

# Harnett County GRC and Library Hydrant Flow Test ATTACHMENT B

FIRE HYDRANT FLOW TEST DATA NOT TO SCALE - HYDRAULIC REFERENCE ONLY

# **GENERAL NOTES**

### SPRINKLER SYSTEM DESIGN

FOR AREAS SUCH AS OFFICES AND PUBLIC SPACES, ETC. THE SPRINKLER SYSTEM SHALL BE DESIGNED FOR LIGHT HAZARD OCCUPANCY AND DESIGN DENSITY OF 0.10 GPM OVER THE MOST REMOTE 1,500 SQ.FT. PLUS A 100 GPM HOSE ALLOWANCE. MAXIMUM SPRINKLER HEAD SPACING NOT TO EXCEED 225 SQ.FT. STORAGE AREAS, MECHANICAL PENTHOUSES, AND HOUSEKEEPING AREAS ARE ORDINARY GROUP 1 HAZARD WITH A DESIGN DENSITY OF 0.15 GPM OVER THE MOST REMOTE 1500 SQ.FT. AND MAXIMUM HEAD SPACING OF 130 SQ.FT.

AS PER NFPA-13, 2013 EDITION SECTION 11.2.3.2.3.1; A 30% REDUCTION IN THE REMOTE AREA SIZE IS PERMITTED TO BE TAKEN IN THE LEVEL 2 ADULT MAKER ROOM (REMOTE AREA #2) ALTHOUGH IT IS A LIGHT HAZARD AREA, IT IS WAS CALCULATED AND IS SPACED AS IF IT WERE ORDINARY HAZARD AND USED AS A CHECK CALCULATION.

# SPRINKLER DEFLECTOR LOCATIONS

CEILINGS ARE DEFINED AS SMOOTH FLAT CEILINGS HAVING NO IRREGULARITIES, SPRINKLER HEAD DEFLECTORS TO BE LOCATED AT THE CEILING AS PER THE MANUFACTURERS LITERATURE.

IN EXPOSED CONSTRUCTION WHERE BEAMS ARE SPACED GREATER THAN 7'-6" ON CENTER, SPRINKLER HEAD DEFLECTORS ARE TO BE LOCATED WITHIN EACH BEAM POCKET WITH THE DEFLECTORS BETWEEN 1"-12" BELOW TOP OF STEEL.

IN EXPOSED CONSTRUCTION WHERE BEAMS ARE SPACED LESS THAN 7'-6" ON CENTER, SPRINKLER HEAD DEFLECTORS ARE PERMITTED TO BE LOCATED BETWEEN 1"-6" BELOW BEAM FLANGE WITH AN OVERALL OF 22" MAX BELOW TOP OF DECK.

## OTHER NOTES

ALL DUCT AND SIMILAR OBSTRUCTIONS 48" AND LARGER IN EXPOSED CONSTRUCTION SHALL HAVE PROTECTION

BENEATH, ALL UPRIGHT HEADS SHALL BE EQUIPPED WITH WIRE CAGE HEAD GUARDS.

# PIPE MATERIALS

### NO SPRINKLER PIPING TO BE PAINTED BY THIS CONTRACTOR

ALL PIPE FOR WET SYSTEMS TO BE BLACK STEEL WITH DUCTILE IRON GROOVED FITTINGS OR CAST IRON THREADED FITTINGS WITH JOINTS AS PER NFPA-13, 2013 EDITION AND AS PER THE FOLLOWING:

-1" Sch 40 RIGID PIPE FOR ARMOVER PIPING AS NEEDED -FLEXIBLE SPRINKLER CONNECTION BETWEEN RIGID PIPING AND THE SPRINKLER HEAD

-Sch 40 PIPE FOR SPRINKLER BRANCHLINE PIPING -Sch 10 PIPE FOR BULK FEED AND SPRINKLER CROSSMAIN PIPING

\*\*\*REFER TO PLANS FOR EXACT SIZES\*\*\*

### SMALL ROOM RULE

SMALL ROOM DEFINITION AS PER NFPA-13, 2013 EDITION: A ROOM OF LIGHT HAZARD OCCUPANCY CLASSIFICATION HAVING UNOBSTRUCTED CONSTRUCTION AND FLOOR AREAS NOT EXCEEDING 800 SQ.FT. THAT ARE ENCLOSED BY WALLS AND A CEILING. OPENINGS TO THE ADJOINING SPACE ARE PERMITTED IF THE MINIMUM LINTEL DEPTH IS 8" FROM THE CEILING.

PER NFPA-13, 2013 EDITION 8.6.3.2.4.1 SPRINKLERS ARE ALLOWED TO BE SPACED NOT MORE THAN 9'-0" OFF ANY SINGLE WALL AS LONG AS SPRINKLER SPACING AND AREA LIMITATIONS ARE NOT EXCEEDED.

# SPRINKLER DESIGN DATA

Project Name: HARNE	TT COUNTY GSC	5	System: WET				
Project Street Address:	455 MCKINNY PK\		Sys. Sq. Ft.: 61900				
Suite: -		Floor#: 2	Ceiling Height:				
Designed By: Allied Fire	e Protection Inc.	Phone: 919	-772-9200	T	otal Bldg. Hgt.: Varies		
Occupancy: OFFICE		Hazard: LIGHT		•			
			Design Summar	у			
	System #1	System #2		-			
Design Method	Calculated	Calculated					
Design Area #	1	2					
Location	CLERESTORY	ADULT LEARNING					
Type of System	WET	WET					
Hazard Class	LIGHT	OH1					
Criteria From	NFPA 13	NFPA 13					
Design Area	1859 SF	1050 SF					
Sprinkler Spacing	168 S.F.	130 S.F.					
Density	0.10 GPM	0.15 GPM					
K-factor	5.6	5.6					
Hose Allowance	100 GPM	250 GPM					
# Design Sprinklers	15	11					
Special App. Spk.	N/A	N/A					
Requirement @	TEST NODE	TEST NODE					
G.P.M. Req'd	363.723	494.760					
P.S.I. Req'd	58.833	51.871					
Safety Factor @	TEST	TEST					
Safety Factor (psi)	15.42	19.52					
Dry Sys. Vol. (gal)	N/A	N/A	N/A	N/A	N/A	N/A	

