

FIRE SPRINKLER SHOP DRAWING REQUIREMENTS

1. SHOP DRAWINGS FOR THE FIRE PROTECTION SYSTEM(S) SHALL BE SUBMITTED TO INDICATE CONFORMANCE WITH THE FLORIDA BUILDING CODE AND THE CONSTRUCTION DOCUMENTS AND SHALL BE APPROVED PRIOR TO THE START OF SYSTEM INSTALLATION. SHOP DRAWINGS SHALL CONTAIN ALL INFORMATION AS REQUIRED BY THE REFERENCED INSTALLATION STANDARDS IN FBC CHAPTER 9. (FBC SECTION 107.2.2)
2. COMPLETE FIRE SPRINKLER SHOP DRAWINGS WITH HYDRAULIC CALCULATIONS TO BE SUBMITTED TO THE AUTHORITY HAVING JURISDICTION FOR SEPARATE PERMIT BY LICENSED CONTRACTOR
3. SHOP DRAWINGS (LAYOUT DOCUMENTS / WORKING PLANS) SHALL MEET THE REQUIREMENTS LISTED IN THE FLORIDA ADMINISTRATION CODE (FAC) CHAPTER 61G15-32.002(6) AND NFPA 13 CHAPTER 14 " PLANS AND CALCULATIONS" AND SHALL INCLUDE BUT IS NOT LIMITED TO : COMMODITIES IN STORAGE AREAS, THEIR LAYOUT OF RACKS, HEIGHT OF STORAGE, CLEARANCE TO HEADS, AND MSDS SHEETS AS NECESSARY.
4. SHOP DRAWINGS SHALL CLEARLY IDENTIFY HAZARD CLASSIFICATIONS AND THEIR LOCATIONS TO THE EXTENT NECESSARY FOR LIFE SAFETY REVIEW.
5. CONTRACTOR SHALL OBTAIN A RECENT (WITHIN 6 MONTHS) HYDRANT FLOW TEST. PAPERWORK AND TAGS WILL BE CHECKED ON EQUIPMENT USED AND MUST HAVE BEEN CERTIFIED WITHIN ONE YEAR.

FIRE PROTECTION COORDINATION NOTES

1. AS PART OF THIS CONTRACT, THE SUB-CONTRACTOR AND THE CONTRACTOR ARE RESPONSIBLE FOR COORDINATION AND VERIFICATION THAT ALL EQUIPMENT, SHOWN IN THE ARCHITECTURAL DRAWINGS PARTICULARLY, BUT NOT LIMITED TO THE ARCHITECTURAL EQUIPMENT PLAN, INCLUDE ALL SERVICE/UTILITY INFORMATION TO OR FROM THE EQUIPMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL BIDDING PROBLEMS, DISCREPANCIES NOT POINTED OUT DURING THE BIDDING PROCESS WILL BE RESOLVED BY THE CONTRACTOR AS PER THE ARCHITECT DETAILS AT NO ADDITIONAL COST TO THE OWNER.
2. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL NEW PIPING, DUCTWORK, CONDUTS, ETC. WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL SYSTEMS OF THE BUILDING. VERIFY ALL SPACE CONDITIONS AND DIMENSIONS AT JOBSITE PRIOR TO FABRICATION AND INSTALLATION OF EQUIPMENT AND MATERIALS. THE CONTRACTOR SHALL SUBMIT COORDINATION DRAWINGS TO ARCHITECT AND OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ARCHITECT/ENGINEER PRIOR TO BEGINNING OF CONSTRUCTION.

HAZARD CLASSIFICATION / DESIGN APPROACH

HAZARD CLASSIFICATION

-LIGHT HAZARD, 0.10 GPM PER SQ. FT., OVER HYDRAULICALLY MOST DEMANDING 1500 SQ. FT., 100 GPM HOSE ALLOWANCE. (TYPICAL FOR ALL OFFICE AREAS, ECT.)

