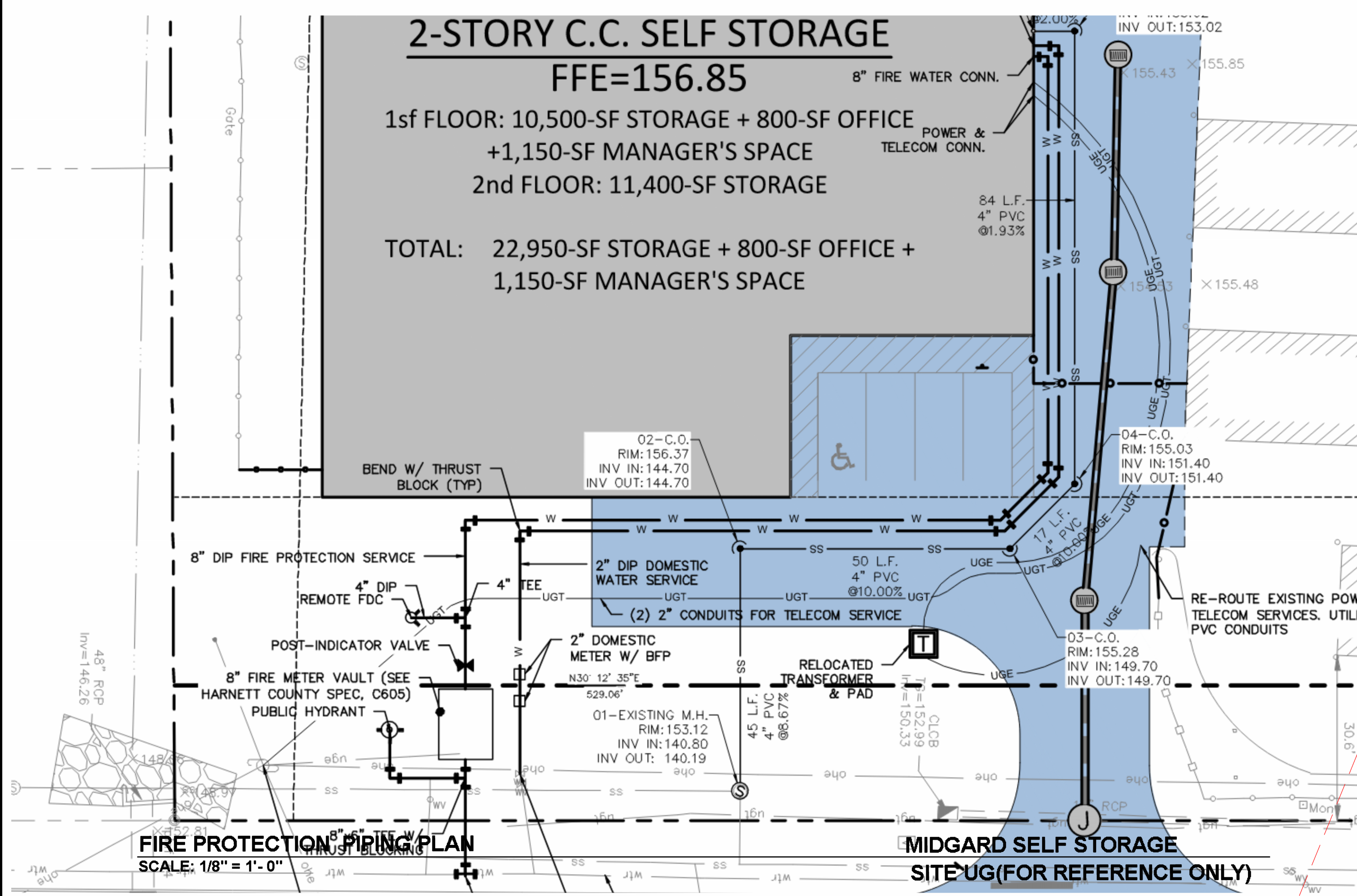


# 2-STORY C.C. SELF STORAGE

FFE=156.85

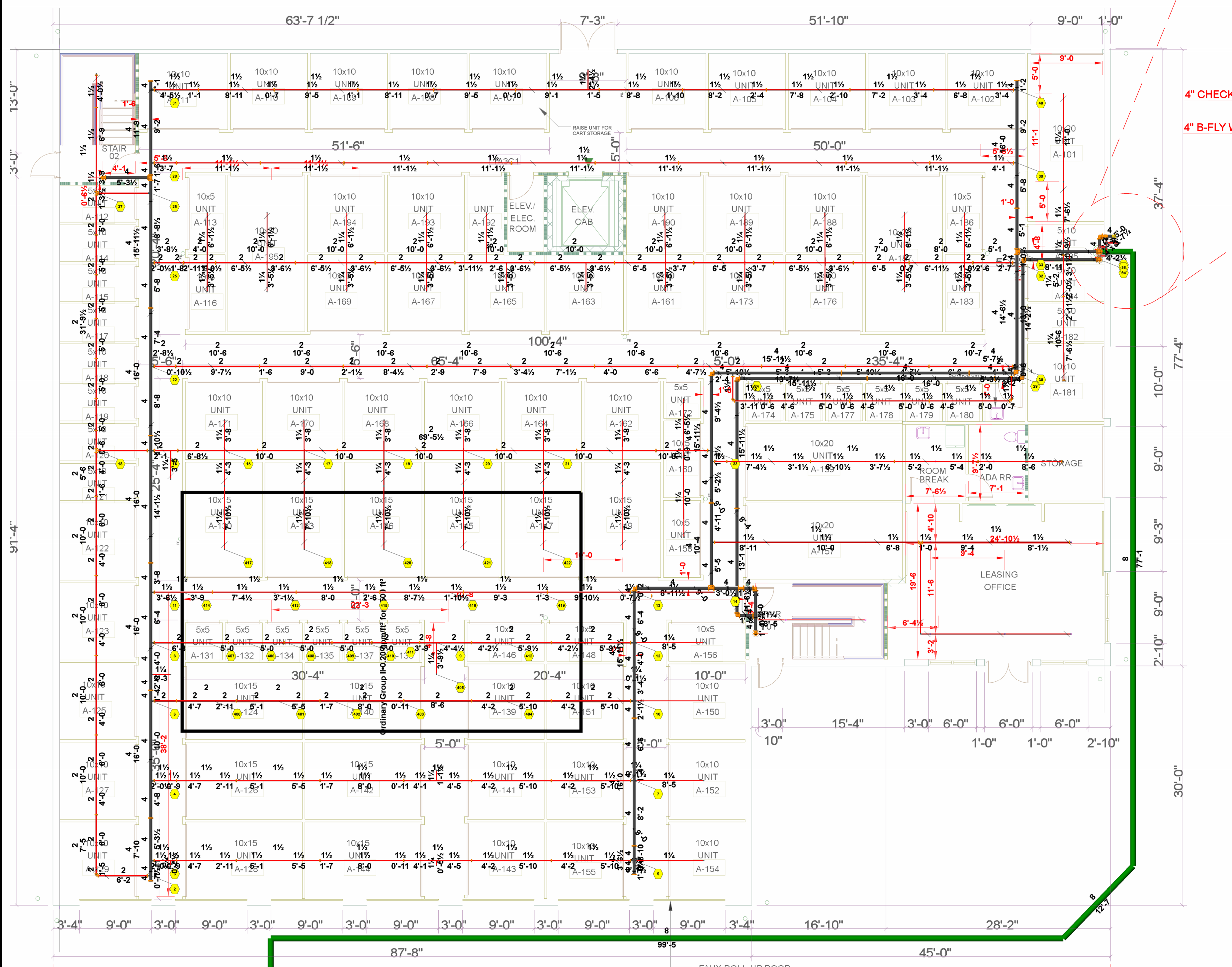
1st FLOOR: 10,500-SF STORAGE + 800-SF OFFICE  
+1,150-SF MANAGER'S SPACE  
2nd FLOOR: 11,400-SF STORAGE

