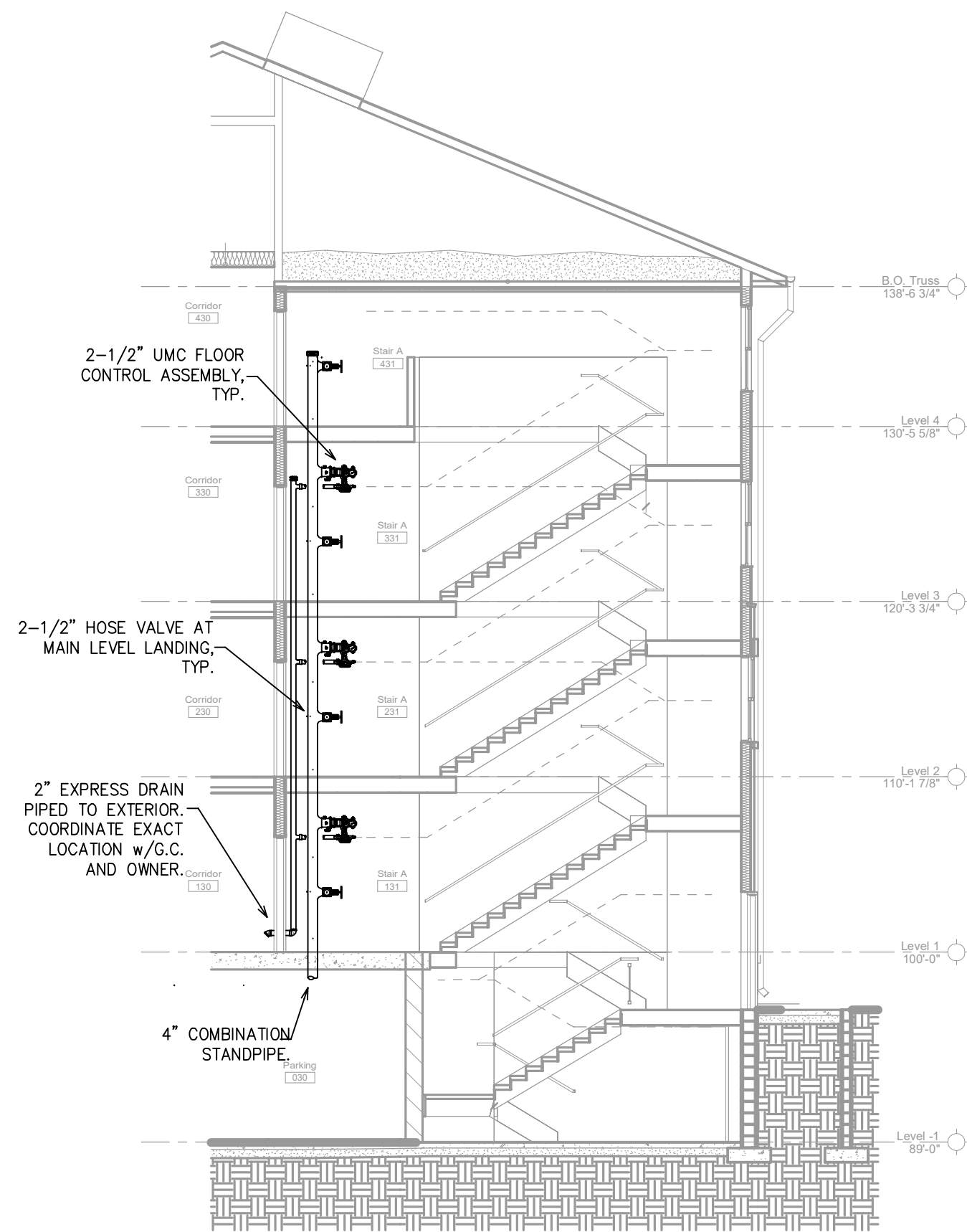
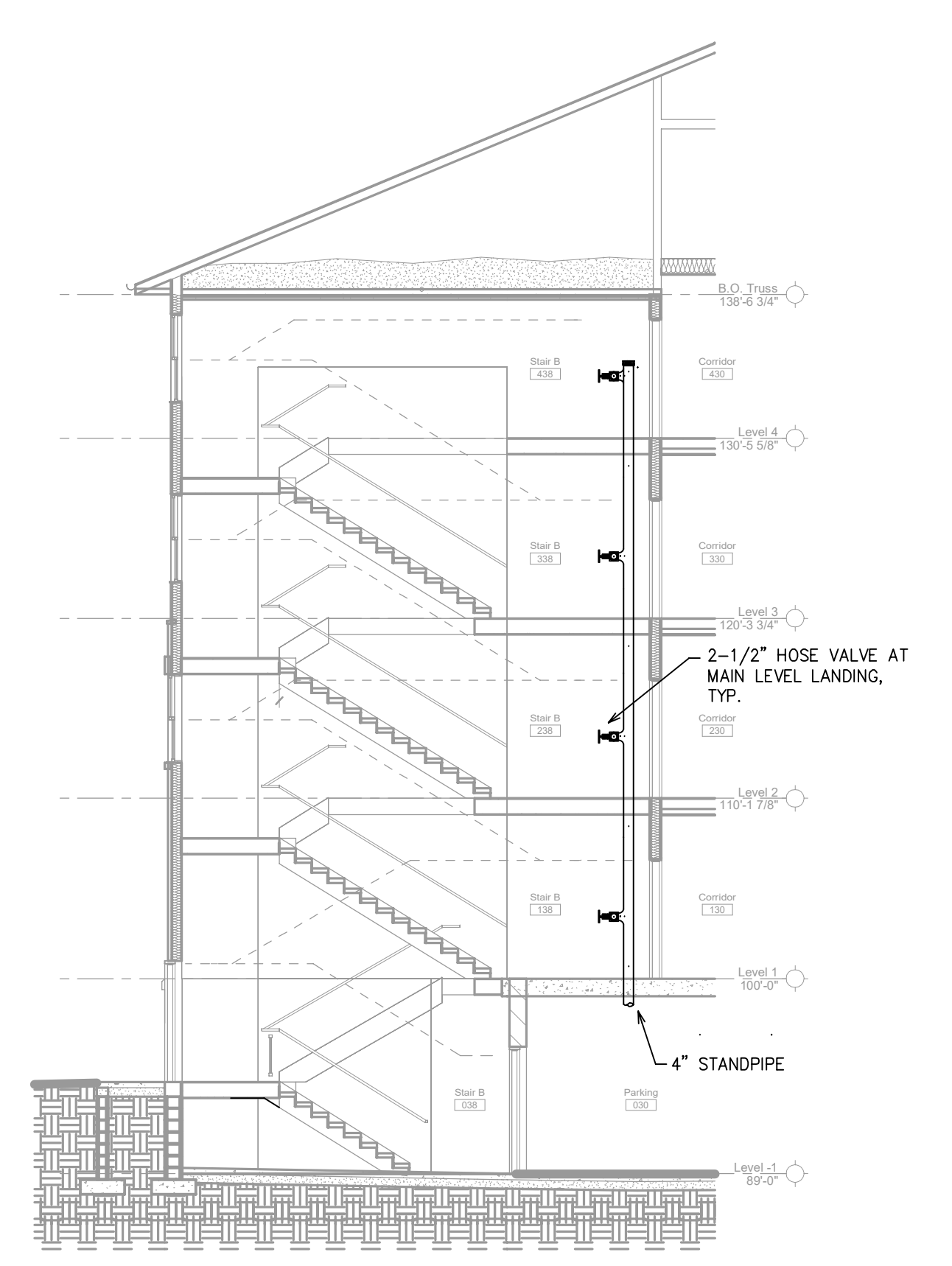


GENERAL NOTES

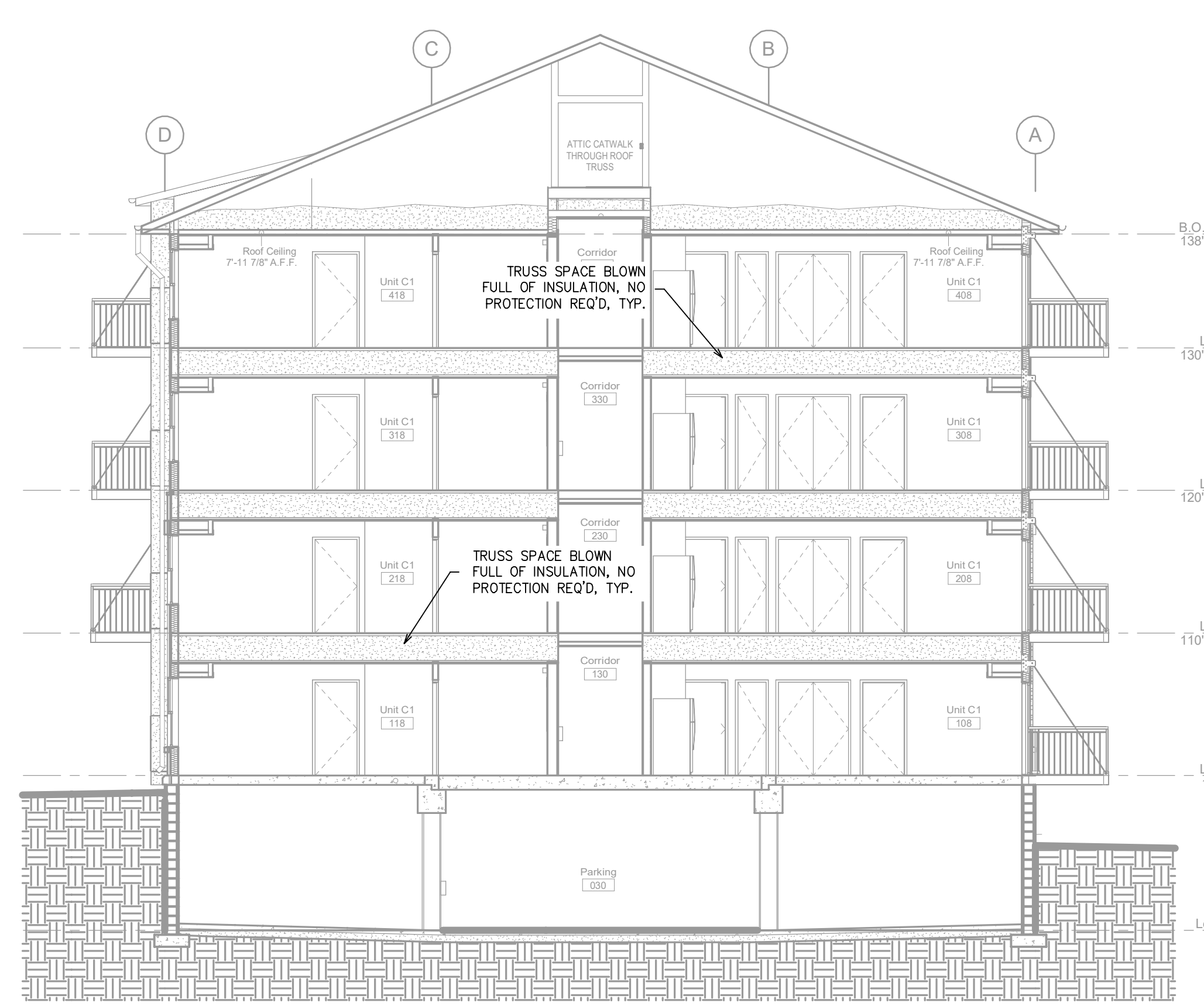
- 1. INTERNATIONAL BUILDING CODE (2018)
1.1. OCCUPANCY: R-2 MULTIFAMILY APARTMENTS; S-2 ENCLOSED PARKING GARAGE
1.2. TYPE OF CONSTRUCTION: A-1, A-1A
1.3. SPRINKLER AREAS (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)
PARKING GARAGE = 23,666 S.F. (ZONE 1)
1ST FLOOR = 23,618 S.F. (ZONE 2)
2ND FLOOR = 23,618 S.F. (ZONE 3)
3RD FLOOR = 23,618 S.F. (ZONE 4)
4TH FLOOR = 23,618 S.F. (ZONE 5)
ATTIC = 23,618 S.F. (ZONE 5)
TOTAL = 141,768 S.F.
1.4. INSTALLATION STANDARDS:
SPRINKLER SYSTEM DESIGNED AND INSTALLED PER NFPA-13 (2016), NFPA 14(2016)
2. SPRINKLER PIPE TYPES:
- WET:
2.1. 1" BRANCH LINES TO BE BLAZEMASTER CPVC PIPING WITH CEMENTED FITTINGS
2.2. 1" THROUGH 2-1/2" MAIN & BRANCH LINES TO BE BLAZEMASTER CPVC PIPING WITH CEMENTED FITTINGS
2.3. 1" BRANCH LINES TO BE BLK SCHEDULE 40 PIPING WITH THREADED FITTINGS
2.4. 1 1/2" THROUGH 4" MAIN & BRANCH LINES TO BE BLK SCHEDULE 10 PIPING WITH SHORT RADIUS GROOVED FITTINGS
- DRY:
2.5. 1" BRANCH LINES TO BE THREADED BLK SCHEDULE 40 WITH THREADED FITTINGS
2.6. 1 1/2" THROUGH 6" MAIN & BRANCH LINES TO BE GROOVED BLK SCHEDULE 10 WITH SHORT RADIUS GROOVED FITTINGS
3. DESIGN CRITERIA
3.1. STORAGE ROOMS, PARKING GARAGE, MECH ROOMS AND SIMILAR AREAS DESIGNED TO ORDINARY HAZARD GROUP 1.
3.2. UNITS, CORRIDORS, COMMUNITY ROOMS AND SIMILAR AREAS DESIGNED TO LIGHT HAZARD.
3.3. ALL CLOSET ARE PROTECTED PER NFPA 13 (2016).
3.4. ALL BATHROOMS 50 S.F. OR UNDER ARE OMITTED PER NFPA 8.15.8.1.1
3.5. REMOTE AREA REDUCTIONS HAVE BEEN TAKEN WHERE APPLICABLE PER NFPA 13 SEC. 11.2.3.2.3
4. NOTES:
4.1. ALL MATERIAL TO BE NEW AND MEET U.L. STANDARDS
4.2. HANGERS TO BE INSTALLED IN ACCORDANCE WITH NFPA 13 (2016) - SEE PLAN FOR HANGING REQUIREMENTS
4.3. DRY SYSTEM PIPE SLOPE INSTALLATION:
SPRINKLER MAINS TO BE 3/4" PER 10 FEET
SPRINKLER BRANCH LINES TO BE 1/2" PER 10 FEET
4.4. DRY SYSTEM CAPACITY:
4.4.1. 973 GAL.
5. SYMBOLS USED ON DRAWINGS:
- (ELEVATION) PIPE ELEVATION A.F.F.
- (BELOW) PIPE ELEVATION BELOW B.O.D.
- (RHM) ROOM HAZARD CLASSIFICATION (ALL ROOMS ARE CONSIDERED LIGHT HAZARD UNLESS NOTED)
- (HJ) HYDRAULIC CALCULATION JUNCTION POINT
9'-0" CEILING HEIGHT
6. SCOPE OF WORK:
6.1. [REDACTED] TO INSTALL NEW STANDPIPE AND SPRINKLER SYSTEMS IN THE NEW BUILDING SHOWN ON THESE DRAWINGS. ALL PIPING IN PARKING GARAGE AND ATTIC TO BE BLK STEEL AND ALL PIPING IN RESIDENTIAL SPACES TO BE CONCEALED BLAZEMASTER CPVC PIPING WITH SEMI-RECESSED WITH SPRINKLER HEADS.
6.2. ALL AREAS OF THE BUILDING TO BE INSTALLED AND COVERED IN ACCORDANCE WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PER NFPA 13 (2016)



