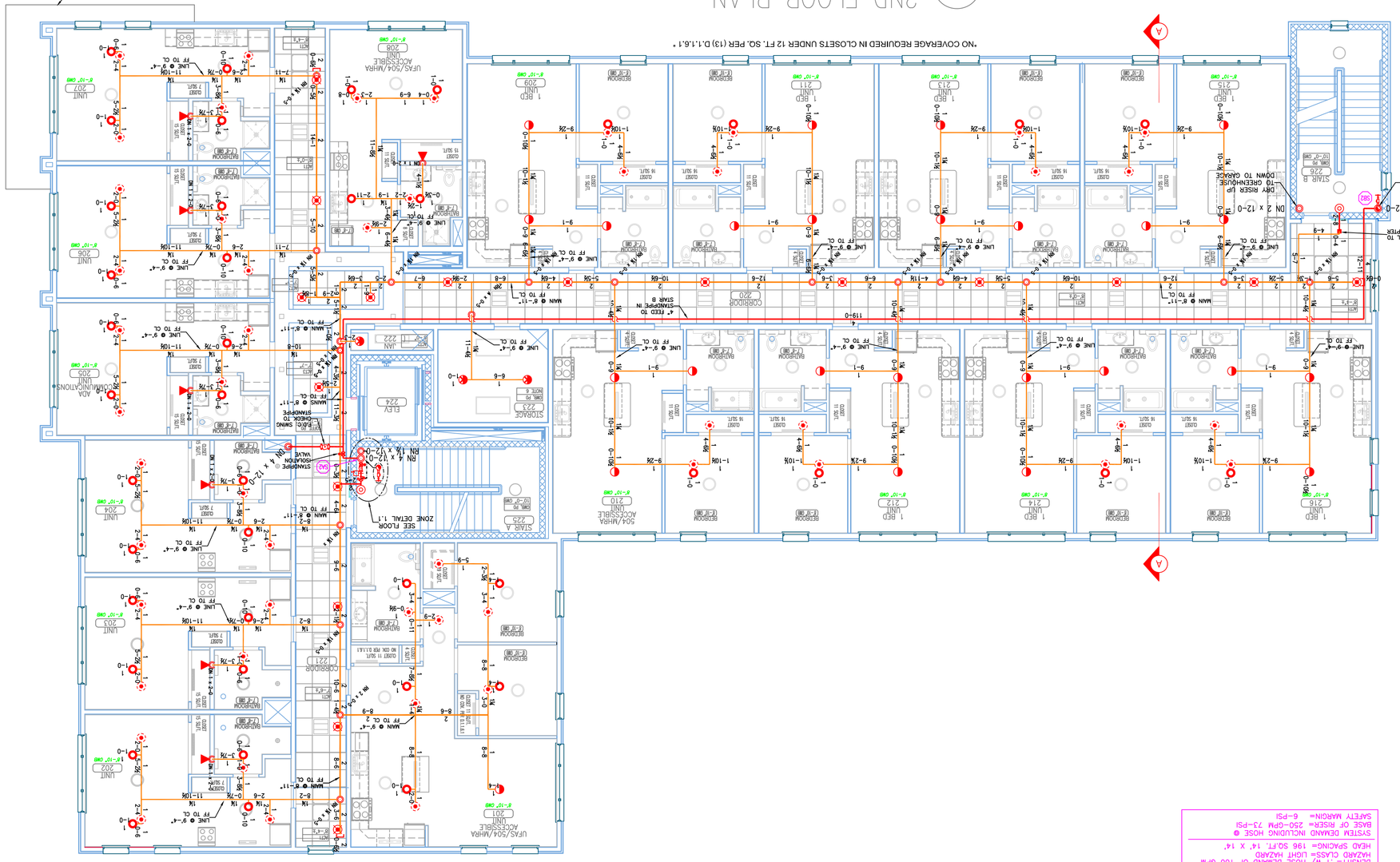
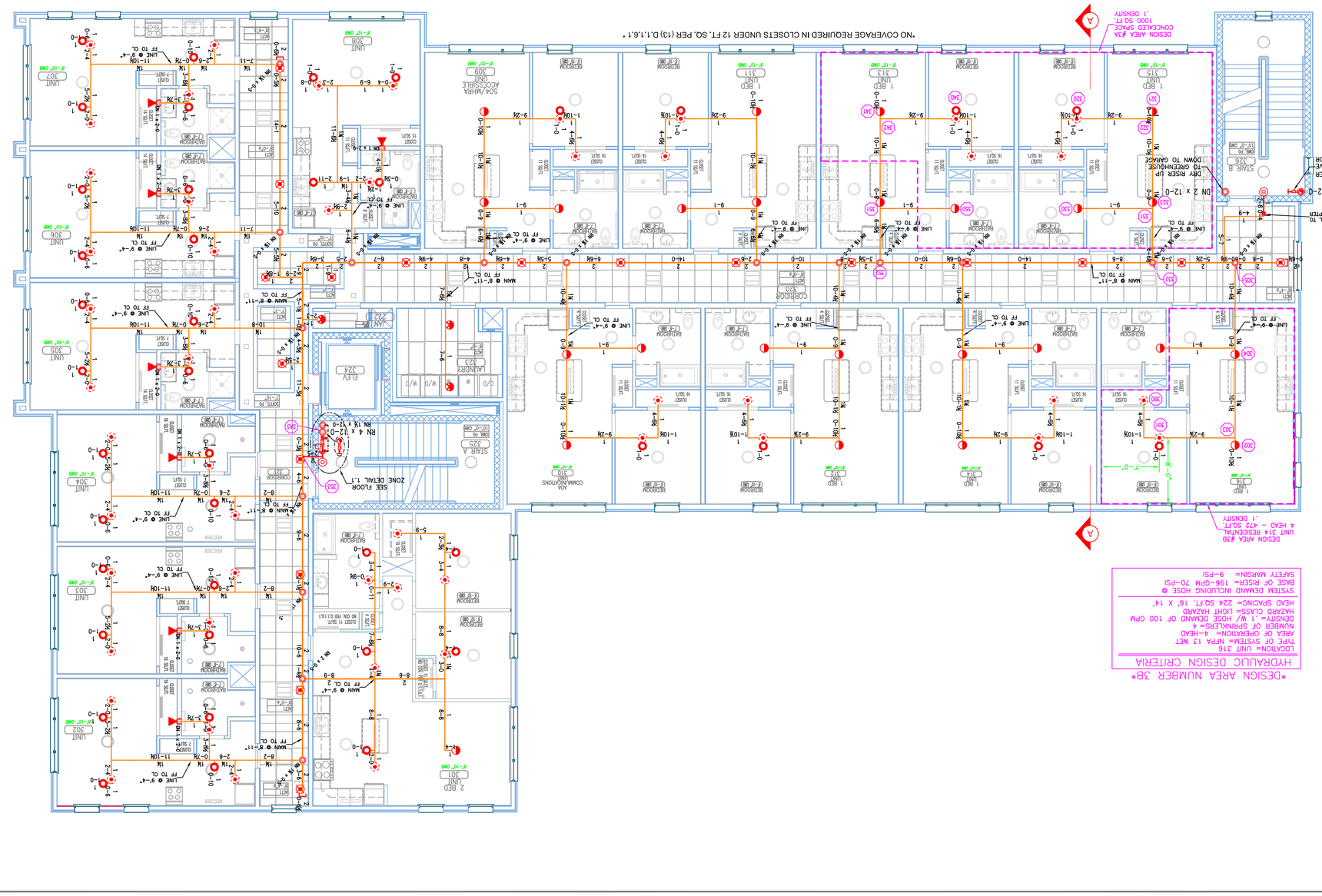
