TEMPERATURE ZONES AT UNIT HEATERS
NOT TO SCALE

6 TYPICAL FLEXIBLE HOSE SPRINKLER ASSEMBLIES FOR CONCEALED PENDANT SPRINKLERS
NOT TO SCALE



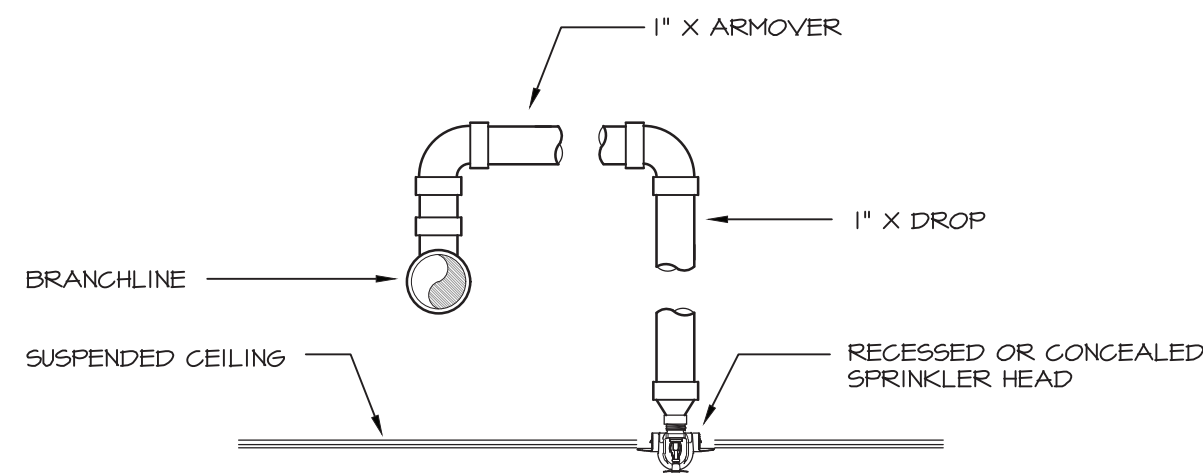
NOTE:
SUPPORT PIPING AND DOUBLE CHECK VALVE BACKFLOW PREVENTER OFF FLOOR WITH PIPE STANCHIONS AND ANCHOR TO FLOOR.

REQUIRED CLEARANCES (DOUBLE CHECK VALVE)

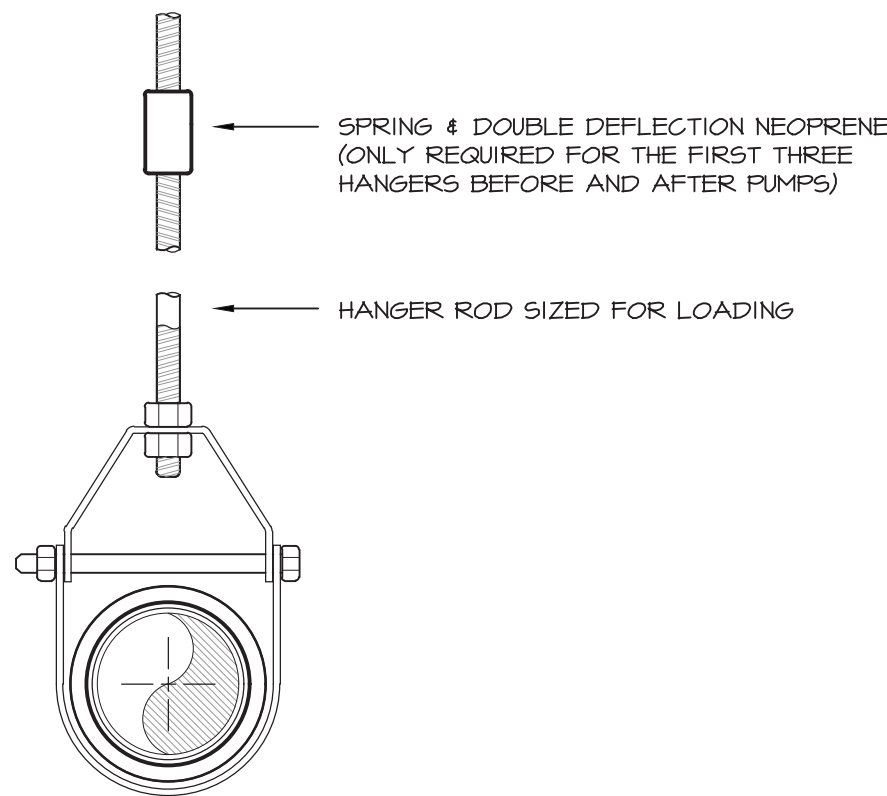
1. FRONT OF CHECKVALVE (2'-6") MINIMUM
2. BEHIND DOUBLE CHECKVALVE (12") MINIMUM
3. BACKFLOW PREVENTER MINIMUM (2'-6") ABOVE FINISHED FLOOR
4. BACKFLOW PREVENTER MAXIMUM (5'-0") ABOVE FINISHED FLOOR
5. ABOVE DOUBLE CHECKVALVE (24") MINIMUM
6. ABOVE BACKFLOW PREVENTER VALVES MINIMUM (12")

7 SPRINKLER SYSTEM BACKFLOW PREVENTER
NOT TO SCALE

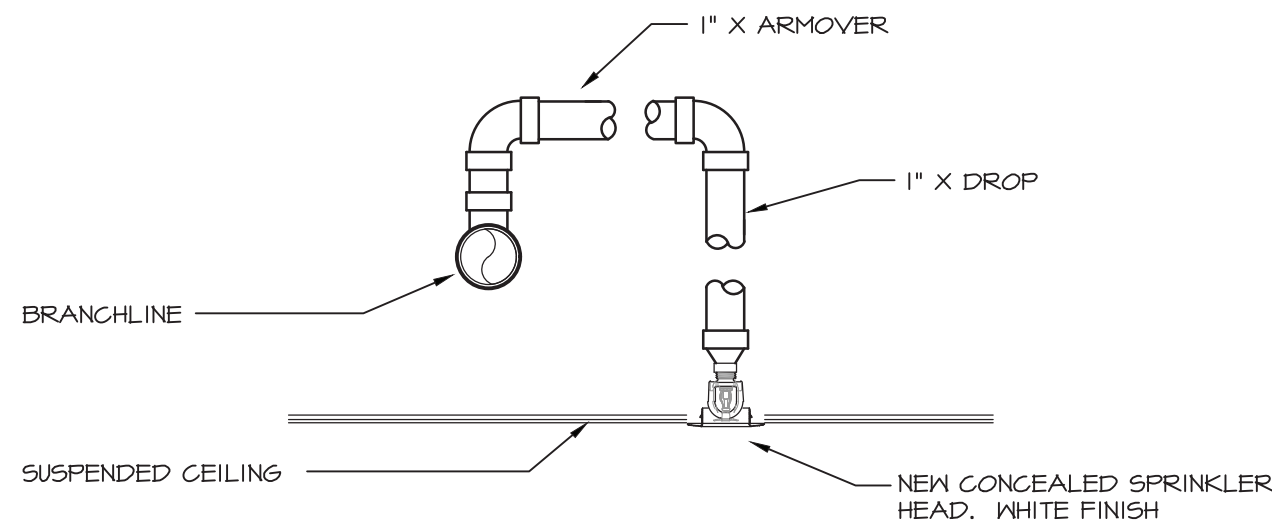
No.	REVISION/SUBMISSION	DATE
Mechanical/Electrical/Plumbing Engineer		
GERARD ASSOCIATES CONSULTING ENGINEERS, D.P.C. 223 MAIN STREET, GOSHEN NY 10924 TEL: (845) 291 1272 info@GerardAssociates.com www.GerardAssociates.com		
Structural Engineer		
SZEWCZAK ASSOCIATES CONSULTING ENGINEERS 200 Fisher Drive Avon, Connecticut phone 860.677.4570 fax 860.676.0814		
Liscum McCormack VanVoorhis LLP 181 CHURCH STREET POUGHKEEPSIE, NEW YORK 12601 ARCHITECTURE PHONE 845-452-2268 FAX 845-452-3752 PLANNING INTERIORS		
PROJECT NEW FIRE STATION FOR ROMBOUT FIRE DISTRICT - STATION 2 NYS ROUTE 52, FISHKILL, NY		
DRAWING FIRE PROTECTION: DETAILS		
SEAL	DRAWN BY RL/KC CHECKED BY JT/GH DATE 11-30-22 DRAWING NUMBER FP500	PROJECT NUMBER 18142
FILE	H:\2021\GA21063	