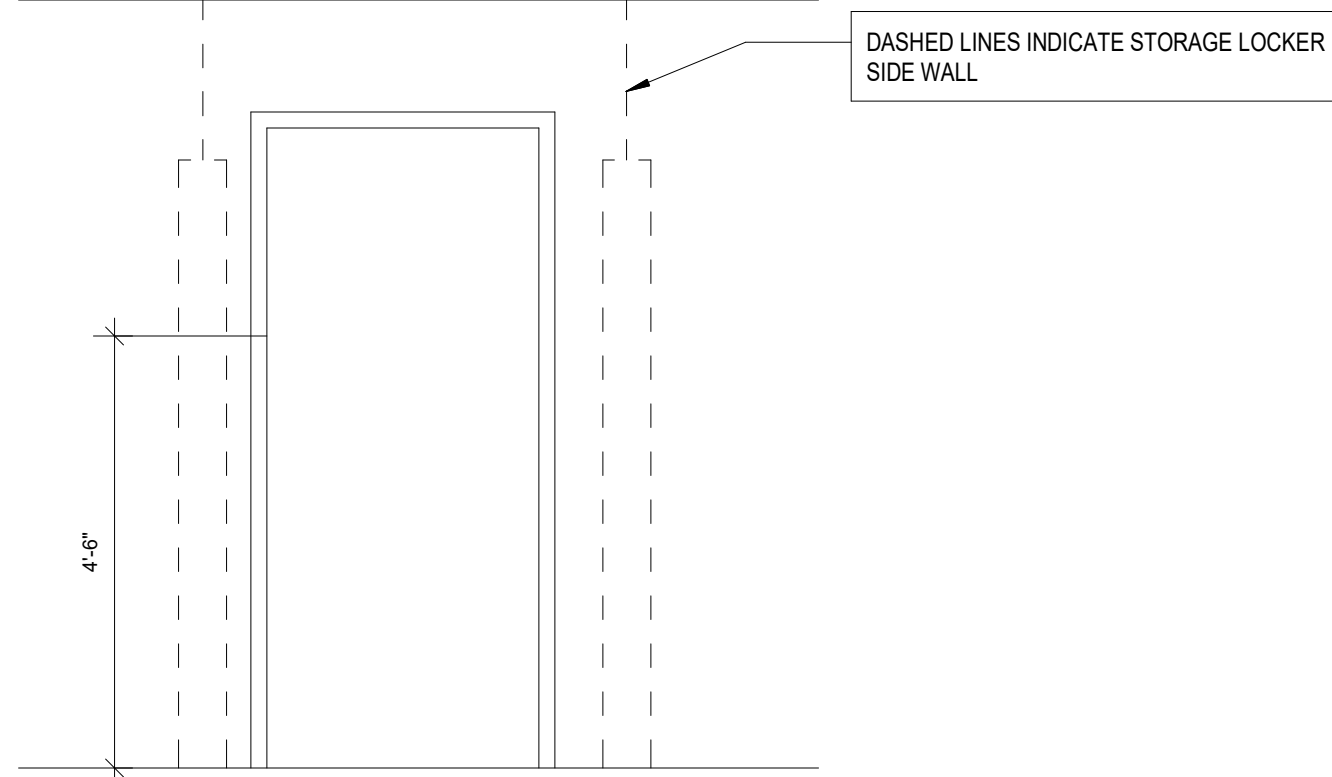
STAIR SECTION -A- SCALE= 1/8" = 1'-0"



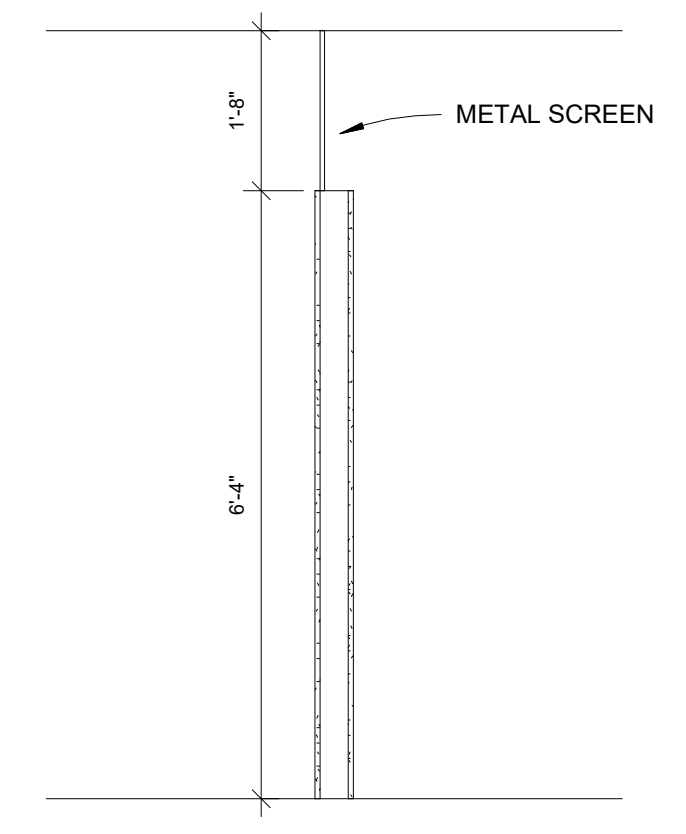
STAIR SECTION -B- SCALE= 1/8" = 1'-0"



SECTION -C- SCALE= 1/8" = 1'-0"



RESIDENTIAL STORAGE DETAIL SECTION -D- SCALE: 1/2" = 1'-0"

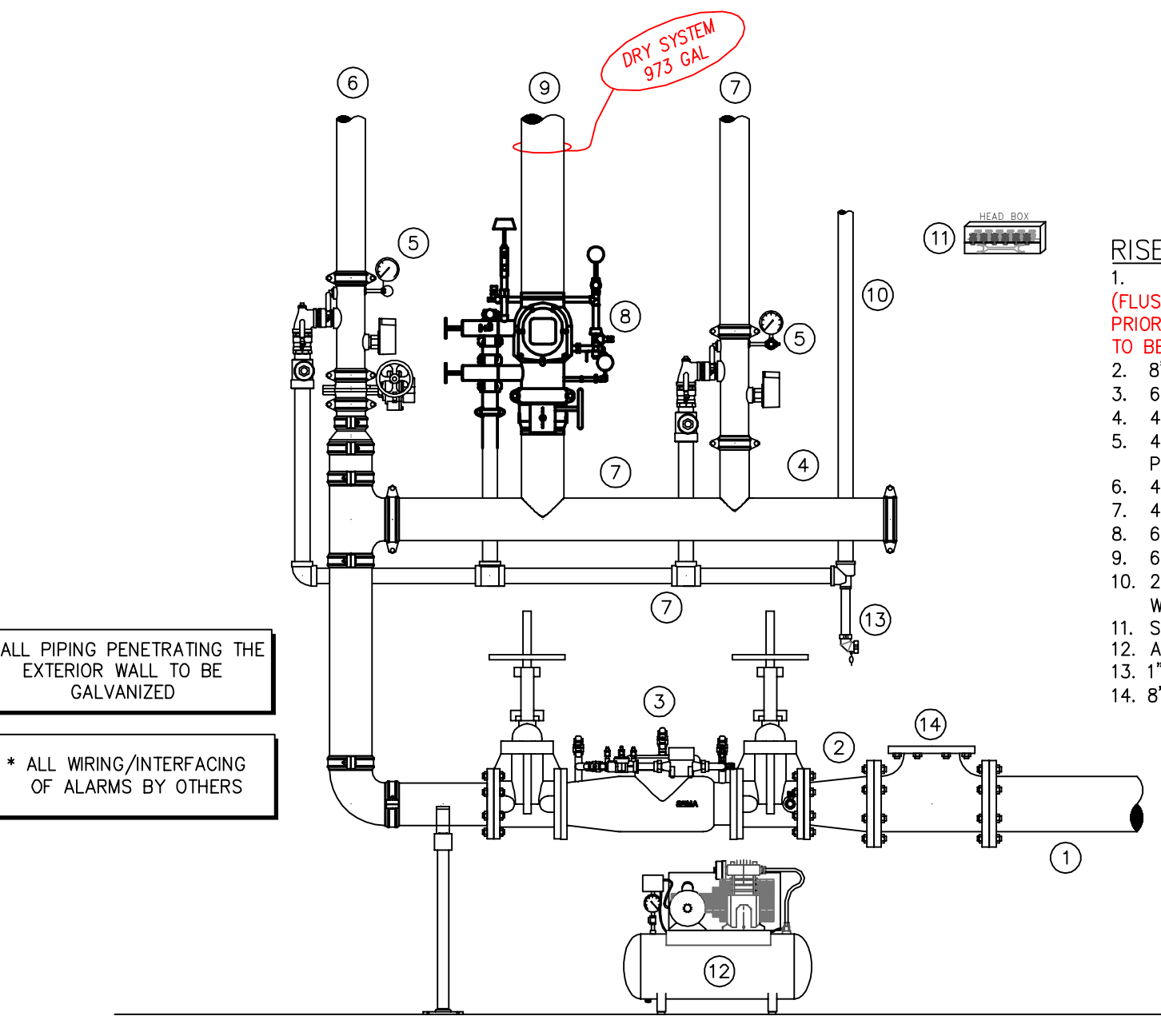


RESIDENTIAL STORAGE DETAIL SECTION -E- SCALE: 1/2" = 1'-0"

Table with columns for NOMINAL PIPE SIZE (N.) and MAXIMUM DISTANCE BETWEEN HANGERS (FT.-IN.). Rows include STEEL PIPE EXCEPT THREADED LIGHTWALL and BLAZEMASTER CPVC.