-ORDINARY HAZARD, GR. I, 0.15 GPM PER SQ. FT., OVER HYDRAULICALLY MOST DEMANDING 1500 SQ. FT., 250 GPM HOSE ALLOWANCE. (TYPICAL FOR PARKING GARAGES, STORAGE ROOMS, MECHANICAL ROOMS AND ELECTRICAL ROOMS.)

-WHERE LISTED QUICK RESPONSE SPRINKLERS ARE USED THROUGHOUT A SYSTEM, SYSTEM AREA OF OPERATION SHALL BE PERMITTED TO BE REDUCED UP TO 40% (900 SQ. FT.) IN ACCORDANCE WITH NFPA 13 CHAPTER 11-2.3.2. FIGURE 11.2.3.3.1.

DESIGN APPROACH

-FULLY AUTOMATIC WET PIPE SPRINKLER SYSTEM PROVIDING 100% COVERAGE OF ALL AREAS IN THE BUILDING SYSTEM SHALL BE DESIGNED AND INSTALLED AS PER LATEST NFPA STANDARDS.


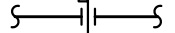
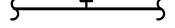


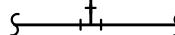

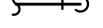


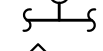



FIRE PROTECTION GENERAL NOTES

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR THE COMPLETE INSTALLATION OF THE FIRE PROTECTION SYSTEM, ALL IN ACCORDANCE WITH THESE CONSTRUCTION DOCUMENTS. ALL WORK PERFORMED UNDER THIS CONTRACT SHALL COMPLY WITH THE FLORIDA BUILDING CODE 7TH EDITION (2020); FLORIDA FIRE PREVENTION CODE 7TH EDITION (2020), OSHA, NFPA 13 (2016), 14 (2016), 20 (2016), 30 (2016), 42 (2016), 61 (2016), 61.1 (2018 FLORIDA EDITION), 101 (2018 FLORIDA EDITION) AND FLORIDA STATUTES 61G15-32.004 ITEMS A THRU J.
2. THE CONTRACTOR SHALL PAY ALL INSPECTION FEES, ALL COSTS OF PERMITS AND ALL OTHER COSTS INCIDENTAL TO THE COMPLETION AND TESTING OF THIS WORK UPON FINAL ACCEPTANCE, A CERTIFICATE FROM THE LOCAL INSPECTION AUTHORITY SHALL BE FURNISHED TO THE OWNER.
3. THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND DEPICT A PERFORMANCE DESIGN ONLY. THEY DO NOT SHOW EVERY BEND, OFFSET OR OTHER FITTINGS WHICH MAY BE REQUIRED FOR THE INSTALLATION IN THE SPACE ALLOCATED, OR FOR COORDINATION WITH OTHER TRADES.
4. COORDINATE THE LOCATION OF RISER, DRAINS, TEST CONNECTIONS, AND OTHER SPRINKLER SYSTEM COMPONENTS WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL SYSTEMS OF THE BUILDING. VERIFY ALL SPACE CONDITIONS AND DIMENSIONS AT JOBSITE PRIOR TO FABRICATION OF PIPING AND INSTALLATION OF EQUIPMENT AND MATERIALS. ANY CONFLICTS SHALL BE REPORTED IMMEDIATELY TO THE ARCHITECT/ENGINEER PRIOR TO BEGINNING OF CONSTRUCTION.
5. CONTRACTOR SHALL PROTECT AND SEAL ALL OPENINGS AND PIPE PENETRATIONS THROUGH FIRE RATED WALLS AND CEILINGS WITH ADEQUATE FIRESTOPPING MATERIALS TO MAINTAIN THE INDICATED FIRE RATINGS OF THE ASSEMBLIES BEING PENETRATED.
6. PROVIDE AUXILIARY DRAINAGE DRUM DRIP FOR ALL TRAPPED SECTION OF PIPE.
7. SPRINKLER PIPE SHALL BE NEW CONFORMING TO ASTM SPECIFICATIONS AND SHALL BEAR ASTM STANDARD MARKED ON EACH LENGTH OF PIPE.

