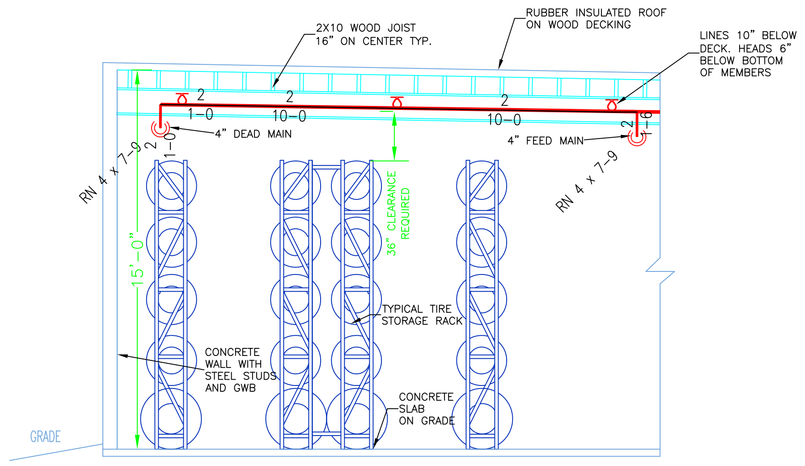
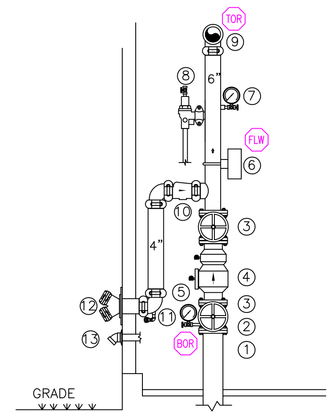


1.1 SECTION 'A'
SCALE 1/4" = 1'-0"

SPRINKLER RISER COMPONENTS

1. 6" DICL UNDERGROUND
2. 6" UNI FLANGE TO GATE VALVE
3. 6" OS&Y GATE VALVE WITH POTTER OSYSU-1 TAMPER SWITCH
4. 6" WILKINS 350AST BACKFLOW PREVENTER.
5. SUPPLY SIDE PRESSURE GAUGE.
6. POTTER VSR-F FLOW SWITCH
7. SYSTEM SIDE PRESSURE GAUGE
8. 2" TEST-N-DRAIN W/ RELIEF VALVE PIPED TO EXTERIOR (SEE PLAN FOR LOCATION)
9. 6" WET SYSTEM RISER TO ENTIRE BUILDING
10. 4" SWING CHECK VALVE FOR F.D.C. FEED 48" MINIMUM FROM EXTERIOR
11. 1/2" AUTOMATIC BALL DRIP
12. (2) 2 1/2" STORZ F.D.C. 36" ABOVE GRADE (SEE PLAN FOR LOCATION)
13. 2" MAIN DRAIN DISCHARGE TO EXTERIOR (SEE PLAN FOR LOCATION)



1.2 RISER DETAIL
SCALE: N.T.S.

PROJECT DESCRIPTION

BUILDING CONST:

THE BUILDING IS 1 LEVEL CONCRETE AND STEEL TYPE 3 CONSTRUCTION STEEL IBEAMS, STEEL BARJOIST, STEEL COLUMNS AND CONCRETE BLOCK WALLS. WOOD DECKING WITH A RUBBER INSULATED ROOF.
ALL STEEL SPRINKLER PIPING AS SHOWN ON PLAN.

BUILDING OCCUPANCY:

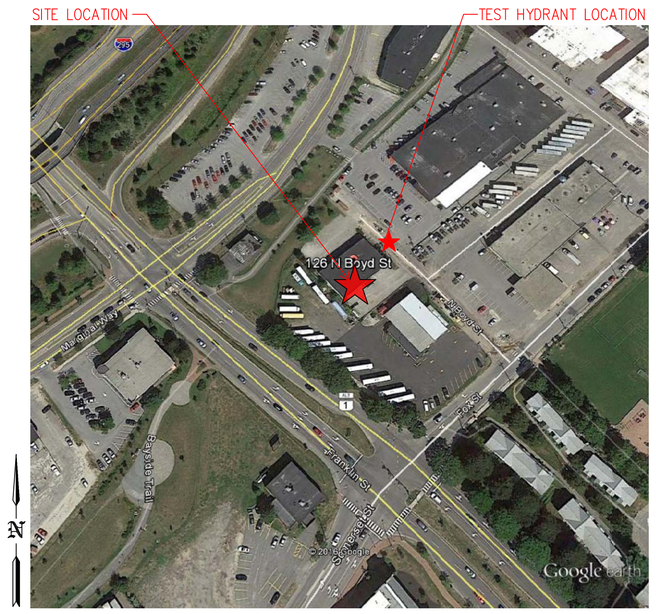
THE BUILDING PREVIOUS OCCUPANCY WAS MERCANTILE AND WILL NOW BE USED FOR TIRE INSTALLATION AND STORAGE.
TIRES ARE STORED ON OPEN SHELVED RACKS ON THEIR SIDES.

SPRINKLER SYSTEM DESIGN:

THIS RENOVATED BUILDING WILL GET A NEW WET SPRINKLER SYSTEM PER NFPA 13.

PER TABLE 18.4(C)
PILING METHOD RUBBER TIRE STORAGE ON SIDE IN FIXED RACKS WITHOUT SOLID SHELVES. PILE HEIGHT UP TO 25 FT MAX.
BUILDING HEIGHT UP TO 30 FT MAX. WITH K 16.8 CMSA UPRIGHT SPRINKLER HEADS. SPACED 80 SQ.FT. WITH A DESIGN AREA OF THE MOST DEMANDING 15 HEADS INCLUDING A 500 HOSE ALLOWANCE.

