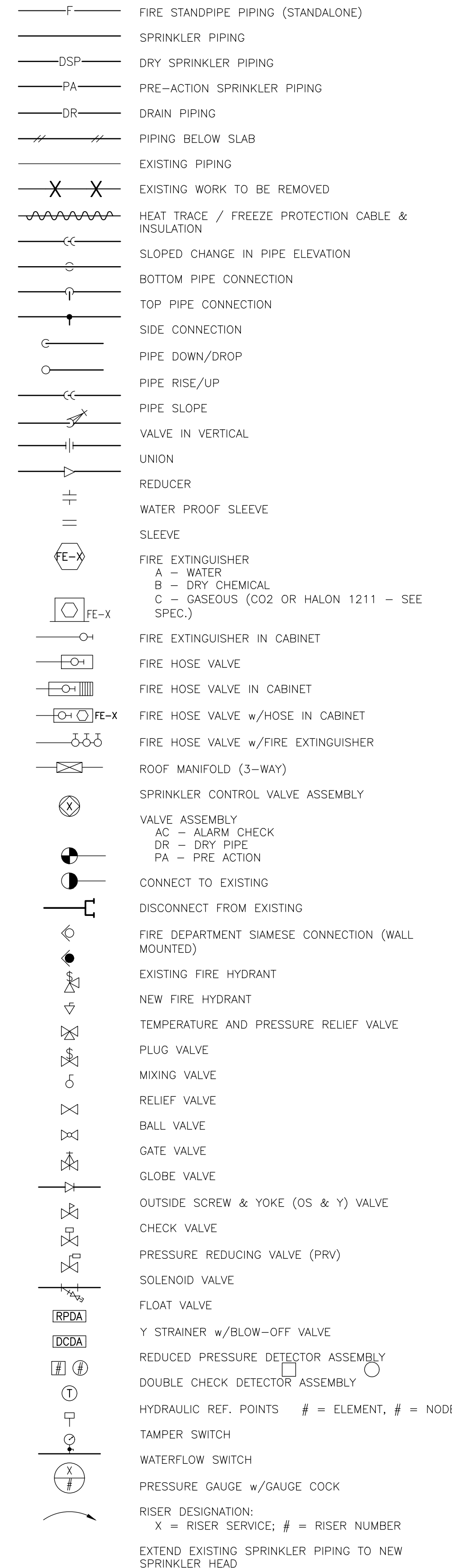
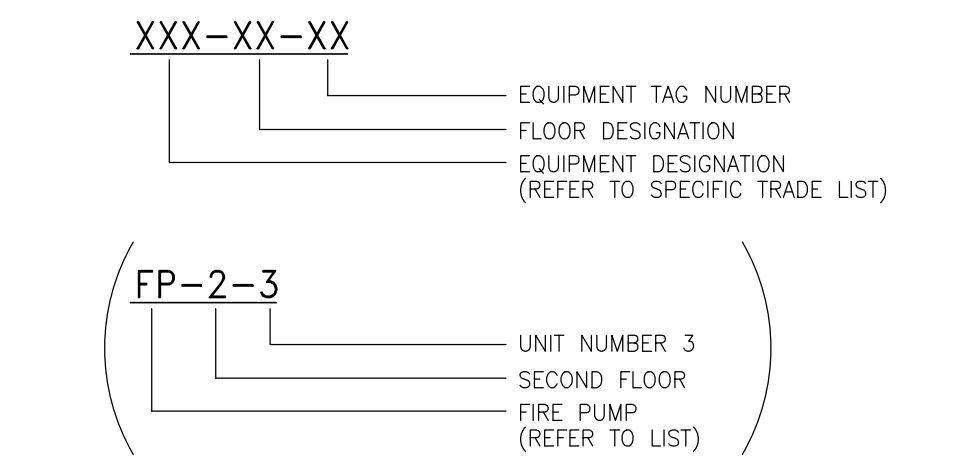


FIRE PROTECTION SYMBOL LIST



FP EQUIPMENT DESIGNATIONS



ABBREVIATIONS

- ABD AUTOMATIC BALL DRIP
- AD AREA DRAIN
- AFF ABOVE FINISHED FLOOR
- ATS AUTOMATIC TRANSFER SWITCH
- BOP BOTTOM OF PIPE
- CFM CUBIC FEET PER MINUTE
- CV CHECK VALVE
- DIA DIAMETER
- DR DRAIN
- DN DOWN (PENETRATES FLOOR SLAB)
- (E) EXISTING
- (ER) EXISTING TO BE REMOVED
- (ERR) EXISTING TO BE REMOVED & RELOCATED
- FHC FIRE HOSE CABINET
- FHR FIRE HOSE RACK
- FHV FIRE HOSE VALVE
- FHVC FIRE HOSE VALVE CABINET
- FD FLOOR DRAIN
- FL FLOOR
- FP FIRE PUMP
- FSP FIRE STANDPIPE
- FT FEET
- GC GENERAL CONTRACTOR
- GV GATE VALVE
- GAL GALLONS
- GPM GALLONS PER MINUTE
- HD HEAT DETECTOR
- ID INSIDE DIAMETER
- IN INCH
- JP JOCKEY PUMP
- MAX MAXIMUM
- MIN MINIMUM
- NC NORMALLY CLOSE
- NIC NOT IN THIS CONTRACT
- NO NORMALLY OPEN
- NTS NOT TO SCALE
- OD OUTSIDE DIAMETER
- OS&Y OUTSIDE SCREW & YOKE GATE VALVE
- PA PRE-ACTION
- PSIA POUNDS PER SQUARE INCH (ABSOLUTE)
- PSI POUNDS PER SQUARE INCH (GAUGE)
- PRV PRESSURE REDUCING VALVE
- (RE) RELOCATED EXISTING
- (ROO) EXISTING TO BE REMOVED AND RETURN TO OWNER
- SD SMOKE DETECTOR
- SPKR SPRINKLER
- TOP TOP OF PIPE
- TS TAMPER SWITCH
- UON UNLESS OTHERWISE NOTED
- UP UP (PENETRATES FLOOR SLAB)
- VB VACUUM BREAKER
- WFS WATER FLOW SWITCH
- Z ZONE