ABOVE GROUND:

1. FOR SIZES ABOVE 2", PIPE MAY BE BLACK STEEL, SCHEDULE 10, IN ACCORDANCE WITH ASTM A135 GRADE A OR ASTM A53 GRADE A.
2. FOR SIZES 2" AND UNDER, PIPE SHALL BE BLACK STEEL, SCHEDULE 40, IN ACCORDANCE WITH ASTM A135 GRADE A OR ASTM A53 GRADE A.
3. PIPING THAT IS EXPOSED TO WEATHER, INSTALLED IN A CORROSIVE ATMOSPHERE OR INSTALLED IN NON-AIR-CONDITIONED AREAS SHALL BE GALVANIZED OR PAINTED WITH A MIN OF 10 MIL RUST PROOF PAINT.
4. ALL EXPOSED PIPING IN FINISHED AREAS SHALL BE PAINTED TO MATCH ADJACENT CEILING COLOR SCHEME.
5. CONTRACTOR SHALL PAINT ALL ABOVE GROUND EXPOSED FIRE SPRINKLER PIPING, FITTINGS, AND VALVES WITH A MIN. OF 10 MIL RUST PROOF FIRE PROTECTION RED PAINT IN MECHANICAL / ELECTRICAL EQUIPMENT ROOMS. DO NOT PAINT SPRINKLER HEADS OR COVER PLATES. EXPOSED PIPING IN ALL OTHER FINISHED AREAS (CORRIDORS, STAIRWELLS, LABS, OFFICES, ECT.) SHALL BE PAINTED TO MATCH ADJACENT COLOR SCHEMES.
6. ALL EXPOSED PIPING AND HEAD SHALL BE INSTALLED AS HIGH AS POSSIBLE TO MAINTAIN HEAD CLEARANCE. SPRINKLER HEADS LESS THAN 8 FEET IN HEIGHT SHALL BE PROVIDED WITH GUARDS.
7. SPRINKLERS SHALL BE INSTALLED UNDER FIXED OBSTRUCTIONS OVER 4 FT (1.2 M) WIDE SUCH AS DUCTS, DECKS, OPEN GRATE FLOORING, CUTTING TABLES, AND OVERHEAD DOORS. (NFPA 13 SECTION 8.5.5.3.1.)
8. NO PIPING SHALL BE LOCATED ABOVE THE ELECTRICAL EQUIPMENT WHICH SHALL INCLUDE BUT IS NOT LIMITED TO SWITCHBOARDS, PANELBOARDS, DISTRIBUTION BOARDS AND MOTOR CONTROL CENTERS. (NEC ARTICLE 110).
9. ALL PIPING, HANGERS SUPPORT METHODS AND SPRINKLER HEADS TO BE INSTALLED IN STRICT ACCORDANCE WITH N.F.P.A. 13, AND ALL LOCAL CODES AND ORDINANCES.
10. HANG ALL PIPING USING SPLIT RING HANGERS AND RISER CLAMPS, SUPPORT FROM GALVANIZED HANGER RODS FROM BEAM CLAMPS OR PRE-SET INSERT ONLY. SHOOTING ANCHORS IS NOT ACCEPTABLE.
11. ALL SPRINKLER FLOW AND TAMPER SWITCHES SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 15, AND WIRED UNDER DIVISION 16.
12. FLOW SWITCHES AND TAMPER SWITCHES SERVING THE FIRE PROTECTION SPRINKLER SYSTEM SHALL BE PROVIDED WITH THEIR OWN INDEPENDENT ADDRESSABLE MODULE.
13. THE INTELLIGENT MONITORING MODULE SHALL INCORPORATE A CUSTOM MICROPROCESSOR BASED INTEGRATED CIRCUIT, SUPERVISED AND UNIQUELY IDENTIFIABLE BY THE CONTROL PANEL. THE INTELLIGENT INTERFACE MODULE SHALL BE USED TO UNIQUELY IDENTIFY WATER FLOW SWITCHES AND TAMPER SWITCHES.
