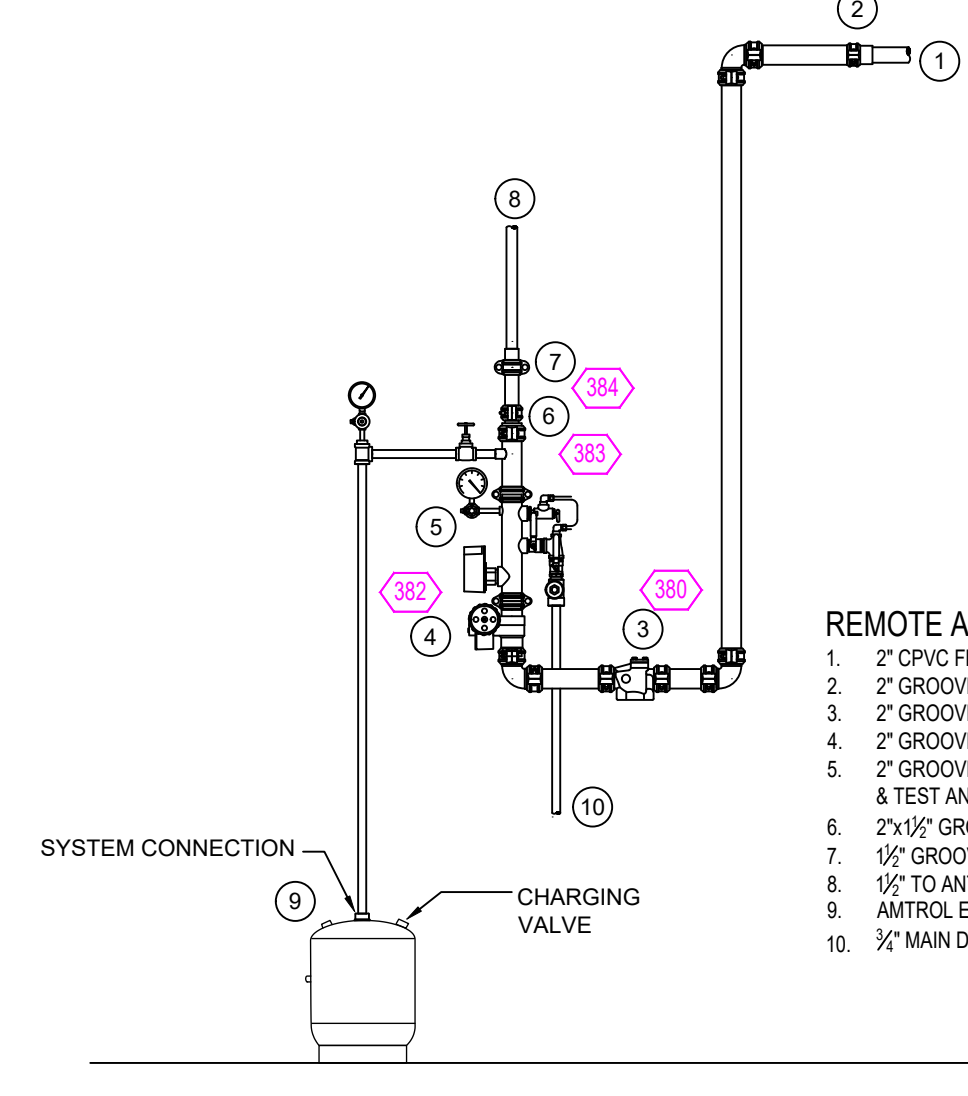


**1 RISER DETAIL**  
SCALE: 1/2" = 1'-0"

- RISER LEGEND**
- 4" 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 G.C.
  - 4"X4" FLANGE X GROOVED ADAPTER
  - 4"X2" GROOVED CONC. REDUCER
  - 2" WILKINS 375 BACKFLOW GIG BPF w/ TAMPER
  - 2" GROOVED BUTTERBALL VALVE w/ TAMPER
  - 2" GROOVED CHECK VALVE
  - 2" GROOVED COMMERCIAL RISER MANIFOLD w/ FLOW SWITCH, PRESSURE GAUGE, & TEST AND DRAIN
  - 2" GROOVED TO CPVC ADAPTER
  - 2" WET SYSTEM
  - 2x1/2" GROOVED CONC. REDUCER
  - 1 1/2" GROOVED TO CPVC ADAPTER
  - 1/2" TO ANTI-FREEZE SYSTEM 1
  - ANTI-FREEZE SYSTEM TANK
  - 3/4" MAIN DRAIN TIED IN AND DRAINED TO APPROVED LOCATION
  - PIPE STAND
  - 2" TO FDC (VERIFY LOCATION ON SITE w/ AHJ)



**2 REMOTE RISER DETAIL**  
SCALE: 1/2" = 1'-0"

- REMOTE ANTIFREEZE RISER LEGEND**
- 2" CPVC FROM WET SYSTEM
  - 2" GROOVED TO CPVC ADAPTER
  - 2" GROOVED CHECK VALVE
  - 2" GROOVED BUTTERBALL VALVE w/ TAMPER
  - 2" GROOVED COMMERCIAL RISER MANIFOLD w/ FLOW SWITCH, PRESSURE GAUGE, & TEST AND DRAIN
  - 2x1/2" GROOVED CONC. REDUCER
  - 1/2" GROOVED TO CPVC ADAPTER
  - 1/2" TO ANTI-FREEZE SYSTEM 2
  - ANTI-FREEZE SYSTEM TANK
  - 3/4" MAIN DRAIN TO APPROVED LOCATION