TOTAL: 22,950-SF STORAGE + 800-SF OFFICE +  
1,150-SF MANAGER'S SPACE



**FIRE PROTECTION PIPING PLAN**  
SCALE: 1/8" = 1'-0"

**MIDGARD SELF STORAGE**  
SITE UG (FOR REFERENCE ONLY)

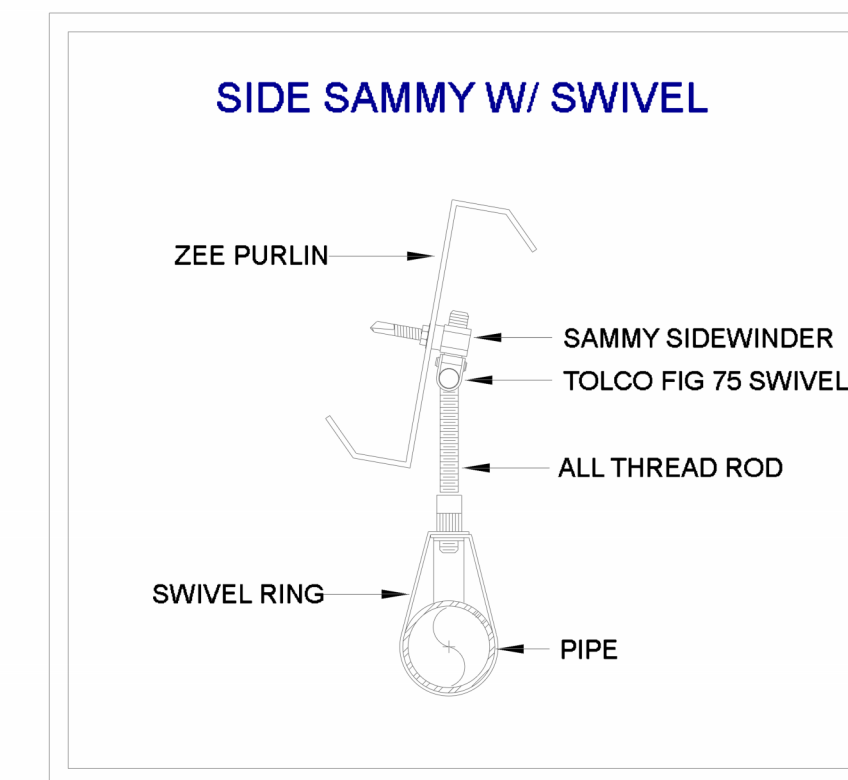
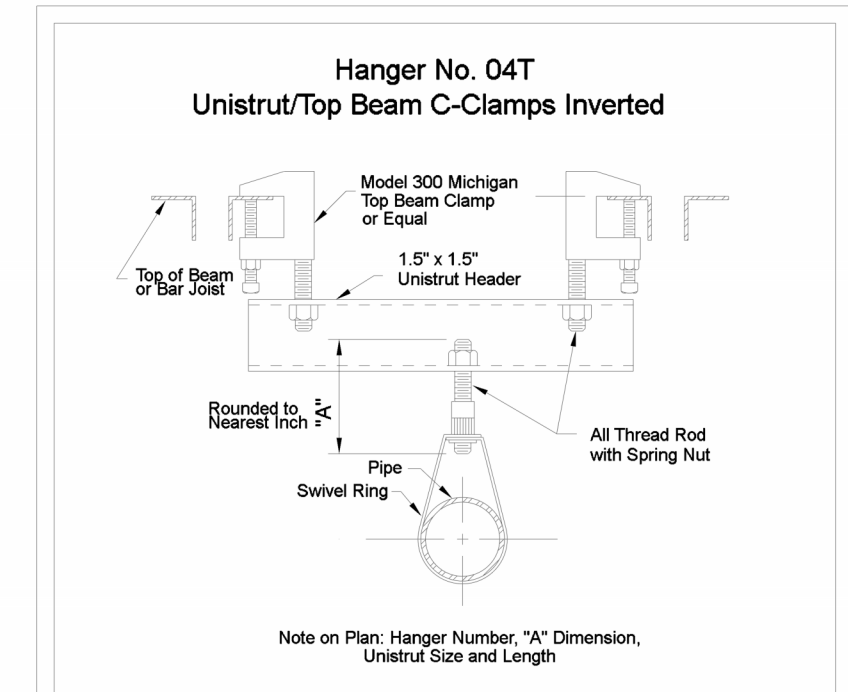