FIRE PROTECTION GENERAL NOTES

1. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL FIRE PROTECTION DRAWINGS.
2. ALL WORK IS NEW UNLESS OTHERWISE NOTED.
3. ALL FIRE PROTECTION WORK SHALL BE IN ACCORDANCE WITH THE CURRENT FIRE PROTECTION CODE AND ALL APPLICABLE LOCAL CODES AND DRAWINGS.
4. MAXIMUM FLOW VELOCITY SHALL NOT EXCEED 20 F.P.S.
5. NFPA 13 - CLIENT #1 ORDINARY HAZARD 1; Client #2 LIGHT HAZARD; USE ORDINARY HAZARD. WATER STORAGE PER TABLE 11.2.2.1 VS 11.2.3.1.2.
6. ALL EXPOSED PIPE, FITTINGS, HANGERS AND SUPPLEMENTARY STEEL SHALL BE PAINTED.
7. ENDS OF ALL CROSS MAINS SHALL BE PROVIDED WITH THREADED FLUSHING CONNECTION NO MORE THAN 2 INCHES IN DIAMETER.
8. PROVIDE AUXILIARY DRAINS FOR ALL PIPING BELOW DUCT SPRINKLERS AND OPEN TRAPPED SECTIONS. PIPING TO ONE SINGLE SPRINKLER IS EXCLUDED.
9. PROVIDE FLUSHING CONNECTIONS WHERE REQUIRED BY NFPA AND F.M.
10. COORDINATE WITH OWNER FOR ALL SHUTDOWNS.
11. PROVIDE TEST CONNECTIONS AT HIGHEST POINT OF MAIN PORTION OF EACH SPRINKLER SYSTEM, WITH 1" PIPE AND VALVE. TEST PIPE SHALL BE CONNECTED TO SPRINKLER PIPE AT LEAST 1-1/4" IN SIZE AND SHALL DISCHARGE OUTSIDE BUILDING OR THROUGH 1/2" SMOOTH BORE BRASS OUTLET, WHERE IT CAN BE EASILY SEEN.
12. COORDINATE ALL PIPE PENETRATIONS AND CORING WITH STRUCTURAL ENGINEER AND IN ACCORDANCE WITH DIVISION 01.
13. REFER TO ARCHITECTURAL DRAWINGS FOR ALL CEILING RELATED WORK.
14. COORDINATE ALL NEW FIRE PROTECTION WORK WITH ALL EXISTING AND/OR NEW DUCTWORK, PIPING AND UTILITIES OF ANY SYSTEMS. DRAWINGS ARE DIAGRAMMATIC AND SHOW THE INTENT OF THE DESIGN. REROUTE ANY PIPING AROUND EXISTING AND/OR NEW SYSTEMS INCLUDING ALL REQUIRED FITTINGS AND SUPPORTS TO MAKE THE INSTALLATION OF THE PIPING AND SPRINKLER HEADS POSSIBLE. RESEAL ANY FIRE AND/OR SMOKE RATED PENETRATIONS THAT HAVE BEEN AFFECTED AS A RESULT OF THE MODIFICATION.
15. ALL COMPONENTS USED IN FIRE PROTECTION SYSTEMS SHALL BE IN ACCORDANCE WITH THE OWNER'S GUIDELINES, STANDARDS AND SPECIFICATIONS.
16. WATER SUPPLY INFORMATION TO BE VERIFIED BY FLOW TEST. A FIRE BOOSTER PUMP IS INSTALLED IN THE BUILDING. THE FIRE PUMP IS RATED AT 750 GPM AND 155 PSI HEAD.