SYM	QTY	POSITION	FINISH	TEMP	K	NPT	SIN	MFG	MODEL#	ESCUTCHEON
13	1	UPR	BRASS	155	5.60	1/2"	TY313	Tyco	TY-FRB	N/A
6	1	PEND	WHITE	286	5.60	1/2"	TY323	Tyco	TY-FRB	RECESSED
130	1	PEND	WHITE	155	4.90	1/2"	TY2236	Tyco	LFII	CONCEALED
1	1	SIDE	BRASS	155	5.60	1/2"	TY3331	Tyco	TY-FRB	N/A
8	1	PEND	WHITE	200	5.60	1/2"	TY323	Tyco	TY-FRB	RECESSED
7	1	UPR	BRASS	175	4.20	1/2"	TY2189	Tyco	CC-2	N/A
3	1	SPRIG	200	5.60	1/2"	TY313	Tyco	TY-FRB	N/A	CONCEALED
2	1	SIDE	WHITE	160	4.20	1/2"	TY2324	Tyco	LFII	CONCEALED
2	1	SIDE	WHITE	155	5.60	1/2"	TY3332	Tyco	TY-FRB	N/A
172		TOTAL								

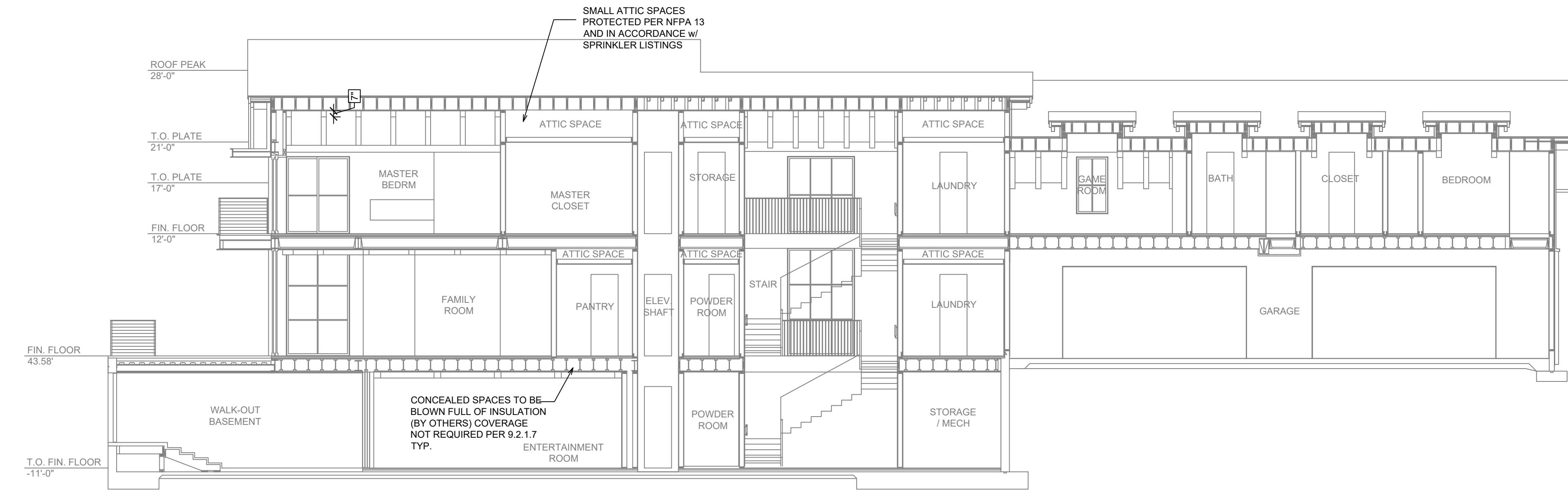
**SPRINKLER HEAD LEGEND**

**SYSTEM NOTES**

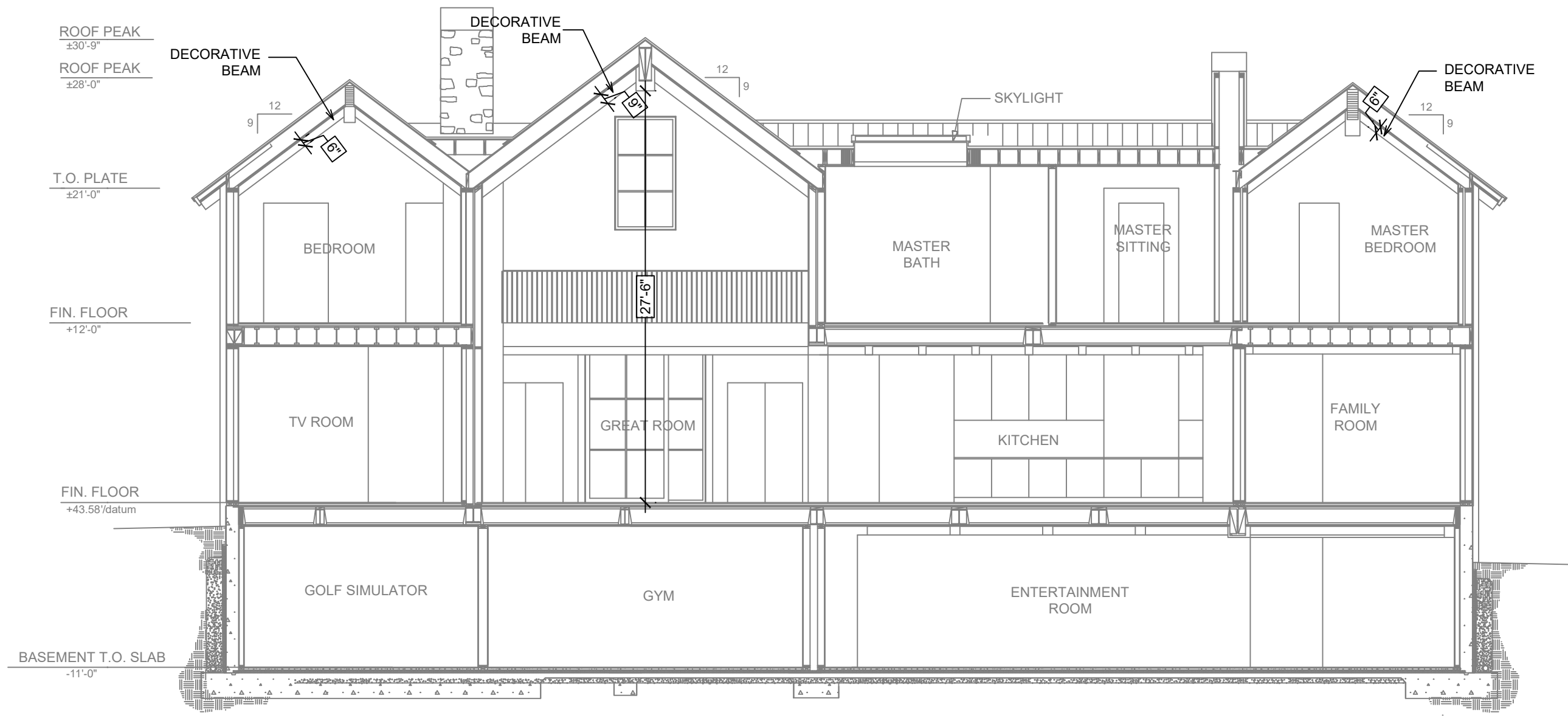
ZONE	AREA SERVED	SYSTEM VOLUME	SYSTEM TYPE
ZONE 1	2ND FLOOR & TERRACE	38 GAL	ANTI-FREEZE
ZONE 2	2ND FLOOR & FRONT ENTRY	40 GAL	ANTI-FREEZE
ZONE 3	MAIN FLOOR & BASEMENT	141 GAL	WET

