

## SCOPE OF WORK:

TO INSTALL A NEW FIRE SPRINKLER SYSTEM IN THE UNCOMMON APARTMENT BUILDING AS SHOWN ON SHOP DRAWINGS PER NFPA 13 & 14. THE SYSTEM WILL CONSIST OF A MANUAL WET STANDPIPE SYSTEM WITH 2 STANDPIPE RISERS AND 2½" HOSE VALVES ON THE INTERMEDIATE LANDINGS. IT WILL ALSO HAVE 1 WET ZONE FOR THE PARKING GARAGE, 1 WET ZONE FOR THE RESIDENTIAL FLOORS 1 THROUGH 6, AND 1 REMOTE DRY SYSTEM FEEDING THE PARKING GARAGE ENTRANCE WITH A VALVE LOCATED IN THE TRASH ROOM. ALL PIPING IN PARKING GARAGE OR EXPOSED TO VIEW TO BE STEEL AND ALL PIPING IN OCCUPIED SPACES TO BE CONCEALED BLAZEMASTER CPVC PIPING WITH SEMI-RECESSED WHITE SPRINKLER HEADS. FDC WILL BE LOCATED ON THE NORTHWEST CORNER OF THE 1ST FLOOR

### NOTE:

#### PIPE SCHEDULE ~

1" = SCH. 30  
1 1/4" & LARGER = SCH. 7  
1" THROUGH 3" = BLAZEMASTER CPVC  
DESIGN CRITERIA ~  
LIGHT HAZARD AREAS ~  
DESIGNED TO DELIVER 0.10  
GPM/S.F. OVER THE MOST  
DEMANDING 1500 S.F.

ORDINARY HAZARD GROUP 1  
AREAS ~ DESIGNED TO DELIVER  
0.15 GPM/S.F. OVER THE MOST  
DEMANDING 1500 S.F.

REMOTE AREA REDUCTIONS HAVE  
BEEN TAKEN WHERE APPLICABLE  
PER NFPA 13 SEC. 11.2.3.2.3

#### AREA OF COVERAGE ~

TOTAL AREA PROTECTED ~ 169,100 SQ. FT.  
ZONE 1:  
LOWER LEVEL ~ 26,900 SQ. FT.  
ZONE 2:  
LEVEL 1 ~ 23,700 SQ. FT.  
LEVEL 2 ~ 23,700 SQ. FT.  
LEVEL 3 ~ 23,700 SQ. FT.  
LEVEL 4 ~ 23,700 SQ. FT.  
LEVEL 5 ~ 23,700 SQ. FT.  
LEVEL 6 ~ 23,700 SQ. FT.

#### FIRE CAULKING ~

ALL FIRE RATED WALLS TO BE  
CAULKED w/ HILTI FS-ONE FIRE  
CAULKING AS PER U.L. LISTING FOR  
WALL TYPE & RATING

#### AUX. DRAINS ~

SHALL BE PROVIDED WHERE A CHANGE  
IN PIPING DIRECTION PREVENTS  
DRAINAGE OF SYSTEM PIPING THROUGH  
THE MAIN DRAIN VALVE.

#### OBSTRUCTIONS ~

ALL SPRINKLER LOCATIONS TO BE  
SPACED IN ACCORDANCE w/  
OBSTRUCTIONS TO MAINTAIN  
CLEARANCES ~ PER NFPA-13 (EXIT  
SIGNS & SECURITY EQUIPMENT SHALL  
NOT BE OBSCURED BY FIRE  
PROTECTION SYSTEM)

#### ELEC. EQUIP ~

PROVIDE SHIELDS OR BAFFLES WHERE  
WATER DAMAGE MAY RESULT FROM  
HEADS TO CLOSE TO ELEC. PANELS

#### SYMBOLS USED ON DRAWING

PIPE ELEVATION A.F.F.

PIPE ELEVATION BELOW B.O.D

ROOM HAZARD CLASSIFICATION (ALL  
ROOMS ARE CONSIDERED LIGHT  
HAZARD UNLESS NOTED)

HYDRAULIC CALCULATION JUNCTION  
POINT

9' - 7" CEILING HEIGHT

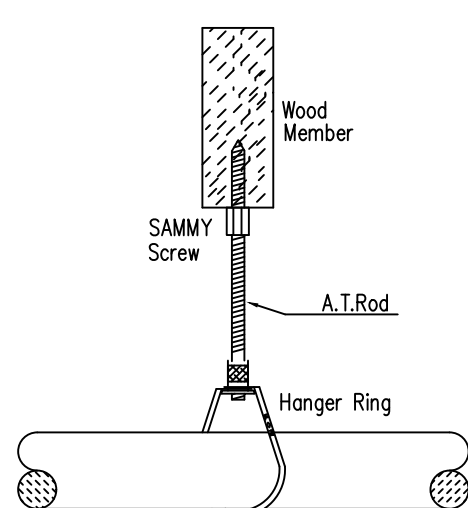
| SY               | QTY  | POSITION | FINISH | TEMP  | K    | NPT    | SIN    | MFG.    | MODEL#      | ESCUTCHEON | HEAD BOX (2 min) |
|------------------|------|----------|--------|-------|------|--------|--------|---------|-------------|------------|------------------|
| 126              | UPR  | BRASS    | 200    | 5.60  | 1/2" | TY313  | TYCO   | TY-FRB  | N/A         |            | 2                |
| 9                | PEND | WHITE    | 155    | 11.20 | 3/4" | TY5237 | TYCO   | EC-11   | SEMI-RECESS |            | 2                |
| 172              | PEND | WHITE    | 200    | 5.60  | 1/2" | TY323  | TYCO   | TY-FRB  | SEMI-RECESS |            | 2                |
| 8                | PEND | WHITE    | 200    | 5.60  | 1"   | TY325  | TYCO   | DS-1    | SEMI-RECESS |            | 2                |
| 898              | PEND | WHITE    | 155    | 4.90  | 1/2" | TY2234 | TYCO   | LFII    | SEMI-RECESS |            | 2                |
| 13               | SIDE | WHITE    | 200    | 11.20 | 3/4" | TY5332 | TYCO   | ECOSW20 | SEMI-RECESS |            | 2                |
| 14               | PEND | WHITE    | 155    | 5.60  | 1/2" | TY323  | TYCO   | TY-FRB  | SEMI-RECESS |            | 2                |
| 13               | PEND | WHITE    | 155    | 5.60  | 1/2" | RA5814 | RELIAB | LT56    | SEMI-RECESS |            | 2                |
| 75               | SIDE | WHITE    | 200    | 5.60  | 1/2" | TY3331 | TYCO   | TY-FRB  | SEMI-RECESS |            | 2                |
| 269              | SIDE | WHITE    | 155    | 4.40  | 1/2" | TY2334 | TYCO   | LFII    | SEMI-RECESS |            | 2                |
| 88               | SIDE | WHITE    | 155    | 5.60  | 1/2" | RA1564 | RELIAB | DH56    | SEMI-RECESS |            | 2                |
| 7                | SIDE | WHITE    | 155    | 4.00  | 1/2" | WK486  | VIKING | FREEDOM | SEMI-RECESS |            | 2                |
| 4                | SIDE | CHROME   | 200    | 5.60  | 1"   | RA1664 | RELIAB | DH560   | SEMI-RECESS | N/A        |                  |
| 1875 TOTAL HEADS |      |          |        |       |      |        |        |         |             |            |                  |