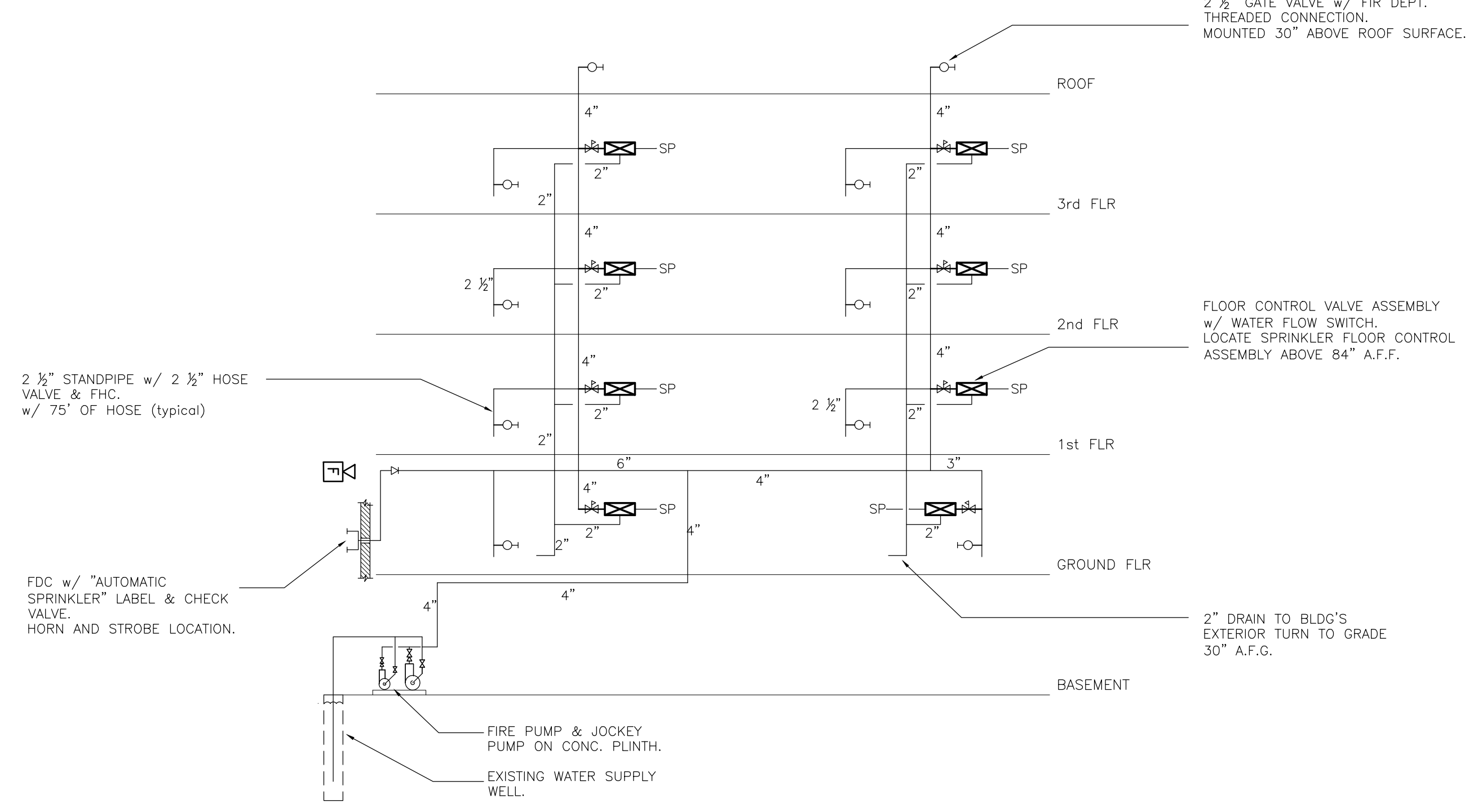
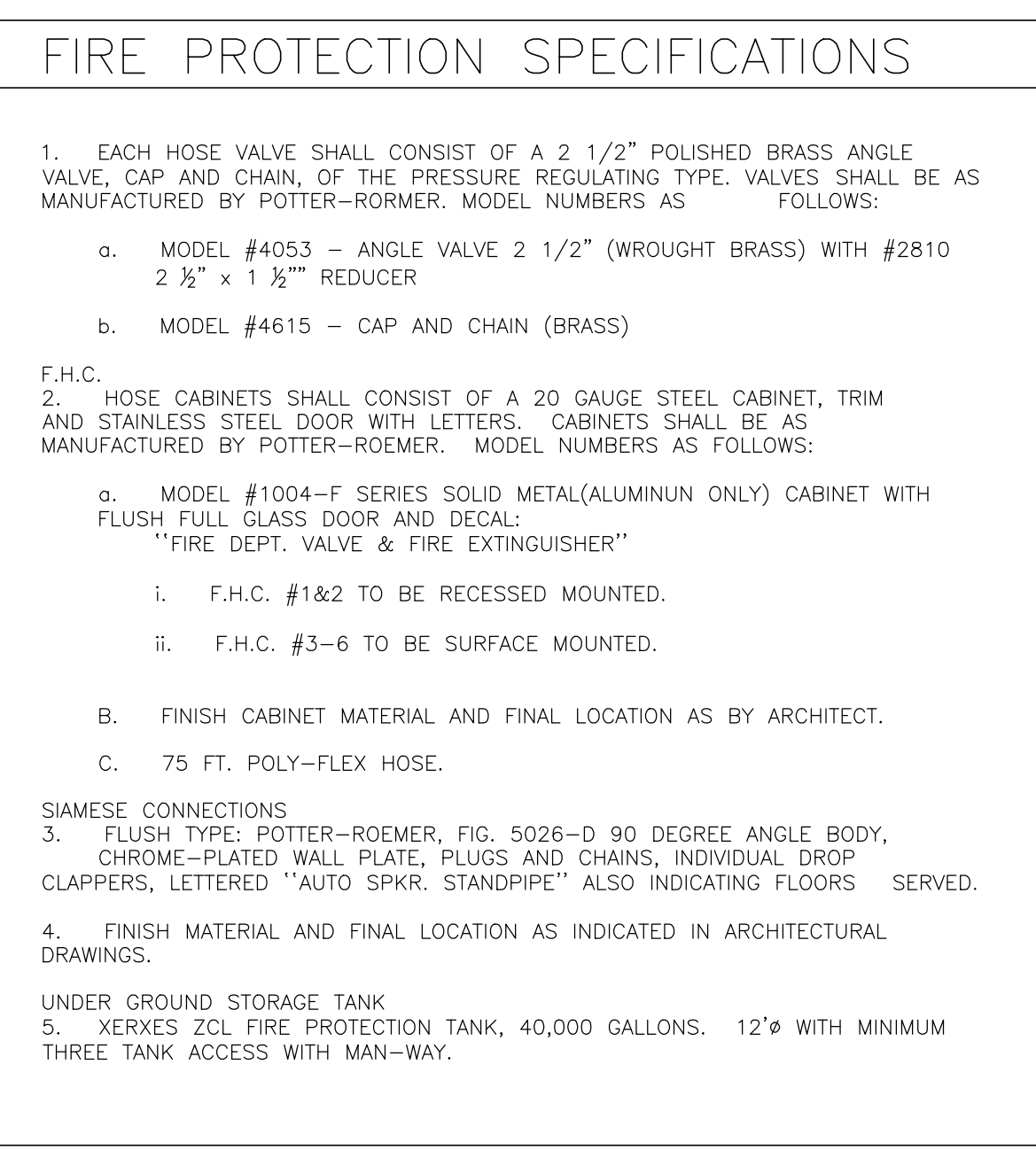
FIRE PROTECTION (AS REQUIRED PER FIRE CODE)