THIS FIRE SPRINKLER SYSTEM UTILIZES THE TYCO LFP ANTI-FREEZE SOLUTION

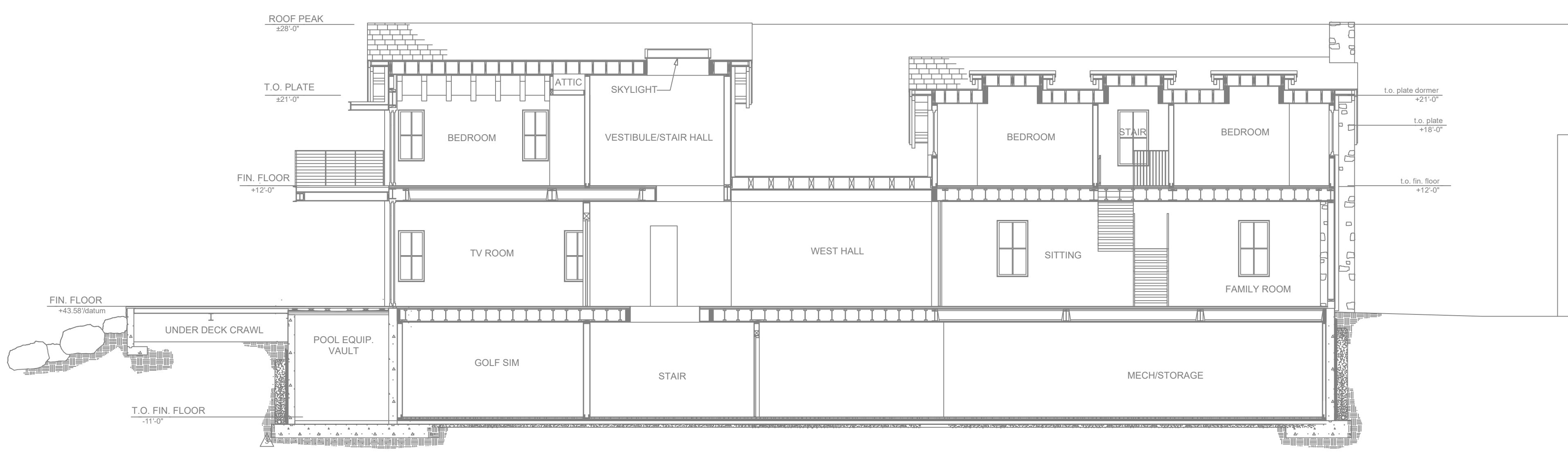
- GENERAL NOTES**
- INTERNATIONAL BUILDING CODE (2018)
  - OCCUPANCY: R-3
  - TYPE OF CONSTRUCTION: I-B, SPRINKLERED
  - SPRINKLERED AREAS (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)
    - BASEMENT = 4757 S.F.
    - 1ST FLOOR = 5005 S.F.
    - 2ND FLOOR = 5005 S.F.
    - TOTAL SF = 14,770 S.F.
  - INSTALLATION STANDARDS: SPRINKLER SYSTEM DESIGNED AND INSTALLED PER NFPA 13 (2022)
  - SPRINKLER PIPE TYPES:
    - 2.1 1" BRANCH LINES TO BE BLAZEMASTER CPVC PIPING WITH CEMENTED FITTINGS
    - 2.2 1/2" THROUGH 2" MAIN & BRANCH LINES TO BE BLAZEMASTER CPVC PIPING WITH CEMENTED FITTINGS
    - 2.3 1" BRANCH LINES TO BE BLK SCHD 40 PIPING WITH THREADED FITTINGS
    - 2.4 1/2" THROUGH 2" MAIN & BRANCH LINES TO BE BLK SCHD 10 PIPING WITH GROOVED FITTINGS
  - DESIGN CRITERIA
    - 3.1 SPRINKLER SYSTEM IS HYDRAULICALLY CALCULATED IN ACCORDANCE WITH NFPA 13
    - 3.2 BATHROOMS UNDER 55 SQ FT OMITTED PER SECTION 9.2.4.1.1
    - 3.3 DESIGN AREA REDUCTIONS PER SECTION 19.2.3.2.3.1 TAKEN WHERE APPLICABLE
    - 3.3 ANTI-FREEZE SYSTEM VOLUMES
      - 3.3.1 SYSTEM 1 - 38 GAL
      - 3.3.2 SYSTEM 2 - 40 GAL
  - NOTES:
    - 4.1 ALL MATERIAL TO BE NEW AND MEET U.L. STANDARDS
    - 4.2 HANGERS TO BE INSTALLED IN ACCORDANCE WITH NFPA 13 (2022) - SEE PLAN FOR HANGING REQ.
  - SYMBOLS USED ON DRAWINGS:
    - PIPE ELEVATION A.F.F.
    - ROOM HAZARD CLASSIFICATION (ALL ROOMS ARE CONSIDERED LIGHT HAZARD UNLESS NOTED)
    - HYDRAULIC CALCULATION JUNCTION POINT
    - CEILING HEIGHT
  - SCOPE OF WORK:
    - 6.1 FIRE SPRINKLER SYSTEM IS COMPRISED OF ONE WET SYSTEM (ZONE 3) PROTECTING THE BASEMENT AND MAIN LEVEL AS WELL AS TWO ANTI-FREEZE SYSTEMS (ZONE 1 & ZONE 2) PROTECTING THE UPPER LEVEL AND OUTDOOR UNHEATED AREAS REQUIRING COVERAGE SUCH AS THE COVERED TERRACE AND FRONT ENTRANCE.
    - 6.2 ALL AREAS OF THE BUILDING TO BE INSTALLED AND COVERED IN ACCORDANCE WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PER NFPA 13 (2022)