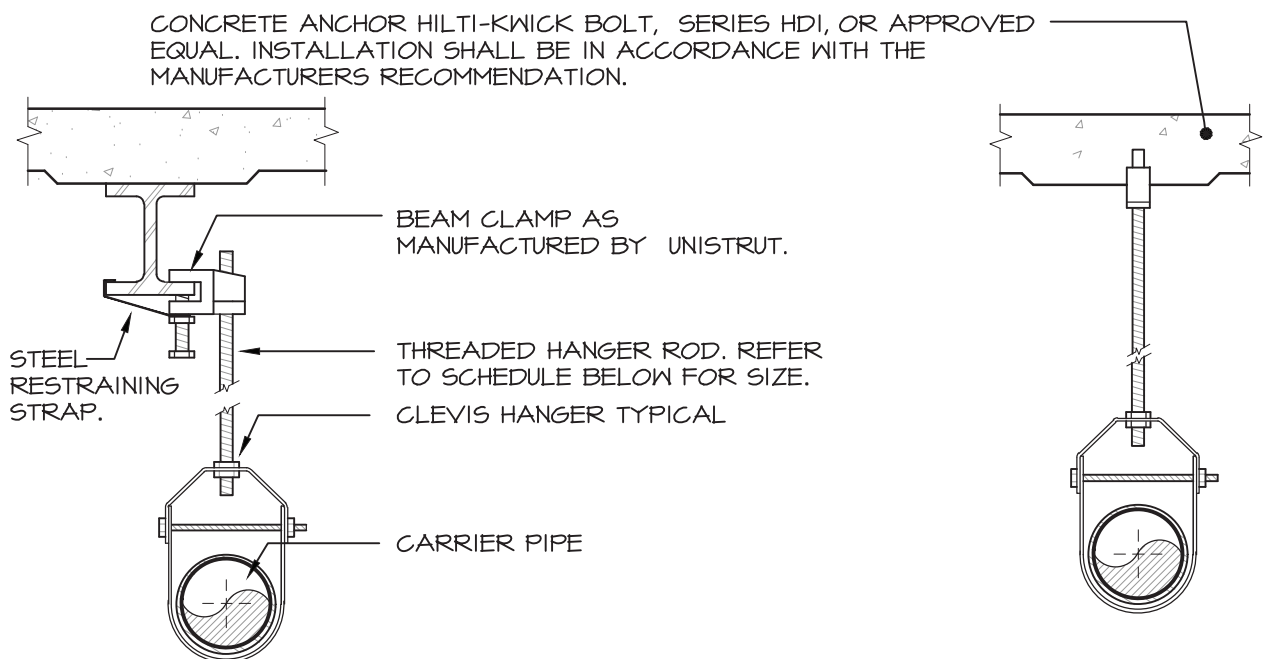
1 TYPICAL ARM-OVER RECESSED HEAD DETAIL
NOT TO SCALE



2 HANGER DETAIL
NOT TO SCALE



3 TYPICAL ARM-OVER CONCEALED HEAD
NOT TO SCALE

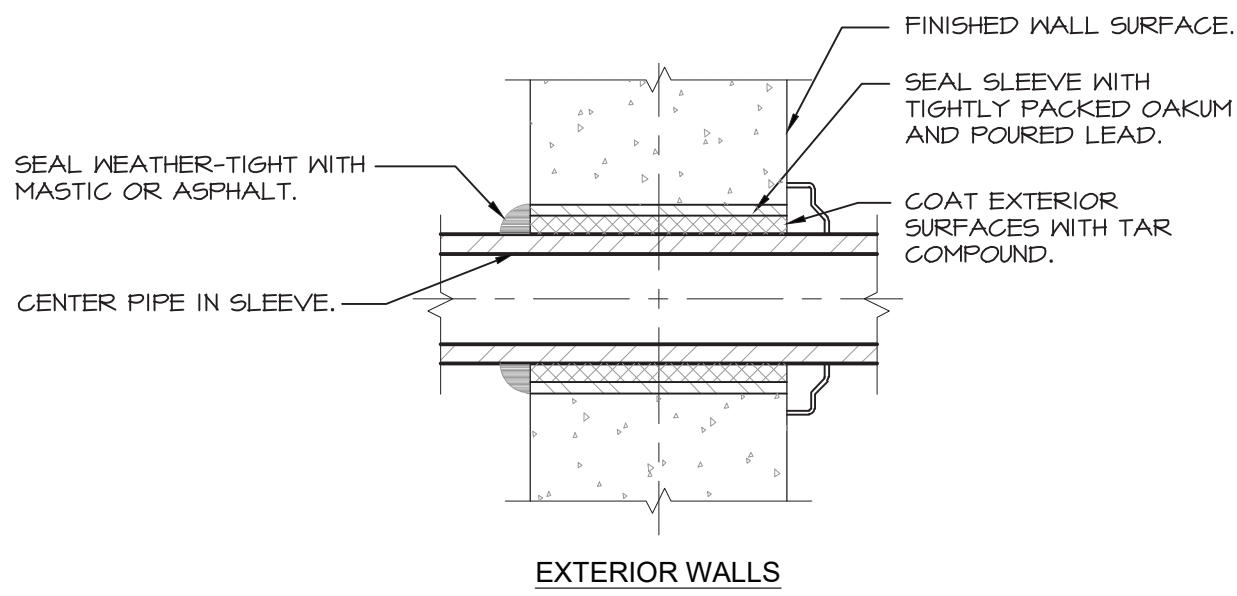


PIPE HANGER SCHEDULE					
PIPE DIA.	3/4"-2"	2 1/2"-3"	4"-5"	6"	8"-12"
HANGER DIA.	3/8"	1/2"	5/8"	3/4"	7/8"

NOTES:

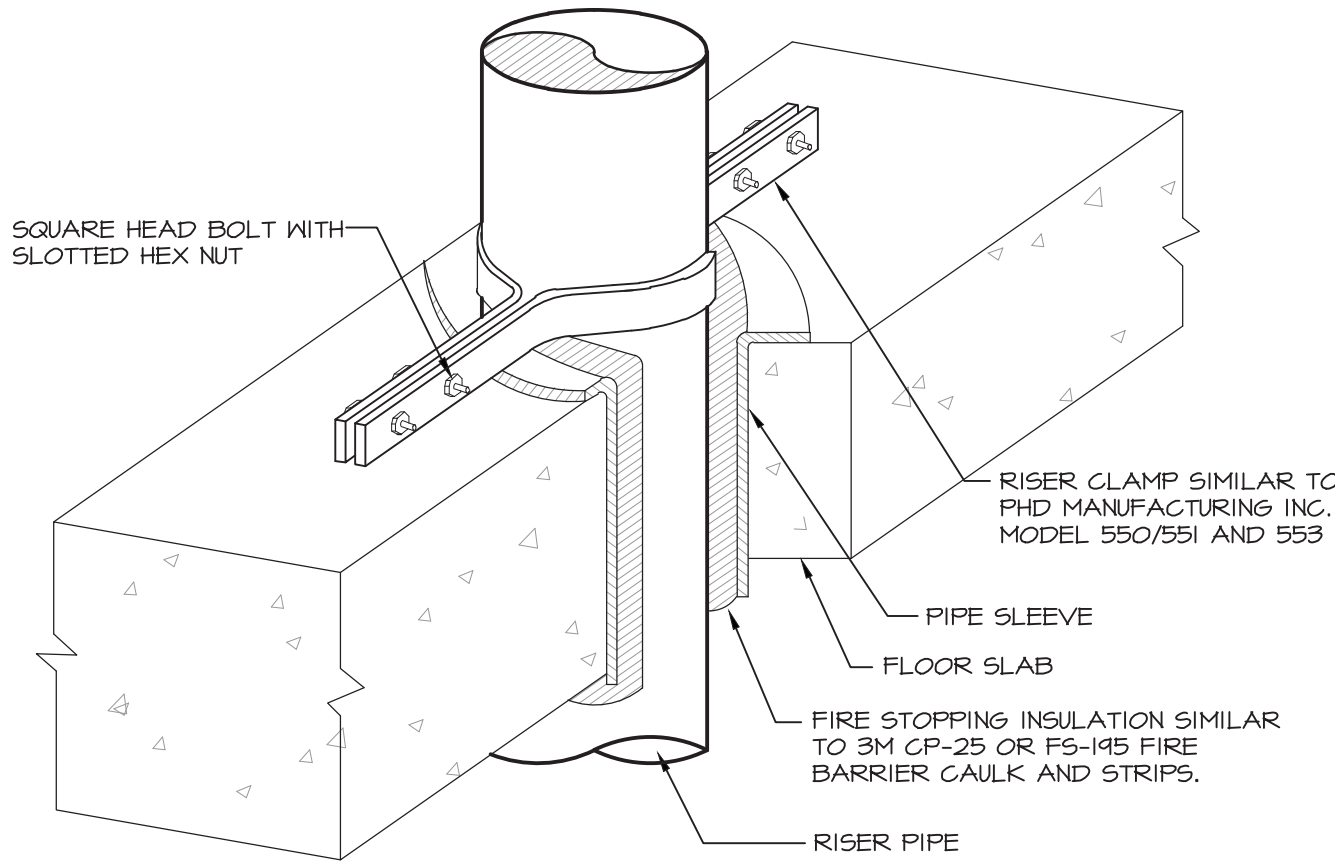
- CLEVIS HANGERS WITH WELDED INSULATION SHIELDS SIMILAR TO RAUCH FIG. 100SH ON ALL PIPES LARGER THAN 1".
- ALL PIPE HANGERS SHALL BE GALVANIZED STEEL OR FACTORY PAINTED BLACK WITH ENAMEL.

4 PIPE HANGER DETAIL
NOT TO SCALE

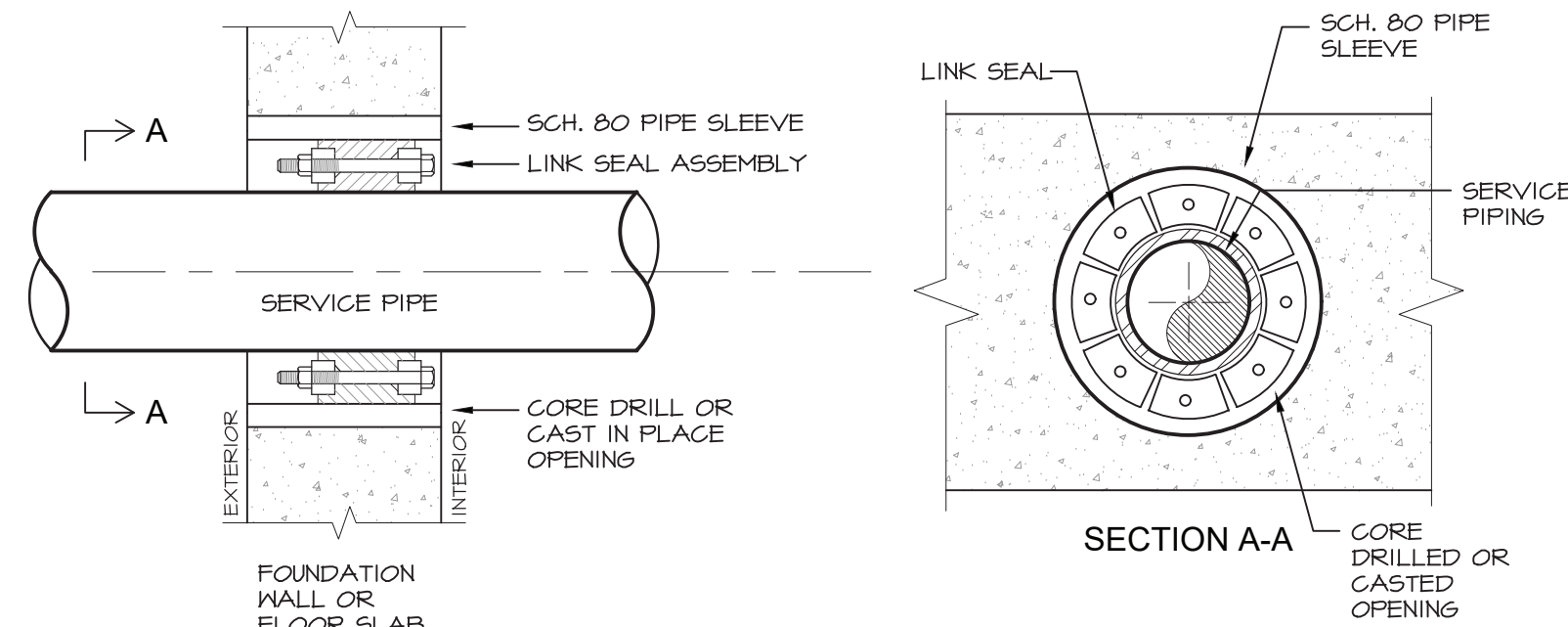


NOTE:
1. PIPE SLEEVE FOR EXTERIOR WALL ABOVE GRADE.