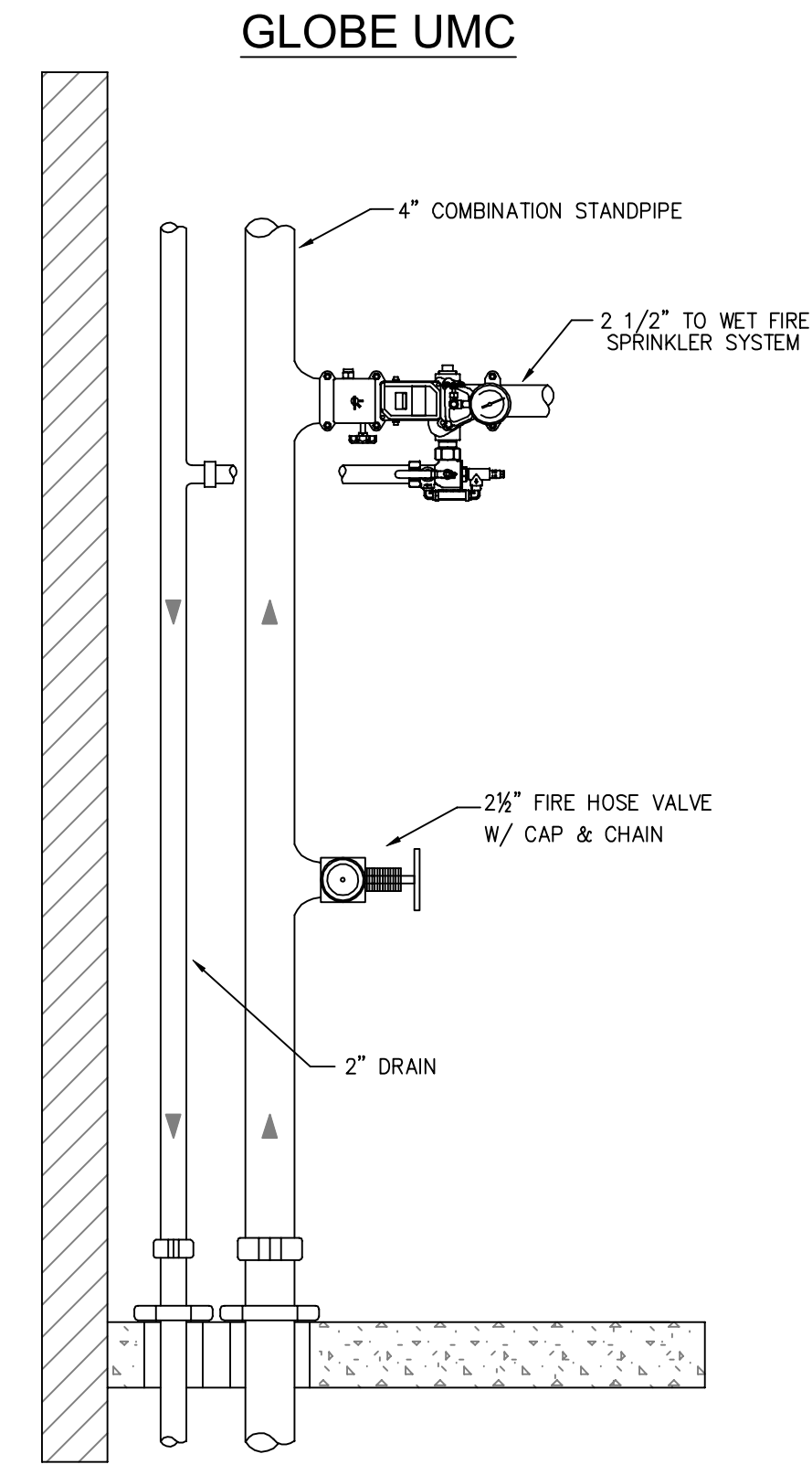
Table with columns for SYM, CNT, POSITION, FINISH, TEMP, K, NPT, SN, MFG, MODEL, ESCUTCHEON. Lists various pipe fittings and their specifications.

SPRINKLER HEAD LEGEND

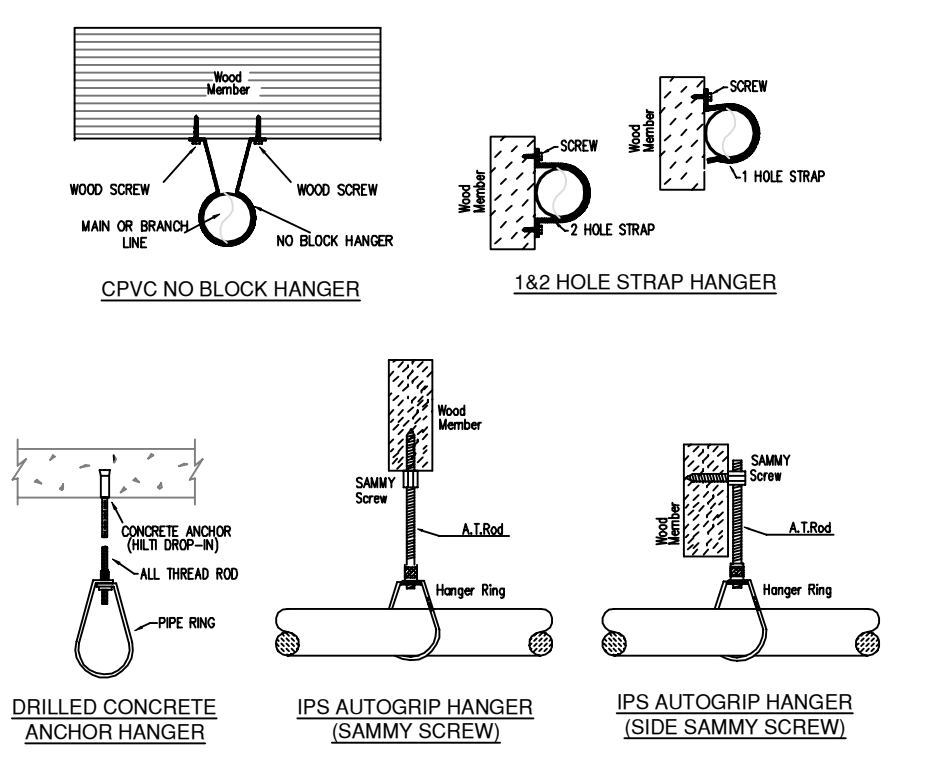


- RISER LEGEND
1. 8" COMBINED UNDERGROUND WATER SERVICE (BY OTHERS) (FLUSHING & TESTING OF THE UNDERGROUND SHALL BE COMPLETED PRIOR TO THE SPRINKLER SYSTEM HOOKUP. UNDERGROUND PAPERS ARE TO BE SUPPLIED TO THE "FP" CONTRACTOR BY THE G.C.)
2. 8" x 4" REDUCER
3. 6" AMES 3000SS BACKFLOW
4. 4" GROOVED BUTTERFLY VALVES w/ TAMPERS
5. 4" GROOVED COMMERCIAL RISER MANIFOLDS w/ FLOW SWITCH, PRESSURE GAUGE, & TEST AND DRAIN
6. 4" OUT TO LOWER LEVEL (ZONE 1)
7. 4" OUT TO COMBINED STANDPIPE AND FDC (ZONES 2 - 5)
8. 6" VICTAULIC PRE-TRIMMED DRY VALVE w/ QUICK OPENING DEVICE
9. 6" OUT TO DRY SYSTEM (ZONE 6)
10. 2" MAIN DRAIN PIPE TO EXTERIOR. COORDINATE EXACT LOCATION WITH G.C./OWNER
11. SPARE HEAD BOX
12. AIR COMPRESSOR
13. 1" AUX DRAIN WITH BALL VALVE
14. 8" OUTLET FOR DOMESTIC FEED

\* ALL FITTINGS TO BE AWWA C104 MORTAR LINED AND EPOXY PRIMED OR AWWA C116 EPOXY COATED AND MADE IN U.S.A. WITH STAINLESS STEEL BOLTS ON ALL FITTINGS.



ZONE CONTROL DETAIL SCALE: 1/2" = 1'-0"