**A BUILDING SECTION**  
SCALE: 1/8" = 1'-0"



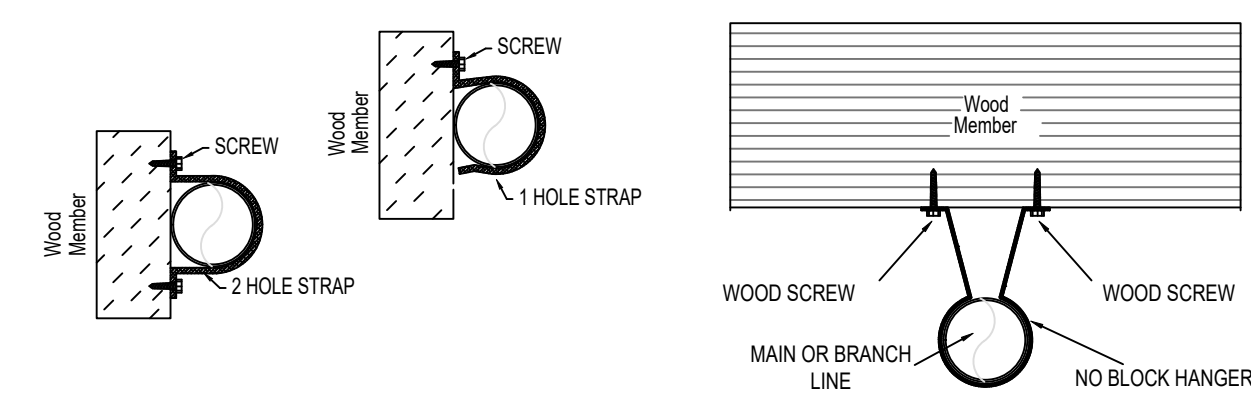
**C BUILDING SECTION**  
SCALE: 1/8" = 1'-0"



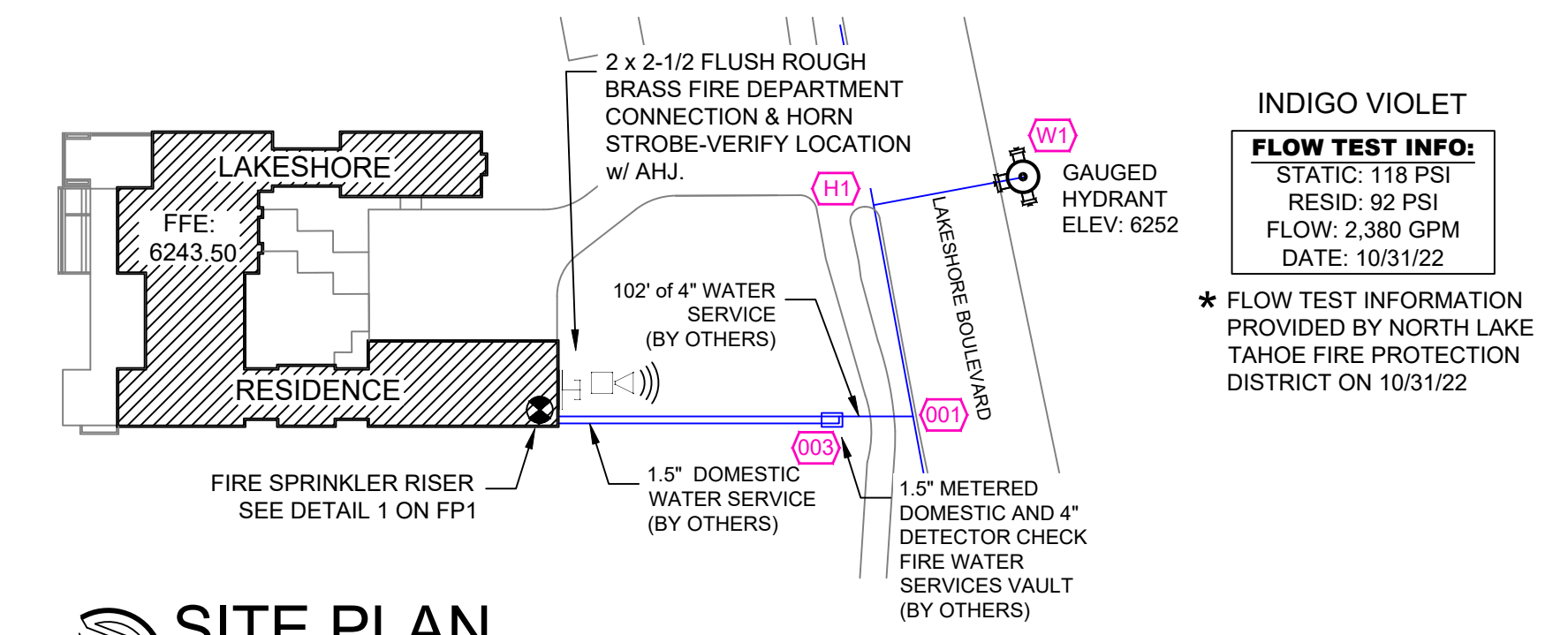
**B BUILDING SECTION**  
SCALE: 1/8" = 1'-0"

