

## FIRE ALARM/MASS NOTIFICATION GENERAL NOTES

- CONTRACTOR SHALL PROVIDE A COMPLETE, COMBINED ADDRESSABLE FIRE ALARM AND MASS NOTIFICATION SYSTEM THROUGHOUT THE BUILDING. SYSTEM SHALL INCLUDE SPRINKLER SYSTEM SUPERVISION, MANUAL PULL STATIONS, SPEAKERS, STROBES, EVACUATE/ANNOUNCEMENT DISPLAYS, WIRING, CONDUIT AND ALL OTHER ASSOCIATED EQUIPMENT. ALL WORK AND INSTALLATION SHALL CONFORM WITH, BUT IS NOT LIMITED TO THE APPLICABLE PROVISIONS OF THE CODES AND STANDARDS ON THIS SHEET AND THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL PROVIDE ADDRESSABLE CLASS B SIGNALING LINE CIRCUITS, CLASS B NOTIFICATION APPLIANCE CIRCUITS AND CLASS B INITIATING DEVICE CIRCUITS. PROVIDE ALL EQUIPMENT, SOFTWARE, PROGRAMMING, ACCESSORIES WHETHER MENTIONED OR NOT, INCLUDING SMOKE SENSORS, ADDRESSABLE INTERFACE AND RELAY DEVICES, TERMINAL CABINETS, CONDUIT, WIRE, JUNCTION BOXES, FASTENERS, HANGERS, ETC.
- FIRE ALARM/MASS NOTIFICATION SYSTEM PANELS, LOCAL OPERATORS CONSOLES, ANNUNCIATORS AND CABINETS SHALL BE RECESSED-MOUNTED IN FINISHED AREAS WITH THE TOP OF THE PANEL AT 72 INCHES ABOVE FINISHED FLOOR OR CENTER OF PANEL AT 60 INCHES ABOVE FINISH FLOOR, WHICHEVER IS LOWER. NOTIFICATION APPLIANCE CIRCUIT PANELS MAY BE SURFACE-MOUNTED IN ELECTRICAL ROOMS.
- ALL FIRE ALARM WIRING SHALL BE INSTALLED CONDUIT. MINIMUM CONDUIT SIZE SHALL BE 3/4". CONDUIT SHALL BE RUN CONCEALED WHERE POSSIBLE.
- PAINT ALL FIRE ALARM JUNCTION BOXES AND COVERS RED IN UNFINISHED AREAS. IN FINISHED AREAS WHERE CONDUIT CANNOT BE CONCEALED, CONDUIT AND JUNCTION BOXES CAN BE PAINTED TO MATCH THE ROOM FINISH, THE INSIDE COVER OF THE JUNCTION BOX MUST BE IDENTIFIED AS "FIRE ALARM" AND THE CONDUIT MUST HAVE PAINTED RED BANDS 3/4" INCH WIDE AT 20 FOOT INTERVALS AND ON BOTH SIDES OF A FLOOR, WALL OR CEILING PENETRATION.
- INSTALL ALL NEW WALL MOUNTED STROBES AND SPEAKER/STROBES 6-INCHES BELOW CEILINGS OR 80-INCHES AFF, WHICHEVER IS LOWER, TO THE CENTERLINE OF LIGHT APPARATUS.
- PULL STATIONS SHALL BE DOUBLE-ACTION TYPE. THE TOP OF THE PULL STATION SHALL BE INSTALLED AT 48-INCHES AFF.
- SPRINKLER CONTRACTOR IS TO PROVIDE ALL WATER FLOW SWITCHES, AND TAMPER SWITCHES. THE ELECTRICAL CONTRACTOR SHALL MAKE ALL ELECTRICAL CONNECTIONS AND PROVIDE POWER TO THESE DEVICES.
- ALL EQUIPMENT AND DEVICES SHALL BE UL LISTED FOR USE IN FIRE ALARM/MASS NOTIFICATION SYSTEMS.
- FIRE ALARM MASS NOTIFICATION SYSTEM MUST UNDERGO INTELLIGIBILITY TESTING IN ACCORDANCE WITH UFC 3-600-01 AND UFC 4-021-01. COMMERCIALY AVAILABLE TEST INSTRUMENTATION SHALL BE USED TO MEASURE THE INTELLIGIBILITY. ENSURE THAT A CIS SCORE OF AT LEAST 0.7 IS ACHIEVED IN EACH AREA WHERE BUILDING OCCUPANTS MAY TYPICALLY BE FOUND. AREAS OF THE BUILDING PROVIDED WITH HARD WALL AND CEILING SURFACES (SUCH AS METAL OR CONCRETE) THAT ARE FOUND TO CAUSE EXCESSIVE SOUND REFLECTIONS MAY BE PERMITTED TO HAVE A CIS SCORE LESS THAN THE MINIMUM REQUIRED VALUE IF APPROVED BY THE NAVFAC MIDLANT FIRE PROTECTION ENGINEER.