- PART 1 - GENERAL**
- 1.1 RELATED DOCUMENTS**
- 1.1.1 Architectural drawings and specifications.
 - 2 Structural drawings and specifications.
 - 3 Mechanical, Electrical & Plumbing drawings and specifications.
 - 4 Spare
- 1.2 DESCRIPTION OF WORK**
- 1.2.1 Extent of fire protection systems work is indicated on drawings and schedules, and by requirements of this section.
- 1.3 CODES AND STANDARDS**
- 1.3.1 NFPA Compliance: NFPA 13 "Standard for the Installation of Sprinkler Systems", and NFPA 14 "Standard for the Installation of Standpipe and Hose Systems".
 - 2 UL Compliance: Provide fire protection products in accordance with UL standards; provide UL label on each product.
 - 3 Factory Mutual (FM)
 - 4 Screw Thread Connections: Comply with local Fire Department/Marshal regulations for sizes, threading and arrangement of connections for fire department equipment to standpipe systems.
 - 5 Bahamas Building Code.
- 1.4 SUBMITTALS**
- 1.4.1 Technical product data for fire protection materials and products.
 - 2 Submit scaled layout drawings for fire protection pipe and fittings including, but not necessarily limited to, pipe and tube sizes, locations, elevations, and slopes of horizontal runs, wall and floor penetrations, and connections. Indicate interface and spatial relationship between piping and proximate equipment.
 - 3 Approval Drawings and Calculations: Prepare approval drawings and calculations of fire protection systems indicating pipe sizes, pipe locations, fittings, shutoffs, equipment, etc. Submit to Agency having jurisdiction for approval. Submit one approved copy, bearing stamp and/or signature of Agency having jurisdiction, before proceeding with installation.
 - 4 Record Drawings: At project closeout, submit record drawings of installed fire protection piping and products; in accordance with requirements of Division 1.
 - 5 Maintenance Data: Submit maintenance data and parts lists for fire protection materials and products. Include this data, product data, shop drawings, approval drawings, approval calculations, certificate of installation, and record drawings in maintenance manual; in accordance with requirements of Division 1.
- PART 2 - PRODUCTS**
- 2.1 MATERIALS AND PRODUCTS**
- 2.1.1 General: Provide piping materials and factory-fabricated piping products of sizes, types, pressure ratings, temperature ratings, and capacities as determined by installer to comply with installation requirements. Provide sizes and types matching piping and equipment connections; provide fittings of materials which match pipe materials used in fire protection systems. Where more than one type of materials or products are indicated, selection is installer's option.
- 2.2 BASIC IDENTIFICATION**
- 2.2.1 Provide identification in accordance with the following listing.
 - 2 Fire Protection Piping: Plastic pipe markers.
 - 3 Fire Protection Valves: Valve tags.
 - 4 Fire Protection Signs: Provide the following signs:
 - 2.2.4.1 At each sprinkler valve, sign indicating what portion of system valve controls.
 - 2 At each outside alarm device, sign indicating what authority to call if device is activated.
- 2.3 BASIC PIPES AND PIPE FITTINGS**
- 2.3.1 Black Steel Pipe: Schedule 40 for less than 8"; Schedule 30 for 8" and larger; Class 125, cast-iron threaded fittings, threaded joints or mechanical grooved pipe couplings and fittings; cut- groove type.

- 2 Black Steel Pipe: Schedule 10 for 5" and smaller; 0.134" wall thickness for 8"; and 0.188" wall thickness for 8" and 10"; wrought-steel buttwelding fittings, welded joints or mechanical grooved pipe couplings and fittings; roll-groove or mechanical locking type.
- 2.4 BASIC PIPING SPECIALTIES**
- 2.4.1 Pipe escutcheons.
 - 2 Dielectric unions.
 - 3 Drip pans.
 - 4 Pipe sleeves.
 - 5 Sleeve seals.
 - 6 Fire Barrier Penetration Seals.
- 2.5 BASIC SUPPORTS AND ANCHORS**
- 2.5.1 Adjustable steel clevis hangers, adjustable steel band hangers, or adjustable band hangers, for horizontal-piping hangers and supports.
 - 2 Two-bolt riser clamps for vertical piping supports.
 - 3 Steel turnbuckles and malleable iron sockets for hanger-rod attachments.
 - 4 Concrete inserts, top-beam C-clamps, side beam or channel clamps or center beam clamps for building attachments.
- 2.6 BASIC VALVES**
- 2.6.1 Interior Valves:
 - 2.6.1.1. Sectional: Gate valves or butterfly valves; UL-listed.
 - 2 Check: Swing check valves; UL-listed.
- 2.7 SPECIAL VALVES**
- 2.7.1 General: Provide valves, UL-listed, in accordance with the following listing. Provide sizes and types which mate and match piping and equipment connections.
 - 2 Alarm Check Valve: Provide cast-iron water flow alarm check valve, 175 psi working pressure.
 - 3 Fire Department Connection Valve: Provide fire department connection iron swing check valve, 175 psi rated working pressure, of size and end type indicated.
 - 4 Detector Check Valves: Provide cast-iron body detector check valve, bronze fitted, with topped bosses on each side for by-pass meter, air vent, and cover-mounted eyebolt.
- 2.8 BASIC METERS AND GAGES**
- 2.8.1 Pressure gages, 0-250 psi range.
- 2.9 FIRE PROTECTION SPECIALTIES**
- 2.9.1 Provide fire protection specialties, UL-listed, in accordance with the following listing.
 - 2 Water Flow Indicators: Provide vane type water flow detectors.
 - 3 Water-Motor Gongs: Provide 10" weatherproof, red enameled finish, water-motor gongs.
 - 4 Supervisory Switches: Provide products recommended by manufacturer for use in service indicated.
- 2.10 AUTOMATIC SPRINKLERS**
- 2.10.1 General: Provide automatic sprinklers of type in accordance with the following listing. Provide fusible links for 165F (74C) unless otherwise indicated.
 - 2.10.1.1 Upright.
 - 2 Pendant.
 - 3 Conventional: 40% discharge upward, 60% downward.
 - 2 Finish: Chrome plate for occupied areas, cast brass for unoccupied areas.
 - 3 Sprinkler Cabinet and Wrench: Furnish steel, baked red enameled, sprinkler box with capacity to store 10 sprinklers and wrench sized to sprinklers.
- 2.11 SIAMESE CONNECTIONS**
- 2.11.1 Wall Type Siamese Connections: Provide wall type cast brass siamese connections and escutcheon plate assembly, with 2, 2-1/2" fire department inlets with female hose connections, American National fire hose connection screw thread, equipped with individual drop clopper valves, equipped with plugs and chains, construction features as indicated, and constructed with the following additional construction features:
 - 2.11.1.1 Finish: Polished brass or chrome plate.