5 EXTERIOR WALL PIPE PENETRATION DETAIL
NOT TO SCALE



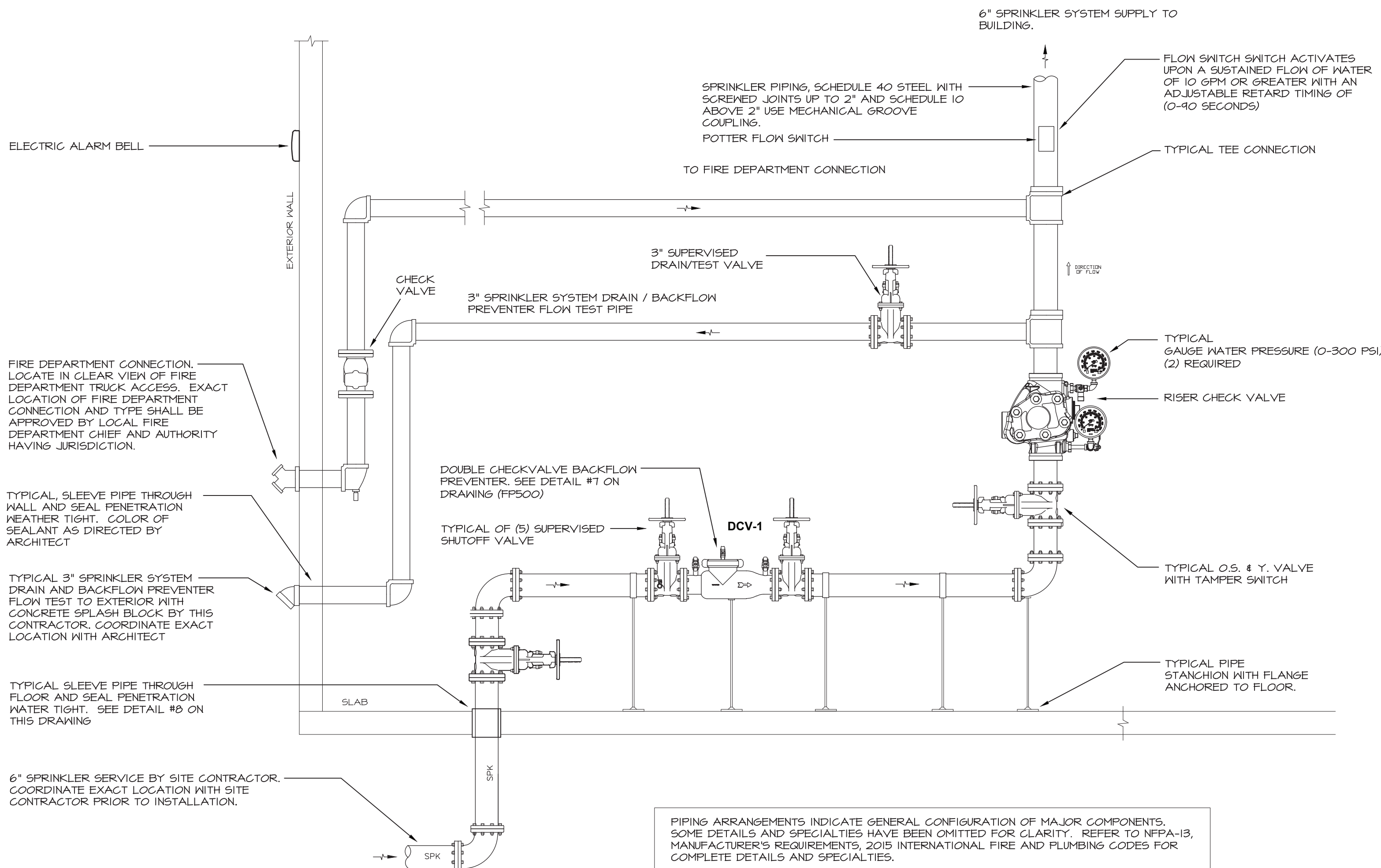
6 PIPE PENETRATION THROUGH FLOOR DETAIL
NOT TO SCALE



NOTES:

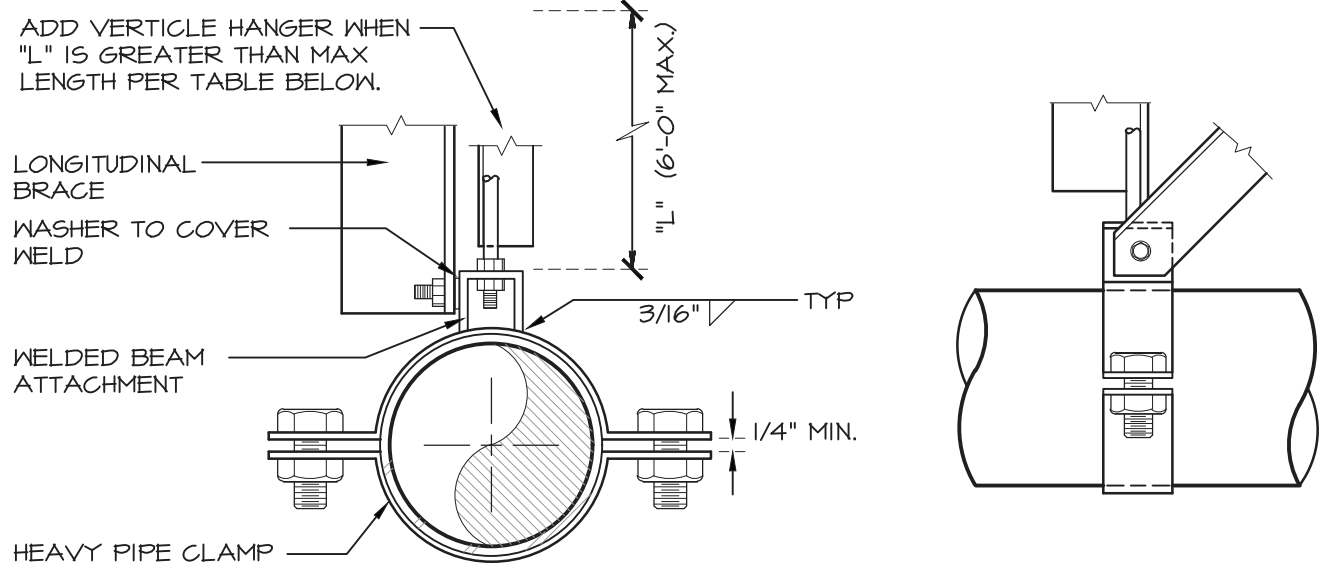
- SEAL ASSEMBLY BASED ON THUNDERLINE MODEL "C" LINK-SEAL MODULAR SEAL, WITH EPDM SEAL ELEMENT, COMPOSITE PRESSURE PLATES, STEEL WITH 2-PART ZINC DICHROMATE & ORGANIC COATED NUTS AND BOLTS RATED FOR AN OPERATING TEMPERATURE RANGE OF -40°F TO +250°F.
- USE LINK SEAL AT ALL LOCATIONS WHERE PIPES PENETRATE NEW OR EXISTING FOUNDATION WALLS AND SLABS ON GRADE.

8 LINK SEAL DETAIL
NOT TO SCALE



7 WET PIPE SPRINKLER SYSTEM RISER SCHEMATIC
NOT TO SCALE

No.	REVISION/SUBMISSION	DATE
Mechanical/Electrical/Plumbing Engineer		
GERARD ASSOCIATES CONSULTING ENGINEERS, D.P.C. 223 MAIN STREET, GOSHEN NY 10924 TEL: (845) 291 1272 info@GerardAssociates.com www.GerardAssociates.com GA21063		
Structural Engineer		
SZEWCZAK ASSOCIATES CONSULTING ENGINEERS 200 Fisher Drive Avon, Connecticut phone 860.677.4570 fax 860.676.0814		
Liscum McCormack VanVoorhis LLP ARCHITECTURE 181 CHURCH STREET POUGHKEEPSIE, NEW YORK 12601 PLANNING INTERIORS PHONE 845-452-2268 FAX 845-452-3752		
PROJECT NEW FIRE STATION FOR ROMBOUT FIRE DISTRICT - STATION 2 NYS ROUTE 52, FISHKILL, NY		
DRAWING FIRE PROTECTION: DETAILS		
SEAL	DRAWN BY RL/KC CHECKED BY JT/GH DATE 11-30-22 DRAWING NUMBER FP501	PROJECT NUMBER 18142 FILE H:\2021\GA21063



BRACE SPACING	PIPE	ROD	MAX. ROD LENGTH	VERT. HANGERS	TRANSVERSE HANGERS	BOLT
80'	2½"	½"	25"	2 x 2 x 16ga	2½" x 2½" x 16ga	¾"
80'	3"	½"	25"	2 x 2 x 16ga	2½" x 2½" x 16ga	¾"
80'	4"	¾"	31"	2 x 2 x 16ga	2½" x 2½" x 16ga	¾"
80'	6"	¾"	37"	2 x 2 x 16ga	2½" x 2½" x 16ga	¾"
80'	8"	1"	43"	2 x 2 x 16ga	2½" x 2½" x 16ga	¾"