14. SEPARATE PERMIT APPLICATIONS ARE REQUIRED FOR FIRE ALARM WIRING AND ANY OTHER LOW VOLTAGE SYSTEM. COPY OF CONTRACT MUST BE SUBMITTED WITH EACH APPLICATION.
15. FIRE ALARM SHOP DRAWING AND PERMIT SHALL BE PROVIDED BY THE CONTRACTOR. UPON COMPLETION OF THE WORK, THE FIRE ALARM SYSTEM SHALL BE TESTED AND RE-CERTIFIED. CONTRACTOR MUST HAVE A COPY OF RE-CERTIFICATION AVAILABLE AT FINAL CONSTRUCTION SURVEY.
16. TEST 100% OF PIPING SYSTEM AT 200 PSI PRESSURE FOR A PERIOD OF 2 HOURS WITHOUT PRESSURE LOSS IN PRESENCE OF THE INSPECTOR.
17. HYDROSTATIC TEST PRESSURE SHALL BE MEASURED AT LOW POINT OF SYSTEM OR ZONE BEING TESTED.
18. THE CONTRACTOR IS TO COORDINATE FINAL LOCATION OF ALL FIRE SPRINKLER HEADS AS SHOWN IN THE ARCHITECTURAL REFLECTING CEILING PLANS.
19. WATER SUPPLIES AND ENVIRONMENTAL CONDITIONS SHALL BE EVALUATED FOR THE EXISTENCE OF MICROBES AND CONDITIONS THAT CONTRIBUTE TO MICROBIOLOGICALLY INFLUENCED CORROSION (MIC), WHERE CONDITIONS ARE FOUND THAT CONTRIBUTE TO MIC, THE SPRINKLER CONTRACTOR SHALL TREAT THE SYSTEMS USING ONE OF THE FOLLOWING METHODS:
 - A. INSTALL A STEEL PIPE SCHEDULE THAT WILL NOT BE AFFECTED BY THE MIC MICROBES.
 - B. TREAT ALL WATER THAT ENTERS THE SYSTEM USING AN APPROVED BIOCID.
 - C. IMPLEMENT AN APPROVED PLAN FOR MONITORING THE INTERIOR CONDITIONS OF THE PIPE AT ESTABLISHED TIME INTERVALS AND LOCATIONS.
20. THE CONTRACTOR SHALL SUBMIT SIGN AND SEALED SHOP DRAWINGS AND CALCULATIONS TO ARCH/ENG., LANDLORDS INSURANCE CARRIER, THE FIRE MARSHALL, AND ALL LOCAL AUTHORITIES HAVING JURISDICTION OF ALL EQUIPMENT, MATERIALS AND LAYOUTS WITH THE INFORMATION REQUIRED BY THE FLORIDA ADMINISTRATION CODE CHAPTER 61G15-32 AND NFPA CHAPTER 13 SECTION 14.1.3 FOR APPROVAL PRIOR TO ANY PERMITTING, FABRICATION AND INSTALLATION.
21. CONTRACTOR SHALL MAINTAIN DETAILED AS-BUILT DRAWINGS (UPDATED DAILY) OF THE WORK PERFORMED ON SITE, PRIOR TO SUBSTANTIAL COMPLETION WALK THROUGH, CONTRACTOR SHALL PROVIDE CADD AS-BUILTS TO A/E TEAM ON CD REFLECTING ALL CHANGES TO SYSTEM LAYOUT DURING CONSTRUCTION.
22. UPON COMPLETION OF THE INSTALLATION, EXTRA HEADS, COVER PLATES, A SPRINKLER WRENCH AND A CABINET AS SPECIFIED BY NFPA-13 SHALL BE PROVIDED TO MD/OPS. THE STOCK OF SPARE SPRINKLERS SHALL INCLUDE ALL TYPES AND RATINGS INSTALLED AND THE QUANTITY BASED ON THE AMOUNT OF SPRINKLER HEADS INSTALLED.