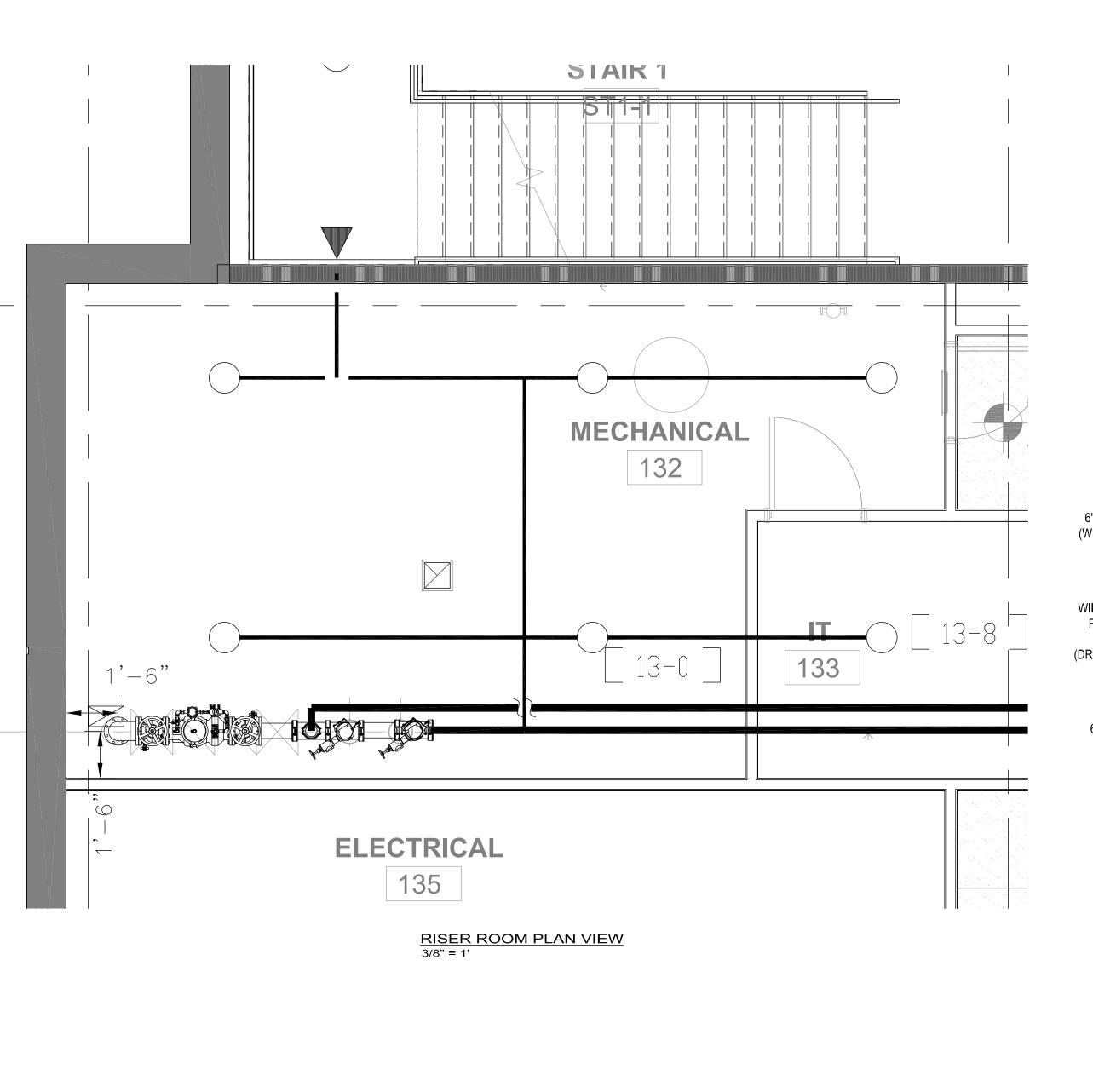
		Water Supply	Information		
Tested by	DEWBERRY	Date/Time	8/7/2019	Pressure Hydrant	SHOWN BELOW
Hydrant Elevation		Flow Hydrant # 1	SHOWN BELOW	Flow Hydrant #2	
Static (PSI)	78	Residiual (PSI)	58	Flow (gpm)	900
		Water test da	ta required		
		Fire Pump	Data N/A		
Rated G.P.M.		Rated Pressure		Horsepower	
Diesel/Electric		Churn Pressure		Style of pump	
Combined Discharge		150% Flow (suction)		150% Flow (gpm)	

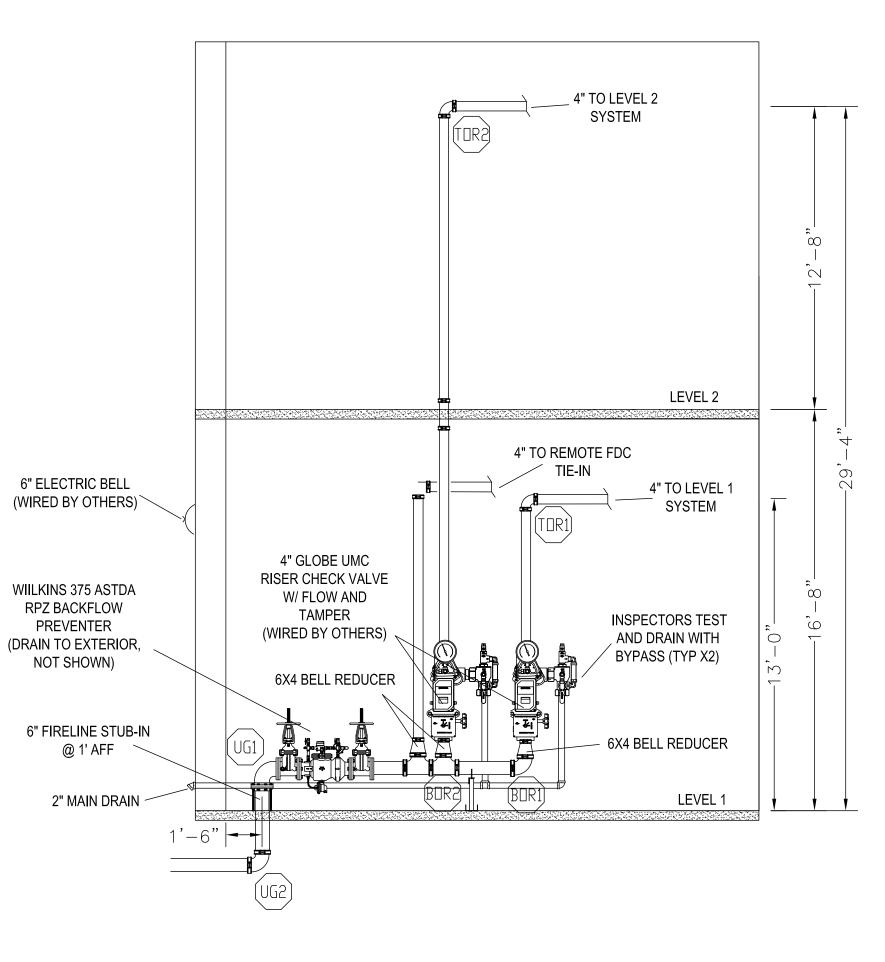
Comedity D	escription				Si	orage Type (Rad	ck,Bin,Pile)			
Comodity Cl	ass	<u>'</u>	S	torage Height			Clearar	nce		
Stable/Unsta	able			pen/Close Array	y		Wet/Dr	y System		
Figure #	Curve #	-	Density Area	Height Factor	Clear Factor	Array	Dry Penalty	Design	Minimum Design	Final Design
WL 1054		Initial		NO STOR	RAGE O	VER 12'-0"				
	empliant with C	Secondary Chapter 23 (FPC	<u> </u>		le etorage	e area layout, rad	ck, and nile plan	included?		