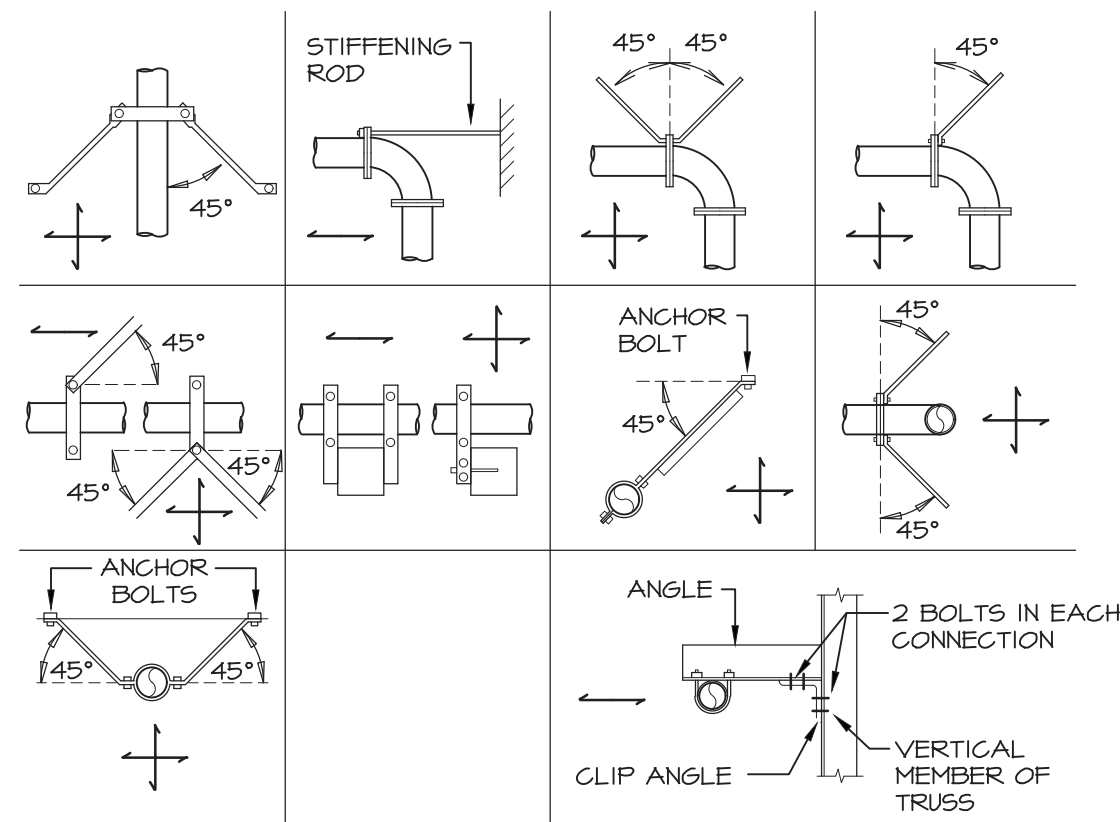
SEISMIC EQUIPMENT AND PIPE HANGER DESIGN

THE FIRE PROTECTION SYSTEM SHALL COMPLY WITH THE NEW YORK STATE UNIFORM FIRE PROTECTION AND BUILDING CODE SECTION 1613 AND APPLICABLE PROVISIONS OF ASCE 7 (ARCHITECTURAL, MECHANICAL AND ELECTRICAL COMPONENT SEISMIC DESIGN REQUIREMENTS).
SPRINKLER CONTRACTOR SHALL HIRE NYS LICENSED PROFESSIONAL ENGINEER TO DESIGN AND PREPARE SHOP DRAWINGS WITH CALCULATIONS FOR EACH PIPE SUPPORT, CONDUIT SUPPORT, MULTIPLE PIPE SUPPORT, TRAPEZE AND SEISMIC RESTRAINT. SUBMIT SHOP DRAWINGS WITH CALCULATIONS TO ENGINEER FOR RECORD AND TO LOCAL AUTHORITY HAVING JURISDICTION FOR APPROVAL.

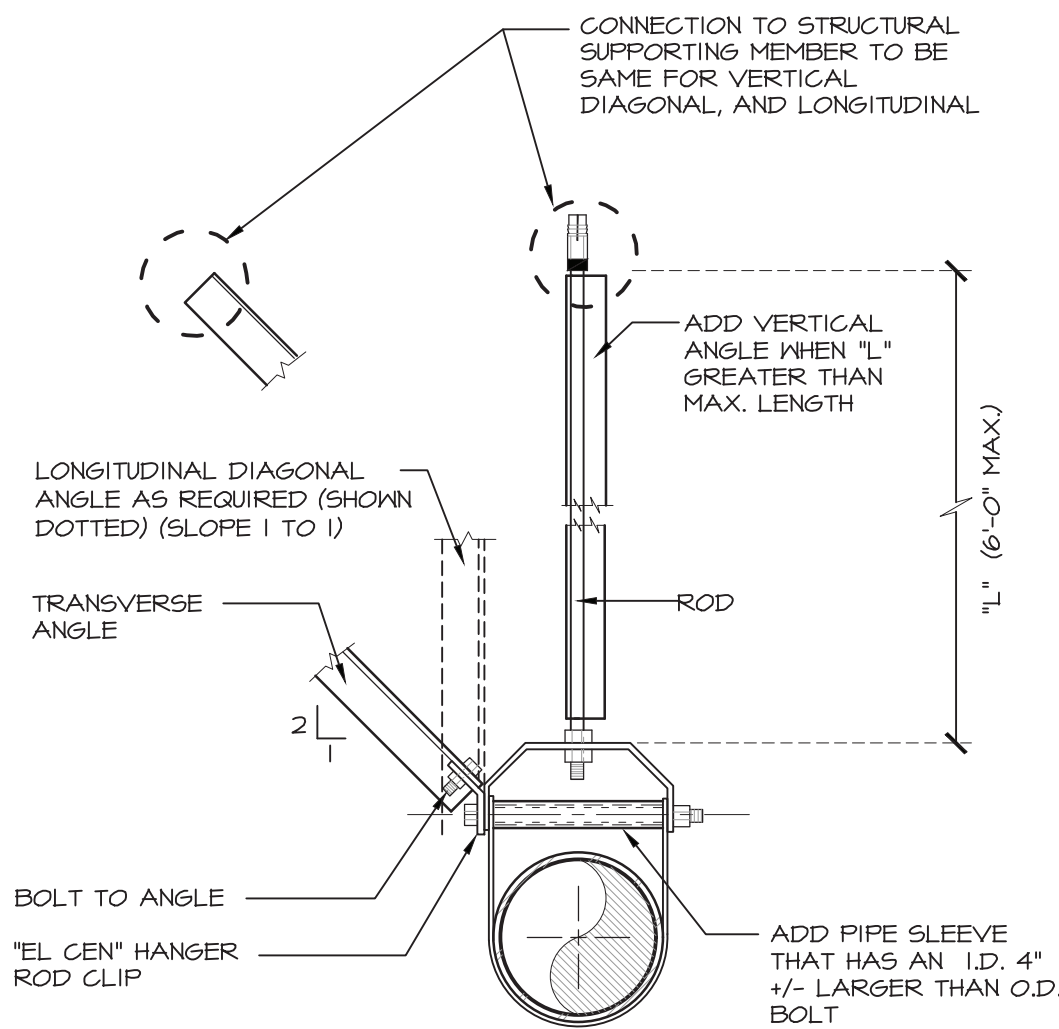
SEISMIC REQUIREMENTS:
BUILDING USE CATEGORY - IV
SEISMIC DESIGN CATEGORY - C

1 LONGITUDINAL SEISMIC BRACING

NOT TO SCALE



INDICATES DIRECTION OF RESTRAINT



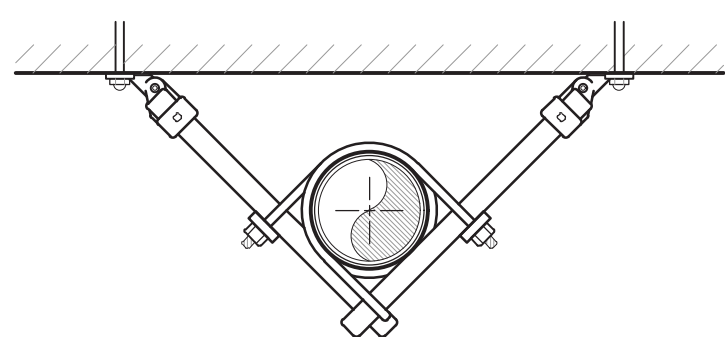
BRACE SPACING	PIPE	ROD	MAX. ROD LENGTH	VERT. HANGERS	TRANSVERSE HANGERS	BOLT
40'	2½"	½"	25"	2 x 2 x 16ga	2½" x 2½" x 16ga	¾"
40'	3"	½"	25"	2 x 2 x 16ga	2½" x 2½" x 16ga	¾"
40'	4"	¾"	31"	2 x 2 x 16ga	2½" x 2½" x 16ga	¾"
40'	6"	¾"	37"	2 x 2 x 16ga	2½" x 2½" x 16ga	¾"
40'	8"	1"	43"	2 x 2 x 16ga	2½" x 2½" x 16ga	¾"