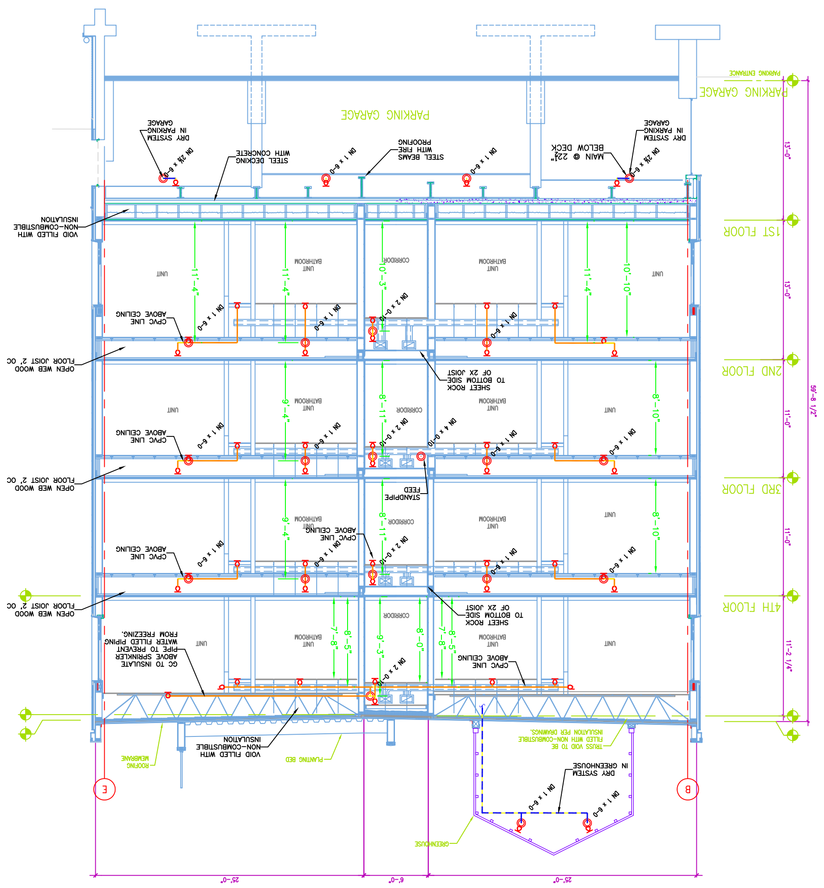


