

FIRE PROTECTION LEGEND

- NON-SPRINKLERED SPACE
- LIGHT HAZARD**
WET PIPE SPRINKLER PROTECTION
0.10 GPM/SQ.FT. OVER 1500 SQ.FT., 250 GPM
HOSE ALLOWANCE
K-FACTOR: 5.6
HOSE DEMAND: 100 GPM
- ORDINARY HAZARD GROUP 2**
WET PIPE SPRINKLER PROTECTION
0.20 GPM/SQ.FT. OVER 1500 SQ.FT., 250 GPM
HOSE ALLOWANCE
K-FACTOR: 8.0
HOSE DEMAND: 250 GPM
- EXTRA HAZARD GROUP 1**
WET PIPE SPRINKLER PROTECTION
0.30 GPM/SQ.FT. OVER 2500 SQ.FT., 250 GPM
HOSE ALLOWANCE
K-FACTOR: 11.2
HOSE DEMAND: 500 GPM

GENERAL NOTES

1. DESIGN AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE GEORGIA STATE MINIMUM STANDARD BUILDING CODE WITH 2017 REVISIONS, GEORGIA STATE MINIMUM STANDARD FIRE CODE WITH 2014 REVISIONS, 2013 EDITION OF NFPA 14, "STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS", 2011 EDITION OF NFPA 16, "STANDARD FOR THE INSTALLATION OF FOAM-WATER SPRINKLER AND FOAM-WATER SPRAY SYSTEMS", 2013 EDITION OF NFPA 13, "STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEM" AS AMENDED BY 120-3-3, 2013 EDITION OF NFPA 72, "NATIONAL FIRE ALARM CODE" AS AMENDED BY 120-3-3, AND 2017 EDITION OF NFPA 70, "NATIONAL ELECTRICAL CODE" AS AMENDED BY 120-3-3, AND 2016 EDITION OF NFPA 409, "STANDARD ON AIRCRAFT HANGARS".
2. THE INTENT AND EXTENT OF THE FIRE PROTECTION SYSTEM DESIGN IS PERFORMANCE-BASED IN NATURE, AND IS DIAGRAMMATIC ONLY. IT IS NOT INTENDED TO SHOW EVERY PIPE, FITTING, DEVICE, APPLIANCE, COMPONENT, ETC. FIRE ALARM FLOOR PLANS AND RISER DIAGRAM ARE DIAGRAMMATIC AND NOT INTENDED TO SHOW EACH AND EVERY COMPONENT, DEVICE, APPLIANCE, ETC. CONDUIT PATHWAYS AND INTERCONNECTIONS SHALL BE DETERMINED BY THE BUILDING FEATURES, NFPA 70, NFPA 72, SYSTEM MANUFACTURER REQUIREMENTS AND RECOMMENDATIONS.
3. CONTRACTOR SHALL VISIT JOB SITE PRIOR TO BID WITH THE PROJECT DOCUMENTS AND SPECIFICATIONS TO BECOME FAMILIAR WITH THE SITE AND SCOPE OF WORK. NOTIFY ENGINEER OF RECORD WITH ANY DISCREPANCIES OUTSIDE THIS DESIGN INTENT. ANY CHANGE ORDER REQUEST AS A RESULT OF COORDINATION BETWEEN TRADES SHALL BE DENIED.
4. ADHERE TO AND OBTAIN ALL PERMITS, LICENSES AND ALL STATE AND LOCAL GOVERNMENT REQUIREMENTS.
5. DO NOT SCALE PLANS FOR THE PURPOSE OF ESTABLISHING DIMENSIONS. FIELD DIMENSIONS GOVERN.
6. FIRE STOP ALL PENETRATIONS OF SMOKE/FIRE PARTITIONS. FIRE STOPPING SHALL BE OF UL LISTED ASSEMBLY.