2 SEISMIC SWAY BRACING (GENERAL)

NOT TO SCALE

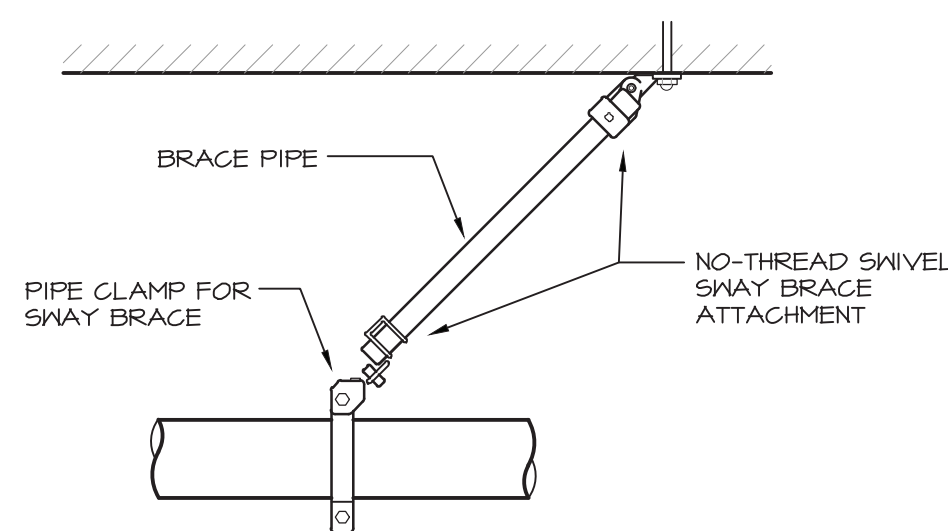
4 TRANSVERSE SEISMIC PIPE BRACING

NOT TO SCALE

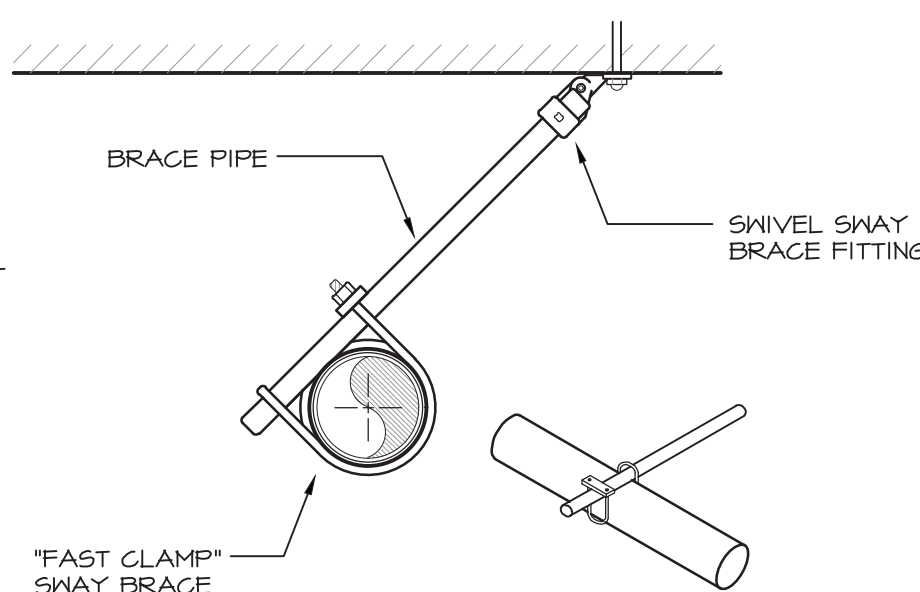


FAST CLAMP RISER BRACE

LONGITUDINAL AND LATERAL BRACE LOCATION
LATERAL BRACE LOCATION



LONGITUDINAL EARTHQUAKE BRACE
NON-THREADED BRACE PIPE



LATERAL EARTHQUAKE BRACE
NON-THREADED BRACE PIPE

3 SEISMIC HANGER DETAILS

NOT TO SCALE

No.	REVISION/SUBMISSION	DATE
Mechanical/Electrical/Plumbing Engineer		
GERARD ASSOCIATES CONSULTING ENGINEERS, D.P.C. 223 MAIN STREET, GOSHEN NY 10924 TEL: (845) 291 1272 info@GerardAssociates.com www.GerardAssociates.com		
GA21063		
Structural Engineer		
SZEWCZAK ASSOCIATES CONSULTING ENGINEERS 200 Fisher Drive Avon, Connecticut phone 860.677.4570 fax 860.676.0814		
Liscum McCormack VanVoorhis LLP 181 CHURCH STREET POUGHKEEPSIE, NEW YORK 12601 ARCHITECTURE PLANNING INTERIORS PHONE 845-452-2268 FAX 845-452-3752		
PROJECT NEW FIRE STATION FOR ROMBOUT FIRE DISTRICT - STATION 2 NYS ROUTE 52, FISHKILL, NY		
DRAWING FIRE PROTECTION: DETAILS		
SEAL	DRAWN BY RL/KC CHECKED BY JT/GH DRAWING NUMBER	PROJECT NUMBER 18142 DATE 11-30-22
FP502		
FILE	H:\2021\GA21063	