### SPRINKLER LEGEND

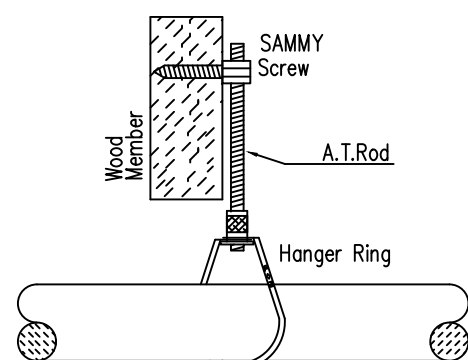
#### MANUAL WET STANDPIPE

LOCATION: 6TH LEVEL STAIR A&B  
REQUIRED FLOW: 750GPM  
OUTLET PSI: 100  
REQUIRED INLET PSI: 138

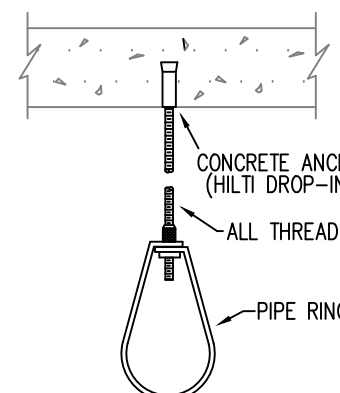
### STANDPIPE PLACARD



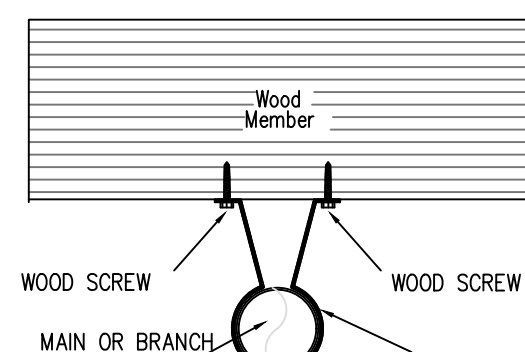
IPS AUTOGRIP HANGER  
(SAMMY SCREW)



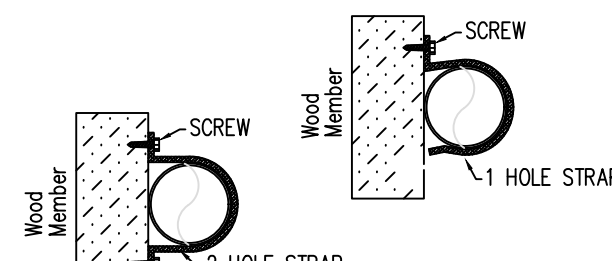
IPS AUTOGRIP HANGER  
(SIDE SAMMY SCREW)



DRILLED CONCRETE  
ANCHOR HANGER



CPVC NO BLOCK HANGER



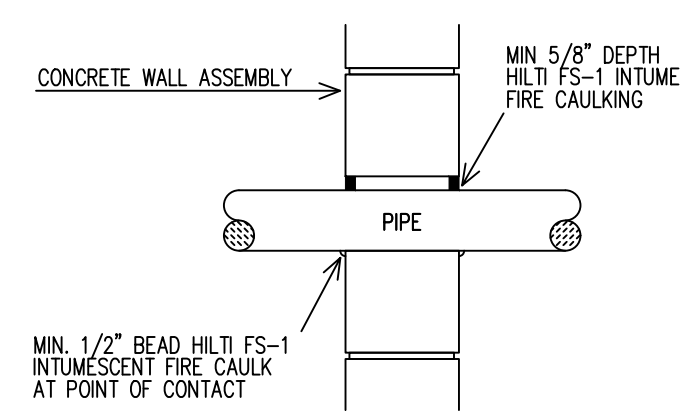
1/2 HOLE STRAP HANGER

### HANGER DETAILS

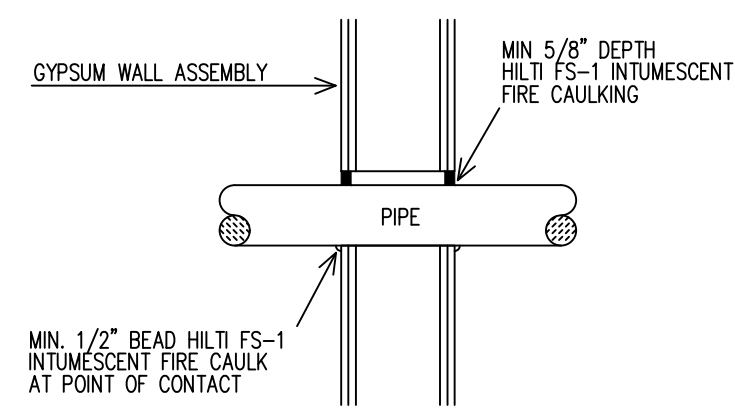
TRUSS SPACES BLOWN  
FULL OF INSULATION, NO  
PROTECTION REQUIRED

### SECTION -A-

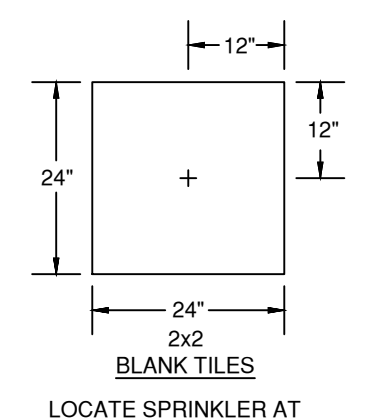
SCALE= 1/8" : 1'-0"



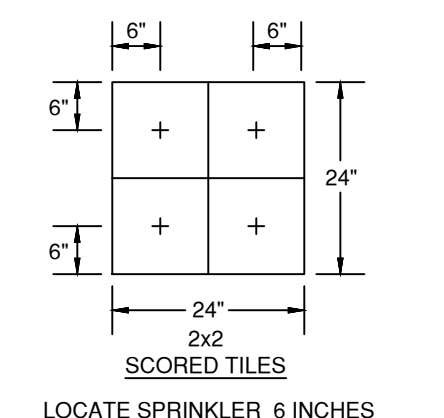
FIRE RATED CONCRETE  
PENETRATION ASSEMBLY W-J-1067  
• Use Hilti FS-1 Fire Stop



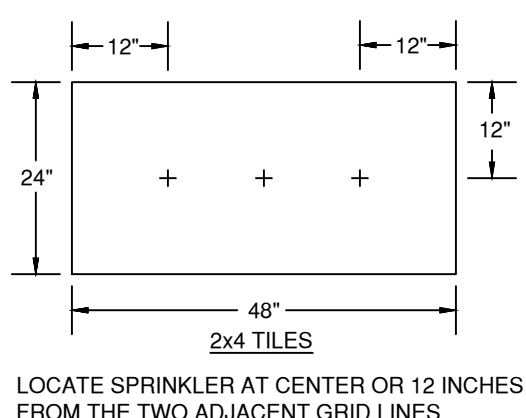
FIRE RATED CONCRETE  
PENETRATION ASSEMBLY W-L-1054  
• Use Hilti FS-1 Fire Stop