NFPA 13 - Table 17.4.2.1(a) Maximum Distance Between Hangers (ft-in.)

	Nominal Pipe Size (in.)								
	3/4	1	1 1/2	2	2 1/2	3	4	6	8
Steel Pipe except threaded lightwall	N/A	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0
Threaded lightwall steel pipe	N/A	12-0	12-0	15-0	15-0	15-0	N/A	N/A	N/A
Copper tube	8-0	8-0	10-0	10-0	12-0	12-0	12-0	15-0	15-0
CPVC	5-6	6-0	6-6	7-0	8-0	9-0	10-0	N/A	N/A



**HANGER DETAILS**



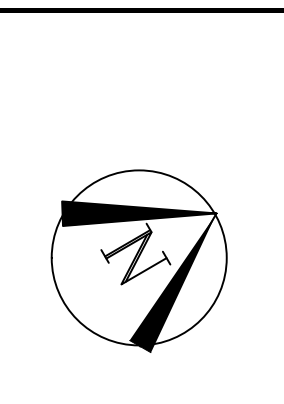
**SITE PLAN**  
SCALE: 1" = 50'-0"

**INDIGO VIOLET**

**FLOW TEST INFO:**  
 STATIC: 118 PSI  
 RESID: 92 PSI  
 FLOW: 2,380 GPM  
 DATE: 10/31/22

\* FLOW TEST INFORMATION PROVIDED BY NORTH LAKE TAHOE FIRE PROTECTION DISTRICT ON 10/31/22

WATER SUPPLY INFORMATION - FLOW TEST DATA				SYMBOLS AND ABBREVIATIONS		SPRINKLER HEADS							CONTRACT RESPONSIBILITIES				
STATIC PSI	RESIDUAL PSI	FLOW GPM	DATE OF TEST	SYMBOL	DESCRIPTION	QTY	SYMB	HEAD TYPE	TEMP.	FINISH	ORIFICE	MODEL	CANOPY	SIN	ITEM	OFF	OTHERS
118	92	2,380	10/31/22	13	UPRIGHT	1	13	UPRIGHT	155	BRASS	5.60	TY-FRB	N/A	TY313	STREET WATER CONNECTION		
				6	PENDENT	1	6	PENDENT	286	WHITE	5.60	TY-FRB	RECESSED	TY323	UNDERGROUND WATER MAINS		
				130	PENDENT	1	130	PENDENT	160	WHITE	4.90	LFII	CONCEALED	TY2236	EXCAVATION		
				1	SIDEWALL	1	1	SIDEWALL	155	BRASS	5.60	TY-FRB	N/A	TY3331	BACKFILL		
				8	PENDENT	1	8	PENDENT	200	WHITE	5.60	TY-FRB	RECESSED	TY323	WIRING		
				7	UPRIGHT	1	7	UPRIGHT	175	BRASS	4.20	CC-2	N/A	TY2189	PAINTING		
				3	SPRIG	1	3	SPRIG	200	BRASS	5.60	TY-FRB	N/A	TY313			
				2	SIDEWALL	1	2	SIDEWALL	160	WHITE	4.20	LFII	CONCEALED	TY2324			
				2	SIDEWALL	1	2	SIDEWALL	155	WHITE	5.60	TY-FRB	N/A	TY3332			