2 2ND FLOOR PLAN
TOTAL PROTECTED AREA 10,600 SQ.FT.
SCALE 1/8" = 1'-0"



3 3RD FLOOR PLAN
TOTAL PROTECTED AREA 10,600 SQ.FT.
SCALE 1/8" = 1'-0"



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

TYPICAL IN CORRIDORS WITH ACT CEILINGS

TYPICAL IN UNITS WITH GWB CEILINGS

CPVC CURING TIMES

FOR TFP-400, TFP-500 VICTAULIC #899 & SPEARS FS-5			
CURE TIMES WITH ONE STEP SOLVENT CEMENT			
	AMBIENT TEMPERATURE DURING CURE PERIOD 200 PSI (MAXIMUM) TEST PRESSURE		
PIPE SIZE	60ºF TO 120ºF	40ºF TO 59ºF	0ºF TO 39ºF
(INCHES)			
3/4"	45 MIN.	1.5 HR.	24 HR.
1"	45 MIN.	1.5 HR.	24 HR.
1-1/4"	1.5 HR.	16 HR.	120 HR.
1-1/2"	1.5 HR.	16 HR.	120 HR.
2"	6 HR.	36 HR.	SEE NOTE 1
2-1/2"	8 HR.	72 HR.	SEE NOTE 1
3"	8 HR.	72 HR.	SEE NOTE 1

NOTE 1:FOR THESE SIZES, THE SOLVENT CEMENT CAN BE APPLIED AT TEMPERATURES AS LOW AS 32ºF. HOWEVER, THE SPRINKLER SYSTEM TEMPERATURE MUST BE RAISED TO A TEMPERATURE OF 32ºF OR ABOVE AND ALLOWED TO CURE PER THE ABOVE RECOMMENDATIONS PRIOR TO PRESSURE TESTING.

CPVC HANGING NOTES

CPVC MAXIMUM SUPPORT SPACING (FT.), NOMINAL PIPE SIZE								
PIPE SIZE	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	
HANGER SPACING	5-1/2'	6'	6-1/2'	7'	8'	9'	10'	

NOTES FOR NFPA 13 2010ed. SYSTEM

SPRINKLERS SHALL BE INSTALLED IN ALL AREAS.

(13) 3.3.17 SMALL ROOMS
A ROOM OF LIGHT HAZARD OCCUPANCY CLASSIFICATION HAVING UNOBSTRUCTED CONSTRUCTION WITH FLOOR AREAS NOT EXCEEDING 800 SQ FT THAT ARE ENCLOSED BY WALLS AND A CEILING ARE PERMITTED TO HAVE A HEAD SPACED 8' OFF ONE WALL

(13) 8.15.5.3. ELECTRICAL EQUIPMENT ROOM OMISSION
SPRINKLERS SHALL NOT BE REQUIRED IN ELECTRICAL EQUIPMENT ROOMS WHERE ALL OF THE FOLLOWING CONDITIONS ARE MET:
(1) THE ROOM IS DEDICATED TO ELECTRICAL EQUIPMENT ONLY.
(2) ONLY DRY-TYPE ELECTRICAL EQUIPMENT IS USED.
(3) EQUIPMENT IS INSTALLED IN A 2-HOUR FIRE RATED ENCLOSURE INCLUDING PROTECTION FOR PENETRATIONS.
(4) NO COMB. STORAGE IS PERMITTED TO BE STORED IN THE ROOM.