FIRE SUPPRESSION NOTES

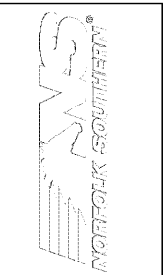
1. CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS WITH HYDRAULIC CALCULATIONS, MATERIAL SPECIFICATION BROCHURE AND A COPY OF THEIR WATER SUPPLY RESULTS TO OWNER'S TECHNICAL REPRESENTATIVE FOR REVIEW PRIOR TO COMMENCING FABRICATION AND INSTALLATION.
2. CONTRACTOR SHALL PERFORM A WATER FLOW TEST PRIOR TO DEVELOPMENT OF THEIR SHOP DRAWINGS AND HYDRAULIC CALCULATIONS TO CONFIRM THE AVAILABLE WATER SUPPLY. THE WATER FLOW TEST INFORMATION SHALL BE WITHIN 12 MONTHS OF SHOP DRAWING AND HYDRAULIC CALCULATION SUBMITTAL.
3. ANY ADDITIONAL OFFSETS OR FITTINGS REQUIRED FOR PROPER INSTALLATION, COORDINATION WITH OTHER TRADES, AND/OR TO MAINTAIN PROPER CLEARANCES SHALL BE PROVIDED FOR A COMPLETE, WORKING AND CODE COMPLIANT SYSTEM.
4. NOT ALL PIPING, VALVES AND APPURTENANCES ARE SHOWN ON THE PLANS. REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.
5. ALL CONTROL VALVES ON THE FIRE PROTECTION SYSTEM SHALL BE ELECTRICALLY SUPERVISED PER NFPA 13. COORDINATE THE TYPE AND EXACT LOCATION OF FLOW AND SUPERVISORY SWITCHES BETWEEN FIRE PROTECTION AND FIRE ALARM CONTRACTORS.
6. FIRE SUPPRESSION SYSTEM(S) SHALL BE DESIGNED FOR A MAXIMUM WORKING PRESSURE OF 175 PSI IN ACCORDANCE WITH NFPA 13.
7. FIRE SUPPRESSION SYSTEM(S) SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH NFPA 13, 14, 16, AND 409.
8. ALL VALVES SHALL HAVE A PERMANENTLY AFFIXED SIGN PER NFPA 13 INDICATING ITS LOCATION AND SECURED TO THE VALVE WITH SUITABLE CHAIN.
9. HANGER MATERIAL, SPACING AND METHOD OF ATTACHMENT SHALL BE IN ACCORDANCE WITH NFPA 13, 14, 16, 409, AND MANUFACTURER'S REQUIREMENTS.
10. MAINTAIN A MINIMUM OF 18" CLEARANCE BELOW SPRINKLER DEFLECTOR(S) AND ANY PERMANENT OR TEMPORARY OBSTRUCTION(S) PER NFPA 13.
11. FIRE SPRINKLER CONTRACTOR SHALL INSTALL SYSTEM PIPING AND COMPONENTS IN A WORKMANSHIP LIKE MANNER. CHANGES IN INSTALLATION AS A RESULT OF POOR WORKMANSHIP SHALL BE AS DIRECTED BY OWNER'S TECHNICAL REPRESENTATIVE AND SHALL BE AT NO ADDITIONAL COST TO THE OWNER.
12. ONLY LISTED AND APPROVED DEVICES AND MATERIALS AS SPECIFIED IN NFPA 13, 14, 16, AND 409 SHALL BE INSTALLED THROUGHOUT THE SYSTEM.
13. ALL SPRINKLERS SHALL BE INSTALLED ACCORDING TO THEIR LISTED SPACING AND OBSTRUCTION REQUIREMENTS.
14. CONTRACTOR SHALL COORDINATE INSTALLATION OF ALL FIRE PROTECTION DEVICES WITH ALL OTHER TRADES. FAILURE TO COMPLY WITH THE RISK OF THE CONTRACTOR.
15. SPRINKLERS SHALL BE CEILING MOUNTED IN CEILING TILES IN SPACES WITH LAY-IN CEILINGS, WITHIN A 1" TOLERANCE IN ANY DIRECTION.
16. PROVIDE SYSTEM(S) WITH FLUSHING CONNECTIONS PER NFPA 13, 14, 16, AND 409.
17. PROVIDE A PERMANENTLY ATTACHED HYDRAULIC PLACARD TO THE SPRINKLER RISER STATING THE REQUIRED DESIGN CRITERIA FOR DESIGNED SYSTEM PER NFPA 13 AND 16.
18. AT LEAST SIX (6) SPARE SPRINKLERS OF EACH TYPE, TEMPERATURE, AND ORIFICE SIZE USED IN THE SYSTEM INCLUDING A SPECIAL WRENCH FOR EACH FIRE SPRINKLER SHALL BE KEPT IN A CABINET WHERE AMBIENT TEMPERATURE WILL AT NO TIME EXCEED 100°F PER NFPA 13, 14, AND 16.
19. SPRINKLER SYSTEM PIPING WILL NOT REQUIRE SEISMIC BRACING.
20. PIPE, FITTING, SPRINKLERS, HANGERS, AND COMPONENTS INSTALLED IN CORROSIVE ATMOSPHERES (I.E COMPARTMENTS CONTAINING CORROSIVE MATERIALS AND/OR FUMES, OR EXTERIOR WEATHER CONDITIONS, ETC.) SUCH AS DRAIN PIPES, HANGER ALL-THREAD ROD, ETC., SHALL BE AN APPROVED NON GALVANIZED CORROSION RESISTANT MATERIAL.
21. QUICK RESPONSE SPRINKLER REDUCTIONS ARE PERMITTED PER NFPA 13 SECTION 11.2.3.2.3. FOR WET-PIPE SYSTEM ONLY.
22. PROVIDE AIR VENTING OF THE WET-PIPE SPRINKLER SYSTEM PER NFPA 13 SECTION 7.1.5 AT A LOCATION NEAR THE HIGH POINT OF THE SYSTEM.
23. REFER TO FIRE SPRINKLER SYSTEM SPECIFICATIONS 21 05 17, 21 05 18, 21 05 23, 21 05 29, 21 11 19, 21 12 13, 21 13 13, AND 21 13 39 FOR ADDITIONAL REQUIREMENTS AND INFORMATION.