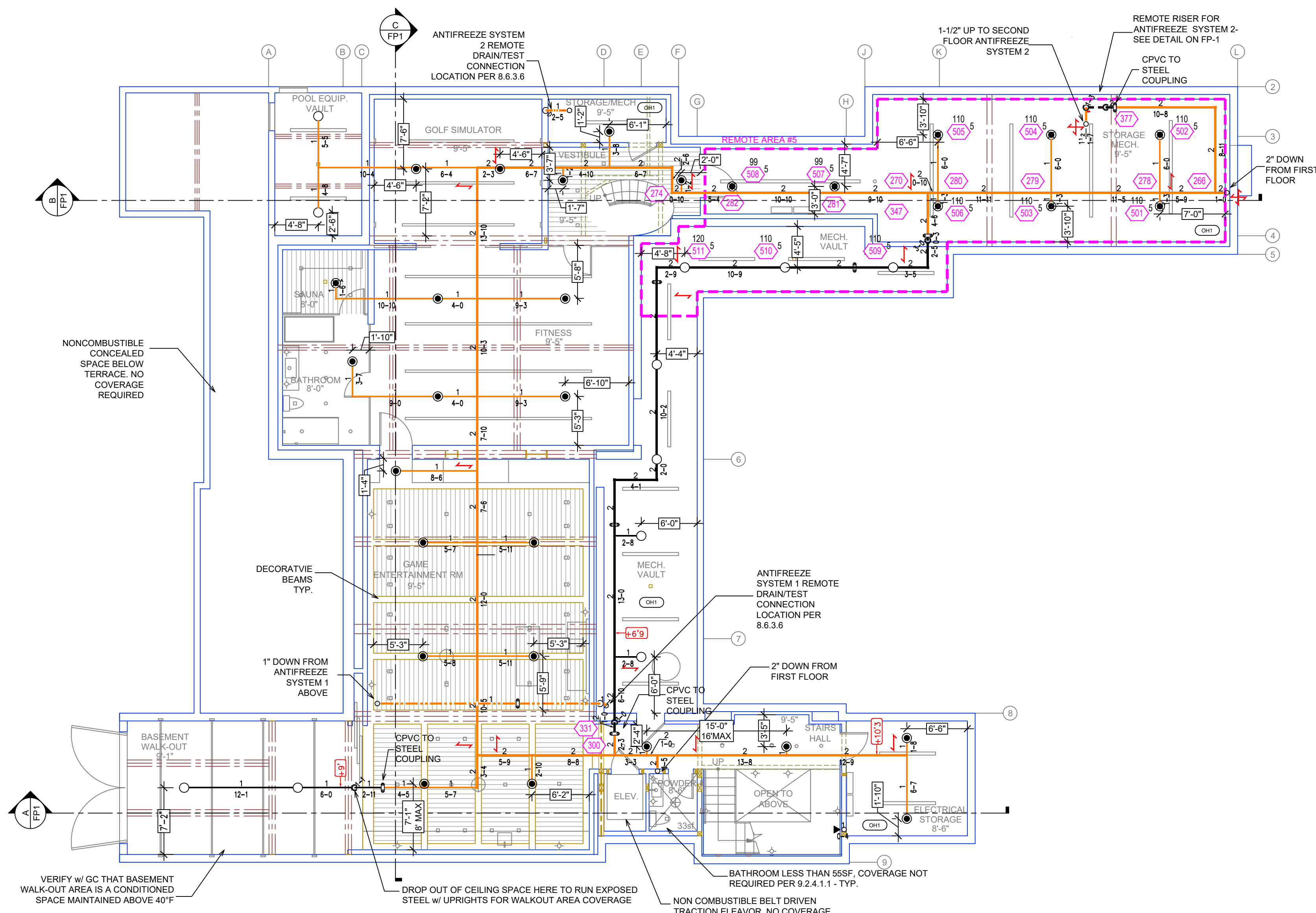


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PROJECT NAME:  
**LAKESHORE RESIDENCE**