LOCATE SPRINKLER AT  
CENTER OF TILE



LOCATE SPRINKLER 6 INCHES  
FROM TWO GRID LINES



LOCATE SPRINKLER AT CENTER OR 12 INCHES  
FROM THE TWO ADJACENT GRID LINES

### SPRINKLER PLACEMENT DETAIL

### INSTALLATION DETAILS

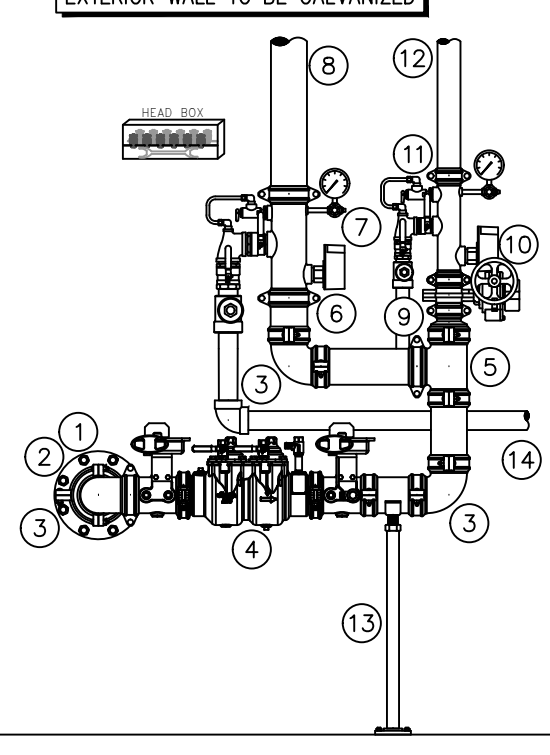
### SPRINKLER SPACING DETAILS

|                                      | MAXIMUM DISTANCE BETWEEN HANGERS (FT.-IN.) |      |        |        |      |        |      |    |    |    |
|--------------------------------------|--------------------------------------------|------|--------|--------|------|--------|------|----|----|----|
|                                      | NOMINAL PIPE SIZE (IN.)                    |      |        |        |      |        |      |    |    |    |
| STEEL PIPE EXCEPT THREADED LIGHTWALL | 3/4"                                       | 1"   | 1 1/4" | 1 1/2" | 2"   | 2 1/2" | 3"   | 4" | 6" | 8" |
| THREADED LIGHTWALL STEEL PIPE        | NA                                         | 12-0 | 12-0   | 15-0   | 15-0 | 15-0   | 15-0 | NA | NA | NA |
| BLAZEMASTER CPVC                     | 5-6                                        | 6-0  | 6-6    | 7-0    | 8-0  | 9-0    | 10-0 | NA | NA | NA |

### NFPA 13 HANGER SPACING

\* ALL WIRING/INTERFACING  
OF ALARMS BY OTHERS

\* ALL PIPING PENETRATING THE  
EXTERIOR WALL TO BE GALVANIZED



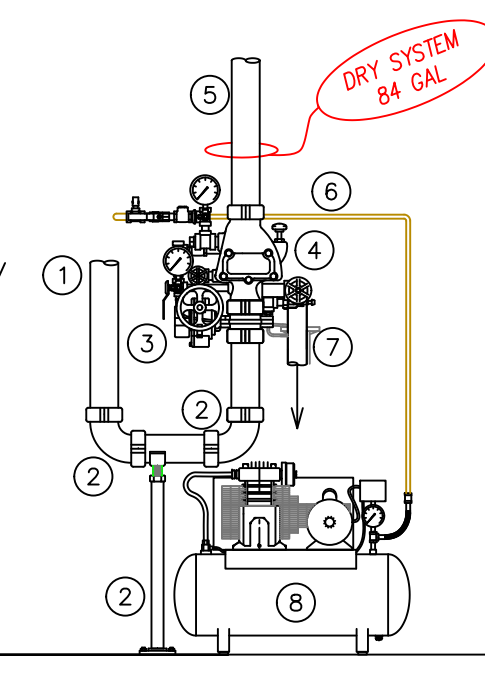
#### RISER LEGEND

- 8" 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 "TP" CONTRACTOR BY THE C.C.)
- 8"x3" GROOVED CONC. REDUCER
- 3" GROOVED ELBOW
- 3" DERINGER D20 BACKFLOW GVG w/ TAMPER
- 3" GROOVED TEE
- 3" GROOVED FILLER PIECE
- 3" GROOVED COMMERCIAL RISER MANIFOLD w/ FLOW SWITCH, PRESSURE  
GAUGE, & TEST AND DRAIN
- 3" MANUAL WET STANDPIPE FEED
- 3"x2 1/2" GROOVED CONC. REDUCER
- 2 1/2" GROOVED BUTTERFLY VALVE w/ TAMPER
- 2 1/2" GROOVED COMMERCIAL RISER MANIFOLD w/ FLOW SWITCH,  
PRESSURE GAUGE, & TEST AND DRAIN
- 2 1/2" TO PARKING GARAGE WET SYSTEM
- PIPE STAND
- PIPE MAIN DRAIN TO AREA WELL

T.O. SLAB  
GARAGE  
821'

#### RISER LEGEND

- FEED FROM 6" STANDPIPE FEED IN HALLWAY
- 3" GROOVED 90 ELBOW
- 3" GROOVED BUTTERFLY VALVE w/ TAMPER
- 3" GROOVED DRY VALVE DPV1 w/ GALV TRIM
- TO NEW DRY SYSTEM ABOVE ADDITION
- 2" COPPER AIR LINE TO DRY VALVE
- 2" MAIN DRAIN TO BE PIPED TO FLOOR DRAIN/  
OUT SIDE. COORDINATE ON SITE.
- AIR COMPRESSOR
- PIPE STAND

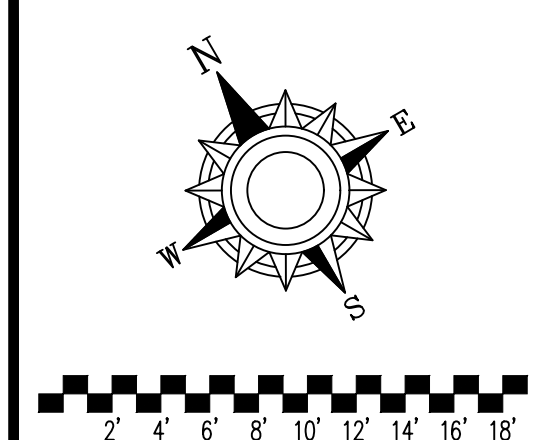


### 1 RISER DETAIL

SCALE: 1/2" = 1'-0"

### 2 DRY SYSTEM DROP LOOP

SCALE: 1/2" = 1'-0"



- General Notes
- System installed per NFPA-13 (2010 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 & Body Flt piping has welded outlets & grooved fittings  
all welding per NFPA-13 (3-6.2).
  - 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/ 12 hds. & one hd wrench.
  - Hangers are to be U.L. Listed and F.M. Approved.
  - Electrical wiring, alarm, detection and supervisory by owner.
  - Owner's responsibility to provide adequate heating to prevent wet  
system piping from freezing.