**FIRE PROTECTION PIPING PLAN**  
SCALE: 1/8" = 1'-0"

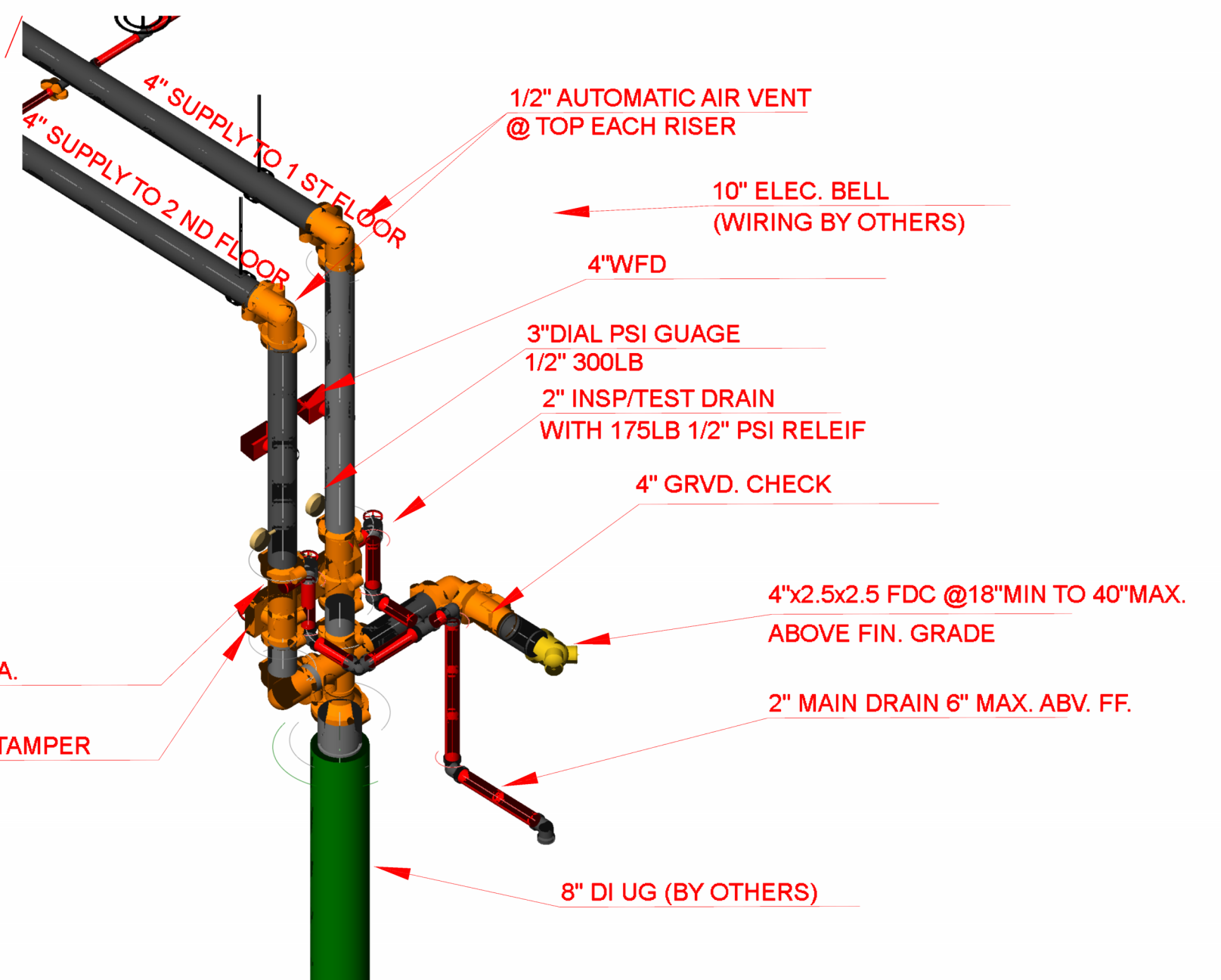
**MIDGARD SELF STORAGE**  
1 ST FLOOR

# GENERAL NOTES

- IFP SCOPE OF WORK: INSTALL FIRE PROTECTION THRU OUT NEW METAL FRAMED 2 STORY STRUCTURE PER NFPA 13,2019 ED.
- CONTRACT EXCLUSIONS: ELECTRIC WIRING, FIRE ALARM DETECTION SYSTEMS, PAINTING OF PIPE.
- OUR CONTRACT IS WITH:  
RELIANT  
1146 CANTON ST  
ROSWELL,GA. 30075  
  