FIRE ALARM NOTES

1. CONTRACTOR SHALL SUBMIT COMPLETE BATTERY CALCULATIONS, VOLTAGE DROP CALCULATIONS, MATERIAL SPECIFICATION BROCHURE, AND SHOP DRAWINGS TO OWNER'S TECHNICAL REPRESENTATIVE FOR REVIEW PRIOR TO COMMENCING FABRICATION AND INSTALLATION. FAILURE TO COMPLY IS AT THE RISK OF THE CONTRACTOR.
2. REFER TO PLAN DRAWINGS AND PROJECT DOCUMENTS FOR APPROXIMATE FIRE ALARM SYSTEM QUANTITIES AND LOCATIONS, NOT ALL SITE CONDITIONS ARE SHOWN. FIRE ALARM CONTRACTOR SHALL VISIT JOB SITE WITH ALL PROJECT DOCUMENTS PRIOR TO BID TO BECOME FAMILIAR WITH PROJECT DESIGN, INSTALLATION, TESTING AND COMMISSIONING REQUIREMENTS. SITE CONDITIONS FOR NEW SYSTEM INSTALLATION, TO PROVIDE A COMPREHENSIVE AND COMPLETE BID, CODE COMPLIANT SYSTEM DESIGN, INSTALLATION, TESTING, COMMISSIONING AND APPROVAL REQUIREMENTS.
3. CONTRACTOR SHALL PROVIDE AUDIBILITY AND INTELLIGIBILITY PER NFPA 72 REQUIREMENTS.
4. FIRE ALARM SIGNALS AND EMERGENCY COMMUNICATIONS SHALL TAKE PRECEDENCE OVER ALL OTHER SIGNALS, SUCH AS BUT NOT LIMITED TO PUBLIC ADDRESS SYSTEMS.
5. ALL NOTIFICATION APPLIANCES CIRCUITS (NAC) SHALL PERFORM TO CLASS "B" AS DEFINED BY NFPA 70 AND NFPA 72.
6. ALL SIGNALING LINE CIRCUITS (SLC) SHALL PERFORM TO CLASS "B" AS DEFINED BY NFPA 70 AND NFPA 72.
7. ALL INDICATING DEVICE CIRCUITS SHALL PERFORM TO CLASS "B" AS DEFINED BY NFPA 70 AND NFPA 72.
8. THE INSTALLATION OF WIRING BETWEEN THE RACP AND BELLY MODULES OR APPLIANCES SHALL PERFORM TO CLASS "B" AS DEFINED BY NFPA 70.
9. CONDUCTORS FOR THE FIRE ALARM SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 70. THE CONDUCTORS SHALL NOT BE INSTALLED WITH CONDUCTORS OF LIGHTNING OR POWER SYSTEMS. THE SUM OF THE CROSS-AREA OF INDIVIDUAL CONDUCTORS SHALL NOT EXCEED 40% OF THE INTERIOR CROSS SECTION OF THE CONDUIT. ALL FIRE ALARM SYSTEM CONDUIT SHALL NOT BE LESS THAN 3/4" EXPOSED WIRING IS ACCEPTABLE AT CEILING LEVEL WITHIN PLENUM. EXPOSED WIRING SHALL BE PLENUM RATED.
10. WALL MOUNTED FIRE ALARM DEVICES IN UNFINISHED AREAS MAY BE SURFACED MOUNTED, THE CONDUIT MAY BE INSTALLED EXPOSED ON WALLS AND CEILINGS.