#### SPRINKLER LEGEND

SEE PLANS

| NO. | REVISIONS   |        | DATE       |
|-----|-------------|--------|------------|
|     | DESCRIPTION | AST #3 |            |
| 1   |             |        | 01/23/2020 |
|     |             |        |            |
|     |             |        |            |
|     |             |        |            |
|     |             |        |            |
|     |             |        |            |
|     |             |        |            |
|     |             |        |            |
|     |             |        |            |

#### APPROVAL STAMPS



Drawing Title: FIRE PROTECTION PLAN

**UNCOMMON  
APARTMENTS**  
1212 4TH STREET SE  
MINNEAPOLIS, MN 55414

Contract No.

**C-19-49**

Drawing Date: 8/26/2019

Scale: 1/8" = 1'-0"

Drawn By:

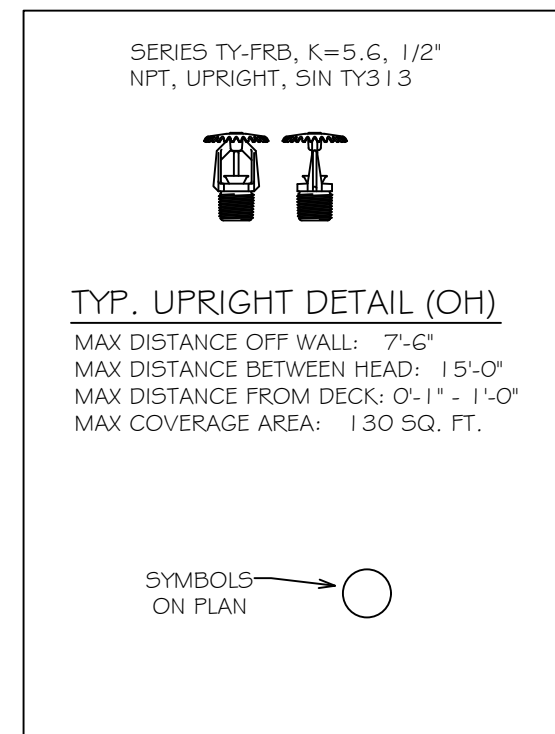
Approval By: STATE FIRE  
MARSHAL DIV.

SHEET NO.

**1 of 8**



## SPRINKLER SPACING DETAILS



## LOWER LEVEL FLOOR PLAN

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

| SYMBOL           | POSITION | FINISH | TEMP   | K   | NPT   | SN   | W/F    | MODEL# | ESCUTCHEON | HEAD BOX (2 min) |
|------------------|----------|--------|--------|-----|-------|------|--------|--------|------------|------------------|
| ○                | 286      | UPR    | BRASS  | 200 | 5.60  | 1/2" | TY313  | TYCO   | TY-FRB     | N/A              |
| ○                | 9        | PEND   | WHITE  | 155 | 11.20 | 3/4" | TY5237 | TYCO   | EC-11      | SEMI-RECESS 2    |
| ○                | 172      | PEND   | WHITE  | 200 | 5.60  | 1/2" | TY323  | TYCO   | TY-FRB     | SEMI-RECESS 2    |
| ○                | 8        | PEND   | WHITE  | 200 | 5.60  | 1"   | TY3255 | TYCO   | DS-1       | SEMI-RECESS 2    |
| ○                | 898      | PEND   | WHITE  | 155 | 4.90  | 1/2" | TY2334 | TYCO   | LF1        | SEMI-RECESS 2    |
| ○                | 13       | SIDE   | WHITE  | 200 | 11.20 | 3/4" | TY3332 | TYCO   | ELOS20     | SEMI-RECESS 2    |
| ○                | 34       | PEND   | WHITE  | 155 | 5.60  | 1/2" | TY323  | TYCO   | TY-FRB     | SEMI-RECESS 2    |
| ○                | 13       | PEND   | WHITE  | 155 | 5.60  | 1/2" | RAS814 | RELIAB | LT56       | SEMI-RECESS 2    |
| ○                | 75       | SIDE   | WHITE  | 200 | 5.60  | 1/2" | TY3331 | TYCO   | TY-FRB     | SEMI-RECESS 2    |
| ○                | 269      | SIDE   | WHITE  | 155 | 4.40  | 1/2" | TY2334 | TYCO   | LF1        | SEMI-RECESS 2    |
| ○                | 88       | SIDE   | WHITE  | 155 | 5.60  | 1/2" | RA1564 | RELIAB | DH86       | SEMI-RECESS 2    |
| ○                | 7        | SIDE   | WHITE  | 155 | 4.00  | 1/2" | VA486  | VIKING | FREEDOM    | SEMI-RECESS 2    |
| ○                | 4        | SIDE   | CHROME | 200 | 5.60  | 1"   | RA1664 | RELIAB | DH560      | SEMI-RECESS N/A  |
| 1875 TOTAL HEADS |          |        |        |     |       |      |        |        |            |                  |

## SPRINKLER LEGEND

### General Notes

- System installed per NFPA-13 (2010 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 (3-8-8).
- 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/ 12 hds. & one hd wrench.
- Hangers are to be U.L. Listed and F.M. Approved.
- Electrical wiring, alarm, detection and supervisory by owner.
- Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

### SPRINKLER LEGEND

SEE PLANS

| NO. | REVISIONS   | DATE       |
|-----|-------------|------------|
| 1   | DESCRIPTION | 01/23/2020 |
|     | ASI #3      |            |

### APPROVAL STAMPS



## CALC PLACARD

Design Area #7 HAZARD: OH1  
Zone: 5 System Type: WET  
Location: SE CORNER OF PARKING

Flowing Outlets: 9 Remote Area: 987  
Density: 0.15  
Flow 406 gpm @ 46.1 psi  
Calculation Safety: 31.1 psi  
Includes 250 gpm Hose allowance

NOTE:  
1500 S.F. REDUCED BY 37% TO 945 S.F.  
PER NFPA 13 FIG. 11.2.3.2.3.1 DUE TO THE  
USE OF QUICK-RESPONSE SPRINKLERS AND  
A 12'-6" MAX CEILING HEIGHT.