- 2 Inlet Pipe: 4" pipe, 5" pipe, or 6" pipe (pipe size).
 - 3 Cast Lettering: "AUTO. SPKR."
 - 4 Escutcheon: 12" diameter or 7" x 14" rectangular.
 - 5 Siamese Connection: Y-type, inlets straight, projecting configuration; or Y-type, inlets 45°, projecting configuration.
- 2.12 ACCEPTABLE MANUFACTURERS**
- 2.12.1 Allen (W.D.) Mfg. Co.
 - 2 Craker-Standard Div.
 - 3 Elkhart
 - 4 Guardian
 - 5 Seco Mfg. Inc.
 - 6 Viking
 - 7 Grinnell

- PART 3 - EXECUTION**
- 3.1 INSTALLATION OF BASIC IDENTIFICATION**
- 3.1.1 Install fire protection signs on piping in accordance with NFPA 13 and NFPA 14 requirements.
- 3.2 INSTALLATION OF PIPES AND PIPE FITTINGS**
- 3.2.1 Comply with requirements of NFPA 13 and NFPA 14 for installation of fire protection piping materials. Install piping products where indicated, in accordance with manufacturer's written instructions, and in accordance with recognized industry practices.
 - 2 Coordinate with other work, including plumbing piping and duct work as necessary to interface components of fire protection piping properly with other work.
 - 3 Install sectional valves in inlet piping, at bottom of each riser, and in loops as indicated.
 - 4 Install fire department connection valves in piping where fire department connections are indicated.
 - 5 Install water flow indicators where indicated.
 - 6 Mount supervisory switches on each sectional valve.
 - 7 Install manual shutoff at each audible alarm station.
 - 8 Install inspector's test connection at most remote point from riser.
- 3.4 INSTALLATION OF VALVES**
- 3.4.1 Detector Check Valves: Install in horizontal position as indicated, orientated for proper flow direction. Install by-pass meter with globe valve and check valve, in accordance with manufacturer's installation directions.
- 3.5 INSTALLATION OF FIRE PROTECTION SPECIALTIES**
- 3.5.1 General: Install fire protection specialties as indicated, and in accordance with NFPA 13 and 14.
 - 2 Furnish wiring requirements to Electrical Installer for electrical wiring of supervisory switches.
- 3.6 FIELD QUALITY CONTROL**
- 3.6.1 Sprinkler Piping Flushing: Prior to connecting sprinkler risers for flushing, flush water feed mains, lead-in connections and control portions of sprinkler piping. After fire sprinkler piping installation has been completed and before piping is placed in service, flush entire sprinkler system, as required to remove foreign substances, under pressure as specified in NFPA 13. Continue flushing until water is clear, and check to ensure that debris has not clogged sprinklers.
 - 2 Hydrostatic Testing: After flushing system, test fire sprinkler piping hydrostatically, for period of 2 hours, at not less than 200 psi or at 50 psi in excess of maximum static pressure when maximum static pressure is in excess of 150 psi. Check system for leakage of joints. Measure hydrostatic pressure at low point of each system or zone being tested.
 - 3 Repair or replace piping system as required to eliminate leak age in accordance with NFPA standards for "leak or no leakage", and retest as specified to demonstrate compliance.
- 3.7 EXTRA STOCK**
- 3.7.1 Heads: For each style and temperature range required, furnish additional sprinkler heads, amounting to one unit for every 100 installed units, but not less than 5 units of each.



FIRE STANDPIPE & SPRINKLER RISER DIAGRAM
N.T.S.

FIRE PUMP SCHEDULE												
SERVICE	PUMP NO.	QUANTITY		MOTOR			RATED CAP. GPM	HEAD FT.	PRESSURE PSI	PUMPS MANUFACTURER AND MODEL #	CONTROLLER MANUFACTURER AND MODEL #	
		TOTAL	EMERG.	HP	RPM	VOLTS						PH
JOCKEY PUMP	FP-0	1	1	2	3450	460	3	10	305	132	PEERLESS - GRUNDFOF CR3-12ST-60H	FIRETROL FTA 550E
FIRE PUMP	FP-1	1	1	100	3575	460	3	750	295	127	PEERLESS 54EF11	FIRETROL FTA-1930 REDUCED VOLTAGE SOFT START STOR WITH FTA 950 EMERGENCY POWER TRANSFER SWITCH

06/30/23 No. DATE DESIGN DEVELOPMENT REVISION B&A BY

BROWN & ASSOCIATES
Engineers & Consultants, Limited

PROJECT PROPOSED RENOVATIONS FOR UTILITIES REGULATION & COMPETITION AUTHORITY - FREDERICK HOUSE

LOCATION FREDERICK STREET, NASSAU, BAHAMAS.

