

FIRE PROTECTION GENERAL NOTES:

GENERAL:
THESE GENERAL NOTES PRESENT AND/OR SUMMARIZE KEY PRODUCT INFORMATION FOR THE PLAN READER'S CONVENIENCE. SEE PLANS AND SPECIFICATIONS FOR FURTHER REQUIREMENTS.

WORK COVERED BY THIS DOCUMENT SHALL INCLUDE ALL LABOR, MATERIAL, PRODUCTS, AND SERVICES FOR, AND INCIDENTAL TO, INSTALLATION OF COMPLETE AND OPERATING HVAC SYSTEMS DRAWN OR SPECIFIED.

ALL WORK SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES INCLUDING, BUT NOT LIMITED TO, NFPA 13, NFPA 14, NFPA 20, NFPA 22, NFPA 24, 2018 INTERNATIONAL BUILDING CODE w/ AMENDMENTS, AND 2018 INTERNATIONAL FIRE CODE w/ AMENDMENTS.

ALL EQUIPMENT AND MATERIALS SHALL BE AS SPECIFIED OR "APPROVED EQUAL" BY THE ARCHITECT OR ENGINEER.

SPRINKLER PIPE SIZING, PIPE ROUTING, SPRINKLER LOCATIONS, AND PIPE SUPPORTS/BRACING BY SPRINKLER CONTRACTOR. PROVIDE SHOP DRAWINGS, HYDRAULIC CALCULATIONS, AND EQUIPMENT SUBMITTALS FOR REVIEW BY ENGINEER, AHJ, AND OWNER. SEE DIVISION 21 SPECIFICATIONS, IF APPLICABLE.

EXACT LOCATIONS AND ROUGHING REQUIREMENTS FOR PIPING AND EQUIPMENT SHALL BE DETERMINED FROM ARCHITECTURAL DRAWINGS, LARGE SCALE ARCHITECTURAL DETAILS, AND APPROVED MANUFACTURER'S SHOP DRAWINGS. PARTICULAR ATTENTION SHALL BE DIRECTED TO FIXTURES OR EQUIPMENT FURNISHED UNDER OTHER DIVISIONS.

SEE ARCHITECTURAL PLANS FOR WALL CONSTRUCTION AND REFLECTED CEILING PLANS.

EXACT LOCATION OF PIPING SHALL BE DETERMINED BY JOB CONDITIONS. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF HIS WORK WITH THAT OF OTHER TRADES AND ARRANGE PIPING TO CLEAR STRUCTURAL MEMBERS AND DUCTWORK.

IN FIRE WALLS, PACK ANNULAR SPACE BETWEEN PIPE AND WALL WITH FIRESTOP COMPOUND IN ACCORDANCE WITH ITS UL LISTING.

PIPING AND FITTINGS:
UNDERGROUND FIRE-SUPPRESSION WATER-SERVICE PIPING SHALL BE MECHANICAL-JOINT, DUCTILE-IRON PIPE, MECHANICAL-JOINT, DUCTILE- OR GRAY-IRON, STANDARD-PATTERN OR DUCTILE-IRON, COMPACT-PATTERN FITTINGS, GLANDS, GASKETS, AND BOLTS; AND GASKETED JOINTS.

WET-PIPE SPRINKLER SYSTEM, NPS 2 AND SMALLER, SHALL BE STANDARD-WEIGHT, BLACK-STEEL PIPE WITH THREADED ENDS; UNCOATED, GRAY-IRON THREADED FITTINGS; AND THREADED JOINTS.

WET-PIPE SPRINKLER SYSTEM, NPS 2-1/2 AND LARGER, SHALL BE SCHEDULE 10, BLACK-STEEL PIPE WITH ROLL-GROOVED ENDS; UNCOATED, GROOVED-END FITTINGS FOR STEEL PIPING; GROOVED-END-PIPE COUPLINGS FOR STEEL PIPING; AND GROOVED JOINTS.

DRY-PIPE SPRINKLER SYSTEM, NPS 2 AND SMALLER, SHALL BE STANDARD-WEIGHT, GALVANIZED-STEEL PIPE WITH THREADED ENDS; GALVANIZED, GRAY-IRON THREADED FITTINGS; AND THREADED JOINTS.

DRY-PIPE SPRINKLER SYSTEM, NPS 2-1/2 AND LARGER, SHALL BE STANDARD-WEIGHT, GALVANIZED-STEEL PIPE WITH CUT-GROOVED ENDS; GALVANIZED, GROOVED-END FITTINGS FOR STEEL PIPING; GROOVED-END-PIPE COUPLINGS FOR STEEL PIPING; AND GROOVED JOINTS.

LISTED FIRE PROTECTION VALVES:
VALVES SHALL BE UL LISTED AND FM APPROVED, WITH MINIMUM 175-PSIG PRESSURE RATING. VALVES FOR GROOVED-END PIPING MAY BE FURNISHED WITH GROOVED ENDS INSTEAD OF TYPE OF ENDS SPECIFIED.