## PIPE LEGEND

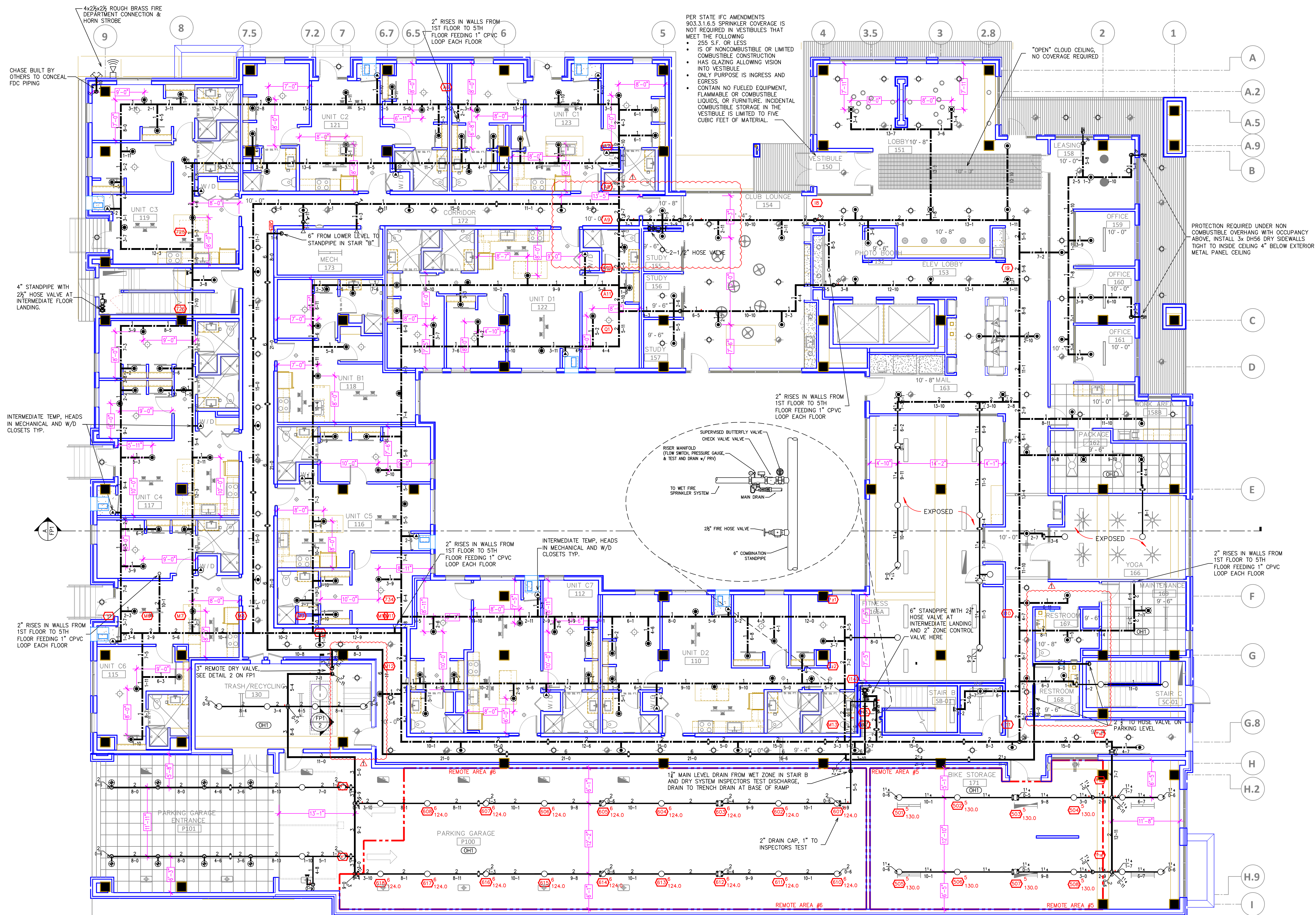
— BLACK STEEL SPRINKLER PIPING  
— CPVC SPRINKLER PIPING

## FIRE PROTECTION PLAN

**UNCOMMON APARTMENTS**  
1212 4TH STREET SE  
MINNEAPOLIS, MN 55414

Contract No.  
**C-19-49**  
Drawing Date: 8/26/2019  
Scale: 1/8" = 1'-0"  
Drawn By:  
Approval By: STATE FIRE MARSHAL DIV.  
SHEET NO. **2 of 8**





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

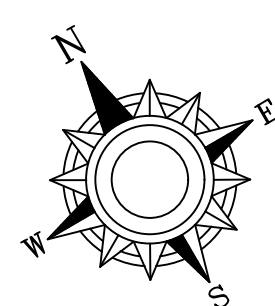
### SPRINKLER SPACING DETAILS

| SYM              | CONT | POSITION | FINISH | TEMP  | K    | NPT    | SIN     | MFG.    | MODEL#      | ESCUTCHION | HEAD | BOX (2 min) |
|------------------|------|----------|--------|-------|------|--------|---------|---------|-------------|------------|------|-------------|
| 286              | UPR  | BRASS    | 200    | 5.60  | 1/2" | TY313  | TYco    | TY-FRB  | N/A         |            |      | 2           |
| 9                | PEND | WHITE    | 155    | 11.20 | 3/4" | TY237  | TYco    | EC-11   | SEMI-RECESS | 2          |      |             |
| 172              | PEND | WHITE    | 200    | 5.60  | 1/2" | TY323  | TYco    | TY-FRB  | SEMI-RECESS | 2          |      |             |
| 8                | PEND | WHITE    | 200    | 5.60  | 1"   | TY325  | TYco    | DS-1    | SEMI-RECESS | 2          |      |             |
| 98               | PEND | WHITE    | 155    | 4.90  | 1/2" | TY234  | TYco    | LFI     | SEMI-RECESS | 2          |      |             |
| 13               | SIDE | WHITE    | 200    | 11.20 | 3/4" | TY332  | TYco    | ELQW20  | SEMI-RECESS | 2          |      |             |
| 34               | PEND | WHITE    | 155    | 5.60  | 1/2" | TY323  | TYco    | TY-FRB  | SEMI-RECESS | 2          |      |             |
| 13               | PEND | WHITE    | 155    | 5.60  | 1/2" | RA5814 | RELIABL | LT56    | SEMI-RECESS | 2          |      |             |
| 75               | SIDE | WHITE    | 200    | 5.60  | 1/2" | TY331  | TYco    | TY-FRB  | SEMI-RECESS | 2          |      |             |
| 269              | SIDE | WHITE    | 155    | 4.40  | 1/2" | TY234  | TYco    | LFI     | SEMI-RECESS | 2          |      |             |
| 68               | SIDE | WHITE    | 155    | 5.60  | 1/2" | RA1664 | RELIABL | DH56    | SEMI-RECESS | 2          |      |             |
| 7                | SIDE | WHITE    | 155    | 4.00  | 1/2" | VK486  | Viking  | FREEDOM | SEMI-RECESS | 2          |      |             |
| 4                | SIDE | CHROME   | 200    | 5.60  | 1"   | RA1664 | RELIABL | DH560   | SEMI-RECESS | N/A        |      |             |
| 1875 TOTAL HEADS |      |          |        |       |      |        |         |         |             |            |      |             |

### SPRINKLER LEGEND

|                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                |                                                                                                                                                                                                                                      |                                                               |                                                                  |                                                                  |                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------|
| <p><b>LT56 CORRIDOR SPRINKLER</b></p> <p>TYPICAL LT56 DETAIL<br/>MAX DISTANCE OFF WALL: 14'-0"<br/>MAX DISTANCE BETWEEN HEAD: 20'-0"<br/>MIN DISTANCE BETWEEN HEAD: 14'-0"<br/>MAX SPRAY DISTANCE: 28'-0" (CALCULATED TO 20'x8')</p> | <p><b>DH56 SIDEWALL SPRINKLER</b></p> <p>TYPICAL DH56 DETAIL<br/>MAX DISTANCE OFF WALL: 14'-0"<br/>MAX DISTANCE BETWEEN HEAD: 20'-0"<br/>MAX DISTANCE FROM DECK: 0'-4" - 1'-0"<br/>MAX SPRAY DISTANCE: 28'-0" (CALCULATED TO 20'x8')</p> | <p><b>LFI 4.4K</b></p> <p>TYPICAL RES SIDE DETAIL<br/>MAX DISTANCE OFF WALL: 8'-0" U.N.O.<br/>MAX DISTANCE BETWEEN HEAD: 16'-0" U.N.O.<br/>MAX DISTANCE FROM DECK: 0'-4" - 1'-0"<br/>MAX SPRAY DISTANCE: 16'-0" U.N.O. (CALCULATED TO 16'x16' U.N.O.)</p> | <p><b>LFI 4.9K</b></p> <p>TYPICAL RES PEND DETAIL<br/>MAX DISTANCE OFF WALL: 10'-0"<br/>MAX DISTANCE BETWEEN HEAD: 14'-0"<br/>MAX DISTANCE FROM DECK: 0'-4" - 1'-0"<br/>MAX SPRAY DISTANCE: 18'-0" (CALCULATED TO 20'x20')</p> | <p><b>FREEDOM / VK486</b></p> <p>TYPICAL RES SIDE DETAIL<br/>MAX DISTANCE OFF WALL: 8'-0"<br/>MAX DISTANCE BETWEEN HEAD: 16'-0"<br/>MAX DISTANCE FROM DECK: 0'-4" - 1'-0"<br/>MAX SPRAY DISTANCE: 18'-0" (CALCULATED TO 16'x16')</p> | <p><b>SERIES TY-FRB, K=5.6, 1/2" NPT, HSW, SIN TY3331</b></p> | <p><b>SERIES TY-FRB, K=5.6, 1/2" NPT, PENDANT, SIN TY323</b></p> | <p><b>SERIES TY-FRB, K=5.6, 1/2" NPT, UPRIGHT, SIN TY313</b></p> | <p><b>MODEL SW-20, K=11.2, 3/4" NPT, ECOM HSW, SIN TY332</b></p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------|