## SPRINKLER GENERAL NOTES

- CONTRACTOR SHALL PROVIDE A COMPLETE HYDRAULICALLY-CALCULATED AUTOMATIC WET-PIPE SPRINKLER SYSTEM THROUGHOUT THE ENTIRE BUILDING. SYSTEM SHALL INCLUDE WATER FLOW ALARM SWITCHES, VALVE SUPERVISORY TAMPER SWITCHES, CHECK VALVES, CONTROL VALVES, PIPING, HANGERS, SPRINKLERS, PIPING CONCEALMENT, AND ALL ASSOCIATED EQUIPMENT. ALL WORK AND INSTALLATION SHALL CONFORM WITH, BUT ARE NOT LIMITED TO THE APPLICABLE PROVISIONS OF THE CODES AND STANDARDS LISTED ON THIS SHEET AND THE CONTRACT DOCUMENTS.
- SPRINKLER CONTRACTOR TO PROVIDE ALL CONTROL VALVES, WATER FLOW SWITCHES, AND SUPERVISORY SWITCHES. ELECTRICAL CONTRACTOR SHALL MAKE ALL ELECTRICAL CONNECTIONS AND PROVIDE POWER TO THESE DEVICES.
- ALL SPRINKLER SYSTEMS SHALL USE BLACK STEEL PIPE SCHEDULE 40 THROUGHOUT.
- ALL SPRINKLER PIPE SHALL BE PAINTED RED. PAINT ALL PIPE AND FITTINGS.
- CONTRACTOR SHALL COORDINATE SPRINKLER SYSTEM PIPING WITH STRUCTURAL MEMBERS AND OTHER TRADES THROUGHOUT THE BUILDING. CONTRACTOR SHALL MAINTAIN AS MUCH HEAD ROOM CLEARANCE AS PRACTICAL BETWEEN BOTTOM OF SPRINKLER PIPE, FITTINGS, VALVES, AND SPRINKLER HEADS WITH THE FINISHED FLOOR IN ALL AREAS OF EXPOSED PIPE, BUT IN NO CASE PROVIDE LESS THAN 7'-0" OF HEAD ROOM CLEARANCE.
- NEW SPRINKLER PIPING SHOWN ON THE DRAWINGS IS SHOWN FOR PURPOSES OF DESIGN INTENT. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ADJUST WORK ACCORDINGLY.
- ALL AREAS ARE HAZARD CATEGORY 1 UNLESS OTHERWISE INDICATED.
- ALL PIPE PENETRATIONS THROUGH FIRE RATED BARRIERS SHALL BE PROVIDED WITH UL LISTED FIRESTOPPING SYSTEMS. FIRE RATED BARRIERS ARE INDICATED ON THE LIFE SAFETY DRAWINGS.

## FIRE ALARM/MASS NOTIFICATION SYMBOLS LEGEND

	FIRE ALARM/MNS CONTROL PANEL
	FIRE ALARM/MNS EQUIPMENT
	EVACUATE/ANNOUNCEMENT DISPLAY
	FIRE ALARM BATTERY CABINET
	REMOTE ANNUNCIATOR
	DIGITAL ELECTRONIC TELEGRAPHIC TRANSMITTER
	MONITOR MODULE
	CONTROL MODULE
	ADDRESSABLE RELAY DEVICE
	TRANSIENT VOLTAGE SURGE SUPPRESSER
	WATER FLOW SWITCH
	TAMPER SWITCH
	MANUAL PULL STATION
	PHOTOELECTRIC SMOKE DETECTOR
	DUCT SMOKE DETECTOR
	CEILING-MOUNTED SPEAKER/STROBE (XX INDICATES CANDELA)
	CEILING-MOUNTED STROBE (XX INDICATES CANDELA)
	WALL-MOUNTED SPEAKER/STROBE (XX INDICATES CANDELA)
	WALL-MOUNTED STROBE (XX INDICATES CANDELA)
	WALL-MOUNTED WEATHERPROOF SPEAKER