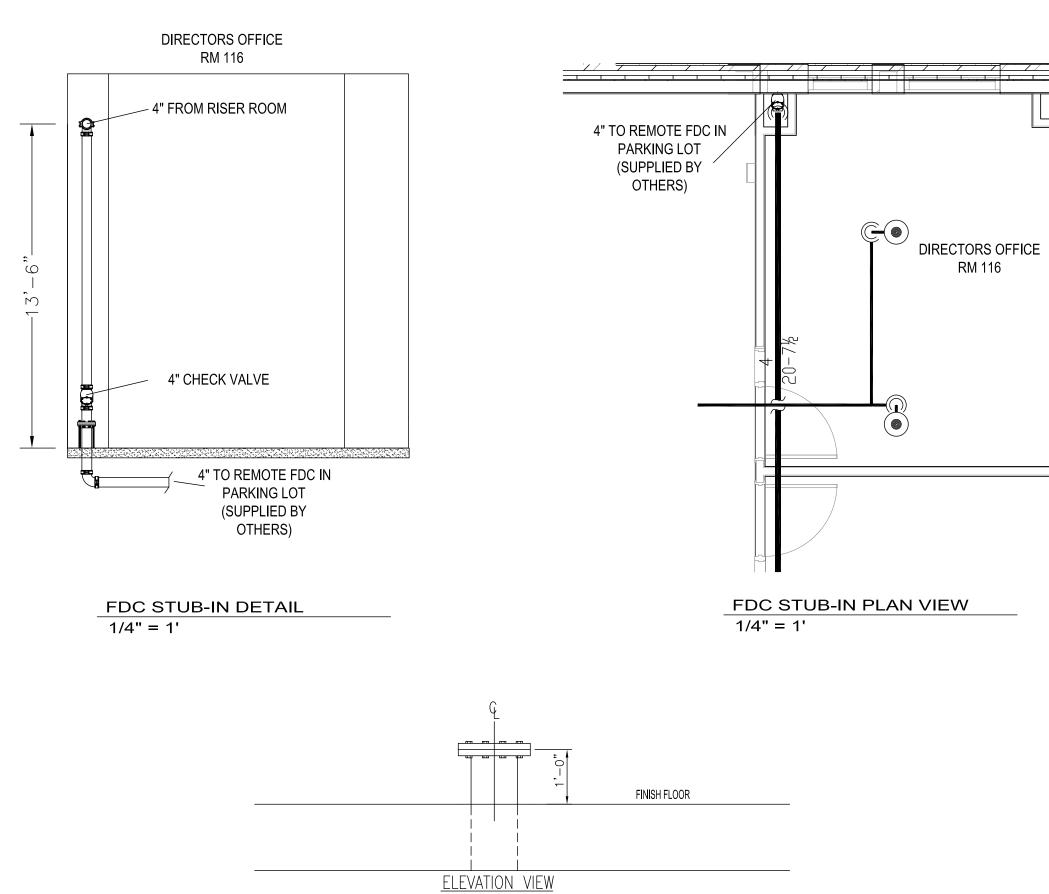
Reviewed For Code Compliance By: D. Banks Wallace **Chief Deputy Fire Marshal** 10/30/2019 10:09:50 AM

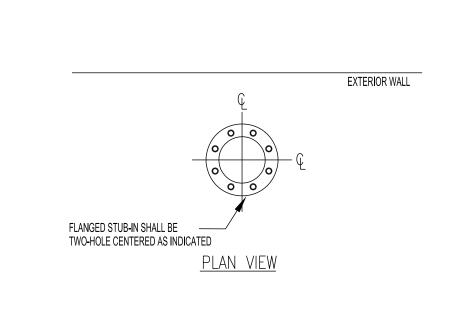


1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | ORIF. 1/2 1/2 1/2 1/2 1/2 5.6 5.6 5.6 5.6 5.6 5.6 5.6 5.6 5.6 EMF 155° 155° 155° 155° 

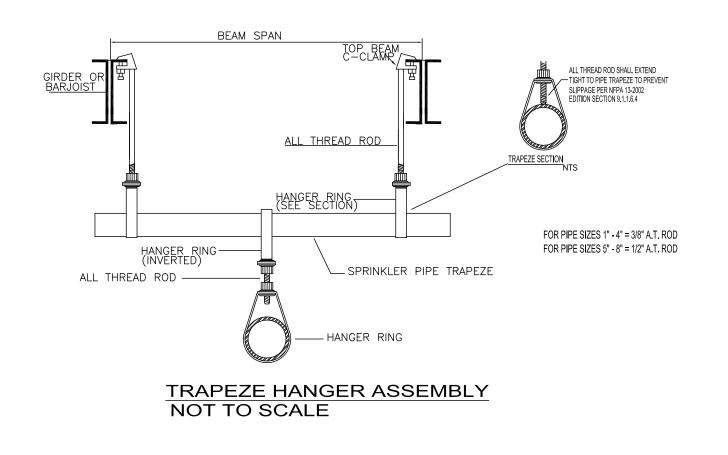


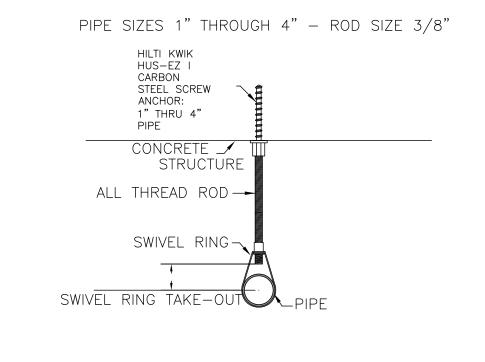




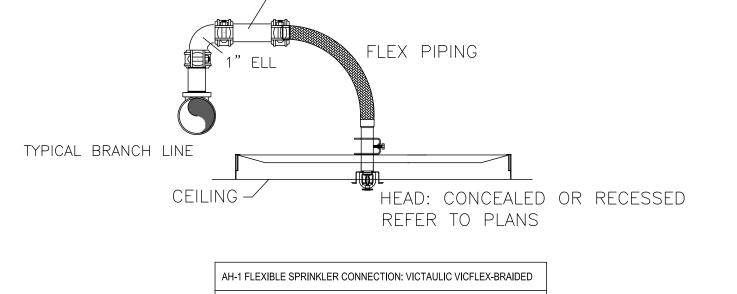


FIRE SUPPLY 6" STUB-IN DETAIL NOT TO SCALE





HILTI CONCRETE SCREW
NOT TO SCALE



TOTAL EQUIVALENT LENGTH ALLOWED (PER HYD. CALC.) 70 FEET

36" FLEXIBLE CONNECTION WITH 5.6K HEAD (UP TO 2 BENDS) 43 FEET 48" FLEXIBLE CONNECTION WITH 5.6K HEAD (UP TO 2 BENDS) 57 FEET