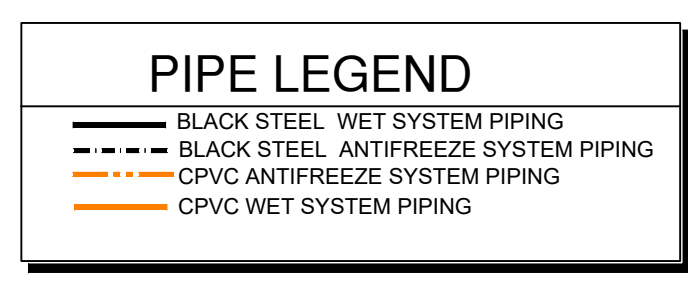
INCLINE VILLAGE, NV 89451





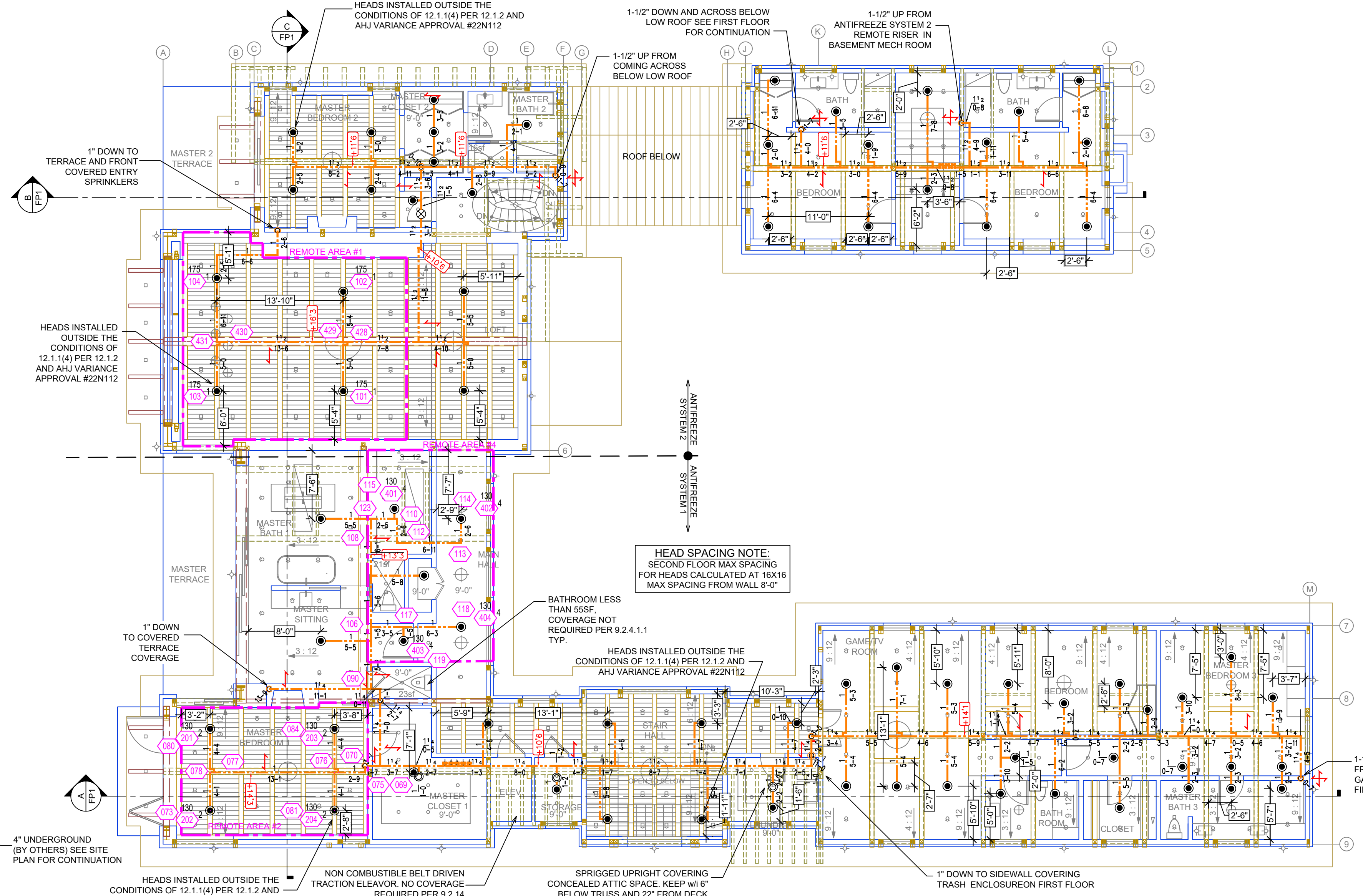
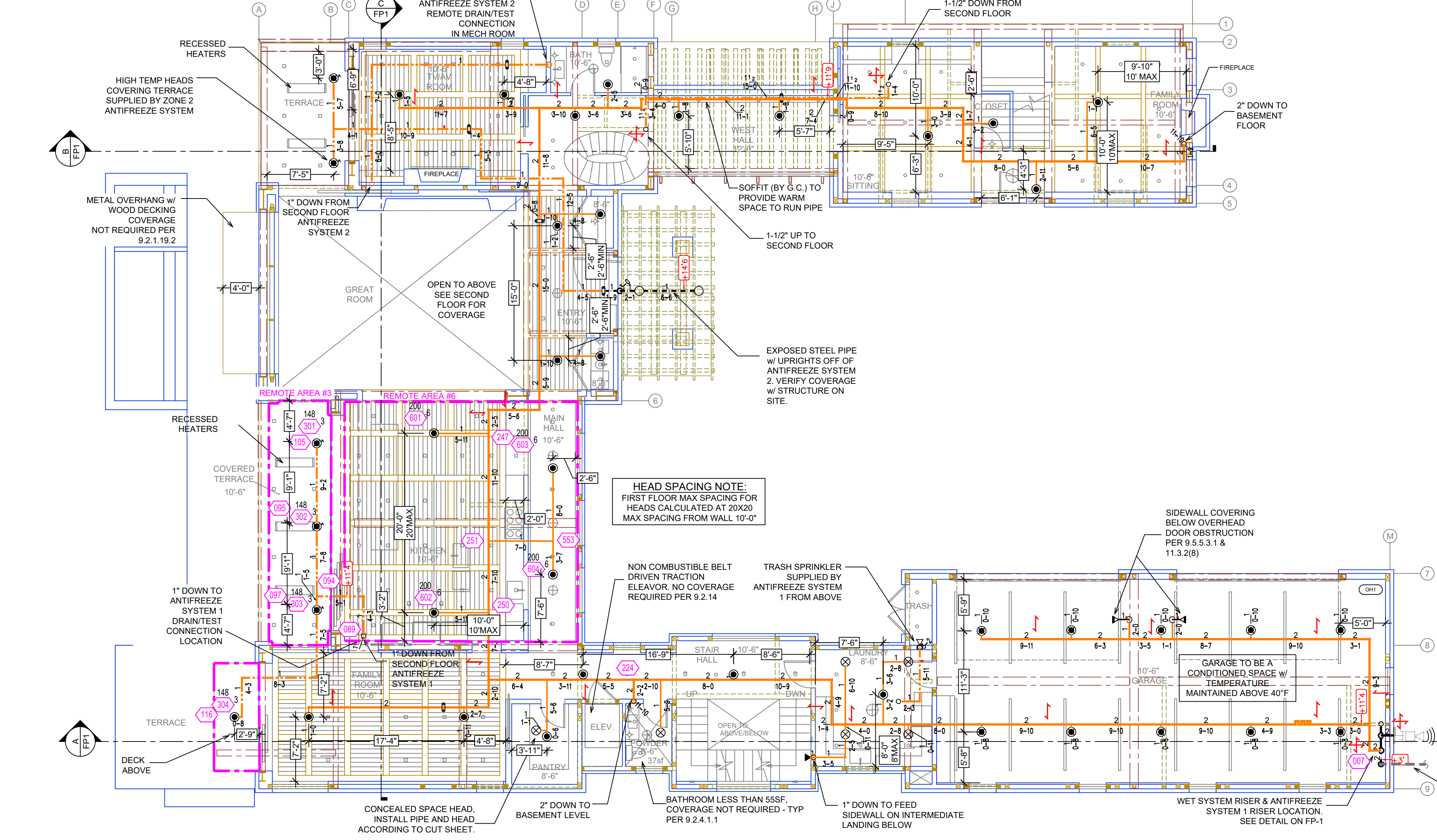
SYM	QTY	POSITION	FINISH	TEMP	K	MPT	SIN	MPG	MODEL#	ESCU/CHCON
13	1	UPR	BRASS	155	5.60	1/2"	TY313	TYFRB	TYFRB	RECESSED
6	1	PEND	WHITE	286	5.60	1/2"	TY233	TYFRB	TYFRB	RECESSED
130	1	PEND	WHITE	155	4.90	1/2"	TY238	TYFRB	LFPI	CONCEALED
1	1	SIDE	BRASS	155	5.60	1/2"	TY331	TYFRB	TYFRB	NA
8	1	PEND	WHITE	200	5.60	1/2"	TY233	TYFRB	TYFRB	RECESSED
7	1	UPR	BRASS	175	4.20	1/2"	TY2189	TYFRB	CC-2	NA
3	1	UPR	BRASS	200	5.60	1/2"	TY313	TYFRB	TYFRB	NA
2	1	SIDE	WHITE	160	4.20	1/2"	TY234	TYFRB	LFPI	CONCEALED
4	1	SIDE	WHITE	155	5.60	1/2"	TY332	TYFRB	TYFRB	NA
172		TOTAL								