(13) 8.15.5 ELEVATOR HOIST WAYS
SIDEWALL SPRAY SPRINKLERS SHALL BE INSTALLED AT THE BOTTOM OF EACH ELEVATOR HOIST WAY NOT MORE THAN 18" ABOVE THE FLOOR PIT.

(13) D.1.1.6.1 IN NEW APARTMENT BUILDINGS SPRINKLERS SHALL NOT BE REQUIRED IN CLOSETS AND CONVERTIBLE SPACE THAT CONTAIN EQUIPMENT SUCH AS WASHER AND DRYERS, FURNACES, OR WATER HEATERS SHALL BE SPRINKLED LAUNDER HOUSING MECHANICAL EQUIPMENT, THAT ARE NOT CLOSETS HOUSING SUCH EQUIPMENT, AND CONVERTIBLE SPACE SHALL BE SPRINKLED IF THEY ARE NOT HABITABLE CEILING SPACE SHALL BE SUPPORT WITHOUT REGARD TO OBSTRUCTIONS OR MINIMUM DISTANCE TO THE WALL.

DEFLECTORS 1" TO 12" BELOW NON-COMBUSTIBLE CEILINGS

ON THE LINE — RELIABLE MODEL #FRR56 (4.7/200°, K=5.6)

ON A SPRIG — RELIABLE MODEL #FRR56 & #FR-CCS (5.6/155.200°, K=5.6)

1/2" COMMERCIAL WHITE SEMI-RECESSED PENDENT & BRASS CCS UPRIGHT 14' X 14' MAX SPACING BELOW COMBUSTIBLE JOIST UPR. DEFLECTORS 1 1/2" TO 4"

1/2" BRASS UPRIGHT ON THE LINE OR SPRIG 14' X 14' MAX SPACING BELOW COMBUSTIBLE JOIST UPR. DEFLECTORS 1 1/2" TO 4"

1/2" RESIDENTIAL WHITE CONCEALED PENDENT. 16' X 14' MAX SPACING

RELIABLE* MODEL #FRES8 58 CCP (82.2/212°, K=5.8)

1/2" RESIDENTIAL WHITE (102.1/155°, K=5.8)

RELIABLE* MODEL #FRES8 & KFR-CCS (82.2/212°, K=5.6)

1/2" CONCEALED SPACE UPRIGHT UPR. DEFLECTORS 1 1/2" TO 4" BELOW COMBUSTIBLE JOIST 14' X 14' MAX SPACING

RELIABLE* MODEL #FRES8 & KFR-CCS (34/155&200°, K=5.6)

1/2" RESIDENTIAL WHITE SEMI-REC. PENDENT & BRASS CCS UPRIGHT 14' X 14' MAX SPACING UPR. DEFLECTORS 1 1/2" TO 4" BELOW COMBUSTIBLE JOIST 14' X 14' MAX SPACING

RELIABLE* MODEL #FRES8 & KFR-CCS (30/155&200°, K=5.6)

1/2" RESIDENTIAL WHITE CONCEALED PENDENT & BRASS CCS UPRIGHT 14' X 14' MAX SPACING UPR. DEFLECTORS 1 1/2" TO 4" BELOW COMBUSTIBLE JOIST

RELIABLE* MODEL #FRES8 (14/155°, K=5.8)

1/2" RESIDENTIAL WHITE CONCEALED SPACE SIDEWALL SEMI RECESSED ESC. DEFLECTORS 4" TO 6" BELOW CWB 14' X 14' MAX SPACING *OR APPROVED EQUAL*

TOTAL HEADS ON THIS SHEET: 274

SCALE: 1/8"=1'-0" (2 1 0 4 8)

REVISIONS:		
NO.	DATE:	DESCRIPTION:

DATE: FEBRUARY 20, 2014
DESIGNER: ED POULIN (RMS# 515)
NICET LEVEL IV CERT # 108534
CHECKED BY: J. FOSS

LOCATION:
409 CUMBERLAND AVE.
PORTLAND, ME

DRAWING TITLE:
409 CUMBERLAND AVE.
APARTMENTS
2ND AND 3RD FLOOR
FIRE PROTECTION PLAN
(NFPA 13 2010ed.)

DRAWING NO.:
FP-02

HIGH TECH FIRE PROTECTION
P.O. BOX 156
MINOT, ME. 04258-0258
TEL: (207) 998-2551 FAX: (207) 998-4187
MAINE LICENSE # 102

GENERAL CONTRACTOR ON RECORD:
WRIGHT RYAN CONSTRUCTION
10 ANGORTH STREET PORTLAND, ME
P.M. CRAIG HILL 207-773-3625

SPECIAL APPLICATIONS:

FIRE CAULK SPRINKLER PIPING PENETRATIONS RATED WALLS PER HILTI SPECIFICATIONS.