| PIPE LEGEND |                              |
|-------------|------------------------------|
|             | BLACK STEEL SPRINKLER PIPING |
|             | CPVC SPRINKLER PIPING        |



2 4 6 8 10 12 14 16 18

- General Notes**
- System installed per NFPA-13 (2010 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 Shown are Center to Center.
  - High Temperature Heads are to be Field Located Where Required.
  - Provide one spare head cabinet w/ 12 hds. & one hd wrench.
  - Hangers are to be U.L. Listed and F.M. Approved.
  - Electrical wiring, alarm, detection and supervisory by owner.
  - Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

### SPRINKLER LEGEND

SEE PLANS

| REVISIONS |             |        | DATE       |
|-----------|-------------|--------|------------|
| NO.       | DESCRIPTION | ASI #3 |            |
| 1         |             |        | 01/23/2020 |

### APPROVAL STAMPS



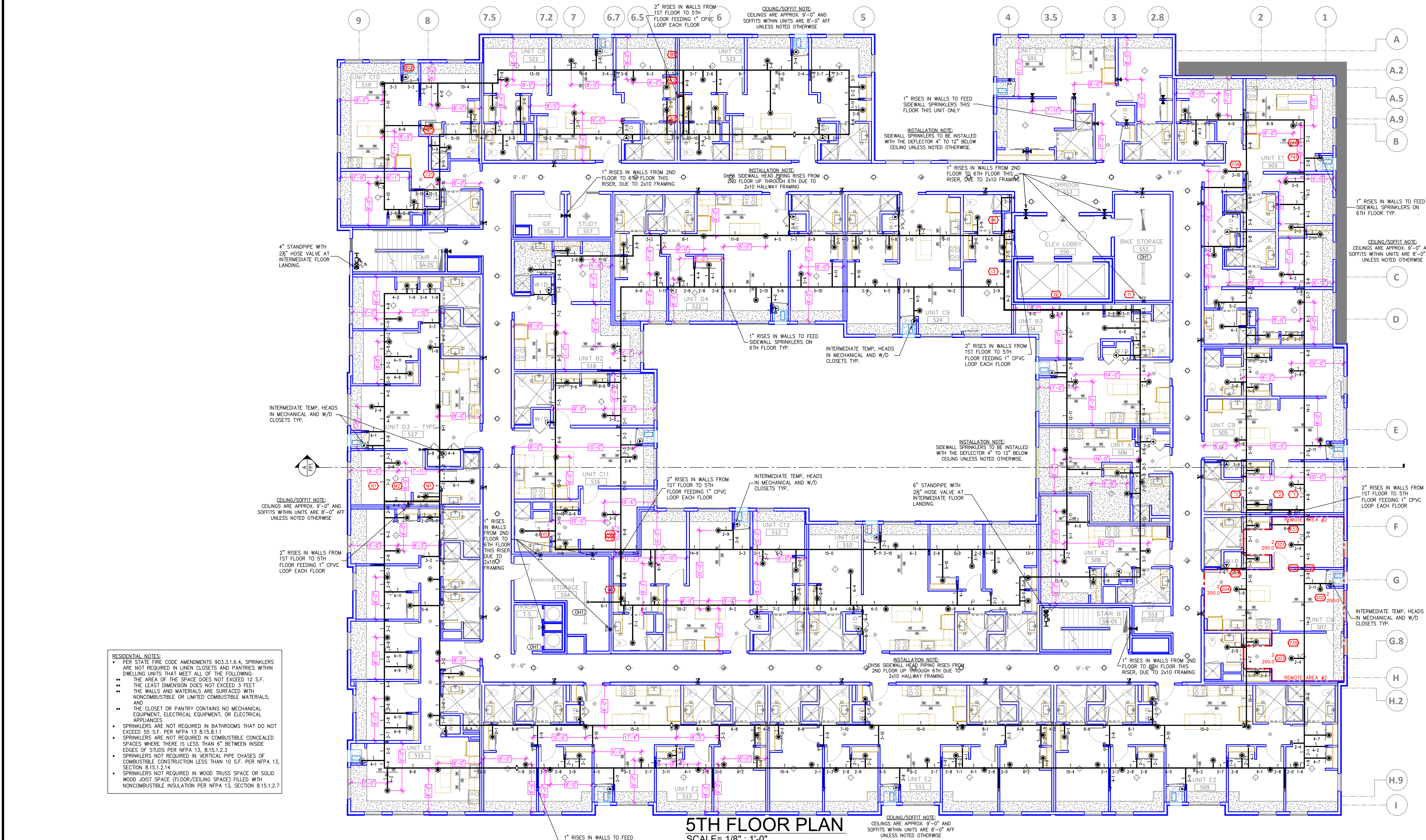
910 N. SYCAMORE AVENUE, SIOUX FALLS, SD 57110 PHONE: (605)-444-9290

### FIRE PROTECTION PLAN

**UNCOMMON APARTMENTS**  
1212 4TH STREET SE  
MINNEAPOLIS, MN 55414

Contract No.  
**C-19-49**  
Drawing Date: 8/26/2019  
Scale: 1/8" = 1'-0"  
Drawn By:  
Approval By: STATE FIRE MARSHAL DIV.  
SHEET NO. **3 of 8**