GENERAL SPRINKLER NOTES

- SPRINKLER CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE AND OPERATIVE AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM, INCLUDING MAIN VALVES AND TIE-INS WITH FIRE ALARM SYSTEM AS NECESSARY TO COMPLY WITH NFPA 13 SPRINKLER SYSTEM.
- ALL SPRINKLER SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH 2020 FIRE PROTECTION CODE, BUILDING CODE, PLUMBING CODE OF NEW YORK STATE, NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 13, 12, AND ALL APPLICABLE LOCAL CODES.
- SPRINKLER CONTRACTOR SHALL FURNISH AND INSTALL ALL PIPING, VALVES, SPRINKLER HEADS, TESTS, HANGERS, FITTINGS AND MISCELLANEOUS COMPONENTS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER THE SPRINKLER SYSTEM COMPLETE, OPERABLE, AND IN ACCORDANCE WITH APPLICABLE CODES AND GENERALLY ACCEPTED INDUSTRY STANDARDS.
- SPRINKLER CONTRACTOR SHALL COORDINATE LOCATIONS OF ALL PIPING, SPRINKLER HEADS AND EQUIPMENT WITH OTHER PRIME CONTRACTORS TO AVOID CONFLICTS.
- SPRINKLER CONTRACTOR SHALL SEAL AROUND ALL PIPE PENETRATIONS THROUGH FIRE RATED WALLS AND CEILINGS WITH HILTI INTUMESCENT FIRE STOP MATERIALS TO MAINTAIN FIRE AND SMOKE RATINGS.
- SPRINKLER CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP AND MATERIAL INSTALLED UNDER THIS CONTRACT FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF SUBSTANTIAL COMPLETION AND ACCEPTANCE BY THE OWNER, AND AGREES TO REPLACE DEFECTIVE WORK AT NO ADDITIONAL COST TO OWNER DURING THE GUARANTEE PERIOD.
- SPRINKLER CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING ALL EQUIPMENT, SPRINKLER HEADS AND PIPING WITH SIGNED & SEALED HYDRAULIC CALCULATIONS TO ENGINEER AND LOCAL FIRE INSPECTOR FOR APPROVAL PRIOR TO INSTALLATION.
- DEMONSTRATE NEW SPRINKLER SYSTEM TO OWNER AND REVIEW MAINTENANCE PROCEDURES. SUBMIT (2) EQUIPMENT MANUALS TO ENGINEERS. PROVIDE CHROME PLATED ESCUTCHEON PLATES WHERE PIPES PASS THROUGH WALL, FLOORS, AND CEILINGS IN FINISHED AREAS.
- SPRINKLER CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF ALL PIPING IN FINISHED AREAS TO ENSURE CONCEALMENT OF ALL PIPING IN WALLS, FLOORS AND CEILINGS.
- SPRINKLER CONTRACTOR SHALL PAY FOR ALL PERMITS AND INSPECTIONS FEES REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION.
- SPRINKLER CONTRACTOR SHALL NOT DRILL OR CUT ANY STRUCTURAL MEMBERS WITHOUT PERMISSION OF ARCHITECT.
- SPRINKLER CONTRACTOR IS RESPONSIBLE FOR CUTTING, PATCHING AND PAINTING ASSOCIATED WITH SPRINKLER WORK. SEE ARCHITECT'S SPECIFICATIONS AND GENERAL CONDITIONS FOR APPROVED MATERIALS AND METHODS.
- EXACT LOCATION OF FIRE DEPARTMENT CONNECTION, TYPE AND SPRINKLER SYSTEM TEST/DRAIN SHALL BE APPROVED BY LOCAL FIRE DEPARTMENT CHIEF, LOCAL FIRE INSPECTOR OR AUTHORITY HAVING JURISDICTION PRIOR TO INSTALLATION.
- SPRINKLER CONTRACTOR SHALL INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND OBSERVE ALL CLEARANCES.
- ALL CONTROL WIRING SHALL BE IN ACCORDANCE WITH N.E.C. ELECTRICAL CODE AND ALL LOCAL CODES. ALL CONDUCTORS SHALL BE COPPER, 120V/1 - MINIMUM CONDUCTOR SIZE #12. 24V MINIMUM CONDUCTOR SIZE #10. SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR APPROVED MATERIALS AND INSTALLATION METHODS.
- SPRINKLER CONTRACTOR SHALL OBSERVE CLEARANCES TO OBSTRUCTIONS.
- SPRINKLER CONTRACTOR SHALL CHAIN CONTROL VALVE IN THE OPEN POSITION.
- SPRINKLER CONTRACTOR SHALL FURNISH SHOP DRAWINGS INDICATING LOCATIONS OF ALL EQUIPMENT AND DEVICES.
- SPRINKLER CONTRACTOR SHALL FURNISH & INSTALL SPRINKLER CABINET WITH MINIMUM SIX SPARE SPRINKLER HEADS AND WRENCH. INCLUDE SEPARATE CABINET WITH SPRINKLERS AND WRENCH FOR EACH TYPE OF HEAD ON PROJECTION IN ACCORDANCE WITH NFPA 13.
- SPRINKLER CONTRACTOR SHALL FURNISH & INSTALL KNOX BOX AND EXTERIOR INDICATING LIGHTS AS REQUIRED BY AUTHORITY HAVING JURISDICTION.
- SPRINKLER CONTRACTOR SHALL FURNISH COORDINATED SHOP DRAWINGS INDICATING LOCATIONS OF ALL EQUIPMENT AND DEVICES INSTALLED IN CEILINGS. THESE DRAWINGS SHALL BE APPROVED BY ALL CONTRACTORS PRIOR TO INSTALLING ANY EQUIPMENT IN CEILINGS. CONTRACTORS THAT DO NOT FOLLOW SHOP DRAWINGS SHALL BEAR ALL COSTS FOR RELOCATING DEVICES AND EQUIPMENT IN CONFLICT WITH OTHER EQUIPMENT.
- SPRINKLER CONTRACTOR SHALL PROVIDE ACCESS DOORS FOR ALL VALVES CONCEALED IN INACCESSIBLE CEILINGS AND WALLS. SEE ARCHITECTS SPECIFICATIONS FOR APPROVED MANUFACTURERS AND TYPES. ACCESS DOORS SHALL HAVE (1) PRIME COAT AND (2) COATS OF FINISHED PAINT, COLOR AS DIRECTED BY ARCHITECT. ACCESS DOOR SHALL HAVE APPROPRIATE FIRE RATING TO MAINTAIN INTEGRITY OF CEILING AND WALL.
- SPRINKLER CONTRACTOR MAY USE EXTENDED COVERAGE SPRINKLER HEADS WHERE PRESSURE AND FLOW PERMIT BASED ON HYDRAULIC CALCULATIONS.
- SPRINKLER CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING SPRINKLER PIPING EQUIPMENT AND HEAD LOCATIONS WITH HYDRAULIC CALCULATIONS. COORDINATE SPRINKLER HEAD LOCATIONS WITH OTHER CONTRACTORS TO AVOID CONFLICTS. RELOCATE SPRINKLER HEADS TO MEET FIELD CONDITIONS. SHOP DRAWINGS SHALL SHOW SPRINKLER PIPE SIZES, PIPE HANGER REQUIREMENTS, FIRESTOPPING AND NECESSARY DETAILS REQUIRED FOR BUILDING DEPARTMENT AND INSURANCE CARRIER APPROVAL. HYDRAULIC CALCULATIONS SHALL BE BASED ON RESIDUAL FLOW TEST PERFORMED BY THIS CONTRACTOR. SUBMIT SHOP DRAWINGS WITH HYDRAULIC CALCULATION TO ENGINEER FOR APPROVAL. SHOP DRAWINGS THEN SHALL BE SUBMITTED TO BUILDING DEPARTMENT, LOCAL FIRE DEPARTMENT AND INSURANCE CARRIER FOR APPROVAL.
- WHEN INSTALLING SPRINKLER HEADS, THE SPRINKLER CONTRACTOR SHALL PROVIDE THE SHORTEST HYDRAULIC PIPE LENGTH BETWEEN THE FINAL SPRINKLER HEAD LOCATION AND THE BRANCH LINE CONNECTION.
- SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR DRAINING AND FILLING THE NEW SYSTEM AS REQUIRED FOR COMPLETION OF WORK.
- PROVIDE (2) 2½ GALLON PRESSURIZED WATER AND (1) 10 POUND ABC DRY CHEMICAL EXTINGUISHERS FOR EMERGENCY USE DURING CONSTRUCTION.
- SPRINKLER SYSTEM PIPING SHALL BE ALTERED AS NEEDED TO ACCOMMODATE CEILING HEIGHTS, DUCTWORK, LIGHTS AND OTHER PIPING. PROVIDE ALL REQUIRED PIPING AND FITTINGS AS NEEDED TO OFFSET SPRINKLER SYSTEM TO AVOID STRUCTURAL, ARCHITECTURAL, MECHANICAL AND ELECTRICAL INTERFERENCES, WHETHER SHOWN ON THE DRAWINGS OR NOT.
- SPRINKLER HEADS INSTALLED IN HUNG CEILING WILL BE POSITIONED WITH TOLERANCE OF ⅛" OF THE CENTERLINE OF THE TILES. INSTALL SPRINKLER HEADS TIGHT TO THE BOTTOM OF THE HUNG CEILING, WITH CARE THAT THE FINISH IS NOT DAMAGED. WHEN CONCEALED TYPE SPRINKLER HEADS ARE USED, THE COVER PLATES SHALL BE FLUSH WITH THE CEILING PLANE, TOLERANCE GREATER THAN ⅛" IS UNACCEPTABLE.
- SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING START-UP OF ALL NEW EQUIPMENT, CONTROLS, AND ETC. TO ENSURE CORRECT OPERATION OF INSTALLED DEVICES.
- SPRINKLER CONTRACTOR SHALL PROVIDE OWNER WITH CATALOG DATA, OPERATING INSTRUCTIONS, MAINTENANCE INSTRUCTIONS, AND RECORD (AS-BUILT) DRAWINGS OF ALL COMPLETED WORK.
- SPRINKLER CONTRACTOR SHALL PROVIDE ADDITIONAL SPRINKLER HEADS AROUND ALL OBSTRUCTIONS SUCH AS LIGHTS, EQUIPMENT, COLUMNS, AND ETC. AS REQUIRED TO PROVIDE COMPLETE COVERAGE IN ACCORDANCE WITH NFPA 13.
- ALL NEW HOLES IN WALLS AND FLOORS SHALL BE CORE DRILLED BY THIS CONTRACTOR. PRIOR TO CORE DRILLING FLOORS, RADAR SCAN FLOOR SLABS. USE CAUTION WHEN CORE DRILLING TO AVOID DAMAGE TO EQUIPMENT, SYSTEMS, STRUCTURE AND ETC.. ANY ITEMS DAMAGED AS A RESULT OF CORE DRILLING SHALL BE REPAIRED BY THIS CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
- SPRINKLER CONTRACTOR SHALL PROVIDE ALL REQUIRED SIGNAGE FOR FIRE PROTECTION SYSTEM.