FLEXIBLE SPRINKLER DETAIL

PIPING WEIGHTS FOR DETERMINING HORIZONTAL LOAD

Weight of Water-Filled Pipe

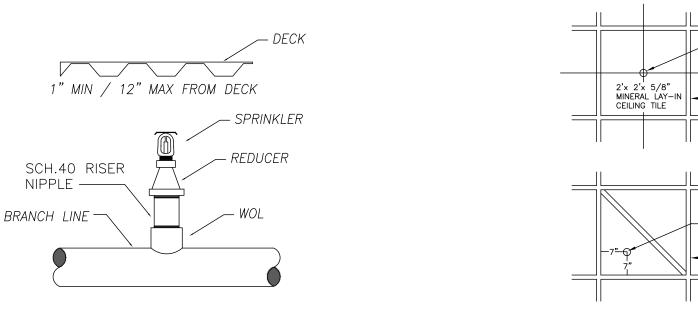
36" FLEXIBLE CONNECTION WITH 8.0K HEAD (UP TO 2 BENDS) NA 48" FLEXIBLE CONNECTION WITH 8.0K HEAD (UP TO 2 BENDS) NA

STANDARD 1" 90 deg. ELBOW STANDARD 1" STRAIGHT TEE 1'-0" OF 1" SCH, 40 PIPE

NOT TO SCALE

RISER DETAIL

1" NIPPLE



NOT TO SCALE

SPRINKLER	
SCH.40 RISER REDUCER NIPPLE WOL	SPRINKLER HEAD LOCATION  T''  EXPOSED "T" GRID
TYPICAL UPRIGHT	CENTER OF TILE DETAIL FOR 2X2 TILES & D

NOT TO SCALE

NICET
// CERTIFIED
ALEX CHERRY Jr C.E.T.
LEVEL III CERTIFICATION #109758
WATER-BASED SYSTEMS LAYOUT

ORIF. 1/2 1/2 1/2 1/2 1/2

ACT( 5.6 5.6 5.6 5.6 5.6 5.6

155° 155° 155° 155° 155° 155°

S - 0 8 4 0 0

IRAF	PEZE I	NOTA	LLAI	ION R	EQUI	REIVIE	11110			
SPAN OF TRAPEZE	NOMINAL PIPE SIZE SUPPORTED									
(Schedule 10)	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"		
1'-6"	1"	1"	1"	1"	1"	1"	1 1/4"	1 1/4		
2'-0"	1"	1"	1"	1 1/4"	1 1/4"	11/4"	1 1/4"	1 1/2		
2'-6"	1 1/4"	1 1/4"	11/4"	1 1/4"	1 1/4"	11/4"	1 1/2"	2"		
3'-0"	1 1/4"	1 1/4"	11/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	2"		
4'-0"	1 1/2"	1 1/2"	11/2"	1 1/2"	2"	2"	2"	2 1/2		
5'-0"	2"	2"	2"	2"	2"	2"	2 1/2"	2 1/2		
6'-0"	2"	2"	2"	2"	2"	2 1/2"	2 1/2"	3"		
7'-0"	2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	3"		
8'-0"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	3"		
9'-0"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	3"	4"		
10'-0"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	3"	3"	4"		

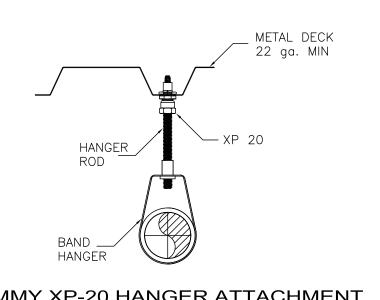
10'-0"	2 1/2"	2 1/	2"	2 1/2"	2 1/2"	2 1/2"	3"		3"	4"
HANGER INSTALLATION REQUIREMENTS										
MAXIMUM DISTANCE BETWEEN HANGERS										
NOMINAL PIPE SIZE		3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"
BLAZEMASTER CPVC	;	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"	10'-0"	n/a	n/a
THREADED LIGHTWA	LL	n/a	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	n/a	n/a
STEEL PIPE (SCH 10/S	SCH 40)	n/a	12'-0"	12'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"

100 PSI STATIC PRESSURE ON SYSTEM REQUIRES UP-LIFT RESTRAINT WITHIN 12 INCHES HORIZONTALLY OF HEAD FOR ARM-OVERS AND END OF BRANCHLINE.

THE UNSUPPORTED LENGTH BETWEEN THE END SPRINKLER AND THE LAST HANGER ON THE LINE SHALL NOT EXCEED 36" FOR 1" PIPE, 48" FOR 1-1/4" PIPE, AND 60" FOR 1-1/2" PIPE OR LARGER.

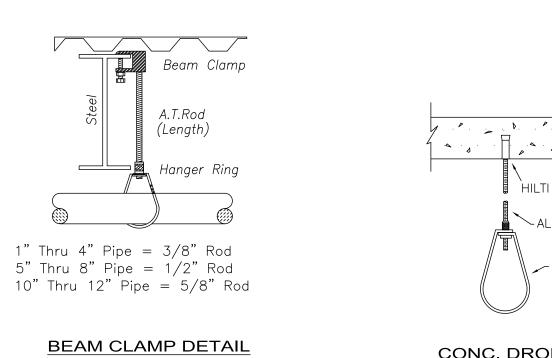
THE CUMULATIVE HORIZONTAL LENGTH OF AN UNSUPPORTED ARMOVER TO A SPRINKLER, SPRINKLER DROP, OR SPRIG-UP SHALL NOT EXCEED 24"

PIPE HANGERS SHALL BE INSTALLED AS REQUIRED BY NFPA FOR SUPPORTING SPRINKLER PIPING. NO OTHER PIPING AND/ OR DEVICES ARE TO BE ATTACHED TO THE SPRINKLER PIPE HANGER SYSTEM UNLESS THE HANGER HAS BEEN SPECIFICALLY DESIGNED FOR THE ADDITIONAL LOADING. THE CONTRACT DOES NOT INCLUDE ANY MATERIAL OR DEVICE TO IMPROVE THE STRUCTURAL STRENGTH OF THE BUILDING TO ENABLE IT TO CARRY THE LOAD OF THE FIRE PROTECTION SYSTEM.