11. IN FINISHED AREAS, WALL MOUNTED DEVICES SHALL BE SURFACE MOUNTED. THE CONDUIT SHALL BE INSTALLED CONCEALED IN THE WALLS AND CEILINGS UNLESS REFERENCED AS CEILING MOUNTED.
12. ELECTRICAL CONTRACTORS SHALL COORDINATE WITH FIRE ALARM VENDOR FOR SYSTEM OPERATING INSTRUCTIONS AND WIRING DIAGRAMS.
13. ALL DUCT DETECTORS SHALL BE PROVIDED WITH REMOTE STATUS INDICATION. PROVIDE INDICATING LAMP FOR ALL CONCEALED DETECTORS.
14. DUCT SMOKE SENSORS SHALL BE IN ACCORDANCE WITH NFPA 72, 90A, AND AS INDICATED ON THE CONTRACT DOCUMENTS.
15. DUCT DETECTORS SHALL BE PROVIDED IN SUPPLY AIR SYSTEMS WITH A DESIGN CAPACITY GREATER THAN 2,000-CFM. ACCESS TO DETECTORS SHALL BE PROVIDED FOR INSPECTION AND MAINTENANCE PURPOSES. ACTUATION OF THE DUCT DETECTOR SYSTEM SHALL SHUT DOWN ALL OPERATIONAL CAPABILITIES OF THE AFFECTED UNIT.
16. FIRE ALARM MANUAL PULL STATIONS AT DOOR OPENINGS SHALL BE WITHIN 5' - 0" HORIZONTALLY OF THE DOOR OPENING.
17. PROVIDE SYNCHRONIZATION FOR ALL NEW AUDIBLE (SPEAKER) AND VISIBLE (STROBE) NOTIFICATION APPLIANCES WHERE THERE ARE MORE THAN TWO DEVICES WITHIN A FIELD OF VIEW TO COMPLY WITH THE REQUIREMENTS OF NFPA 72.
18. PROVIDE TRANSIENT VOLT SURGE SUPPRESSION DEVICE WHERE CIRCUITS PENETRATE THE BUILDING ENVELOPE AND, FIRE ALARM EQUIPMENT SUPPLIED FROM THE BUILDING ELECTRICAL SYSTEM, (I.E DOOR HOLDERS, NAC BOOSTER PANELS, ETC), IN ACCORDANCE WITH NFPA 70 AND NFPA 72 REQUIREMENTS.
19. STROBE FOR VISUAL FIRE ALARM APPLIANCES SHALL HAVE WHITE/ CLEAR LENS WITH RED HOUSING AND BE LABELED "FIRE".
20. INSTALL SMOKE DETECTORS NO CLOSER THAN 3' - 0" TO HVAC AIR SUPPLY DIFFUSERS
21. ALL FIRE ALARM PANELS AND EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH NFPA 70 ARTICLE 250 AND 800 WITH A MAXIMUM OF 25 OHMS RESISTANCE.
22. CONTRACTOR SHALL PROVIDE A DOCUMENTATION CABINET AT THE SYSTEM CONTROL UNIT IN THE BUILDING WITH ALL REQUIRED DOCUMENTATION AND SOFTWARE REQUIRED BY NFPA 72 SECTIONS 7.7.2 AND 23.2.2.
23. REFER TO ADDRESSABLE FIRE ALARM SYSTEM SPECIFICATION 28 46 21.11 FOR ADDITIONAL REQUIREMENTS AND INFORMATION