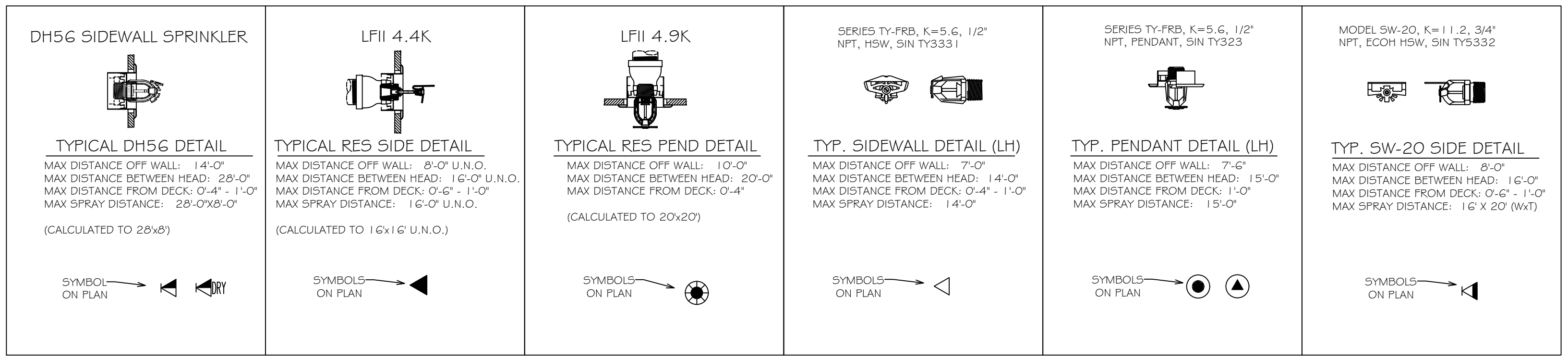
5TH FLOOR PLAN  
SCALE= 1/8" = 1'-0"

Design Area #2 HAZARD LIGHT  
Zone 2 System Type WET  
Location: LEVEL 5 UNIT C9  
Flowing Outlets: 4  
Density: 0.10  
Flow 185 gpm @ 58.6 psi  
Calculation Safety: 19.2 psi  
Includes 100 gpm hose allowance  
NOTE:  
4 SPRINKLER HEADS CALCULATED PER  
NFPA 13 SEC. 11.3.1.1 DWELLING UNIT  
CALC

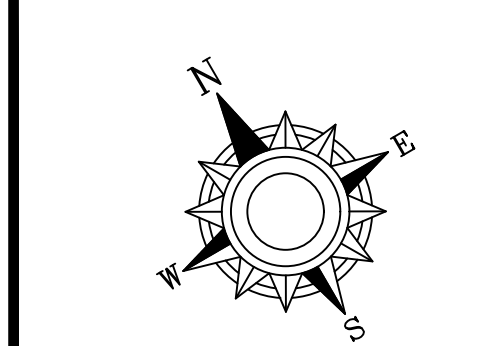
- RESIDENTIAL NOTES:**
- PER STATE FIRE CODE AMENDMENTS 903.3.1.6.4, SPRINKLERS ARE NOT REQUIRED IN LINEN CLOSETS AND PANTRIES WITHIN DWELLING UNITS THAT MEET ALL OF THE FOLLOWING:
    - THE AREA OF THE SPACE DOES NOT EXCEED 12 S.F.
    - THE LEAST DIMENSION DOES NOT EXCEED 3 FEET
    - THE WALLS AND MATERIALS ARE SURFACED WITH NONCOMBUSTIBLE OR LIMITED COMBUSTIBLE MATERIALS; AND
    - THE CLOSET OR PANTRY CONTAINS NO MECHANICAL EQUIPMENT, ELECTRICAL EQUIPMENT, OR ELECTRICAL APPLIANCES
  - SPRINKLERS ARE NOT REQUIRED IN BATHROOMS THAT DO NOT EXCEED 55 S.F. PER NFPA 13 8.15.8.1.1
  - SPRINKLERS ARE NOT REQUIRED IN COMBUSTIBLE CONCEALED SPACES WHERE THERE IS LESS THAN 6" BETWEEN INSIDE EDGES OF STUDS PER NFPA 13, 8.15.1.2.3
  - SPRINKLERS NOT REQUIRED IN VERTICAL PIPE CHASES OF COMBUSTIBLE CONSTRUCTION LESS THAN 10 S.F. PER NFPA 13, SECTION 8.15.1.2.14
  - SPRINKLERS NOT REQUIRED IN WOOD TRUSS SPACE OR SOLID WOOD JOIST SPACE (FLOOR/CEILING SPACE) FILLED WITH NONCOMBUSTIBLE INSULATION PER NFPA 13, SECTION 8.15.1.2.7

| SYM              | CNT | POSITION | FINISH | TEMP | K     | NPT  | SIN    | MFG.    | MODEL#  | ESCUTCHION  | HEAD BOX (2 min) |
|------------------|-----|----------|--------|------|-------|------|--------|---------|---------|-------------|------------------|
| ○                | 286 | UPR      | BRASS  | 200  | 5.60  | 1/2" | TY313  | Typo    | TY-FRB  | N/A         | 2                |
| ●                | 9   | PEND     | WHITE  | 155  | 11.20 | 3/4" | TY5237 | Typo    | EC-11   | SEMI-RECESS | 2                |
| ○                | 172 | PEND     | WHITE  | 200  | 5.60  | 1/2" | TY323  | Typo    | TY-FRB  | SEMI-RECESS | 2                |
| ●                | 8   | PEND     | WHITE  | 200  | 5.60  | 1"   | TY3235 | Typo    | DS-1    | SEMI-RECESS | 2                |
| ●                | 898 | PEND     | WHITE  | 155  | 4.90  | 1/2" | TY2234 | Typo    | LFI     | SEMI-RECESS | 2                |
| ●                | 13  | SIDE     | WHITE  | 200  | 11.20 | 3/4" | TY5332 | Typo    | ELOS20  | SEMI-RECESS | 2                |
| ●                | 34  | PEND     | WHITE  | 155  | 5.60  | 1/2" | TY323  | Typo    | TY-FRB  | SEMI-RECESS | 2                |
| ●                | 13  | PEND     | WHITE  | 155  | 5.60  | 1/2" | RA5814 | RELIAB. | LT56    | SEMI-RECESS | 2                |
| ●                | 175 | SIDE     | WHITE  | 200  | 5.60  | 1/2" | TY3331 | Typo    | TY-FRB  | SEMI-RECESS | 2                |
| ●                | 269 | SIDE     | WHITE  | 155  | 4.40  | 1/2" | TY2334 | Typo    | LFI     | SEMI-RECESS | 2                |
| ●                | 88  | SIDE     | WHITE  | 155  | 5.60  | 1/2" | RA1564 | RELIAB. | DH56    | SEMI-RECESS | 2                |
| ●                | 7   | SIDE     | WHITE  | 155  | 4.00  | 1/2" | VK486  | VIKING  | FREEDOM | SEMI-RECESS | 2                |
| ●                | 4   | SIDE     | CHROME | 200  | 5.60  | 1"   | RA1664 | RELIAB. | DH56D   | SEMI-RECESS | N/A              |
| 1875 TOTAL HEADS |     |          |        |      |       |      |        |         |         |             |                  |

SPRINKLER LEGEND



| PIPE LEGEND |                              |
|-------------|------------------------------|
|             | BLACK STEEL SPRINKLER PIPING |
|             | CPVC SPRINKLER PIPING        |



General Notes

- System installed per NFPA-13 (2010 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 (3-8-8).
- 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/ 12 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.