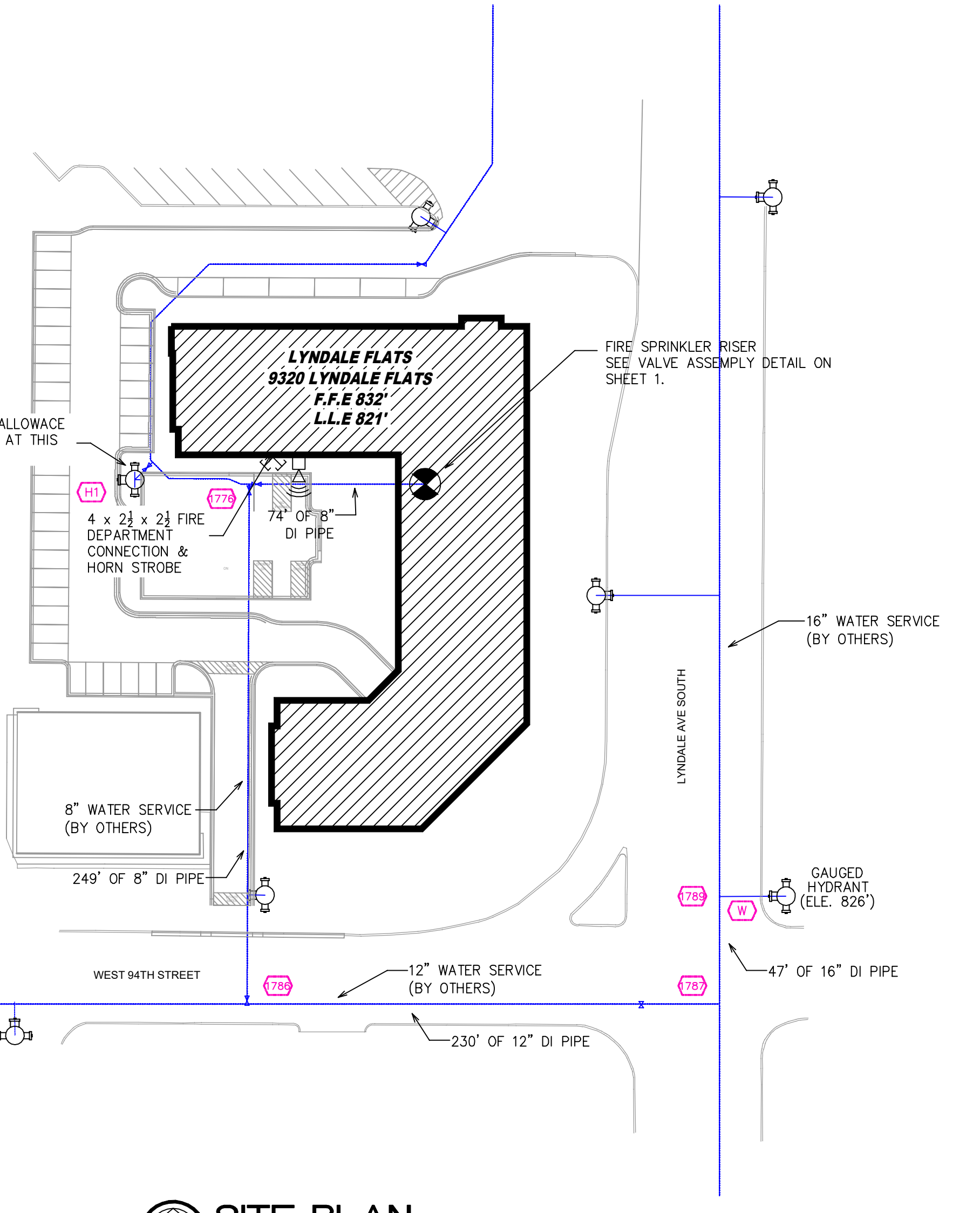


HANGER DETAILS

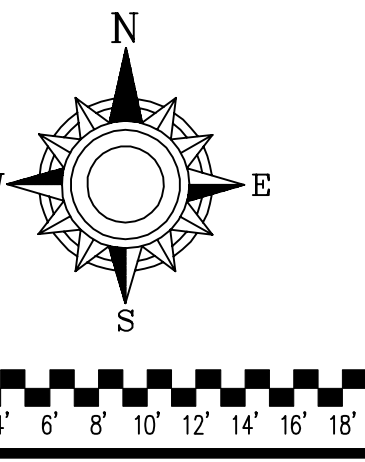
MANUAL WET STANDPIPE
LOCATION: 3RD AND 4TH FLOOR STAIR B
REQUIRED FLOW: 500 GPM
OUTLET PSI: 100
REQUIRED INLET PSI: 140

PIPE LEGEND

--- BLACK STEEL SPRINKLER PIPING
- - - - - CPVC BLAZEMASTER SPRINKLER PIPING



SITE PLAN SCALE: 1/8" = 1'-0"



- General Notes
1. System installed per NFPA-13 (2016 Edition) and State Fire Marshal.
2. All equipment for this system shall be U.L. listed.
3. Minimum pipe size shall be 1" nominal pipe.
4. All Sch-10 & Bddy Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-8-2).
5. No installation or fabrication to begin without approved shop dwgs.
6. All Pipe Locations are to be Field Measured Prior to Fabrication and installation by Sprinkler Contractor.
7. All Dimensions Shown are Center to Center.
8. High Temperature Heads are to be Field Located Where Required.
9. Provide one spare head cabinet w/ 8 hrs. & one hd wrench.
10. Hangers are to be U.L. Listed and P.M. Approved.
11. Electrical wiring, alarm, detection and supervisory by owner.
12. Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

APPROVAL STAMPS



Project information including: LYNDALE FLATS, 9320 LYNDALE AVE SOUTH, BLOOMINGTON, MN 55420. Drawing title: FIRE PROTECTION PLAN. Scale: 1/8" = 1'-0". Drawing No: C21-11. Date: 4/14/21. Drawn By: [REDACTED]. Approval By: MARSHAL DIV. SHEET NO. [REDACTED].

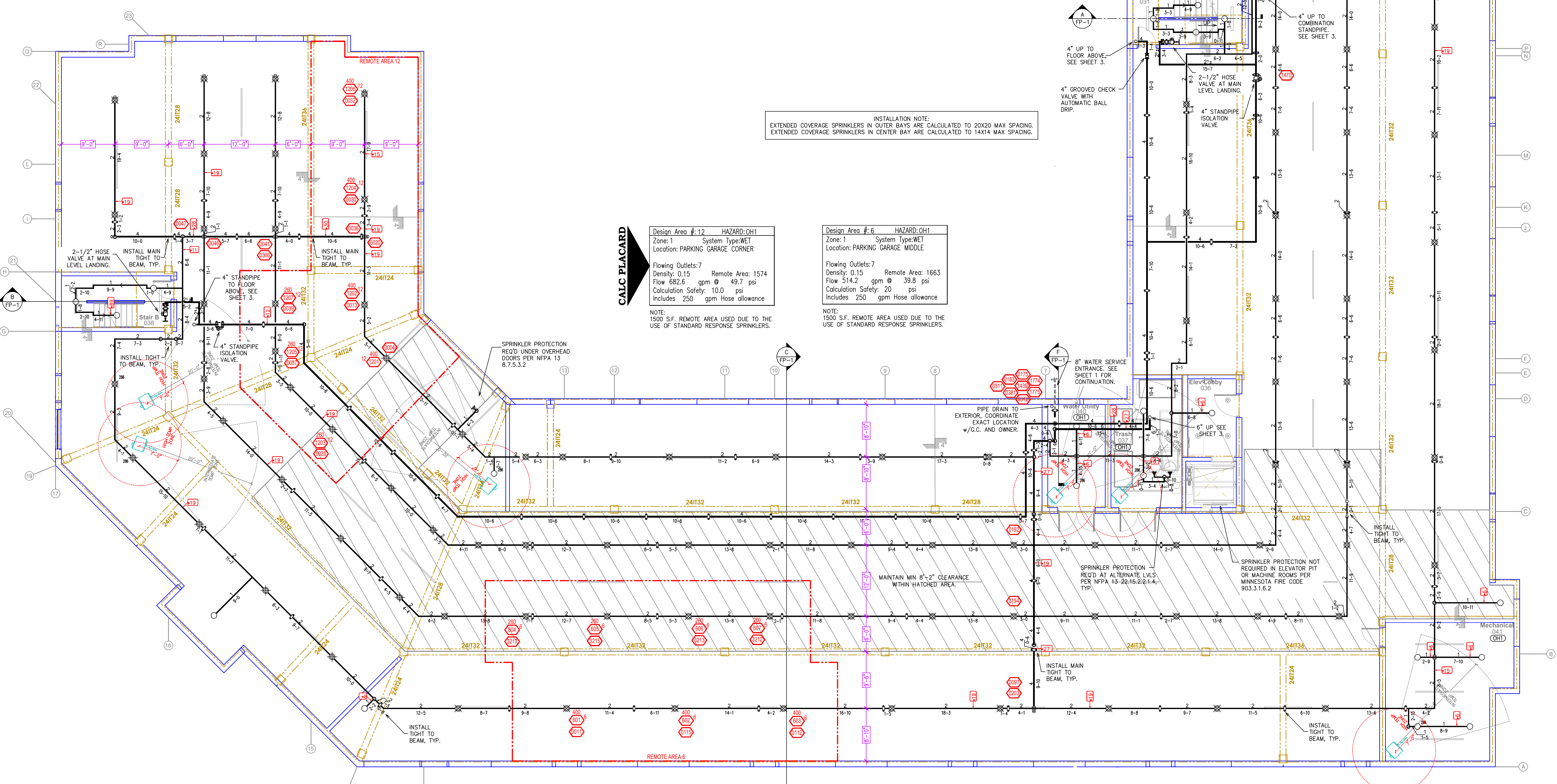
Table with columns for Drawing Title, Scale, Drawing No, Date, Drawn By, Approval By, and Sheet No.

**PIPE LEGEND**

- BLACK STEEL SPRINKLER PIPING
- - - - - CPVC BLAZEMASTER SPRINKLER PIPING

SYM	QTY	POSITION	FINISH	TEMP	K	RPT	SN	MPG	MODEL #	ESCU/SECTION
◀	223	SIDEWALL	WHITE	155	4.40	1/2"	TY2334	TYCO	LPI	SEMI-RECESS
○	16	UPRIGHT	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A
◐	4	UPRIGHT	BRASS	286	5.60	1/2"	TY313	TYCO	TY-FRB	N/A
◑	198	SPRIG	BRASS	200	14.00	3/4"	TY6137	TYCO	EC-14	N/A
◒	2	SPRIG	BRASS	286	14.00	3/4"	TY6137	TYCO	EC-14	N/A
◓	1	SIDEWALL	BRASS	200	11.20	3/4"	TY5332	TYCO	ELOSW20	N/A
◔	167	PENDENT	WHITE	200	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESS
◕	17	SIDEWALL	WHITE	155	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESS
◖	155	PENDENT	WHITE	155	4.90	1/2"	TY2238	TYCO	LPI	SEMI-RECESS
◗	12	SIDEWALL	WHITE	155	5.60	1/2"	RA1568 RELIABLE	DH56		SEMI-RECESS
◘	21	PENDENT	WHITE	155	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESS
◙	67	SIDEWALL	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESS
◚	156	SPRIG	BRASS	200	8.00	3/4"	TY4180	TYCO	BB1	N/A
◛	78	UPRIGHT	BRASS	200	5.60	1/2"	TY3190	TYCO	AP	N/A
1357 TOTAL SPRINKLERS										

**SPRINKLER HEAD LEGEND**



**CALC PLACARD**

Design Area # 12 HAZARD: OH1  
 Zone: 1 System Type: WET  
 Location: PARKING GARAGE CORNER  
 Flowing Outlets: 7  
 Density: 0.15 Remote Area: 1574  
 Flow 582.6 gpm @ 49.7 psi  
 Calculation Safety: 10.0 psi  
 Includes 250 gpm Hose allowance  
 NOTE: 1500 S.F. REMOTE AREA USED DUE TO THE USE OF STANDARD RESPONSE SPRINKLERS.

Design Area # 6 HAZARD: OH1  
 Zone: 1 System Type: WET  
 Location: PARKING GARAGE MIDDLE  
 Flowing Outlets: 7  
 Density: 0.15 Remote Area: 1663  
 Flow 514.2 gpm @ 39.8 psi  
 Calculation Safety: 20 psi  
 Includes 250 gpm Hose allowance  
 NOTE: 1500 S.F. REMOTE AREA USED DUE TO THE USE OF STANDARD RESPONSE SPRINKLERS.

INSTALLATION NOTE:  
 EXTENDED COVERAGE SPRINKLERS IN OUTER BAYS ARE CALCULATED TO 20X20 MAX SPACING.  
 EXTENDED COVERAGE SPRINKLERS IN CENTER BAY ARE CALCULATED TO 14X14 MAX SPACING.

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

**General Notes**

1. System installed per NFPA-13 (2016 Edition) and State Fire Marshal.
2. All equipment for this system shall be U.L. listed.
3. Minimum pipe size shall be 1" nominal pipe.
4. All Sch-10 & Eddy Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-8-2).
5. No installation or fabrication to begin without approved shop dwgs.
6. All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
7. All Dimensions Shown are Center to Center.
8. High Temperature Heads are to be Field Located Where Required.
9. Provide one spare head cabinet w/ 8 hds. & one hd wrench.
10. Hangers are to be U.L. Listed and P.M. Approved.
11. Electrical wiring, alarm, detection and supervisory by owner.
12. Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

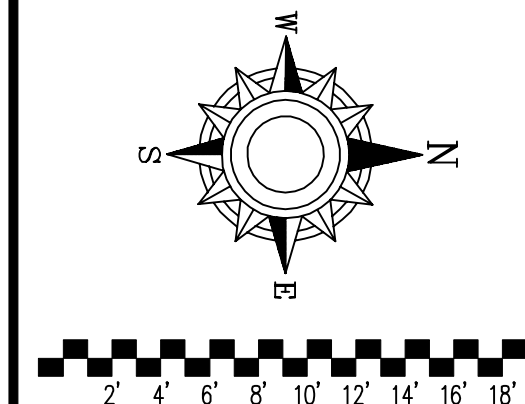
**APPROVAL STAMPS**

Blank area for approval stamps.



