



- FIRE PROTECTION SYSTEM DESIGN CRITERIA
1. DESIGN OF WATER BASED FIRE PROTECTION SYSTEMS:

A. THE FIRE PROTECTION DESIGN INCLUDES AUTOMATIC SPRINKLER SYSTEM DESIGN AND DEDICATED FIRE PROTECTION WATER SERVICE. SEE SITE (CIVIL) DRAWINGS FOR CONTINUATION.

B. FIRE PROTECTION ENGINEER OF RECORD: MR. W. RONALD MCILVEEN, P.E.: THIS DESIGN IS DELEGATED TO THE FIRE PROTECTION SYSTEM DELEGATED ENGINEER.

C. GENERAL SCOPE OF WORK: AS PART OF THE NEW CONSTRUCTION FOR THE HANGAR, PROVIDE A FULLY SPRINKLERED BUILDING. COMPLY WITH NFPA 13 (INCLUDING THE TYPE OF HEADS). PROVIDE ALL REQUIRED DOCUMENTATION FOR THE HANGAR (PROVIDE SHOP DRAWINGS AND HYDRAULIC CALCULATIONS, AS REQUIRED).

D. FOR THIS BUILDING, THE DELEGATED ENGINEER SHALL COMPLY WITH THIS DESIGN CRITERIA. SUBMIT CALCULATIONS AND SHOP DRAWINGS (SIGNED AND SEALED). SUBMIT SUPPLEMENTAL PRODUCT DATA FOR SYSTEM COMPONENTS, AS REQUESTED BY THE AUTHORITY HAVING JURISDICTION.
2. FOR THE ENTIRE BUILDING, PROVIDE A COMPLETE DRY PIPE FIRE PROTECTION SYSTEM IN ACCORDANCE WITH THE 2018 NORTH CAROLINA STATE BUILDING CODE: FIRE PROTECTION.

3. THIS FIRE PROTECTION DESIGN REQUIRES A LICENSED PROFESSIONAL ENGINEER, AS PART OF THESE REQUIREMENTS.

4. DESIGN OF WATER BASED FIRE PROTECTION SYSTEM ENGINEERING DOCUMENTS:

A. POINT OF SERVICE FOR THE FIRE PROTECTION WATER SUPPLY: EXISTING FIRE PROTECTION SERVICE ENTRANCE FROM THE NEW 6" WATER SUPPLY IN THE STREET.

B. NFPA STANDARDS (PER 2018 NORTH CAROLINA STATE BUILDING CODE: FIRE PROTECTION).

NFPA 13 - 2013

C. CLASSIFICATIONS OF HAZARD OCCUPANCY IN ACCORDANCE WITH NFPA 13, CHAPTER 5:

ORDINARY HAZZARD: AIRCRAFT STORAGE HANGAR (NOT GOVERNED BY NFPA 409); EXTRA HAZZARD, GROUP 1.

D. DESIGN APPROACH:

1) DRY PIPE FOR THE UNHEATED AIRCRAFT STORAGE HANGAR AND SERVICE ENTRANCE ROOM (NOT GOVERNED BY NFPA 409).

2) DEVICE TEMPERATURE RATINGS: IN ACCORDANCE WITH NFPA 13 8.3.2.

3) SPRINKLER HEAD SPACING: IN ACCORDANCE WITH NFPA 13 CHAPTER 8

4) PIPING: DO NOT USE THREADABLE LIGHTWALL PIPE.

5) FIRE PROTECTION MATERIALS (PIPING, HANGERS, HEADS, ETC.) IN UNCONDITIONED AREAS: CORROSION RESISTANT ONLY. PROVIDE GALVANIZED STEEL PIPING, SCREWED FITTINGS, HANGERS, TRIM, ALL-THREAD RODS, AND ACCESSORIES.

E. CHARACTERISTICS OF WATER SUPPLY: EXISTING WATER SUPPLY FED FROM AN EXISTING BURIED WATER SUPPLY.

F. FLOW TEST DATA: PROVIDE A NEW FLOW TEST FOR USE IN THE HYDRAULIC CALCULATIONS.

DATE OF TEST:  
BY:

HYDRANT #1:  
HYDRANT COEFFICIENT:  
STATIC:  
RESIDUAL:  
PITOL:  
FLOW:

G. VALVING AND ALARM: NEW 6" RISER VALVE AND CHECK VALVE: PROVIDE DRY PIPE VALVE FOR BUILDING

H. MICROBIAL INDUCED CORROSION: NO MIC CORROSION WAS REPORTED. RECONFIRM.

I. BACKFLOW PREVENTION AND METERING: SEE CIVIL DRAWING.

J. PROVIDE REMOTE PEDESTAL FDC AND CHECK VALVE. RECONFIRM LOCATION WITH AHJ.

K. FIRE PUMP: NOT REQUIRED.

L. WATER STORAGE TANK: NOT REQUIRED.

M. OWNER'S CERTIFICATE. IN STORAGE OCCUPANCIES, THE OWNER'S INFORMATION CERTIFICATE IS REQUIRED FROM THE PROPERTY OWNER AS IT CLEARLY DEFINES THE STORAGE CONFIGURATION OF THE SPACE FOR THE CURRENT AND FUTURE USE OF THE PROPERTY, AS REQUIRED BY THE CODES AND STANDARDS SET FORTH IN THIS SPECIFICATION.
- GENERAL FIRE PROTECTION NOTES (ALL "F" DRAWINGS):

F-1 REGULATORY REQUIREMENTS: PROVIDE ALL WORK TO MEET OR EXCEED MINIMUM REGULATORY REQUIREMENTS INCLUDING:

NORTH CAROLINA STATE BUILDING CODE: 2018  
NORTH CAROLINA FIRE PREVENTION CODE: 2018

ADVISE THE ARCHITECT OF ANY CHANGES IN THE CONTRACT DOCUMENTS THAT MAY BE REQUIRED IN ORDER TO MEET CODE, PRIOR TO WORK (ORDERING, ROUGHING, OR INSTALLATION).

F-2 COORDINATION: COORDINATE WITH OTHER WORK (INCLUDING PLUMBING, MECHANICAL, ELECTRICAL, STRUCTURAL, AND ARCHITECTURAL) FOR AVAILABLE SPACE, SEQUENCE OF INSTALLATION, AND INSTALLATION REQUIREMENTS, PRIOR TO COMMENCING CONSTRUCTION. ADVISE THE ARCHITECT OF ANY CHANGES IN THE CONTRACT DOCUMENTS THAT MAY BE REQUIRED FOR THE WORK TO BE PERFORMED.

F-3 EXISTING FIELD CONDITIONS: THE CONTRACT DOCUMENTS INDICATE THE DESIGN INTENT USING AVAILABLE INFORMATION. THE CONTRACTOR IS TO ADVISE THE ARCHITECT IF EXISTING CONDITIONS DIFFER FROM THOSE SHOWN. ALSO ADVISE THE ARCHITECT IF CODE OR SAFETY CONFLICTS EXIST. THE CONTRACTOR IS REQUIRED TO VISIT THE SITE (PRIOR TO THE BID) TO BECOME FAMILIAR WITH CONDITION AND INSTALLATION DETAILS THAT WILL AFFECT HIS WORK. CHANGES IN THE CONTRACT SUM AND CONTRACT TIME WILL NOT BE ALLOWED FOR FAILURE TO INVESTIGATE FIELD CONDITIONS. ALL WORK IS NEW, UNLESS NOTED OTHERWISE.

F-4 PIPING LOCATIONS: LOCATE ALL PIPING IN CONCEALED LOCATIONS (FURRED CHASES OR SUSPENDED CEILINGS), AS AVAILABLE. DO NOT LOCATE PIPING ABOVE ELECTRICAL SWITCHBOARDS OR PANELBOARDS.

F-5 SEALS: REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF FIRE RATED PARTITIONS. SEAL ALL PENETRATIONS OF RATED PARTITIONS.
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- SAND BAR  
ARCHITECTURE, P.A.
- 102 EAST TARPON AVENUE  
TARPON SPRINGS, FLORIDA 34689  
TEL. 727.308.1773  
SAND BAR ARCHITECTURE, P.A.  
AA 26003331
- CERTIFICATION
- CONSULTANTS
- W. RONALD MCILVEEN, P.E.  
ARCHITECTURAL  
ENGINEERING  
INCORPORATED  
36458 US. HWY 19 N,  
PALM HARBOR, FL 34684  
(727) 784-1472
- W. RONALD MCILVEEN, P.E.  
NC PE # 024291
- PROJ. #: 20114  
DRAWN BY: DWM  
REVIEWED BY: WRM
- PROJECT INFORMATION
- AERO CENTER  
WILMINGTON  
AIRCRAFT  
STORAGE  
HANGAR
- WILMINGTON  
INTERNATIONAL AIRPORT  
1835 FLIGHTLINE RD  
WILMINGTON, NC 28405
- COMMISSION 20-02a
- DRAWING NAME
- FIRE PROTECTION  
NOTES
- ISSUE
- CONSTRUCTION  
DOCUMENTS
- ISSUE DATE
- 10.16.2020
- ISSUE REVISIONS
- | No. | Date | Description |
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- DRAWING NUMBER
- F0.1