NOT TO SCALE

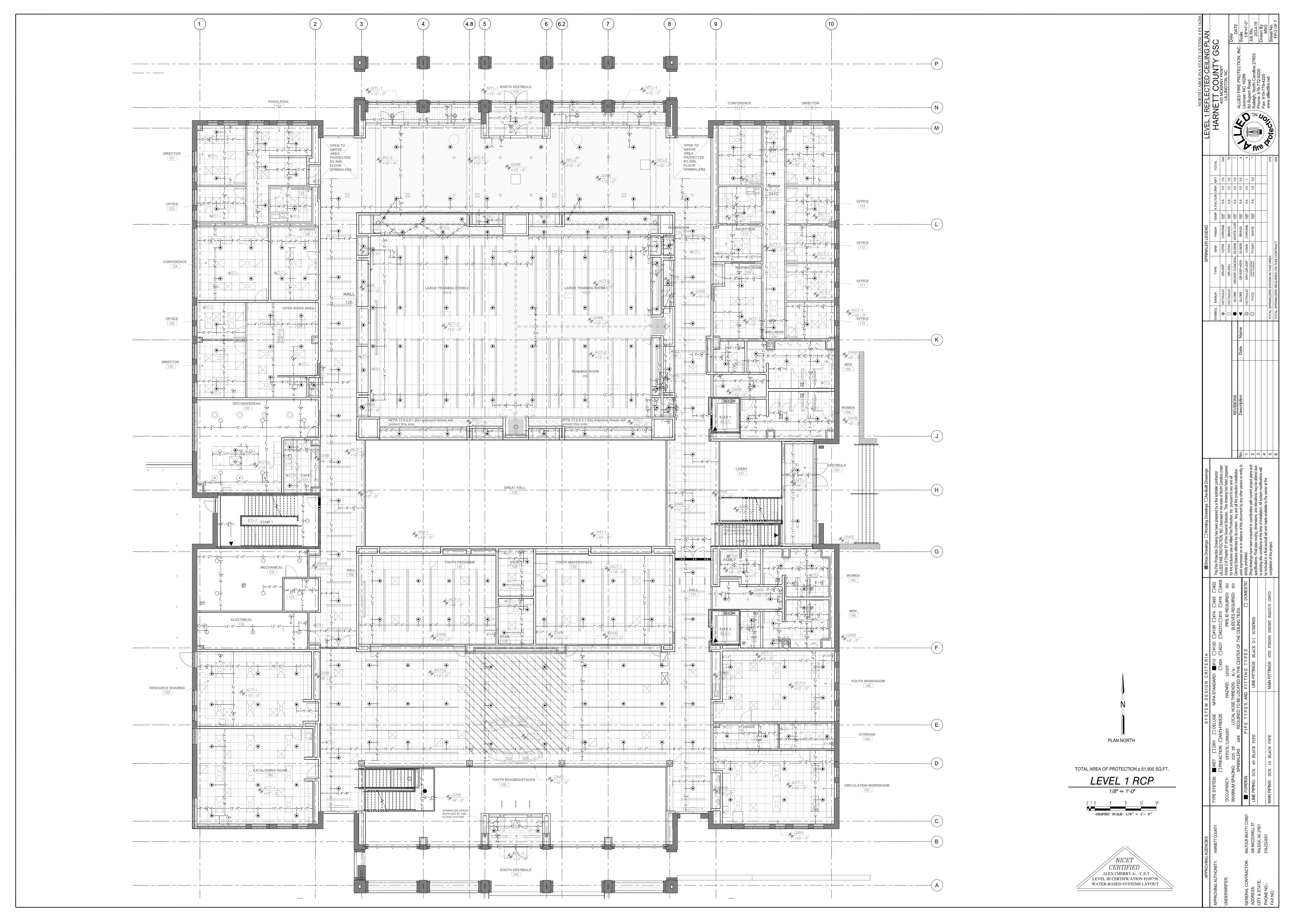


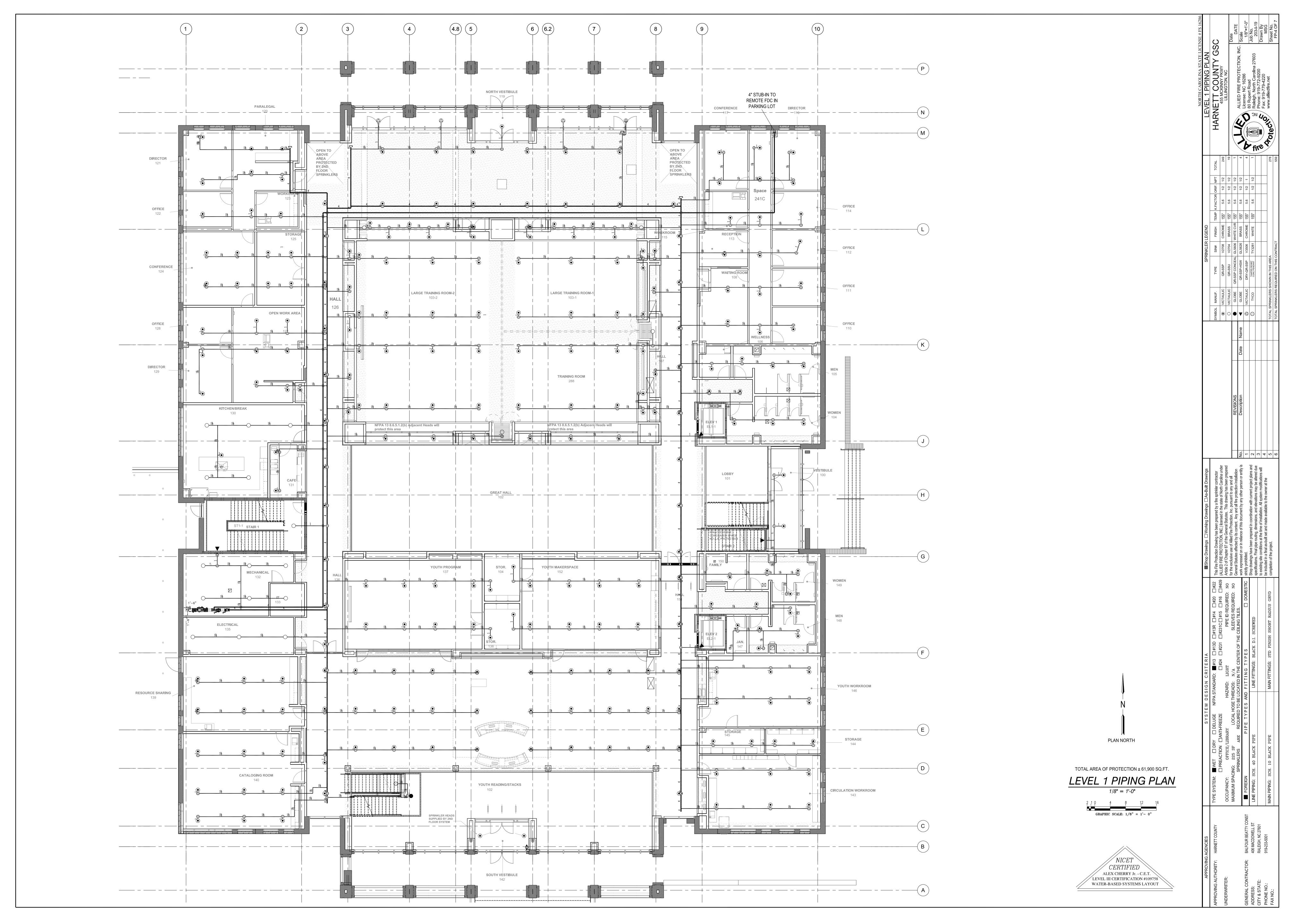


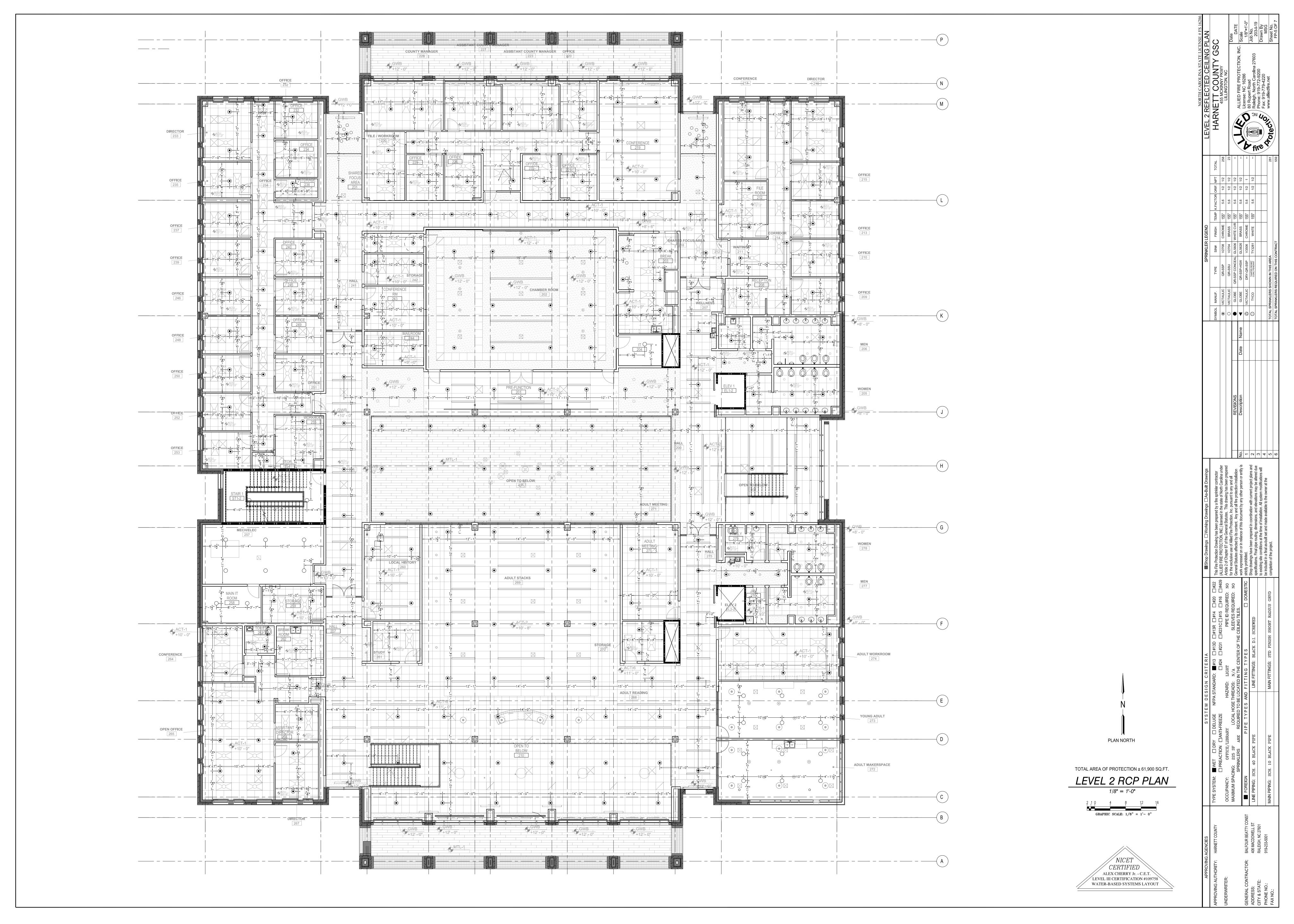
	<u>in.</u>	mm	lb/ft	kg/m_	
	1 1 1 1 1 2 2 1 2 3 3 1 2 4 5 6 8	25 32 40 50 65 80 90 100 125 150	2.05 2.93 3.61 5.13 7.89 10.82 13.48 16.40 23.47 31.69	3.05 4.36 5.37 7.63 11.74 16.10 20.06 24.41 34.93 47.16	
y		200	47.70	70,99	
	Schedule	10 Pipe			
HILTI CONCRETE ANCHOR	1	25 32	1.81 2.52	2.69 3.75	
ALL THREAD ROD	1 ½" 1 ½" 2	40 50	3.04 4.22	4.52 6.28	
PIPE RING	2 ½" 3	65 80	5,89 7,94	8.77 11.82	
	3 ½″ 4 5	90 100 125	9.78 11.78 17.30	14.55 17.53 25.75	
CONC. DROP-IN NOT TO SCALE	6 8 ————	150 200	23.03 40.08	34.27 59.65	
	l				