**FIRE PROTECTION PLAN**  
**LYNDALE FLATS**  
 9320 LYNDALE AVE SOUTH  
 BLOOMINGTON, MN 55420

Contract No. **C21-11**  
 Drawing Date: 4/14/21  
 Scale: 1/8" = 1'-0"  
 Drawn By:  
 Approval By: STATE FIRE MARSHAL DIV.  
 SHEET NO. **2 of 7**

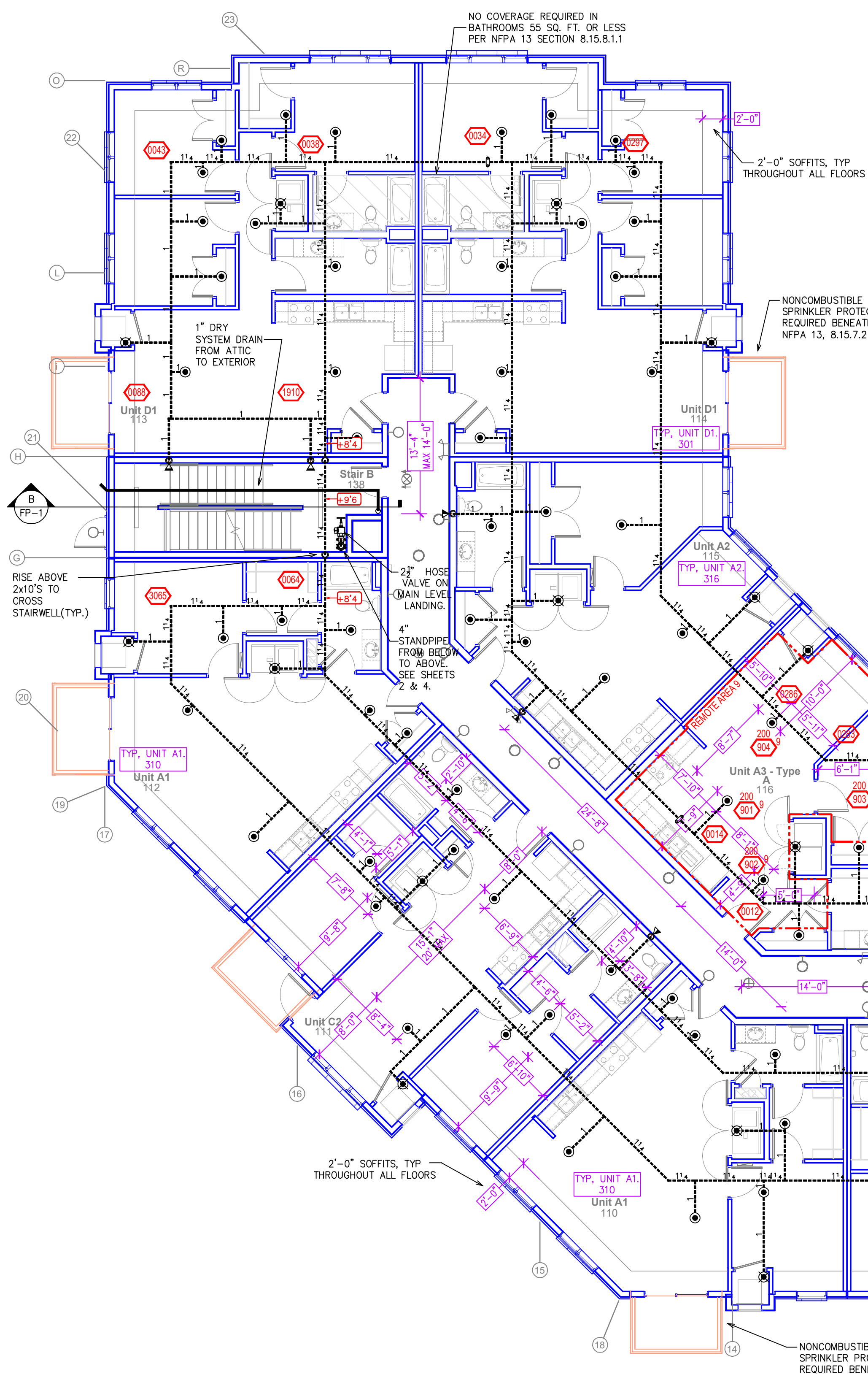


PIPE LEGEND

- BLACK STEEL SPRINKLER PIPING
- CPVC BLAZEMASTER SPRINKLER PIPING

SYM	QTY	POSITION	FINISH	TEMP	K	NPT	SN	MFG	MODEL#	ESD/CHECHN
123	1	SIDEWALL	WHITE	155	1.40	1/2"	TY2334	TYCO	LFI	SEMI-RECESS
14	4	UPRIGHT	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A
14	4	UPRIGHT	BRASS	286	5.60	1/2"	TY313	TYCO	TY-FRB	N/A
98	2	SPRIG	BRASS	200	14.00	3/4"	TY6137	TYCO	EC-14	N/A
98	2	SPRIG	BRASS	286	14.00	3/4"	TY6137	TYCO	EC-14	N/A
1	1	SIDEWALL	BRASS	200	11.20	3/4"	TY5332	TYCO	ELOWW2	N/A
167	1	PENDENT	WHITE	200	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESS
117	1	SIDEWALL	WHITE	155	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESS
555	1	PENDENT	WHITE	155	4.90	1/2"	TY2236	TYCO	LFI	SEMI-RECESS
52	1	SIDEWALL	WHITE	155	5.60	1/2"	RA1964	RELIABLE	DH56	SEMI-RECESS
21	1	PENDENT	WHITE	155	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESS
67	1	SIDEWALL	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESS
56	1	SPRIG	BRASS	200	8.00	3/4"	TY4180	TYCO	BB1	N/A
78	1	UPRIGHT	BRASS	200	5.60	1/2"	TY3190	TYCO	AP	N/A
1357 TOTAL SPRINKLERS										

SPRINKLER HEAD LEGEND



Design Area #9 HAZARD: LIGHT  
 Zone: 2 System Type: WET  
 Location: UNIT 116  
 Flowing Outlets: 4 Remote Area: 4 SPK  
 Density: 0.10 Flow: 180.0 gpm @ 40.4 psi  
 Calculation Safety: 19.6 psi  
 Includes 100 gpm Hose allowance  
 NOTE: FOUR MOST DEMANDING RESIDENTIAL SPRINKLERS CALCULATED PER NFPA 13 11.3.1.1.

INSTALLATION NOTE:  
 RESIDENTIAL PENDENT SPRINKLERS CALCULATED TO 20X20 MAX SPACING OR 10'-0" MAX OFF OF WALL, TYP.

PER STATE IFC AMENDMENTS 903.3.1.6.5 SPRINKLER COVERAGE IS NOT REQUIRED IN VESTIBULES THAT MEET THE FOLLOWING:  
 • 250 S.F. OR LESS  
 • IS OF NONCOMBUSTIBLE OR LIMITED COMBUSTIBLE CONSTRUCTION  
 • HAS GLAZING ALLOWING VISION INTO VESTIBULE  
 • ONLY PURPOSE IS INGRESS AND EGRESS  
 • CONTAIN NO FUELED EQUIPMENT, FLAMMABLE OR COMBUSTIBLE LIQUIDS, OR FURNITURE. INCIDENTAL COMBUSTIBLE STORAGE IN THE VESTIBULE IS LIMITED TO FIVE CUBIC FEET OF MATERIAL.

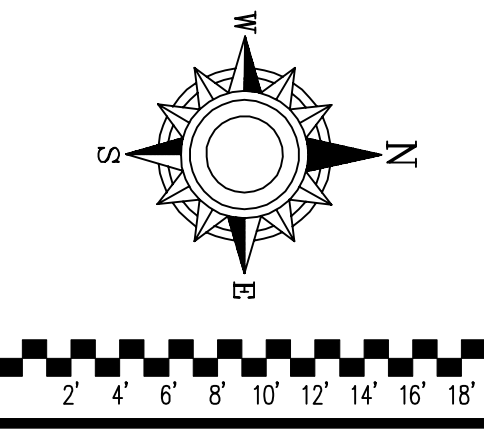
SPRINKLER PROTECTION NOT REQUIRED IN ELEVATOR PIT OR MACHINE ROOMS PER MINNESOTA FIRE CODE 903.3.1.6.2

PER STATE IFC AMENDMENTS 903.3.1.6.5 SPRINKLER COVERAGE IS NOT REQUIRED IN VESTIBULES THAT MEET THE FOLLOWING:  
 • 250 S.F. OR LESS  
 • IS OF NONCOMBUSTIBLE OR LIMITED COMBUSTIBLE CONSTRUCTION  
 • HAS GLAZING ALLOWING VISION INTO VESTIBULE  
 • ONLY PURPOSE IS INGRESS AND EGRESS  
 • CONTAIN NO FUELED EQUIPMENT, FLAMMABLE OR COMBUSTIBLE LIQUIDS, OR FURNITURE. INCIDENTAL COMBUSTIBLE STORAGE IN THE VESTIBULE IS LIMITED TO FIVE CUBIC FEET OF MATERIAL.

1ST FLOOR PROTECTION PLAN  
 SCALE= 1/8" = 1'-0"

Design Area #11 HAZARD: LIGHT  
 Zone: 2 System Type: WET  
 Location: FITNESS ROOM 146  
 Flowing Outlets: 7 Remote Area: 900  
 Density: 0.10 Flow: 214.4 gpm @ 46.5 psi  
 Calculation Safety: 13.4 psi  
 Includes 100 gpm Hose allowance  
 NOTE: 1500 S.F. REDUCED BY 40% TO 900 S.F. PER NFPA-13 FIG. 11.2.3.2.3.1 DUE TO THE USE OF QUICK RESPONSE SPRINKLERS AND A 9'-0" CEILING HEIGHT.

CALC PLACARD



- General Notes
- System installed per NFPA-13 (2016 Edition) and State Fire Marshal.
  - All equipment for this system shall be U.L. listed.
  - Minimum pipe size shall be 1" nominal pipe.
  - All Sch-10 & Eddy Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-82).
  - No installation or fabrication to begin without approved shop dwgs.
  - All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
  - All Dimensions Show as Center to Center.
  - High Temperature Heads are to be Field Located Where Required.
  - Provide one spare head cabinet w/ 8 hrs. & one hd wrench.
  - Hangers are to be U.L. Listed and P.M. Approved.
  - Electrical wiring, alarm, detection and supervisory by owner.
  - Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

APPROVAL STAMPS

Blank area for approval stamps.