CHECK VALVES, NPS 2 OR SMALLER, SHALL BE UL 312, SWING CHECK TYPE, BRONZE BODY, AND THREADED ENDS.

CHECK VALVES, NPS 2-1/2 OR LARGER, SHALL BE UL 312, SWING CHECK TYPE, CAST OR DUCTILE IRON BODY, AND FLANGED OR GROOVED ENDS.

OS&Y GATE VALVES, NPS 2 AND SMALLER, SHALL BE UL 262, BRONZE BODY, EXTERNAL SUPERVISORY SWITCH, AND THREADED ENDS.

OS&Y GATE VALVES, NPS 2-1/2 AND LARGER, SHALL BE UL 262, CAST OR DUCTILE IRON BODY, EXTERNAL SUPERVISORY SWITCH, AND FLANGED OR GROOVED ENDS.

INDICATING-TYPE VALVES, NPS 2 AND SMALLER, SHALL BE UL 1091, BALL OR BUTTERFLY TYPE, BRONZE BODY, INTERNAL SUPERVISORY SWITCH, AND THREADED ENDS.

INDICATING-TYPE VALVES, NPS 2-1/2 AND LARGER, SHALL BE UL 1091, BUTTERFLY TYPE, CAST OR DUCTILE IRON BODY, INTERNAL SUPERVISORY SWITCH, AND FLANGED OR GROOVED ENDS.

SPECIALTY VALVES:
VALVES SHALL BE UL LISTED AND FM APPROVED, WITH MINIMUM 175-PSIG PRESSURE RATING. VALVES FOR GROOVED-END PIPING MAY BE FURNISHED WITH GROOVED ENDS INSTEAD OF TYPE OF ENDS SPECIFIED.

AUTOMATIC (BALL DRIP) DRAIN VALVES SHALL BE UL 1726, AUTOMATIC DRAINING, BALL CHECK, NPS 3/4, AND THREADED ENDS.

SPRINKLERS:
SPRINKLERS SHALL BE UL LISTED OR FM APPROVED, WITH MINIMUM 175-PSIG PRESSURE RATING.

AUTOMATIC SPRINKLERS WITH HEAT-RESPONSIVE ELEMENT SHALL BE UL 199, NOMINAL 1/2-INCH ORIFICE WITH DISCHARGE COEFFICIENT K OF 5.6, AND FOR "ORDINARY" TEMPERATURE CLASSIFICATION RATING UNLESS OTHERWISE INDICATED OR REQUIRED BY APPLICATION.

SPRINKLER FINISHES SHALL BE CHROME PLATED, BRONZE, OR PAINTED, AS INDICATED.

SPRINKLER ESCUTCHEONS SHALL BE CHROME-PLATED STEEL, ONE PIECE, FLAT.

SPRINKLER GUARDS SHALL BE UL 199, WIRE CAGE WITH FASTENING DEVICE FOR ATTACHING TO SPRINKLER.

ALARM DEVICES:
DEVICES SHALL BE UL LISTED OR FM APPROVED. ALARM-DEVICE TYPES SHALL MATCH PIPING AND EQUIPMENT CONNECTIONS.

ELECTRICALLY OPERATED ALARM BELL SHALL BE UL 464, VIBRATING, METAL ALARM BELL; 8-INCH MINIMUM DIAMETER; RED-ENAMEL FACTORY FINISH, SUITABLE FOR OUTDOOR USE.

WATER-FLOW INDICATORS SHALL BE UL 346; ELECTRICALLY SUPERVISED, TWO SINGLE POLE, DOUBLE THROW CIRCUIT SWITCHES FOR ISOLATED ALARM AND AUXILIARY CONTACTS, 7A, 125VAC, AND 0.25AM 24VDC, COMPLETE WITH FACTORY-SET, FIELD-ADJUSTABLE RETARD ELEMENT TO PREVENT FALSE SIGNALS AND TAMPERPROOF COVER THAT SENDS SIGNAL IF REMOVED, PADDLE OPERATED, 250 PSIG PRESSURE RATING.

VALVE SUPERVISORY SWITCHES SHALL BE UL 346; ELECTRICALLY SUPERVISED, SINGLE POLE, DOUBLE THROW SWITCH WITH NORMALLY CLOSED CONTACTS, DESIGNED TO SIGNAL THAT CONTROLLED VALVE IS IN OTHER THAN FULLY OPEN POSITION.

SUBMITTALS:
PROVIDE SHOP DRAWINGS, HYDRAULIC CALCULATIONS, AND EQUIPMENT SUBMITTALS FOR REVIEW BY ENGINEER, AHJ, AND OWNER.

HAZARD CLASSIFICATION:

ALL AREAS SHALL BE REGARDED AS LIGHT HAZARD UNLESS NOTED OTHERWISE.