FIRE PROTECTION SYMBOL LEGEND




SYMBOL	DESCRIPTION
	AUTOMATIC FIRE SPRINKLER LINE
	BUTTERFLY VALVE W/ TAMPER SWITCH
	FLOW SWITCH
	O.S. & Y. GATE VALVE W/ TAMPER SWITCH
	RISER
	TEE
	ELBOW 90 DEG
	PIPE DOWN
	CAP
	PIPE UP
	FIRE HYDRANT
	FIRE DEPARTMENT CONNECTION
	CHECK VALVE
	BACKFLOW PREVENTER

NOTE: ALL SYMBOLS MAY NOT BE USED

ABBREVIATIONS

F	FIRE
OS&Y	OUTSIDE SCREW & YOKE
D.I.P.	DUCTILE IRON PIPE
SP	SPRINKLER
FL	FLOOR
F.P.	FIRE PROTECTION
FHV	FIRE HOSE VALVE
FHC	FIRE HOSE CABINET
FDC	FIRE DEPARTMENT CONNECTION
R.M.	ROOM
DN.	DOWN
EXIST.	EXISTING
U/G	UNDERGROUND
UR	UPRIGHT

SPRINKLER HEAD SCHEDULE

SYMBOL	DESCRIPTION	SYSTEM	ORIFICE SIZE	TEMP ° RATING
	PENDENT CONCEALED (STANDARD COVERAGE)	WET PIPE	1/2" (K=5.6)	155 DEG
 CR	PENDENT CONCEALED (STANDARD COVERAGE) (CORROSION RESISTANT SPRINKLER)	WET PIPE	1/2" (K=5.6)	155 DEG
 UR	UPRIGHT EXPOSED (STANDARD COVERAGE) (CORROSION RESISTANT SPRINKLER)	WET PIPE	1/2" (K=5.6)	155 DEG

NOTES

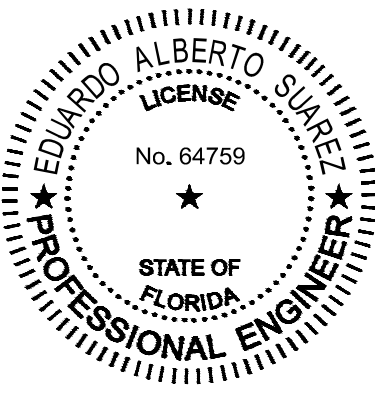
1. PROVIDE QUICK RESPONSE SPRINKLERS AT ALL LIGHT HAZARD OCCUPANCIES AS DEFINED IN NFPA 13.
2. ALL COVER PLATES SHALL BE ORDERED WHITE.

ELM ARCH

8950 SW 74TH Court
Suite 1204
Miami, FL 33156
786-391-2646

Qualifier: Erik Lloyd Mye
State of Florida: AR 9357

Sign & Seal: Eduardo A. Suarez P.
State of Florida: License No. 647



OWNER

Miami Lakes Branch Library

6699 Windmill Gate Road
Miami Lakes, FL 33014

TITLE: Symbol Legend and General Notes - Fire Protection

REVISION

DATE _____

04-03-2023

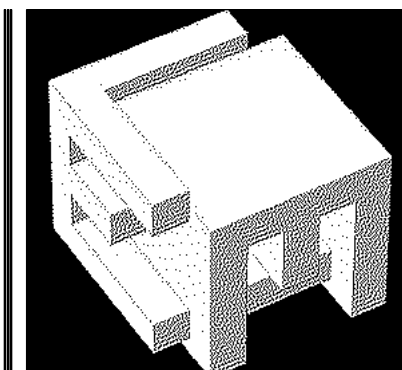
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OF