FIRE ALARM LEGEND

- FIRE ALARM CONTROL PANEL
- DIGITAL ALARM COMMUNICATOR TRANSMITTER
- FIRE ALARM ANNUNCIATOR
- FIRE ALARM BATTERY CABINET
- DIVERTER VALVE CONTROL PANEL
- FIRE ALARM CLEAR VISUAL STROBE AND HORN. WALL MOUNT AT 80" AFF TO BOTTOM OF LENS OR 6" BELOW CEILING, WHICHEVER IS LOWER AND NOT GREATER THAN 96". C = CEILING MOUNTED DEVICE. WP = WEATHER PROOF
- FIRE ALARM CLEAR STROBE. CEILING MOUNTED. WP = WATERPROOF
- FIRE ALARM CLEAR STROBE. WALL MOUNT AT 80" AFF TO BOTTOM OF LENS OR 6" BELOW CEILING, WHICHEVER IS LOWER AND NOT GREATER THAN 96". NUMBER INDICATES CANDELA LEVEL.
- MANUAL FIRE ALARM PULL STATION, MOUNT 42" - 48" AFF TO TOP OF HANDLE
- FIRE ALARM MONITORING MODULE
- RELAY MODULE
- FIRE ALARM CONTROL MODULE
- SMOKE DETECTOR - PHOTOELECTRIC
- VALVE SUPERVISORY SWITCH
- WATER FLOW DETECTOR SWITCH
- SURGE SUPPRESSOR
- SOLENOID VALVE



DATE	DESCRIPTION	MARK

DESIGNED BY: BEN	DRAWN BY: JAC	CHECKED BY: MS	SUBMITTED BY: AP	ISSUED FOR CONSTRUCTION: 13/07/2021
OWNER REPRESENTATIVE: NORFOLK SOUTHERN 1200 PEACOCKREE STREET, NE ATLANTA, GEORGIA 30309	DESIGNER'S QUALIFICATION: REGISTERED PROFESSIONAL ENGINEER TYPE 16 - ELECTRICAL THE STATE BOARD OF PROFESSIONAL ENGINEERS 100 W. PINE STREET, SUITE 1000 ATLANTA, GEORGIA 30303 PHONE (404) 525-7900 FAX (404) 525-7901 JOSNO: 119057	POND CORPORATE AIRCRAFT HANGAR FOR NORFOLK SOUTHERN CORPORATION FULTON COUNTY AIRPORT - BROWN FIELD (FTY) 3855 AVIATION CIRCLE, SUITE 200 ATLANTA, GEORGIA 30338		

FIRE PROTECTION GENERAL NOTES & LEGEND

SHEET ID
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