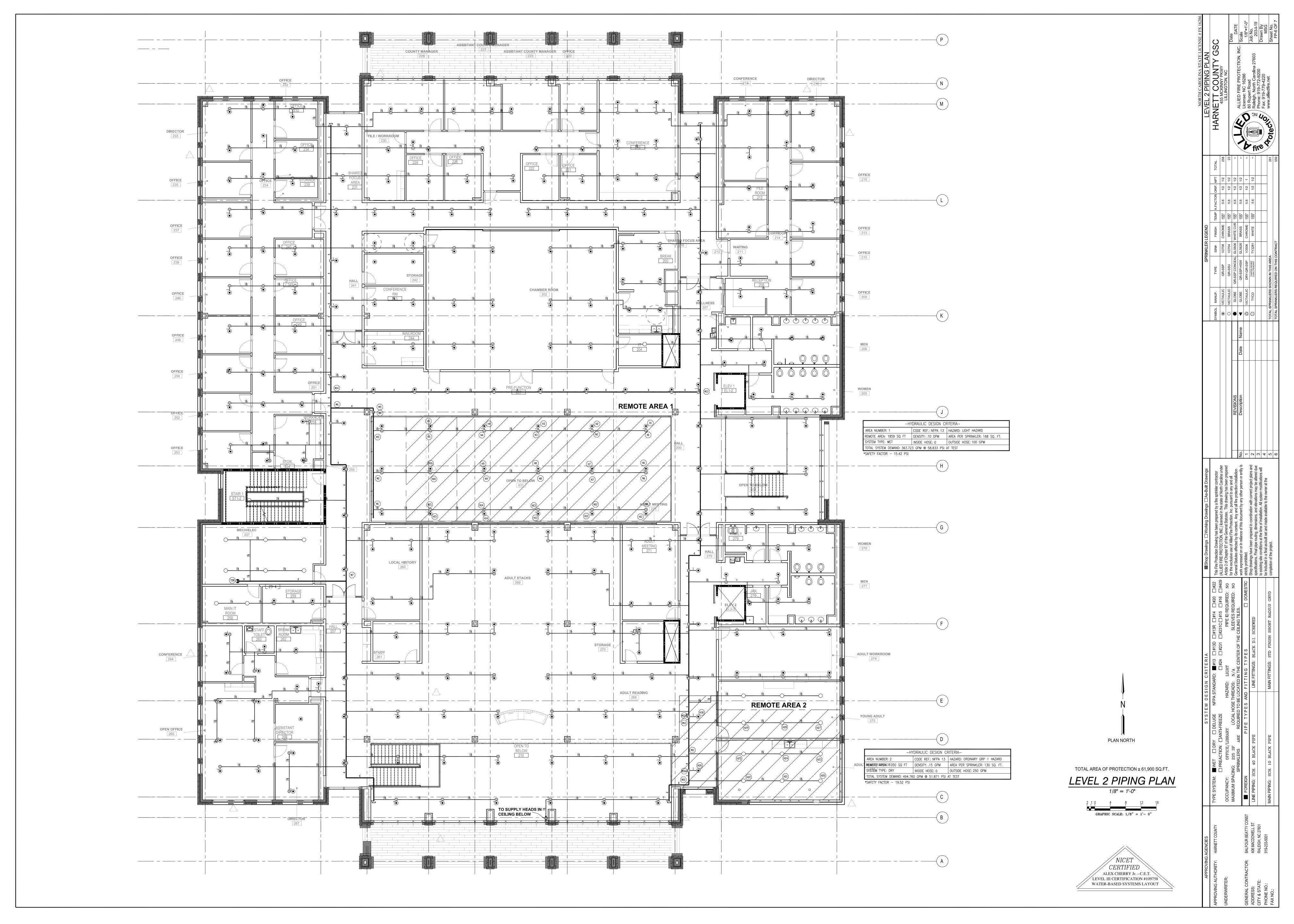
US US	System No. C-AJ-	System No. C-AJ-1149		System No. W-L	-1054	System No. W-L-1054
Classified by	ANSI/UL1479 (ASTM E814)	CAN/ULC S115	c Us	ANSI/UL1479 (ASTM E814)	CAN/ULC S115	
	F Rating — 2 Hr	F Rating —2 Hr	Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115	F Ratings —1 and 2 Hr (See Items 1 and 3)	F Ratings — 1 and 2 Hr (See Items 1 and 3)	
	T Rating — 0 Hr	FT Rating — 0 Hr		T Rating — 0 Hr	FT Rating — 0 Hr	1. Wall Assembly — The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified
	L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 2 Hr		L Define at Application Lange Thorond OF Man R	FILE Comment of the C	in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
	L Rating At 400 F — 4 CFM/sq ft	FTH Rating — 0 Hr		L Rating at Ambient — Less Than 1 CFM/sq ft	FH Ratings —1 and 2 Hr (See Items 1 and 3)	A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in.  OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC. When steel studs are used and the diam of opening exceeds the width of
	W Rating — Class 1 (See Item 4)	L Rating At Ambient — Less Than 1 CFM/sq ft		L Rating at 400 F — Less Than 1 CFM/sq ft	FTH Rating — 0 Hr	stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the
	2	L Rating At 400 F — 4 CFM/sq ft			FTH Rating — 0 Hr	steel studs at each end. The framed opening in the wall shall be 4 to 6 in. wider and 4 to 6 in. higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. clearance is present between the penetrating item and the framing on all four sides.
	A 4	(4)			L Rating at Ambient — Less Than 1 CFM/sq ft L Rating at 400 F — Less Than 1 CFM/sq ft	B. Gypsum Board* — 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 32-1/4 in, for steel stud walls. Max diam of opening is 14-1/2 in. for wood stud walls.  The F Rating of the firestop system is equal to the fire rating of the wall assembly.  2. Through-Penetrants — One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The
Wall Assembly	W—Min 4-1/2 in thick reinforced lightweight or normal weigh	SECTION A-A aht (100-150 pcf) concrete. Wall may also be constructed of any		A (3)	(1A)	types and sizes of metallic pipes, conduits or tubing may be used:  A. Steel Pipe — Nom 30 in diam (or smaller) Schedule 10 (or heavier) steel pipe.  B. Iron Pipe — Nom 30 in. diam (or smaller) cast or ductile iron pipe.  C. Conduit — Nom 4 in diam (or smaller) steel electrical metallic tubing or 6 in. diam steel conduit.  D. Copper Tubing — Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.  E. Copper Pipe — Nom 6 in. diam (or smaller) regular (or heavier) copper pipe.  3. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point or continuous contact locations between pipe and wall, a min 1/2 in. diam bead of fill material shall be applied at the pipe wall interface on both surfaces of wall.  HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant  *Bearing the UL Classification Mark
ified Concrete te Blocks (C/ Penetrants — d on both side c pipes, condi I Pipe — Nom Pipe — Nom Pipe — Nom Attential — M Material — M thickness of n material to be or Cavity Ma of wall. At the pipe interface 601S or CP6	Blocks *. Max diam of opening is 12 in.  AZT) category in the Fire Resistance Directory for names of - One metallic pipe, conduit or tubing to be installed within the sof offloor or wall assembly. The annular space shall be 0 in. uits or tubing may be used:  n 10 in. diam (or smaller) Schedule 10 (or heavier) steel pipe 10 in. diam (or smaller) steel electrical metallic tubing or steel or in. diam (or smaller) steel electrical metallic tubing or steel or Nom 4 in. diam (or smaller) Type L (or heavier) copper tubir om 4 in. diam (or smaller) Regular (or heavier) copper pipe. in 3 in. thickness of min 4 pcf mineral wool batt insulation for nin 4 pcf mineral wool batt insulation for nin 4 pcf mineral wool batt insulation for recessed from top surface of floor or from both surfaces of terial* — Sealant — Min 1/2 in. thickness of fill material app point of contact location between pipe and concrete, a min	manufacturers. the firestop system. Pipe, conduit or tubing to be rigidly . (point contact) to max 1-1/4 in. The following types and sizes e. conduit. ng. or nom 4 in. diam (and smaller) pipes, conduits or tubings and a om 4 in. diam, firmly packed into opening as a permanent form. wall as required to accommodate the required thickness of fill obied within the annulus, flush with the top surface of floor or both 1/2 in. diam bead of fill material shall be applied at the Rating applies only when CFS-S SIL GG, CFS-S SIL SL (floors		2 2	SECTION A-A	
ie UL Classific	Sealant	5 5 512 55, Of 55 512 52 (16013 01119), OF 000 01 1 550NE				
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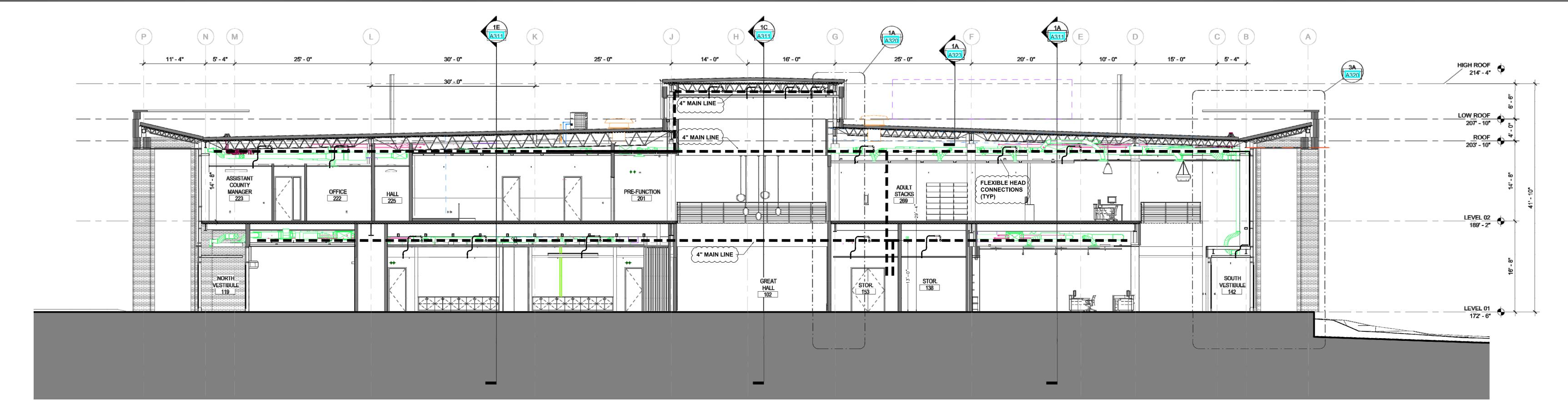
CENTER OF TILE DETAIL FOR 2X2 TILES & DIAGONAL TILES