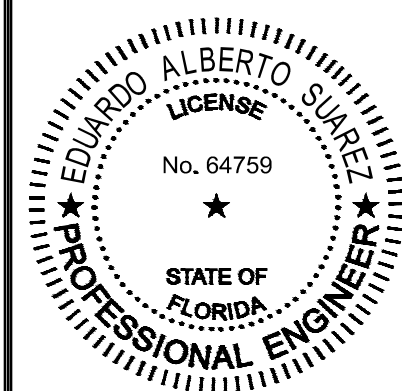


ELM ARCH

8950 SW 74TH Court
Suite 1204
Miami, FL 33156
786-391-2646

Qualifier:
State of Florida: Erik Lloyd Myers
AR 93574

Sign & Seal: Eduardo A. Suarez P.E.
State of Florida: License No. 64759



OWNER:

Miami Lakes Branch Library

6699 Windmill Gate Road
Miami Lakes, FL 33014

TITLE: Floor Plan - Fire Protection

REVISION

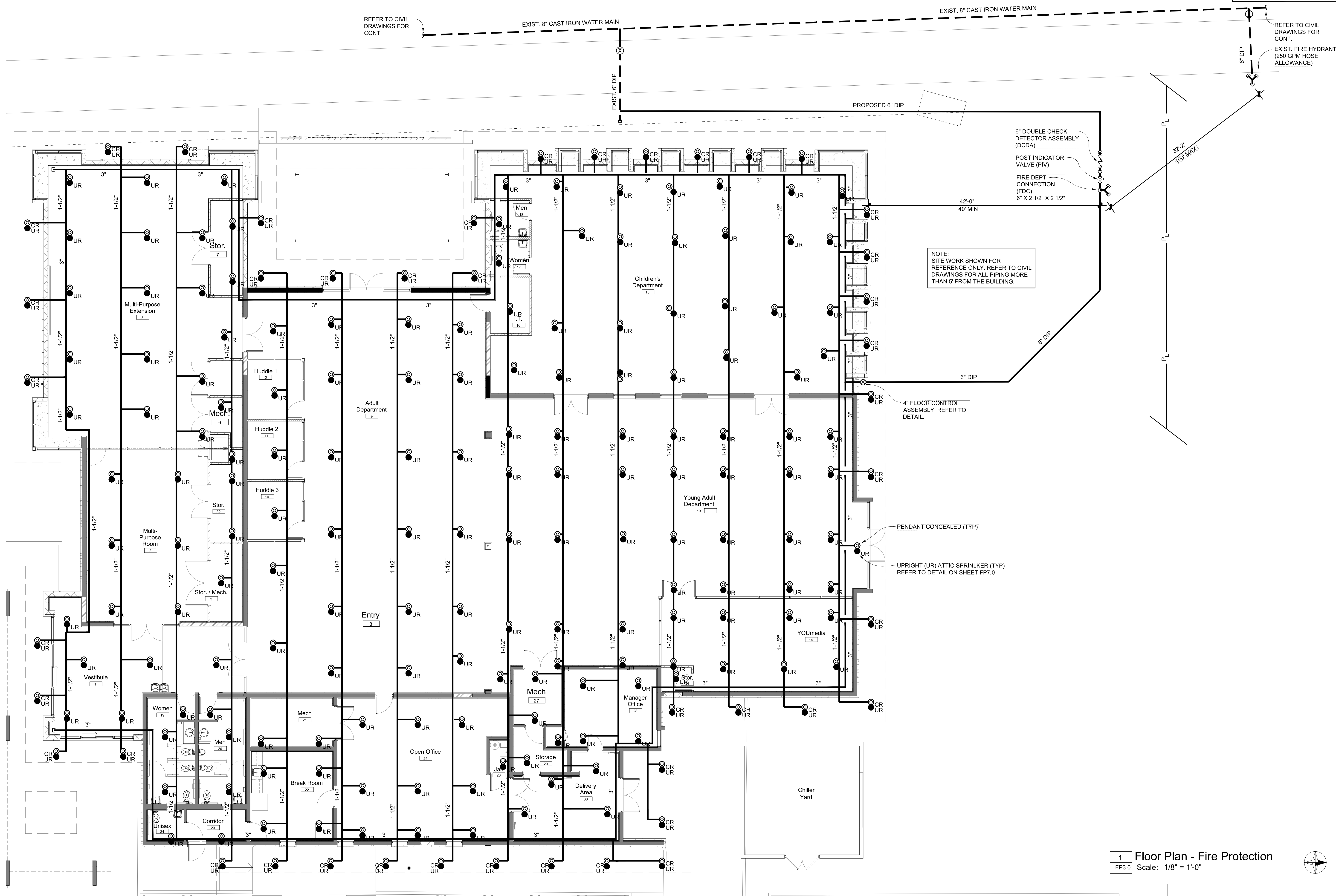
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PROJECT NUMBER
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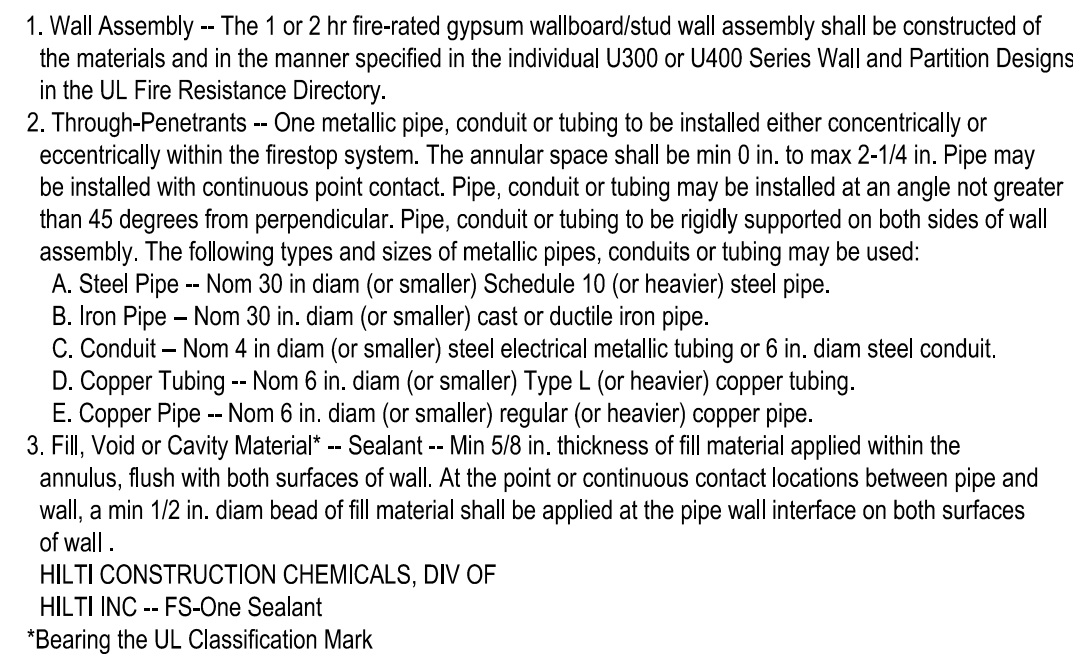
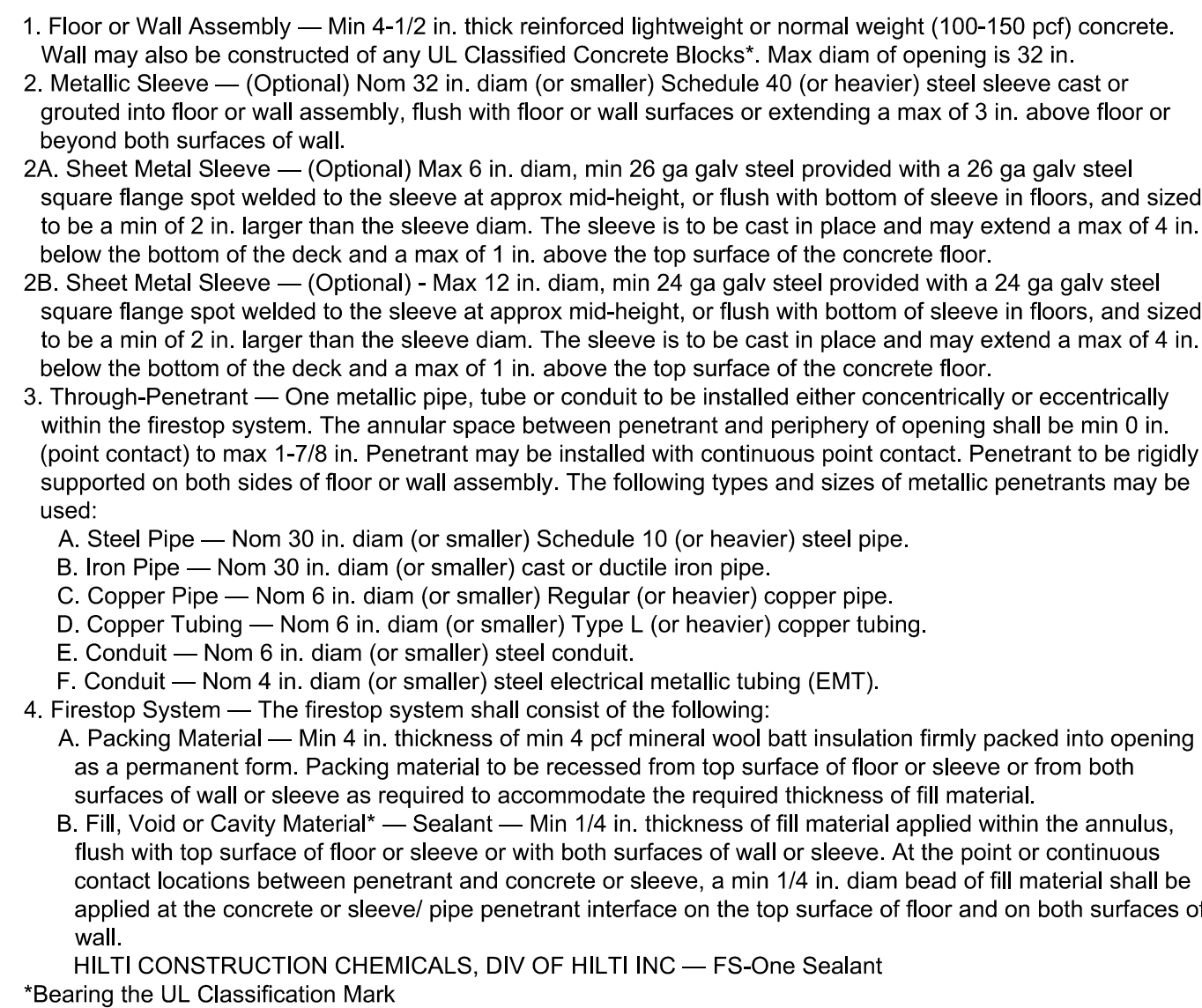
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OF



1 Floor Plan - Fire Protection
FP3.0 Scale: 1/8" = 1'-0"

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NOTE: NFPA 13 TABLE 9.2.2.1 (a)



OWNER

Miami Lakes Branch Library

6699 Windmill Gate Road
Miami Lakes, FL 33014

TITLE: Details - Fire Protection

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04-03-2023

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