Drawing Title: FIRE PROTECTION PLAN

**LYNDALE FLATS**

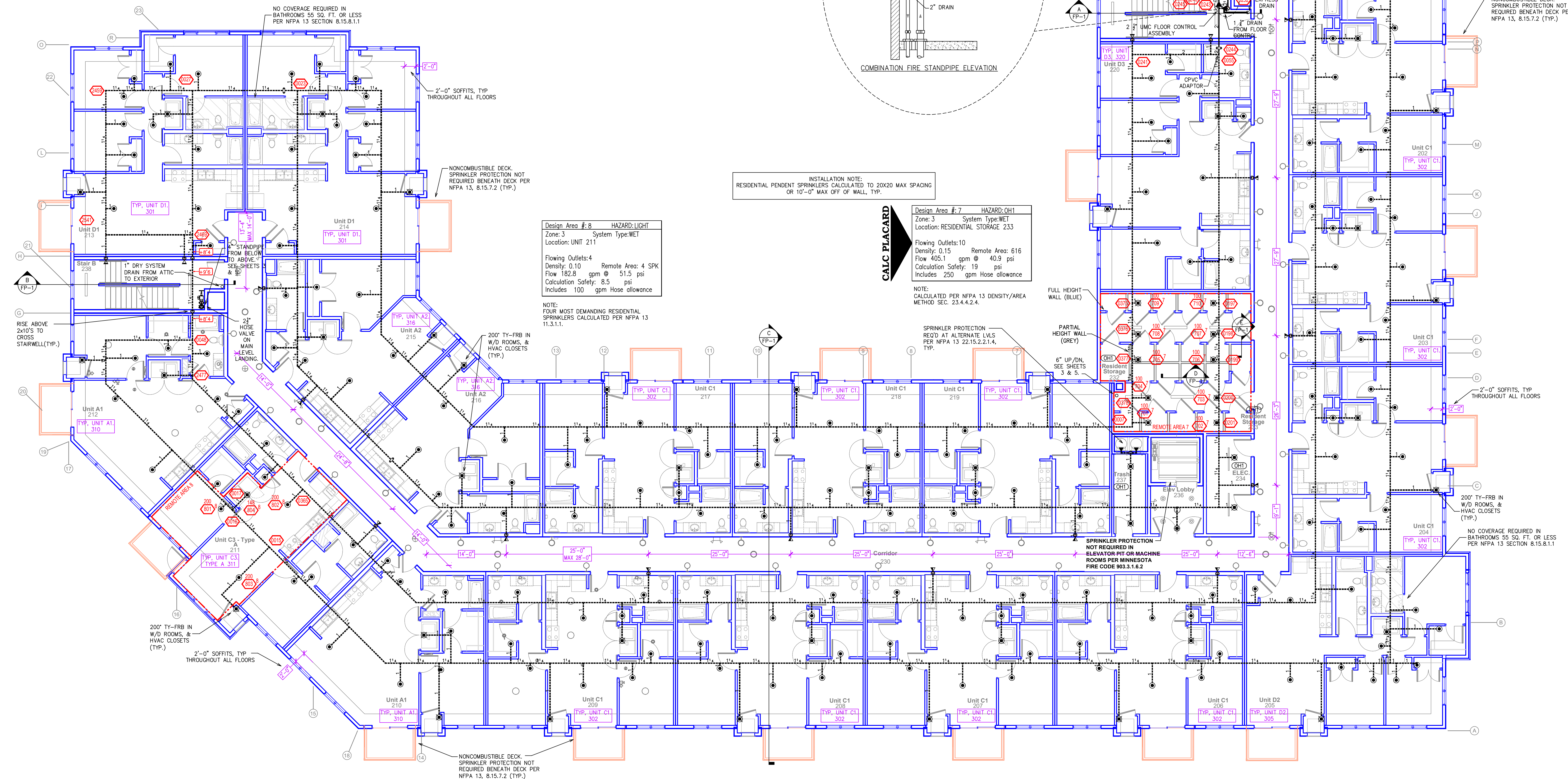
9320 LYNDALE AVE SOUTH  
 BLOOMINGTON, MN 55420

Contract No: C21-11  
 Drawing Date: 4/14/21  
 Scale: 1/8" = 1'-0"  
 Drawn By: [Signature]  
 Approval By: STATE FIRE MARSHAL DIV.  
 SHEET NO. 3 of 7

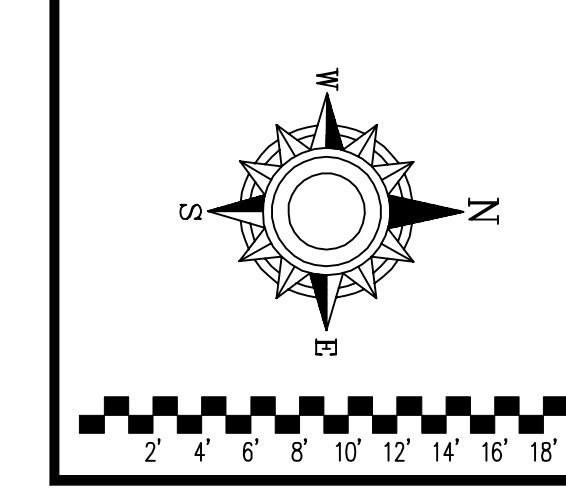
PIPE LEGEND									
— BLACK STEEL SPRINKLER PIPING									
- - - CPVC BLAZEMASTER SPRINKLER PIPING									

SYM	QTY	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#	ESCAUTION
○	223	SIDEWALL	WHITE	155	4.40	1/2"	TY2334	TYCO	LJLI	SEMI-RECESS
○	16	UPRIGHT	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A
○	4	UPRIGHT	BRASS	286	5.60	1/2"	TY313	TYCO	TY-FRB	N/A
○	98	SPRIG	BRASS	200	14.00	3/4"	TY6137	TYCO	EC-14	N/A
○	2	SPRIG	BRASS	286	14.00	3/4"	TY6137	TYCO	EC-14	N/A
○	1	SIDEWALL	BRASS	200	11.20	3/4"	TY5332	TYCO	ELOW20	N/A
○	167	PENDENT	WHITE	200	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESS
○	17	SIDEWALL	WHITE	155	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESS
○	555	PENDENT	WHITE	155	4.90	1/2"	TY2236	TYCO	LJLI	SEMI-RECESS
○	52	SIDEWALL	WHITE	155	5.60	1/2"	RY1964	RELIABLE	DR96	SEMI-RECESS
○	21	PENDENT	WHITE	155	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESS
○	67	SIDEWALL	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESS
○	56	SPRIG	BRASS	200	8.00	3/4"	TY4180	TYCO	BB1	N/A
○	78	UPRIGHT	BRASS	200	5.60	1/2"	TY3180	TYCO	AP	N/A
1357 TOTAL SPRINKLERS										

**SPRINKLER HEAD LEGEND**



**2ND FLOOR FIRE PROTECTION PLAN**  
SCALE = 1/8" = 1'-0"



- General Notes**
- System installed per NFPA-13 (2016 Edition) and State Fire Marshal.
  - All equipment for this system shall be U.L. listed.
  - Minimum pipe size shall be 1" nominal pipe.
  - All Sch-10 & Bddy Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-82).
  - No installation or fabrication to begin without approved shop dwgs.
  - All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
  - All Dimensions Shows are Center to Center.
  - High Temperature Heads are to be Field Located Where Required.
  - Provide one spare head cabinet w/ 8 hds. & one hd wrench.
  - Hangers are to be U.L. Listed and P.M. Approved.
  - Electrical wiring, alarm, detection and supervisory by owner.
  - Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

APPROVAL STAMPS



Drawing Title: \_\_\_\_\_

Contract No. \_\_\_\_\_

Drawing Date: \_\_\_\_\_

Scale: \_\_\_\_\_

Drawn By: \_\_\_\_\_

Approval By: \_\_\_\_\_

SHEET NO. \_\_\_\_\_

**PIPE LEGEND**

— BLACK STEEL SPRINKLER PIPING  
 - - - - - CPVC BLAZEMASTER SPRINKLER PIPING

SYM	QTY	POSITION	FINISH	TEMP	K	NPT	SN	MFG	MODEL#	ESCUTCHEON
223	1	SIDEWALL	WHITE	155	4.40	1/2"	TY2334	TYCO	LF1	SEMI-RECESS
16	1	UPRIGHT	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A
4	1	UPRIGHT	BRASS	286	5.60	1/2"	TY313	TYCO	TY-FRB	N/A
8	1	SPRIG	BRASS	200	14.00	3/4"	TY6137	TYCO	EC-14	N/A
2	1	SPRIG	BRASS	286	14.00	3/4"	TY6137	TYCO	EC-14	N/A
1	1	SIDEWALL	BRASS	200	11.20	3/4"	TY3332	TYCO	ELOS20	N/A
167	1	PENDENT	WHITE	200	5.60	1/2"	TY333	TYCO	TY-FRB	SEMI-RECESS
17	1	SIDEWALL	WHITE	155	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESS
555	1	PENDENT	WHITE	155	4.90	1/2"	TY2236	TYCO	LF1	SEMI-RECESS
52	1	SIDEWALL	WHITE	155	5.60	1/2"	RA1564	RELIABLE	DH56	SEMI-RECESS
21	1	PENDENT	WHITE	155	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESS
67	1	SIDEWALL	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESS
56	1	SPRIG	BRASS	200	8.00	3/4"	TY4180	TYCO	BB1	N/A
78	1	UPRIGHT	BRASS	200	5.60	1/2"	TY3190	TYCO	AP	N/A
1,357 TOTAL SPRINKLERS										

**SPRINKLER HEAD LEGEND**

NO COVERAGE REQUIRED IN BATHROOMS 55 SQ. FT. OR LESS PER NFPA 13 SECTION 8.15.8.1.1

2"-0" SOFFITS, TYP THROUGHOUT ALL FLOORS

NONCOMBUSTIBLE DECK SPRINKLER PROTECTION NOT REQUIRED BENEATH DECK PER NFPA 13, 8.15.7.2 (TYP.)

INSTALLATION NOTE:  
 RESIDENTIAL PENDENT SPRINKLERS CALCULATED TO 20X20 MAX SPACING OR 10'-0" MAX OFF OF WALL, TYP.