**SPRINKLER HEAD LEGEND**



Design Area #	HAZARD	RES
Design Area # 1	HAZARD: RES	RES
Zone: 1	System Type: WET	RES
Location: GREAT ROOM		
Flowing Outlets: 4		
Density: 0.10	Remote Area: 4 SPK	
Flow: 171.2 gpm @ 95.6 psi		
Calculation Safety: 22.2 psi		
Includes 100 gpm Hose allowance		
RESIDENTIAL SPRINKLERS: 4 ADJACENT SPRINKLERS CALCULATED PER 19.3.1.1 w/ MINIMUM REQUIRED DISCHARGE PER SPRINKLER ACCORDING TO 19.3.1.3		
Design Area # 2	HAZARD: RES	RES
Zone: 1	System Type: WET	RES
Location: MASTER BED		
Flowing Outlets: 4		
Density: 0.10	Remote Area: 4 SPK	
Flow: 154.9 gpm @ 75.6 psi		
Calculation Safety: 42.2 psi		
Includes 100 gpm Hose allowance		
RESIDENTIAL SPRINKLERS: 4 ADJACENT SPRINKLERS CALCULATED PER 19.3.1.1 w/ MINIMUM REQUIRED DISCHARGE PER SPRINKLER ACCORDING TO 19.3.1.3		
Design Area # 3	HAZARD: LIGHT	RES
Zone: 1	System Type: WET	RES
Location: COVERED TERRACE		
Flowing Outlets: 4		
Density: 0.10	Remote Area: 592	
Flow: 161.2 gpm @ 89.7 psi		
Calculation Safety: 28.1 psi		
Includes 100 gpm Hose allowance		
SINGLE LINE OF SPRINKLER PROTECTION, DESIGN AREA PER 19.2.3.4.2		
Design Area # 4	HAZARD: RES	RES
Zone: 1	System Type: WET	RES
Location: MAIN HALL		
Flowing Outlets: 4		
Density: 0.10	Remote Area: 4 SPK	
Flow: 155.4 gpm @ 76 psi		
Calculation Safety: 41.9 psi		
Includes 100 gpm Hose allowance		
RESIDENTIAL SPRINKLERS: 4 ADJACENT SPRINKLERS CALCULATED PER 19.3.1.1 w/ MINIMUM REQUIRED DISCHARGE PER SPRINKLER ACCORDING TO 19.3.1.3		
Design Area # 5	HAZARD: OH-1	RES
Zone: 3	System Type: WET	RES
Location: STORAGE/MECH		
Flowing Outlets: 11		
Density: 0.15	Remote Area: 935	
Flow: 438.8 gpm @ 101.9 psi		
Calculation Safety: 15 psi		
Includes 250 gpm Hose allowance		
REMOTE AREA REDUCTION OF 40% TAKEN PER 19.2.3.2.3.1. 900SF AREA CALCULATED		
Design Area # 6	HAZARD: RES	RES
Zone: 3	System Type: WET	RES
Location: KITCHEN		
Flowing Outlets: 4		
Density: 0.10	Remote Area: 4 SPK	
Flow: 153.6 gpm @ 49.7 psi		
Calculation Safety: 68.1 psi		
Includes 100 gpm Hose allowance		
RESIDENTIAL SPRINKLERS: 4 ADJACENT SPRINKLERS CALCULATED PER 19.3.1.1 w/ MINIMUM REQUIRED DISCHARGE PER SPRINKLER ACCORDING TO 19.3.1.3		

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



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

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

WATER SUPPLY INFORMATION - FLOW TEST DATA				SYMBOLS AND ABBREVIATIONS				CONTRACT RESPONSIBILITIES				
DATE OF FLOW TEST: 10/31/22	RESIDUAL PRESS: 92	FLOW: 2,380	DATE OF FLOW TEST: 10/31/22									
SOURCE OF INFORMATION: NORTH LAKE TAHOE FIRE PROTECTION DIST.												
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SPRINKLER HEADS											CONTRACT RESPONSIBILITIES	
QTY	SYMB	HEAD TYPE	TEMP.	FINISH	ORIFICE	MODEL	CANOPY	SIN	ITEM	OFF	OTHERS	
13	○	UPRIGHT	155	BRASS	5.60	TY-FRB	N/A	TY313	STREET WATER CONNECTION			
6	●	PENDENT	286	WHITE	5.60	TY-FRB	RECESSED	TY233	UNDERGROUND WATER MAINS			
130	●	PENDENT	160	WHITE	4.90	LFPI	CONCEALED	TY238	EXCAVATION			
1	<	SIDEWALL	155	BRASS	5.60	TY-FRB	N/A	TY331	BACKFILL			
8	●	PENDENT	200	WHITE	5.60	TY-FRB	RECESSED	TY233	WIRING			
7	○	UPRIGHT	175	BRASS	4.20	CC-2	N/A	TY2189	PAINTING			
3	○	SPRIG	200	BRASS	5.60	TY-FRB	N/A	TY313				
2	<	SIDEWALL	160	WHITE	4.20	LFPI	CONCEALED	TY234				
2	<	SIDEWALL	155	WHITE	5.60	TY-FRB	N/A	TY332				
NO. DATE BY												
PROJECT NAME: LAKESHORE RESIDENCE												
INCLINE VILLAGE, NV 89451												
AMM	12-9-22	1/8" = 1'	FS 2 OF 2									