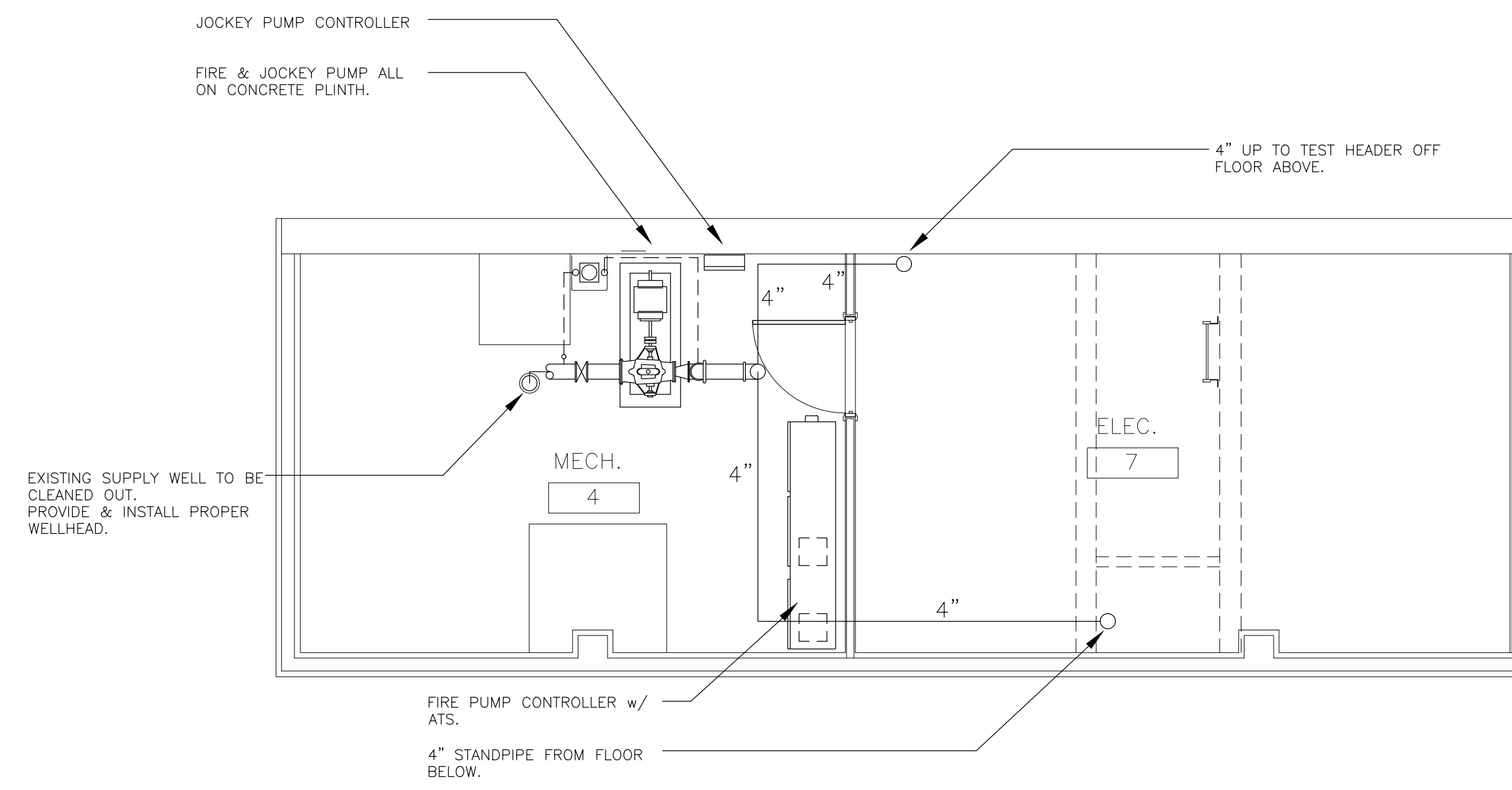
TITLES F.P. LEGEND & SPECIFICATIONS

SCALE N.T.S.

CLIENT URCA

PROJECT ARCHITECT TDG	NUMBER PROJECT	DRAWING NO. FP-1
DRAWN BY B&A		REF. URCA
DATE OCT.12		

The drawings are diagrammatic and indicate general layout of equipment and approximate dimensions, unless a dimensional detail is included. The drawings do not show all architectural and structural details. Refer to the contract set of building drawings and check for any variations from the plans. Take any information requiring accurate dimensions from the building drawings or at the building.



BASEMENT FIRE PROTECTION PLAN

SCALE: 1/4" = 1'-0"

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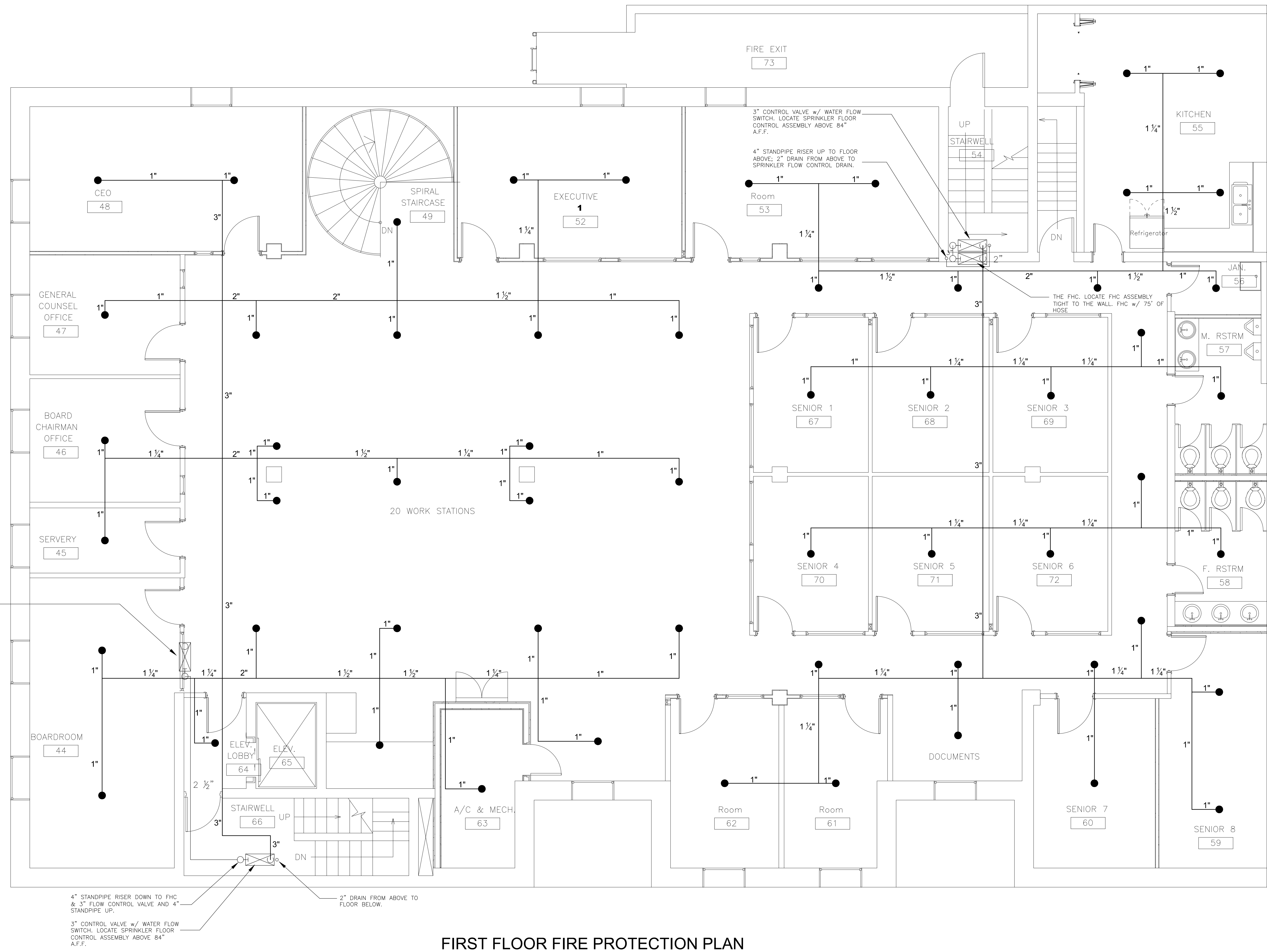
LOCATION FREDERICK STREET, NASSAU, BAHAMAS.