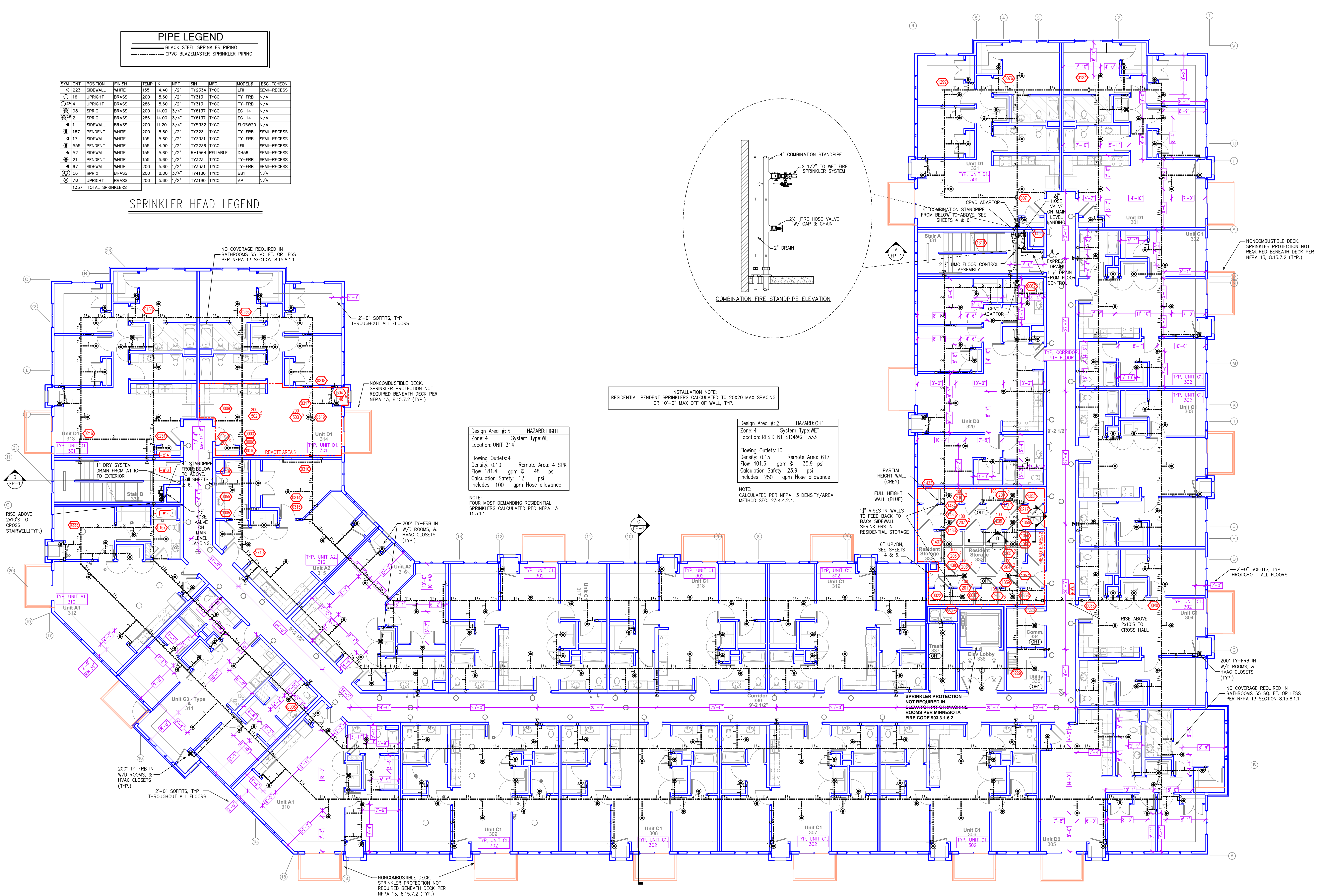
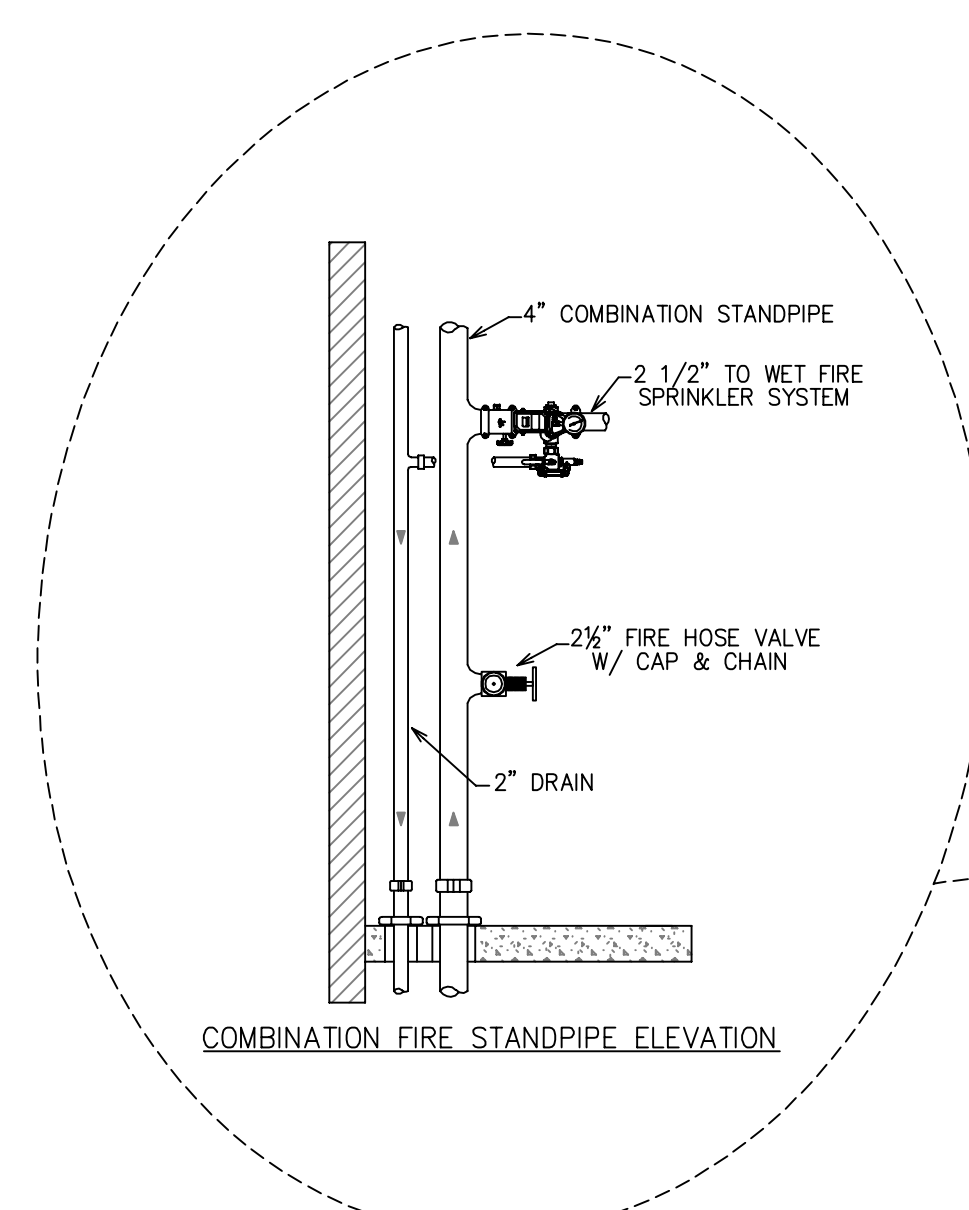
Design Area # 5 HAZARD: LIGHT  
 Zone: 4 System Type: WET  
 Location: UNIT 314  
 Flowing Outlets: 4  
 Density: 0.10 Remote Area: 4 SPK  
 Flow 181.4 gpm @ 48 psi  
 Calculation Safety: 12 psi  
 Includes 100 gpm Hose allowance

NOTE:  
 FOUR MOST DEMANDING RESIDENTIAL SPRINKLERS CALCULATED PER NFPA 13 11.3.1.1.

Design Area # 2 HAZARD: OH1  
 Zone: 4 System Type: WET  
 Location: RESIDENT STORAGE 333  
 Flowing Outlets: 10  
 Density: 0.15 Remote Area: 617  
 Flow 401.6 gpm @ 35.9 psi  
 Calculation Safety: 23.9 psi  
 Includes 250 gpm Hose allowance

NOTE:  
 CALCULATED PER NFPA 13 DENSITY/AREA METHOD SEC. 23.4.4.2.4.

COMBINATION FIRE STANDPIPE ELEVATION



**3RD FLOOR FIRE PROTECTION PLAN**  
 SCALE = 1/8" = 1'-0"

**General Notes**

- System installed per NFPA-13 (2016 Edition) and State Fire Marshal.
- All equipment for this system shall be U.L. listed.
- Minimum pipe size shall be 1" nominal pipe.
- All Sch-40 & Extra Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-8-2).
- No installation or fabrication to begin without approved shop dwgs.
- All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
- All Dimensions Shown are Center to Center.
- High Temperature Heads are to be Field Located Where Required.
- Provide one spare head cabinet w/ 8 hds. & one hd wrench.
- Hangers are to be U.L. Listed and P.M. Approved.
- Electrical wiring, alarm, detection and supervisory by owner.
- Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

**APPROVAL STAMPS**

Area reserved for approval stamps and signatures.

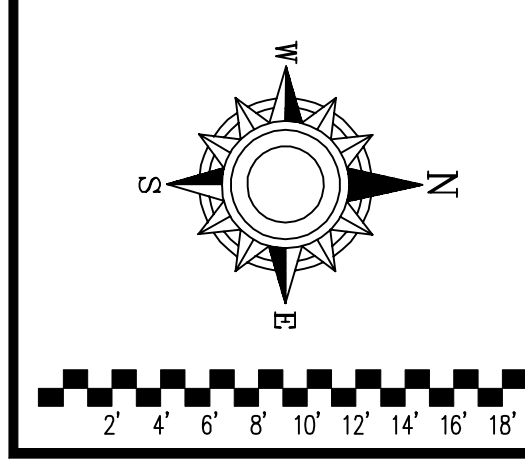


910 N. SYCAMORE AVENUE; SIOUX FALLS, SD 57110 PHONE: (605)-444-9290

**FIRE PROTECTION PLAN**

**LYNDALE FLATS**  
 9320 LYNDALE AVE SOUTH  
 BLOOMINGTON, MN 55420

Contract No. **C21-11**  
 Drawing Date: 4/14/21  
 Scale: 1/8" = 1'-0"  
 Drawn By: [Signature]  
 Approval By: STATE FIRE MARSHAL DIV.  
 SHEET NO. **5 of 7**



PIPE LEGEND									
BLACK STEEL SPRINKLER PIPING									
CVC BLAZEMASTER SPRINKLER PIPING									

SYM	QTY	POSITION	FINISH	TEMP. K	INPT	SIN	MFG.	MODEL#	ESCUTCHEON	
223	1	SIDEWALL	WHITE	155	4.40	1/2"	TY2334	TYCO	LF1	SEMI-RECESS
18	1	UPRIGHT	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A
94	1	UPRIGHT	BRASS	286	5.60	1/2"	TY313	TYCO	TY-FRB	N/A
98	1	SPRIG	BRASS	200	14.00	3/4"	TY6137	TYCO	EC-14	N/A
2	1	SPRIG	BRASS	286	14.00	3/4"	TY6137	TYCO	EC-14	N/A
1	1	SIDEWALL	BRASS	200	11.20	3/4"	TY3332	TYCO	ELOS20	N/A
187	1	PENDENT	WHITE	200	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESS
117	1	SIDEWALL	WHITE	155	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESS
555	1	PENDENT	WHITE	155	4.90	1/2"	TY2236	TYCO	LF1	SEMI-RECESS
52	1	SIDEWALL	WHITE	155	5.60	1/2"	RA1564	RELIABLE	DH56	SEMI-RECESS
21	1	PENDENT	WHITE	155	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESS
67	1	SIDEWALL	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESS
56	1	SPRIG	BRASS	200	8.00	3/4"	TY4180	TYCO	BB1	N/A
78	1	UPRIGHT	BRASS	200	5.60	1/2"	TY3190	TYCO	AP	N/A
1357	TOTAL SPRINKLERS									

**SPRINKLER HEAD LEGEND**

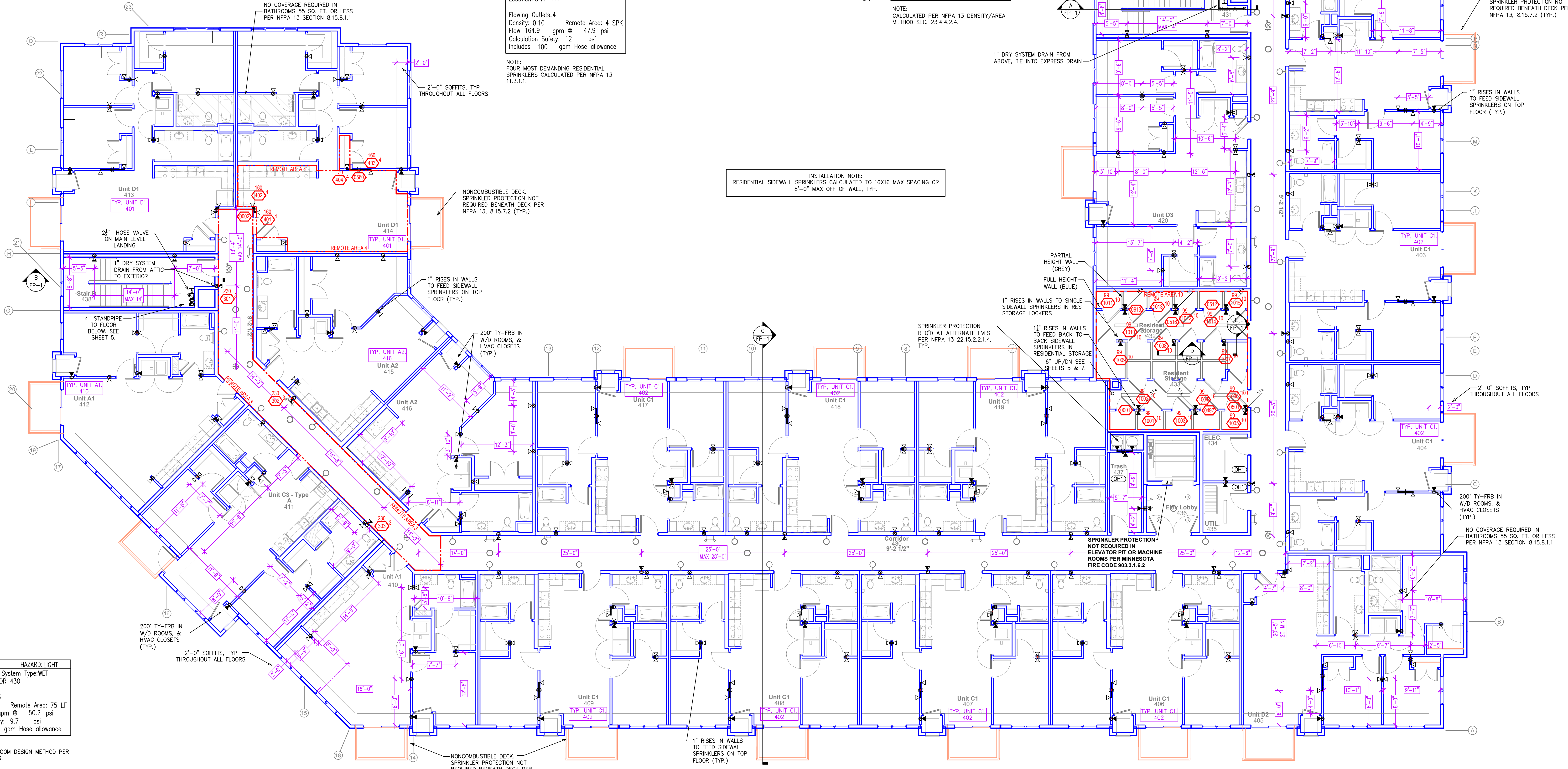
Design Area # 4 HAZARD: LIGHT  
 Zone: 4 System Type: WET  
 Location: UNIT 414  
 Flowing Outlets: 4 Remote Area: 4 SPK  
 Density: 0.10 Remote Area: 4 SPK  
 Flow 164.9 gpm @ 47.9 psi  
 Calculation Safety: 12 psi  
 Includes 100 gpm Hose allowance