- NFPA 13 2019 EDITION  
- INTERNATIONAL BUILDING CODE (I.B.C.) 2018 EDITION  
ANY NORTH CAROLINA AMENDMENTS 2019
- ALL NEW SPRINKLER PIPING TO BE 1" TO 2" SCHEDULE 40 BLACK. PER ASTM A795/A795M. ALL PIPING JOINED WITH C.I SCRWV FITTINGS PER ASME B16.4. 2 1/2" TO 6" TO BE SCHEDULE 10. JOINED WITH GRVD COUPLING AND FITTINGS PER NFPA 13 7.5.3. CPVC PER ASTM F442/F442M PER NFPA 13 2019 TABLE 7.3.1.1
- ALL MATERIALS AND INSTALLATION TO BE IN ACCORDANCE WITH NFPA 13, 2019 EDITION.
- IT IS THE OWNER'S RESPONSIBILITY TO PROVIDE SUFFICIENT HEAT, AT OR ABOVE 40 DEG F, TO PREVENT FREEZING OF THE SPRINKLER PIPING AND RELATED COMPONENTS.
- HANGERS ARE INSTALLED ACCORDING TO NFPA 13, 2019 EDITION. INSTALL HANGER WITHIN 1'-0" OF DROP SYSTEM PSI EXCEEDS 100 PSI.
- EXCLUSION: SEISMIC BRACING, FIRE ALARM, WIRING OF ANY KIND, AND PAINTING.



## HANGERS



**FIRE RISER DETAIL**

STATE FIRE MARSHAL RULES AND REGULATIONS FOR MODIFICATION OF EXISTING SPRINKLER SYSTEMS  
 - One additional sprinkler may be added to an original installation location if the additional sprinkler is in a remotely located or non-communicating compartment from the existing or relocated sprinkler.  
 - Two sprinklers may be added to an existing branch line if the additional sprinklers are in remotely located or non-communicating compartments from the existing or relocated sprinkler.  
 - New branch lines added to existing cross mains shall be sized the same as the existing branch lines.  
 - No more than two heads shall be supplied from 1 inch pipe unless the existing system was calculated to supply more than two heads. In such case, the calculated maximum for 1 inch pipe shall take precedence.

## PROJECT BUILDING INFO

TYPE OF USE: 1 ST FLOOR-OFFICES, 2ND FLOOR RESIDENCE  
 BUILDING SQ. FT.: 12,450 11,400  
 TYPE OF OCCUPANCY: MIXED USE  
 TYPE OF CONSTRUCTION: I12B METAL AND CONCRETE  
 ZONED : B  
 NUMBER OF STORIES: 2  
 IMPROVEMENT AREA: ENTIRE 2 STORY STRUCTURE  
  
 FIRE SPRINKLERS: 1500 SQ FT ORD. HAZ. 130 sq ft max.  
 LIGHT 225 SQ FT OFFICES 15X15 MAX.  
 RESIDENTIAL LT HAZ 256 SQ FT MAX. 16X16 MAX.  
 YES

## LEGEND

- ⊙ - EXISTING SPRINKLER
- ⊖ - EXISTING PIPING
- - NEW BRANCHLINE PIPING
- HEAD TO BE ADDED VIA MECHANICAL TEE OR FROM NEW PIPE
- PIPE TO BE REWORKED FROM EXISTING OUTLET
- PIPE CONTINUES
- D - DEMO/REMOVE SPRINKLER
- A - ADD SPRINKLER
- NC - NO CHANGE EXISTING SPRINKLER TO REMAIN
- SRR - SMALL ROOM RULE
- ✓ - NEW HANGER
- ★ 0'-0" - HEIGHT A.F.F.