## SPRINKLER SYSTEM SYMBOLS LEGEND

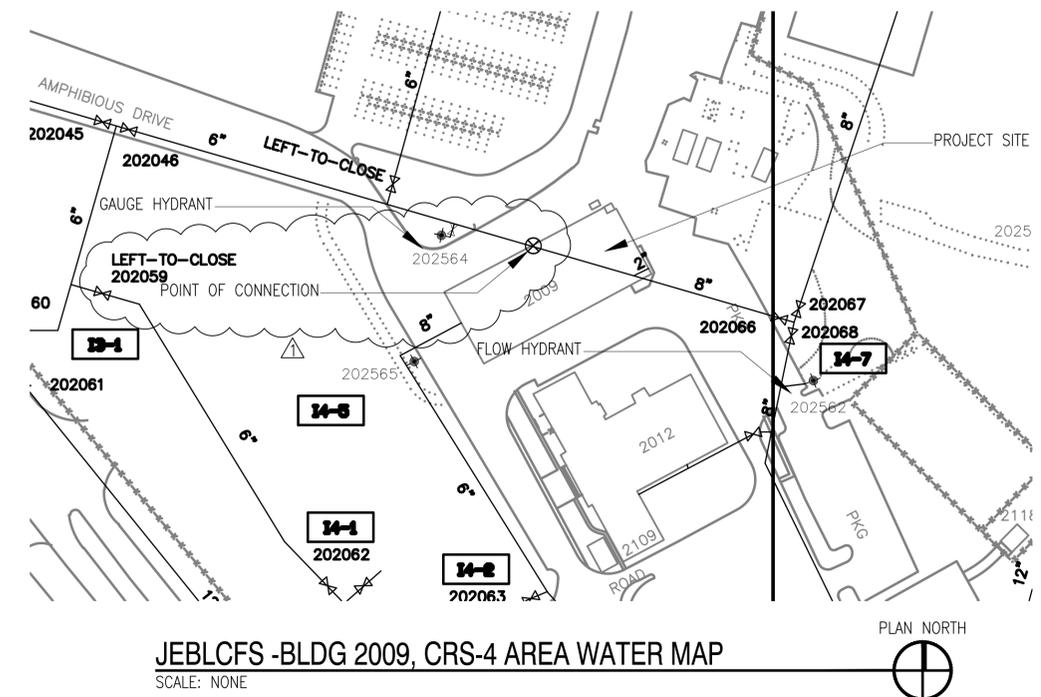
	NEW SPRINKLER PIPING
	PIPE UP
	PIPE CONTINUATION MARK
	CHECK VALVE
	INDICATING CONTROL VALVE
	SPRINKLER RISER
	POINT OF CONNECTION, NEW OR STARTING
	FIRE DEPARTMENT CONNECTION
	TEST HEADER
	HAZARD CATEGORY 2

## APPLICABLE CODES AND STANDARDS

- NFPA 1, UNIFORM FIRE CODE, (2015)
- NFPA 13, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS, (2013)
- NFPA 24, INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES, (2013)
- NFPA 1963, STANDARD FOR FIRE HOSE CONNECTIONS, (2009)
- NFPA 70, NATIONAL ELECTRIC CODE, (2014)
- NFPA 72, NATIONAL FIRE ALARM AND SIGNALING CODE, (2016)
- NFPA 90A, INSTALLATION OF AIR-CONDITIONING AND VENTILATING SYSTEMS, (2015)
- NFPA 101, LIFE SAFETY CODE, (2015)
- UFC 1-200-01, DESIGN: GENERAL BUILDING REQUIREMENTS, (CHANGE 1, 2013)
- UFC 3-600-01, FIRE PROTECTION ENGINEERING FOR FACILITIES, (CHANGE 3, 2013)
- UFC 3-600-10N, FIRE PROTECTION ENGINEERING, (2007)
- UFC 4-021-01, DESIGN AND O&M: MASS NOTIFICATION SYSTEMS, (CHANGE 1, 2007)
- IBC, INTERNATIONAL BUILDING CODE, (2012)

STATIC PRESSURE (PSI)	RESIDUAL PRESSURE (PSI)	FLOW RATE (GPM)	DATE TESTED
54	37	920	10/20/2015

NOTES: TEST PERFORMED BY NAVFAC MID-ATLANTIC FIRE PROTECTION ENGINEER ERIC ZDANKIEWICZ AND ANDY BENSON FEAD LC UTILITIES.



JEBLCFS - BLDG 2009, CRS-4 AREA WATER MAP  
SCALE: NONE

DATE	7/7/16	EZ	APPR
DESCRIPTION	AMENDMENT NO 0002		
SEAL			
A/E INFO			
APPROVED:			
FOR COMMANDER NAVFAC			
ACTIVITY			
SATISFACTORY TO: DATE			
DES	ERZ	CHK	DPS
BRANCH MANAGER G.E. BAILEY, P.E. CHIEF ENGR/ARCH S.M. LANTZ, P.E.			
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND JEBLCFS - VIRGINIA BEACH, VA JOINT EXPEDITIONARY BASE LITTLE CREEK-FORT STORY VIRGINIA BEACH, VA <b>RENOVATIONS AND REPAIRS                  TO BUILDING 2009</b> FIRE PROTECTION NOTES, SYMBOLS, AND LEGEND			
SCALE: AS SHOWN			
EPROJECT NO.: 1361870			
CONSTR. CONTR. NO. N/A			
NAVFAC DRAWING NO. 12719115			
SHEET	10	OF	39
<b>F-001</b>			
DRAWFORM REVISION: 10 MARCH 2009			

FILE NAME: P:\VA\littlecreek\multiplebuildings\2015\_1361870\_DBB\_Response\Admin\_Spaces\B\_Design\BDOC\_2009\Drawings\Sheet\1\_FireProtection\1361870-F-001.dwg  
 LAYOUT NAME: F-001 FIRE PROTECTION NOTES SYMBOLS AND LEGEND  
 PLOTTED: Monday, July 11, 2016 - 4:03pm USER: ericj.marshall