| SPRINKLER LEGEND | NO. | REVISIONS   | DATE       |
|------------------|-----|-------------|------------|
| SEE PLANS        | 1   | DESCRIPTION | 01/23/2020 |
|                  |     | AST #3      |            |

| APPROVAL STAMPS                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>DRIVEN<br/>FIRE CONSULTANTS<br/>910 N. SYCAMORE AVENUE; STOUX FALLS, SD 57110 PHONE: (605)-444-9290</p> |

| FIRE PROTECTION PLAN                                                      |
|---------------------------------------------------------------------------|
| <b>UNCOMMON APARTMENTS</b><br>1212 4TH STREET SE<br>MINNEAPOLIS, MN 55414 |

|                                      |
|--------------------------------------|
| Contract No.<br><b>C-19-49</b>       |
| Drawing Date: 8/26/2019              |
| Scale: 1/8" = 1'-0"                  |
| Drawn By:                            |
| Approval By: STATE FIRE MARSHAL DIV. |
| SHEET NO. 7 of 8                     |



Design Area #3 HAZARD: RES  
Zone: 2 System Type: WET  
Location: LEVEL 6 UNIT C10  
Flowing Outlets: 4  
Density: 0.10 Remote Area: 477  
Flow 164 gpm @ 69.3 psi  
Calculation Safety: 8.5 psi  
Includes 100 gpm Hose allowance

NOTE:  
4 SPRINKLER HEADS CALCULATED PER  
NFPA 13 SEC. 11.3.1.1 DWELLING UNIT  
CALC

Design Area #4 HAZARD: LIGHT  
Zone: 2 System Type: WET  
Location: 6TH LEVEL HALLWAY  
Flowing Outlets: 3  
Density: 0.10 Remote Area: 440  
Flow 171 gpm @ 69.4 psi  
Calculation Safety: 8.4 psi  
Includes 100 gpm Hose allowance

NOTE:  
3 SPRINKLER HEADS CALCULATED (75  
LINEAR FEET) PER NFPA 13 SEC.  
11.2.3.5.7 CORRIDOR CALC

Design Area #1 HAZARD: RES  
Zone: 2 System Type: WET  
Location: LEVEL 6 UNIT E1  
Flowing Outlets: 4  
Density: 0.10 Remote Area: 364  
Flow 165 gpm @ 68.1 psi  
Calculation Safety: 9.8 psi  
Includes 100 gpm Hose allowance

NOTE:  
4 SPRINKLER HEADS CALCULATED PER  
NFPA 13 SEC. 11.3.1.1 DWELLING UNIT  
CALC

RESIDENTIAL NOTES:  
• PER STATE FIRE CODE AMENDMENTS 903.3.1.6.4, SPRINKLERS ARE NOT REQUIRED IN LINEN CLOSETS AND PANTRIES WITHIN DWELLING UNITS THAT MEET ALL OF THE FOLLOWING:  
• THE AREA OF THE SPACE DOES NOT EXCEED 12 S.F.  
• THE LEAST DIMENSION DOES NOT EXCEED 3 FEET  
• THE WALLS AND MATERIALS ARE SURFACED WITH NONCOMBUSTIBLE OR LIMITED COMBUSTIBLE MATERIALS; AND  
• THE CLOSET OR PANTRY CONTAINS NO MECHANICAL EQUIPMENT, ELECTRICAL EQUIPMENT, OR ELECTRICAL APPLIANCES  
• SPRINKLERS ARE NOT REQUIRED IN BATHROOMS THAT DO NOT EXCEED 55 S.F. PER NFPA 13 & 15.8.1.1  
• SPRINKLERS ARE NOT REQUIRED IN COMBUSTIBLE CONCEALED SPACES WHERE THERE IS LESS THAN 6" BETWEEN INSIDE EDGES OF STUDS PER NFPA 13, 8.15.1.2.3  
• SPRINKLERS NOT REQUIRED IN VERTICAL PIPE CHASES OF COMBUSTIBLE CONSTRUCTION LESS THAN 10 S.F. PER NFPA 13, SECTION 8.15.1.2.14  
• SPRINKLERS NOT REQUIRED IN WOOD TRUSS SPACE OR SOLID WOOD JOIST SPACE (FLOOR/CEILING SPACE) FILLED WITH NONCOMBUSTIBLE INSULATION PER NFPA 13, SECTION 8.15.1.2.7

| SYM              | QTY  | POSITION | FINISH | TEMP | K     | NPT  | SIN    | MFG.    | MODEL   | ESCU/OTHER  | HEAD BOX (2 min) |
|------------------|------|----------|--------|------|-------|------|--------|---------|---------|-------------|------------------|
| 286              | UPR  |          | BRASS  | 200  | 5.60  | 1/2" | TY313  | TYO     | TY-FRB  | N/A         | 2                |
| 9                | PEND |          | WHITE  | 155  | 11.20 | 3/4" | TY323  | TYO     | TY-FRB  | SEMI-RECESS | 2                |
| 172              | PEND |          | WHITE  | 200  | 5.60  | 1/2" | TY323  | TYO     | TY-FRB  | SEMI-RECESS | 2                |
| 8                | PEND |          | WHITE  | 200  | 5.60  | 1"   | TY3205 | TYO     | DS-1    | SEMI-RECESS | 2                |
| 898              | PEND |          | WHITE  | 155  | 4.90  | 1/2" | TY2334 | TYO     | LFI     | SEMI-RECESS | 2                |
| 13               | SIDE |          | WHITE  | 200  | 11.20 | 3/4" | TY3332 | TYO     | ELDSW20 | SEMI-RECESS | 2                |
| 34               | PEND |          | WHITE  | 155  | 5.60  | 1/2" | TY323  | TYO     | TY-FRB  | SEMI-RECESS | 2                |
| 13               | PEND |          | WHITE  | 155  | 5.60  | 1/2" | RA5814 | RELIABL | LT86    | SEMI-RECESS | 2                |
| 75               | SIDE |          | WHITE  | 200  | 5.60  | 1/2" | TY3331 | TYO     | TY-FRB  | SEMI-RECESS | 2                |
| 269              | SIDE |          | WHITE  | 155  | 4.40  | 1/2" | TY2334 | TYO     | LFI     | SEMI-RECESS | 2                |
| 88               | SIDE |          | WHITE  | 155  | 5.60  | 1/2" | RA1564 | RELIABL | DH56    | SEMI-RECESS | 2                |
| 7                | SIDE |          | WHITE  | 155  | 4.00  | 1/2" | VK486  | VKING   | FREEDOM | SEMI-RECESS | 2                |
| 4                | SIDE |          | CHROME | 200  | 5.60  | 1"   | RA1664 | RELIABL | DH56D   | SEMI-RECESS | N/A              |
| 1875 TOTAL HEADS |      |          |        |      |       |      |        |         |         |             |                  |

#### SPRINKLER LEGEND

#### SPRINKLER LEGEND

SEE PLANS

| REVISIONS |             |        | DATE       |
|-----------|-------------|--------|------------|
| NO.       | DESCRIPTION | AST #3 |            |
| 1         |             |        | 01/23/2020 |
|           |             |        |            |
|           |             |        |            |
|           |             |        |            |
|           |             |        |            |

#### APPROVAL STAMPS



#### FIRE PROTECTION PLAN

**UNCOMMON APARTMENTS**  
1212 4TH STREET SE  
MINNEAPOLIS, MN 55414

Contract No.  
**C-19-49**  
Drawing Date: 8/26/2019  
Scale: 1/8" = 1'-0"  
Drawn By:  
Approval By: STATE FIRE MARSHAL DIV.  
SHEET NO. 8 of 8