TITLES BASEMENT FIRE PROTECTION

SCALE 1/4" = 1'-0"

CLIENT URCA

PROJECT ARCHITECT TDG	NUMBER PROJECT	DRAWING NO.
DRAWN BY B&A		FP-2
DATE OCT. 12	REF. URCA	



FIRST FLOOR FIRE PROTECTION PLAN
SCALE: 1/4" = 1'-0"

06/30/23 DESIGN DEVELOPMENT B&A
No. DATE REVISION BY

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PROJECT
PROPOSED RENOVATIONS FOR
UTILITIES REGULATION & COMPETITION
AUTHORITY - FREDERICK HOUSE

LOCATION
FREDERICK STREET, NASSAU, BAHAMAS.

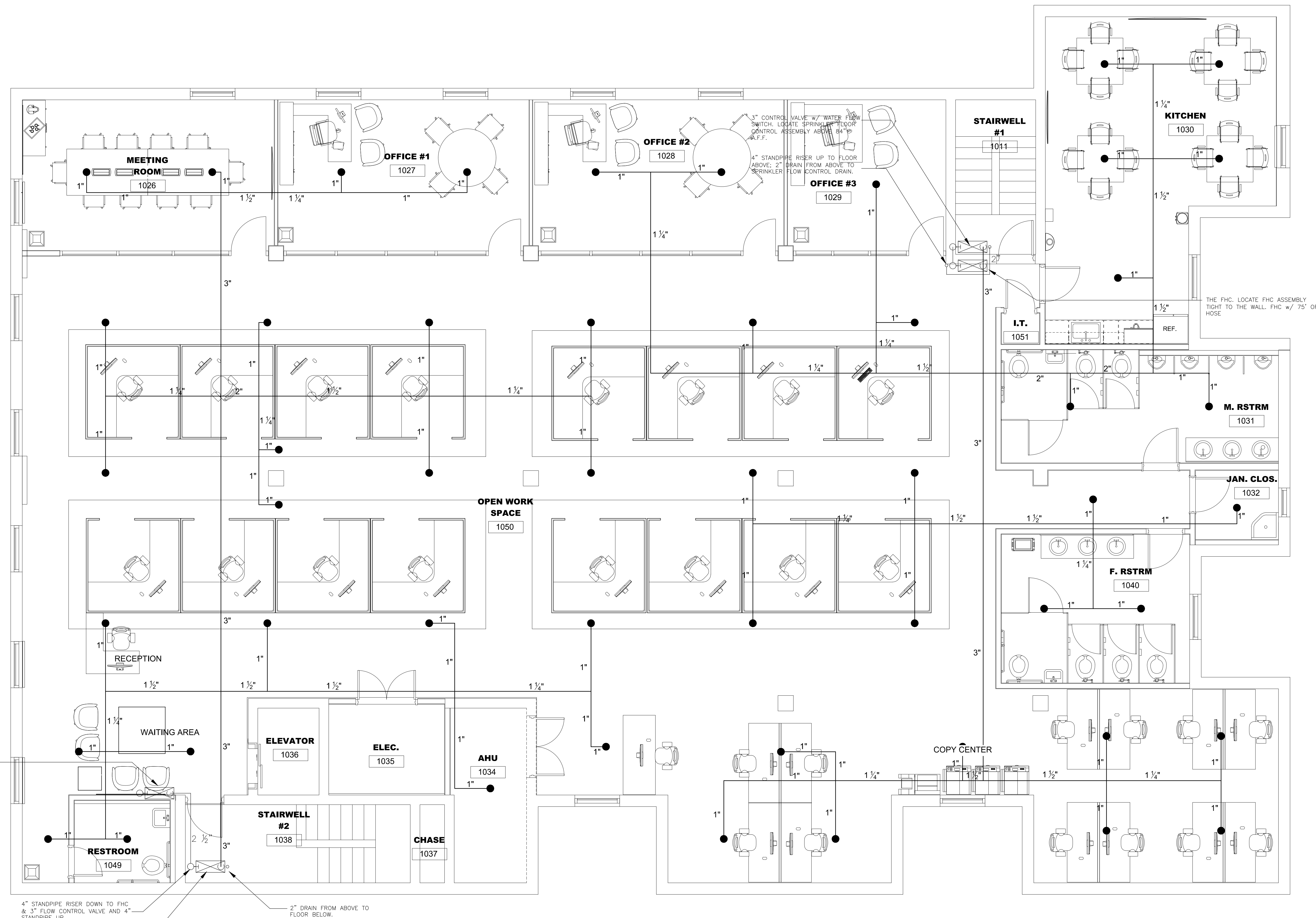
TITLE FIRST FLOOR FIRE PROTECTION

SCALE 1/4" = 1'-0"

CLIENT URCA

PROJECT ARCHITECT TDG	NUMBER PROJECT	DRAWING NO. FP-4
DRAWN BY B&A		REF. URCA
DATE OCT. 12		

The drawings are diagnostic and indicate general layout of equipment and approximate dimensions, unless a dimensional detail is included. The drawings do not show all architectural and structural details. Refer to the contract set of building drawings and check for any variations from the plans. Take any information requiring accurate dimensions from the building drawings or at the building.