LEGEND:

○	RISER PIPE RISER UP OR DOWN
•	AUXILIARY DRAIN
	PROPOSED DRY STEEL PIPE
	PROPOSED WET CPVC PIPE
	PROPOSED WET STEEL PIPE
	SYSTEM COMPONENTS
	PIPE PITCH ¼ MAINS ½ LINES
Ⓐ	HYDRAULIC CALC. POINT

DESIGN & SYSTEM NOTES:

ALL PIPING 2" & LARGER TO BE SCHEDULE 10 WITH GROOVED DUCTILE IRON FITTING OR CPVC.
ALL PIPING 1 1/2" & SMALLER TO BE SCHEDULE 40 WITH APPROPRIATE FITTING OR CPVC.
POSITION, LOCATION, SPACING, AND USE OF SPRINKLERS SHALL BE IN ACCORDANCE WITH NFPA 13.
HYDRAULIC CALCULATION PROCEDURES HAVE BEEN DONE IN ACCORDANCE WITH NFPA 13. (SEE PLANS FOR LOCATION OF REMOTE AREAS. HYDRAULIC REFERENCE POINTS, AND SYSTEM DEMANDS)
HIGH TECH FIRE PROTECTION IS TO BEGIN WORK AT 6" MAIN 1' AFT INSIDE OF BUILDING.
DIMENSIONS AND LOCATIONS GIVEN FOR SPRINKLER HEADS AND PIPE MAY VARY TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
OWNER TO PROVIDE ADEQUATE HEAT THROUGHOUT BUILDING TO PROTECT WATER FILLED PIPING AND EQUIPMENT FROM FREEZING TEMPERATURES.
ONLY TAI-SEAL TYPE COUPLINGS TO BE INSTALLED ON DRY AND OR PRE-ACTION SYSTEMS.
OWNER IS RESPONSIBLE TO MAINTAIN THE SPRINKLER SYSTEM IN ACCORDANCE WITH THE LATEST EDITION OF NFPA 25, "INSPECTION TESTING & MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS" AND/OR ALL APPLICABLE FEDERAL, STATE, AND/OR LOCAL LAWS, CODES AND ORDINANCES.
ALL MECHANICAL, ELECTRICAL AND PLUMBING TRADES TO COORDINATE THEIR WORK WITH SPRINKLER CONTRACTOR.
ALL ELECTRIC WORK IS TO BE DONE BY OTHERS.

HEAD LEGEND:

RELIABLE* MODEL F1RES SB CCP
RELIABLE* MODEL #FRES8 & KFR-CCS
RELIABLE* MODEL #FRR56
RELIABLE* MODEL #FRR56 & KFR-CCS
RELIABLE MODEL KFR-CCS
RELIABLE MODEL #SFR-CCS
RELIABLE MODEL #SFR-CCS

DESIGN AREA NUMBER 3A
HYDRAULIC DESIGN CRITERIA
LOCATION= UNIT 316
TYPE OF SYSTEM= NFPA 13 WET
AREA OF OPERATION= 1000-SQ.FT.
HAZARD CLASS= LIGHT HAZARD
DENSITY= .1 W/ HOSE DEMAND OF 100 GPM
NUMBER OF SPRINKLERS= 7
REMOTE SPACING= 196 SQ.FT. 14' X 14'
SYSTEM DEMAND INCLUDING HOSE @
BASE OF RISER= 250-GPM 23-PSI
HEAD SPACING= 196 SQ.FT. 14' X 14'
SAFETY MARGIN= 6-PSI

DESIGN AREA NUMBER 3B
HYDRAULIC DESIGN CRITERIA
LOCATION= UNIT 314 & 315 CONCEALED SPACE
TYPE OF SYSTEM= NFPA 13 WET
AREA OF OPERATION= 1000-SQ.FT.
HAZARD CLASS= LIGHT HAZARD
DENSITY= .1 W/ HOSE DEMAND OF 100 GPM
NUMBER OF SPRINKLERS= 4-HEAD
REMOTE= 1 W/ HOSE DEMAND
HEAD SPACING= 224 SQ.FT. 16' X 14'
SYSTEM DEMAND INCLUDING HOSE @
BASE OF RISER= 196-GPM 20-PSI
SAFETY MARGIN= 9-PSI