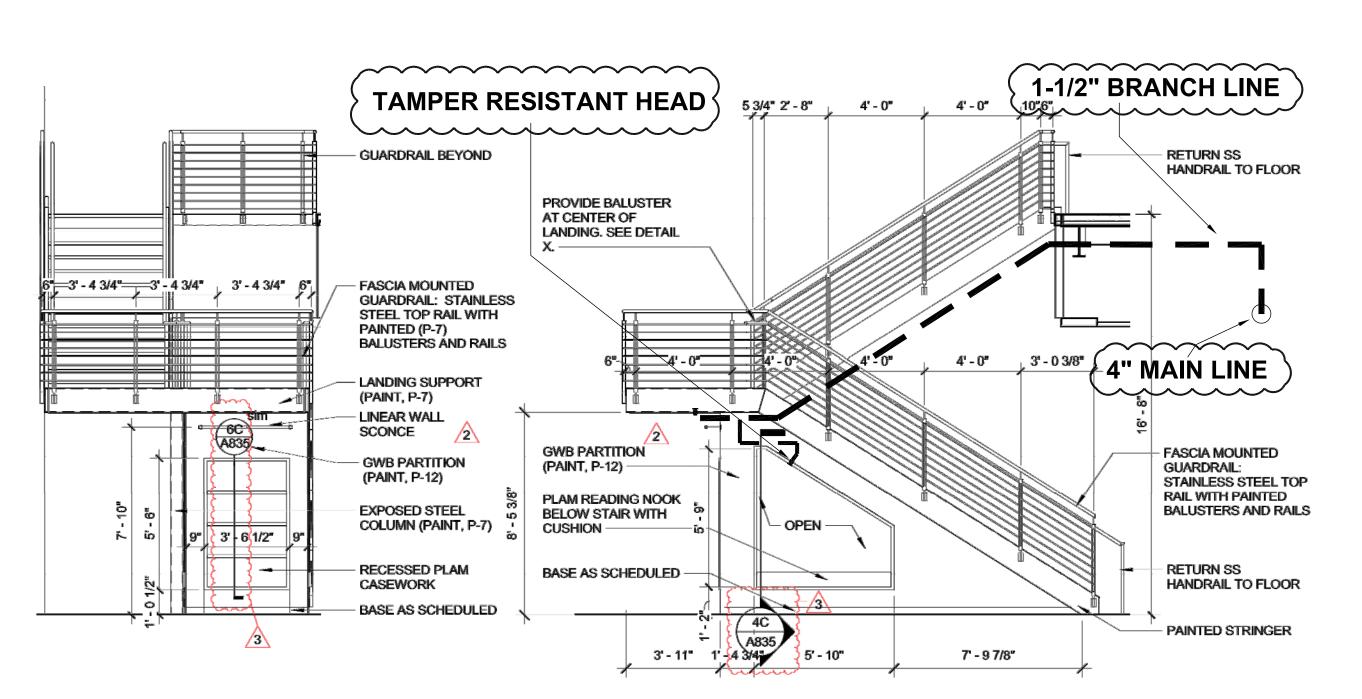






# PLAN EAST ELEVATION 1/8" = 1'-0"

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



LOBBY STAIR DETAIL

1/4" = 1'-0"

1 1 γ γ γ γ γ γ

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

PLAN NORTH

NICET
CERTIFIED
ALEX CHERRY Jr. - C.E.T.
LEVEL III CERTIFICATION #109758
WATER-BASED SYSTEMS LAYOUT

HARNETT COU

258

23

LILLINGTON, P

455 MCKINNY PI

455 MCKINNY PI

456 MCKINNY PI

ALLIED FIRE PRO
License: NC 16286
80 Rupert Road
80 Rupert Road
Phone: 919-772-92
Phone: 919-779-4220

 SPRINKLER LEGEND

 SYMBOL
 MANUF.
 TYPE
 SIN#
 FINISH
 TEMP
 K.FACTOR ORIF.

 O
 VICTAULIC
 QR-SSP
 V2708
 CHROME
 155°
 5.6
 1/2

 Name
 I
 GLOBE
 QR-SSP CONCEAL
 GL5606
 WHITE CVR
 155°
 5.6
 1/2

 Name
 I
 GLOBE
 QR-SSP-HSW
 GL5626
 BRASS
 155°
 5.6
 1/2

 I
 I
 IVCO
 TWORPERESST
 V3206
 CHROME
 155°
 5.6
 1/2

 I
 I
 IVCO
 TWORPERESST
 TY3281
 WHITE
 155°
 5.6
 1/2

 I
 I
 I
 I
 I
 I
 I
 I

NTY

TYPE SYSTEM: ■ WET □ DRY □ DELUGE NFF

□ PREACTION □ ANTI-FREEZE

OCCUPANCY: OFFICE/LIBRARY

MAXIMUM SPACING: 225 SF LOCAL HOSE I

SPRINKLERS ARE REQUIRED TO BI

TYCONST FOREIGN PIPE TYPES A

LINE PIPING: SCH. 40 BLACK PIPE

RAL CONTRACTOR: BALFOUR BEATTY CONST
406 MACDOWELL ST
LINE
8 STATE: RALEIGH, NC 27601
IE NO.: 919-233-5001