L.H. - LIGHT HAZARD, PER NFPA 13

OH-1 - ORDINARY HAZARD, GROUP 1, PER NFPA 13

LEGEND:

FS - FIRE SPRINKLER PIPING

NS - NON-SPRINKLERED AREA

FIRE BARRIER LEGEND:

----- 1 HOUR FIRE BARRIER

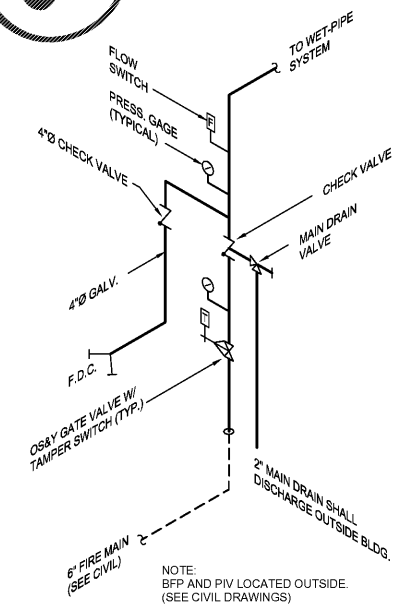
DESIGN CRITERIA:

1. TYPES OF SYSTEMS:
- WET PIPE
2. DENSITY / DESIGN AREA:
- LIGHT HAZARD: 0.10 GPM/FT² OVER H.M.D. 1500 FT²
- ORD. HAZARD, GR. 1: 0.15 GPM/FT² OVER H.M.D. 1500 FT²
3. SPRINKLERS SHALL BE:
- 5.6 K-FACTOR AND A TEMPERATURE RATING OF 165°F
- UPRIGHT TYPE FOR ROOMS WITHOUT CEILINGS
- RECESSED PENDENT TYPE FOR ROOMS WITH CEILINGS
- SIDEWALL TYPE FOR WALL MOUNTING
- UPRIGHT, PENDENT, AND SIDEWALL, DRY TYPE FOR SPACES SUBJECT TO FREEZING
- WHITE WITH WHITE ESCUTCHEON IN FINISHED SPACES EXPOSED TO VIEW, ROUGH BRONZE IN UNFINISHED SPACES NOT EXPOSED TO VIEW
4. MAXIMUM PROTECTION AREA PER SPRINKLER SHALL NOT EXCEED 225 SQ. FT. FOR LIGHT HAZARD AND 130 SQ. FT. FOR ORDINARY HAZARD.
5. PROVIDE SEISMIC BRACING PER NFPA AND IBC.
6. HOSE ALLOWANCE SHALL BE 250 GPM FOR ORDINARY HAZARD OCCUPANCIES.
7. COMPLY WITH NFPA 13 FOR ABOVEGROUND PIPING AND NFPA 24 FOR UNDERGROUND PIPING.

FIRE FLOW TEST DATA:

1. TEST DATE: 09/28/2020
2. PERFORMED BY: STEPHEN MURPHY OF NORTH AUGUSTA
3. LOCATION OF RESIDUAL FIRE HYDRANT R: W. MARTINTOWN ROAD (ONSITE), HYDRANT #386
4. LOCATION OF FLOW FIRE HYDRANT F: CLAY STREET & ALANTIS AVENUE, HYDRANT #55
5. STATIC PRESSURE OF RESIDUAL FIRE HYDRANT R: 74 PSIG
6. MEASURED FLOW AT FLOW FIRE HYDRANT F: 700 GPM
7. RESIDUAL PRESSURE AT RESIDUAL HYDRANT R: 72 PSIG
8. CONTRACTOR SHALL VERIFY AVAILABLE FIRE FLOW WITH NEW FLOW TEST FOR DESIGN PURPOSES, IF ABOVE DATA IS MORE THAN 6 MONTHS OLD.
9. ESTIMATED FIRE SUPPRESSION WATER DEMAND AT POC: 800 GPM AT 45 PSI.

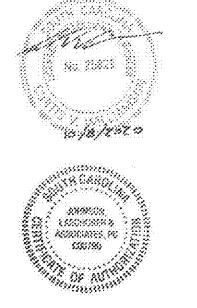
Order Plans @ www.LDILine.com



1 FIRE SPRINKLER RISER SCHEMATIC
NO SCALE



CLIENT: CITY OF NORTH AUGUSTA, SC
100 GEORGIA AVENUE, NORTH AUGUSTA, SC 29841
PROJECT NAME: NORTH AUGUSTA FIRE STATION 1 RELOCATION
PROJECT LOCATION: 311 W. MARTINTOWN ROAD, NORTH AUGUSTA, SC 29841



REV	DATE	BY	DESCRIPTION
0	10/08/20	CVW	ISSUED FOR BID

PROJECT NO. 3057.2003
DRAWN BY: WBR
CHECKED BY: CVW
DATE: 10/08/2020

SHEET TITLE:
FIRE PROTECTION GENERAL NOTES AND DETAILS

SCALE: AS NOTED
DRAWING NO. **F-001** REV. **0**



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