NOTE: FOUR MOST DEMANDING RESIDENTIAL SPRINKLERS CALCULATED PER NFPA 13 11.3.1.1.

**CALC PLACARD**

Design Area # 10 HAZARD: OH1  
 Zone: 4 System Type: WET  
 Location: RESIDENTIAL STORAGE 433  
 Flowing Outlets: 15  
 Density: 0.15 Remote Area: 620  
 Flow 477.9 gpm @ 49.3 psi  
 Calculation Safety: 10.6 psi  
 Includes 250 gpm Hose allowance

NOTE: CALCULATED PER NFPA 13 DENSITY/AREA METHOD SEC. 23.4.4.2.4.



**4TH FLOOR FIRE PROTECTION PLAN**  
 SCALE= 1/8" = 1'-0"

Design Area # 3 HAZARD: LIGHT  
 Zone: 4 System Type: WET  
 Location: CORRIDOR 430  
 Flowing Outlets: 3 Remote Area: 75 LF  
 Density: 0.10 Remote Area: 75 LF  
 Flow 169.4 gpm @ 50.2 psi  
 Calculation Safety: 9.7 psi  
 Includes 100 gpm Hose allowance

NOTES:  
 CALCULATED TO ROOM DESIGN METHOD PER NFPA 13 11.2.3.3.6.

- General Notes**
- System installed per NFPA-13 (2016 Edition) and State Fire Marshal.
  - All equipment for this system shall be U.L. listed.
  - Minimum pipe size shall be 1" nominal pipe.
  - All Sch-40 & Extra Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-8-2).
  - No installation or fabrication to begin without approved shop dwgs.
  - All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
  - All Dimensions Show as Center to Center.
  - High Temperature Heads are to be Field Located Where Required.
  - Provide one spare head cabinet w/ 8 hds. & one hd wrench.
  - Hangers are to be U.L. Listed and P.M. Approved.
  - Electrical wiring, alarm, detection and supervisory by owner.
  - Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

**APPROVAL STAMPS**



910 N. SYCAMORE AVENUE; STOUX FALLS, SD 57110 PHONE: (605)-444-9290

**FIRE PROTECTION PLAN**  
**LYNDALE FLATS**  
 9320 LYNDALE AVE SOUTH  
 BLOOMINGTON, MN 55420

Contract No. **C21-11**  
 Drawing Date: 4/14/21  
 Scale: 1/8" = 1'-0"  
 Drawn By: \_\_\_\_\_  
 Approval By: STATE FIRE MARSHAL DIV.  
 SHEET NO. **6 of 7**

PIPE LEGEND	
	BLACK STEEL SPRINKLER PIPING
	CPVC BLAZEMASTER SPRINKLER PIPING

SYM	CNT	POSITION	FINISH	TEMP	K	NPT	SIN	WFG.	MODEL#	ESD/CHEON	
◁	1233	SIDEWALL	WHITE	155	4.40	1/2"	TY2334	TYCO	LFI	SEMI-RECESS	
◁	16	UPRIGHT	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A	
◁	14	UPRIGHT	BRASS	286	5.60	1/2"	TY313	TYCO	TY-FRB	N/A	
◁	98	SPRIG	BRASS	200	14.00	3/4"	TY6137	TYCO	EC-14	N/A	
◁	2	SPRIG	BRASS	286	14.00	3/4"	TY6137	TYCO	EC-14	N/A	
◁	1	SIDEWALL	BRASS	200	11.20	3/4"	TY5322	TYCO	ELOS20	N/A	
◁	167	PENDENT	WHITE	200	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESS	
◁	17	SIDEWALL	WHITE	155	5.60	1/2"	TY331	TYCO	TY-FRB	SEMI-RECESS	
◁	555	PENDENT	WHITE	155	4.90	1/2"	TY2326	TYCO	LFI	SEMI-RECESS	
◁	52	SIDEWALL	WHITE	155	5.60	1/2"	RA1564	RELIABLE	DH56	SEMI-RECESS	
◁	21	PENDENT	WHITE	155	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESS	
◁	67	SIDEWALL	WHITE	200	5.60	1/2"	TY331	TYCO	TY-FRB	SEMI-RECESS	
◁	56	SPRIG	BRASS	200	8.00	3/4"	TY4180	TYCO	BB1	N/A	
◁	78	UPRIGHT	BRASS	200	5.60	1/2"	TY3190	TYCO	AP	N/A	
⊕	1357	TOTAL SPRINKLERS									

**SPRINKLER HEAD LEGEND**

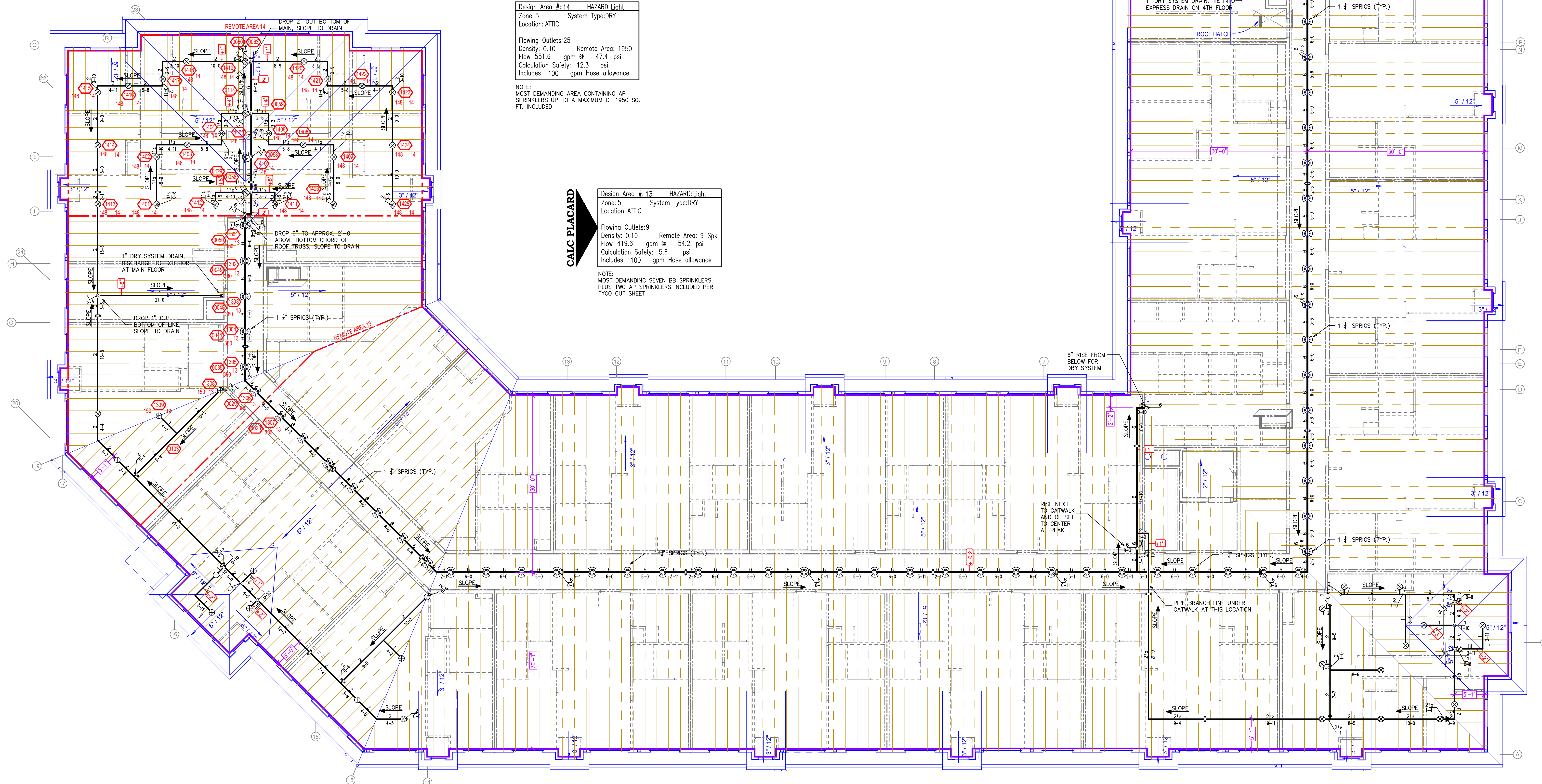
Design Area #14 HAZARD:Light  
 Zone:5 System Type:DRY  
 Location:ATTIC  
 Flowing Outlets:25  
 Density:0.10 Remote Area:1950  
 Flow 551.6 gpm @ 47.4 psi  
 Calculation Safety: 12.3 psi  
 Includes 100 gpm Hose allowance

NOTE:  
 MOST DEMANDING AREA CONTAINING AP  
 SPRINKLERS UP TO A MAXIMUM OF 1950 SQ.  
 FT. INCLUDED

Design Area #13 HAZARD:Light  
 Zone:5 System Type:DRY  
 Location:ATTIC  
 Flowing Outlets:9  
 Density:0.10 Remote Area:9 Spk  
 Flow 419.6 gpm @ 54.2 psi  
 Calculation Safety: 5.6 psi  
 Includes 100 gpm Hose allowance

NOTE:  
 MOST DEMANDING SEVEN BB SPRINKLERS  
 PLUS TWO AP SPRINKLERS INCLUDED PER  
 TYCO CUT SHEET

**CALC PLACARD**



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

APPROVAL STAMPS



Contract No. **C21-11**  
 Drawing Date: 4/14/21  
 Scale: 1/8" = 1'-0"  
 Drawing By: [Signature]  
 Approval By: STATE FIRE MARSHAL DIV.  
 SHEET NO. **7 of 7**

**General Notes**

- System installed per NFPA-13 (2016 Edition) and State Fire Marshal.
- All equipment for this system shall be U.L. listed.
- Minimum pipe size shall be 1" nominal pipe.
- All Sch-10 & Eddy Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-8.2).
- No installation or fabrication to begin without approved shop dwgs.
- All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
- All Dimensions Shown are Center to Center.
- High Temperature Heads are to be Field Located Where Required.
- Provide one spare head cabinet w/ 8 hds. & one hd wrench.
- Hangers are to be U.L. Listed and P.M. Approved.
- Electrical wiring, alarm, detection and supervisory by owner.
- Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