SPRINKLER SYSTEM TESTS

- HYDROSTATIC - 200 PSI FOR 2 HOURS WITHOUT LOSS OF PRESSURE.
- SYSTEM OPERATIONAL TESTS - WATER FLOW DETECTING DEVICES.
- MAIN DRAIN VALVE - STATIC AND RESIDUAL PRESSURES.
- SPRINKLER CONTRACTOR SHALL PERFORM ALL SPRINKLER SYSTEM TESTS REQUIRED BY LOCAL FIRE INSPECTOR OR AUTHORITY HAVING JURISDICTION.
- ALL TESTS SHALL BE WITNESSED BY LOCAL FIRE INSPECTOR OR AUTHORITY HAVING JURISDICTION. SUBMIT REPORT ON ALL TESTS TO LOCAL FIRE INSPECTOR AND ENGINEER FOR APPROVAL.

SPRINKLER SYSTEM REQUIREMENTS

OCCUPANCY CLASSIFICATIONS

- NFPA 13 LIGHT HAZARD OCCUPANCY: OFFICE, DAY ROOM & MEETING
- NFPA 13 ORDINARY GROUP I: BOILER ROOM, APPARATUS ROOM, KITCHEN AND STORAGE AREAS.

NET SPRINKLER SERVICE REQUIREMENTS

- NFPA 13 ORDINARY HAZARD GROUP I:
 - MINIMUM WATER SUPPLY (1500 SQFT. x .15 GPM/SQFT.)225 GPM
 - TOTAL COMBINED INSIDE AND OUTSIDE HOSE STREAMS.250 GPM
- MINIMUM 475 GPM

FINAL FLOW BASED ON
APPROVED HYDRAULIC
CALCULATIONS

SPRINKLER SYSTEM REQUIREMENTS

- MINIMUM PRESSURE AT SPRINKLER HEAD SHALL BE 7 PSI UNLESS NOTED OTHERWISE.
- FLOW VELOCITY IN PIPING SHALL NOT EXCEED 20 FPS.
- EQUIVALENT FITTING LENGTHS USED IN HYDRAULIC CALCULATIONS SHALL BE IN ACCORDANCE WITH NFPA 13.
- LIGHT HAZARD MAXIMUM SPRINKLER HEAD PROTECTION AREA: 225 SQFT.
- ORDINARY GROUP I & II MAXIMUM SPRINKLER HEAD PROTECTION AREA: 150 SQFT.
- MAXIMUM FLOOR AREA PROTECTION LIMIT: LIGHT & ORDINARY HAZARD 52,000 SQFT.

CAMO STATIC WATER PRESSURE NYS ROUTE 52

STATIC: 140 PSI

SPRINKLER CONTRACTOR SHALL HIRE INDEPENDENT COMPANY TO PERFORM RESIDUAL FLOW TEST ON MUNICIPAL WATER SYSTEM. SPRINKLER SYSTEM HYDRAULIC CALCULATIONS SHALL BE BASED ON FLOW TEST RESULTS.

FIRE PROTECTION EQUIPMENT SCHEDULE

SYMBOL	MANUFACTURER	CATALOG #	DESCRIPTION
K	TYCO	SERIES TY-FRB	SIDEWALL SPRINKLER, QUICK RESPONSE, K=5.6 - "INTERMEDIATE" TEMPERATURE CLASSIFICATION (175°F). RECESSED WHITE ESCUTCHEON PLATE.
⊙	TYCO	SERIES RFII	CONCEALED PENDENT SPRINKLER, QUICK RESPONSE, K=5.6 -"ORDINARY" TEMPERATURE CLASSIFICATION (155°F). COLOR WHITE.
⊙ A	TYCO	SERIES TY-FRB	PENDENT SPRINKLER, RECESSED ESCUTCHEON, QUICK RESPONSE, K=5.6 -"INTERMEDIATE" TEMPERATURE CLASSIFICATION (175°F). CHROME OR COLOR ESCUTCHEON AND SPRINKLER HEAD AS DIRECTED BY ARCHITECT.
⊙ B	TYCO	SERIES TY-FRB	UPRIGHT/PENDANT SPRINKLER, QUICK RESPONSE, K=5.6 -"INTERMEDIATE" TEMPERATURE CLASSIFICATION (175°F). NATURAL BRASS, CHROME OR COLOR AS DIRECTED BY OWNER. WITH METAL WIRE GUARD
			SPRINKLER PIPING ABOVEGROUND, SCHEDULE 40 STEEL WITH SCREWED JOINTS UP TO 2" AND SCHEDULE 10 ABOVE 2" USE MECHANICAL GROOVE COUPLING.
DCV-1	WATTS	TT4	6" DOUBLE CHECK-VALVE ASSEMBLY WITH UL/FM APPROVED 054Y SUPERVISED GATE VALVES. APPROVED BY UNIVERSITY OF SOUTHERN CALIFORNIA.

NOTES:

- SPRINKLER HEADS SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.
- PROVIDE METAL WIRE GUARDS WHERE SPRINKLERS ARE SUBJECT TO DAMAGE.
- ALL HEAT GENERATING EQUIPMENT WHICH CAN AFFECT THE TEMPERATURE RATING OF THE SPRINKLER HEADS SHALL BE CLEARLY IDENTIFIED ON THE SHOP DRAWINGS. COORDINATE HEATING EQUIPMENT LOCATIONS WITH MECHANICAL PLANS.
- SPRINKLER CONTRACTOR SHALL FURNISH & INSTALL SHIELDS ON SPRINKLERS THAT CANNOT BE SUFFICIENTLY SPACED TO AVOID DISCHARGE INTERACTION.
- FINAL K-FACTOR OF SPRINKLER HEADS BASED UPON HYDRAULIC CALCULATION REQUIREMENTS.

No.	REVISION/SUBMISSION	DATE
Mechanical/Electrical/Plumbing Engineer		
<div><div>GERARD ASSOCIATES</div><div>CONSULTING ENGINEERS, D.P.C. 223 MAIN STREET, GOSHEN NY 10924 TEL: (845) 291 1272 info@GerardAssociates.com www.GerardAssociates.com</div></div>		
GA21063		
Structural Engineer		
<div><div>SZEWCZAK ASSOCIATES</div><div>CONSULTING ENGINEERS 200 Fisher Drive Avon, Connecticut phone 860.677.4570 fax 860.676.0814</div></div>		
<div><div>Liscum McCormack VanVoorhis LLP</div><div>ARCHITECTURE 181 CHURCH STREET POUGHKEEPSIE, NEW YORK 12601 PLANNING INTERIORS PHONE 845-452-2268 FAX 845-452-3752</div></div>		
PROJECT NEW FIRE STATION FOR ROMBOUT FIRE DISTRICT - STATION 2 NYS ROUTE 52, FISHKILL, NY		
DRAWING FIRE PROTECTION: EQUIPMENT SCHEDULES		
SEAL	DRAWN BY RL/KC CHECKED BY JT/GH DRAWING NUMBER	PROJECT NUMBER 18142 DATE 11-30-22
		FP600
FILE	H:\2021\GA21063	