Riser Tag	
Design Basis:	Ordinary Group I
Occupancy:	336
Total Sprinklers:	23
Number of Sprinklers Calculated:	23
Number of Nozzles Calculated:	0
K-Factor:	5.6
Orifice Size:	0
Design Density:	0.20 gpm/ft <sup>2</sup>
Average Density:	0.20 gpm/ft <sup>2</sup>
Area of Application:	1800 SF (Actual 2300 SF)
Demand at Base of Riser or Point of Connection:	7.000
Pressure (psi):	
Static Pressure (psi):	60.000
Residual Pressure (psi):	29.000
Supply Pressure (psi):	89.700
Total Demand Pressure (psi):	730.200
Total Demand Flow (gpm):	27.799
Pressure Margin (psi):	12.663

Hydraulic Information	
Remainder Area 1:	
OCCUPANCY CLASSIFICATION (Ordinary Group I)	
DENSITY (gpm/ft <sup>2</sup> )	0.20 for 1800 SF (Actual 2300 SF)
TOTAL HOSE STREAMS	200.000
DRY CAPACITY	0.000 gpm
TOTAL HEADS FLOWING	23
K-FACTOR	5.6
TOTAL WATER REQUIRED	130.200
TOTAL PRESSURE REQUIRED	27.799
BASE OF RISER (gpm)	730.200
BASE OF RISER (psi)	27.799
SAFETY MARGIN (psi)	+12.663 (31.3%)

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
⊙	Reliable	RA3624	KFR56 INT	233	5.6	Upright	1/2"	Quick	Brass	212 °F	
⊖	Reliable	RA3624	KFR56 INT	8	5.6	Pendent	1/2"	Quick	Brass	212 °F	
⊙	Reliable	RA3624	KFR56 INT	83	5.6	Upright	1/2"	Quick	Brass	212 °F	
⊖	Reliable	R3516	F1RES49	12	4.9	Pendent	1/2"	Fast	White Polyester	155 °F	
⊙	Reliable	RA3624	KFR56 INT	1	5.6	Upright	1/2"	Quick	Brass	212 °F	
				<b>Total = 337</b>							



**VICINITY MAP**

**INTERNATIONAL FIRE PROTECTION INC.**  
POWERED BY API GROUP  
 6935 Oak Ridge Commerce Way  
 Austell, Georgia 30168  
 Tel.: (770) 745-4530 Fax: (770) 745-8730  
 WWW.CADAPRO.COM

**STAMP**

REGISTERED PROFESSIONAL ENGINEER  
 STATE OF NORTH CAROLINA  
 EXPIRES 12/31/2024  
 PROJECT NO. 23-001  
 SHEET NO. 1 OF 2

**BARON, SC**

ACT: NOT IN CONTRACT  
 N.T.S.: NOT TO SCALE  
 O.C.: ON CENTER  
 O.S.Y.: OUTSIDE SCHEDULE YORE  
 R.E.D.: RELOCATED  
 S.P.: SPRINKLER  
 T.H.D.: THREADED

**LITTLE ROCK, AR**

ACROBATIC CEILING TILE  
 BUTTERFLY VALVE  
 CENTER LINE  
 CONCERNING  
 CENTER OF GRADE  
 CONCRETE  
 G.R.V.: GRUNDVAL  
 O.V.B.: OVERSIL (PERMANENT)

**PLANT CITY, FL**

IMPORTANT  
 This drawing and the information and the property of INTERNATIONAL FIRE PROTECTION, Inc. and is loaned upon the express conditions that the same be returned to the office of origin and that no reproduction of this drawing or any part thereof shall be made without the written consent of I.F.P.

**TIFTON, GA**

REVISIONS

NO.	DATE	DESCRIPTION

**ATLANTA, TN**

DRAWN BY: D. PEOPLES  
 DATE: JULY 12, 2024  
 SCALE: as noted

**MASHVILLE, TN**

DATE: JULY 12, 2024  
 SCALE: as noted

**CHATTANOOGA, TN**

DATE: JULY 12, 2024  
 SCALE: as noted

**BIRMINGHAM, AL**

DATE: JULY 12, 2024  
 SCALE: as noted

**MOBILE, AL**

DATE: JULY 12, 2024  
 SCALE: as noted

**MADISON, AL**

DATE: JULY 12, 2024  
 SCALE: as noted

**MIDGARD SELF STORAGE**  
 14396 NC 210 S  
 SPRING LAKE, NC 28390  
 FIRE PROTECTION PIPING PLAN T.1.

CONTRACT NUMBER  
1041-0126884

SHEET NUMBER  
FP-1 of 2