SECOND FLOOR FIRE PROTECTION PLAN

SCALE: 1/4" = 1'-0"

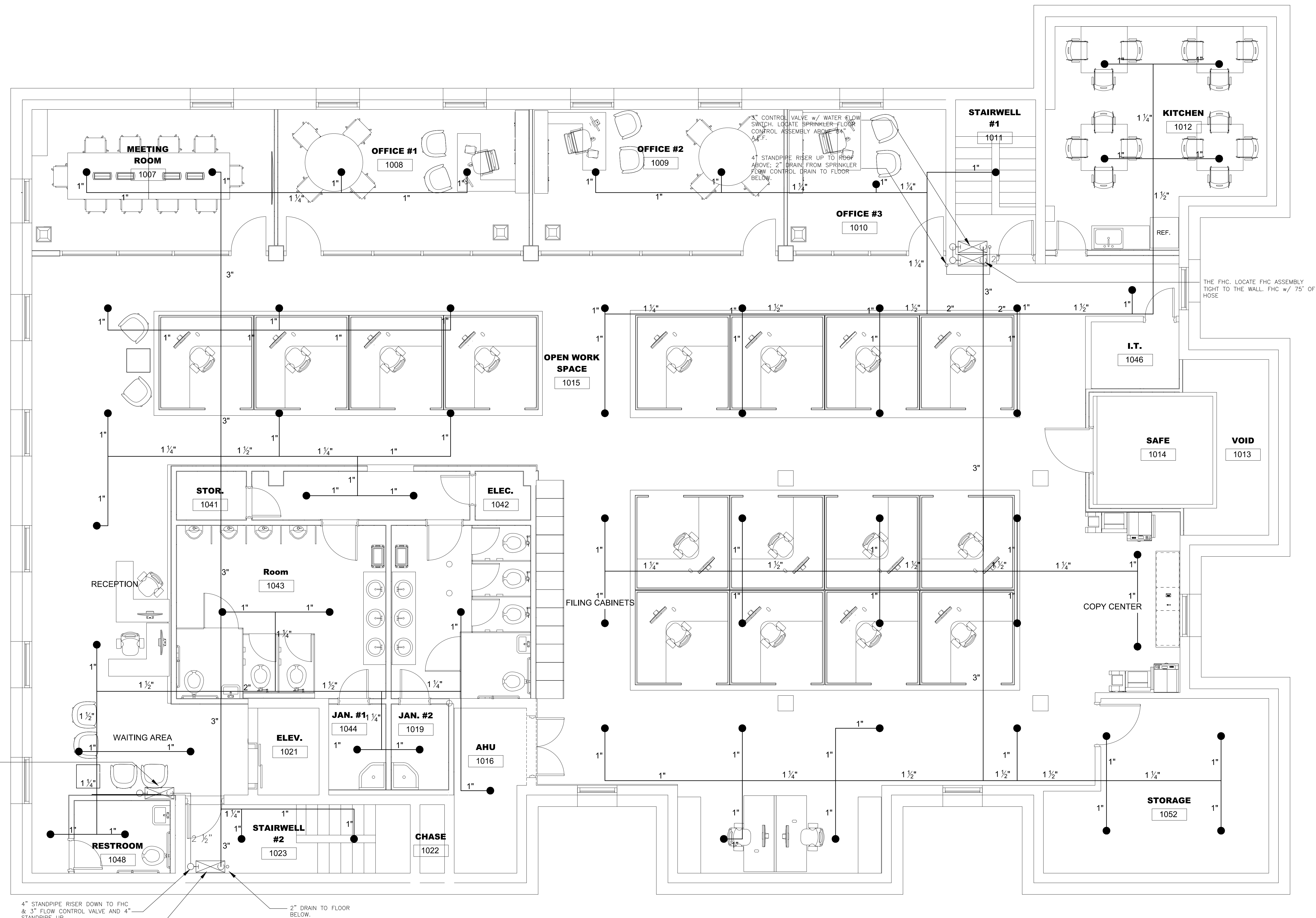
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PROJECT PROPOSED RENOVATIONS FOR UTILITIES REGULATION & COMPETITION AUTHORITY - FREDERICK HOUSE
 LOCATION FREDERICK STREET, NASSAU, BAHAMAS.
 TITLES SECOND FLOOR FIRE PROTECTION
 SCALE 1/4" = 1'-0"
 CLIENT URCA

PROJECT ARCHITECT TDG	NUMBER PROJECT	DRAWING NO. FP-5
DRAWN BY B&A		REF. URCA
DATE OCT.12		



NEW FHC LOCATION. LOCATE FHC ASSEMBLY TIGHT TO THE WALL. FHC w/ 75' OF HOSE.

4" STANDPIPE RISER DOWN TO FHC & 3" FLOW CONTROL VALVE AND 4" STANDPIPE UP.
 3" CONTROL VALVE w/ WATER FLOW SWITCH, LOCATE SPRINKLER FLOOR CONTROL ASSEMBLY ABOVE 84" A.F.F.
 2" DRAIN TO FLOOR BELOW.

THIRD FLOOR FIRE PROTECTION PLAN
 SCALE: 1/4" = 1'-0"

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PROJECT PROPOSED RENOVATIONS FOR UTILITIES REGULATION & COMPETITION AUTHORITY - FREDERICK HOUSE
 LOCATION FREDERICK STREET, NASSAU, BAHAMAS.
 TITLES THIRD FLOOR FIRE PROTECTION
 SCALE 1/4" = 1'-0"
 CLIENT URCA

PROJECT ARCHITECT	NUMBER PROJECT	DRAWING NO.
TDG		FP-6
DRAWN BY B&A		REF. URCA
DATE OCT. 12		

The drawings are diagrammatic and indicate general layout of equipment and approximate dimensions, unless a dimensional detail is included. The drawings do not show all architectural and structural details. Refer to the contract set of building drawings and check for any variations from the plans. Take any information requiring accurate dimensions from the building drawings or at the building.



ROOF FIRE PROTECTION PLAN

SCALE: 1/4" = 1'-0"

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06/30/23 DESIGN DEVELOPMENT B&A
 NO. DATE REVISION BY



PROJECT
 PROPOSED RENOVATIONS FOR
 UTILITIES REGULATION & COMPETITION
 AUTHORITY - FREDERICK HOUSE

LOCATION
 FREDERICK STREET, NASSAU, BAHAMAS.

TITLES ROOF FIRE PROTECTION

SCALE 1/4" = 1'-0"

CLIENT URCA

PROJECT ARCHITECT TDG	NUMBER PROJECT	DRAWING NO.
DRAWN BY B&A		FP-7
DATE OCT. '12		REF. URCA