SPRINKLER DEFLECTORS UP TO 6" BELOW 2X10 MEMBERS.
STORAGE HEIGHT OF TIRES NOT TO EXCEED 25' IN HEIGHT AND ALSO MUST MAINTAIN 36" CLEARANCE FROM TOP OF STORAGE TO SPRINKLER HEAD DEFLECTOR.



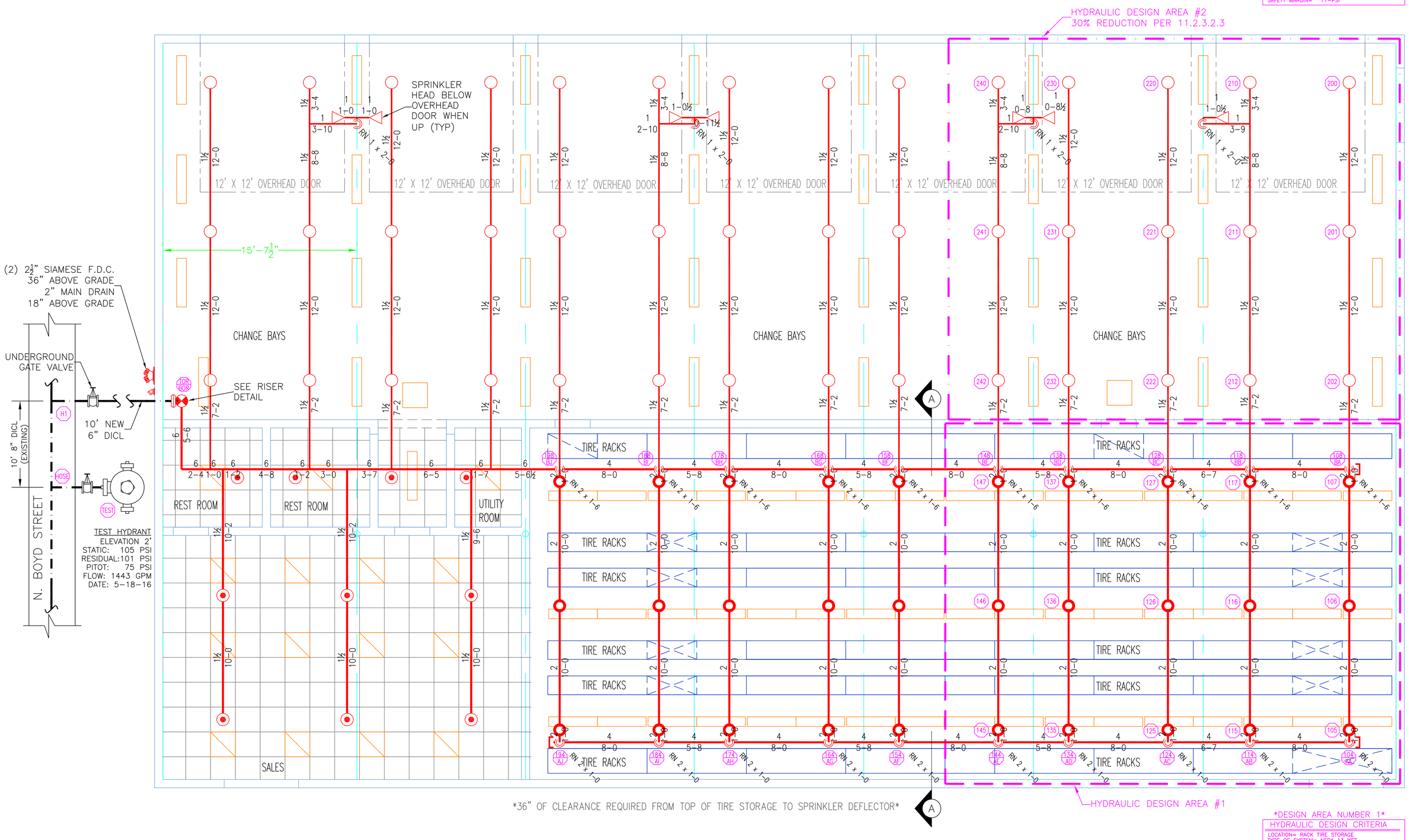
1.4 PLOT PLAN
SCALE: N.T.S.

DESIGN AREA NUMBER 2

HYDRAULIC DESIGN CRITERIA

LOCATION= TIRE CHANGING BAYS
TYPE OF SYSTEM= NFPA 13 WET
AREA OF OPERATION= 1050-SQ.FT. 30%-CEIL.RED.
NUMBER OF SPRINKLERS= 15
DENSITY= .3 W/ HOSE DEMAND OF 250 GPM
HAZARD CLASS= ORDINARY HAZARD GROUP 2
HEAD SPACING= 100 SQ.FT.

SYSTEM DEMAND INCLUDING HOSE @
BASE OF RISER= 514-GPM 28-PSI
SAFETY MARGIN= 77-PSI



36" OF CLEARANCE REQUIRED FROM TOP OF TIRE STORAGE TO SPRINKLER DEFLECTOR

1 GROUND LEVEL (WET)
TOTAL PROTECTED AREA 6,100 SQ.FT.
SCALE 1/4" = 1'-0"

TABLE 18.4(C)

PILE METHOD	MAX PILE.	MAX BLD.	K-FACTOR	# OF SPRINKLERS	MIN PSI	DURATION	HOSE
RUBBER TIRE STORAGE ON-SIDE IN RACKS WITHOUT SOLID SHELVES	UP TO 25'	30'	16.8	15 TOTAL (3) ON EACH LINE	35	3 HOUR	500 GPM

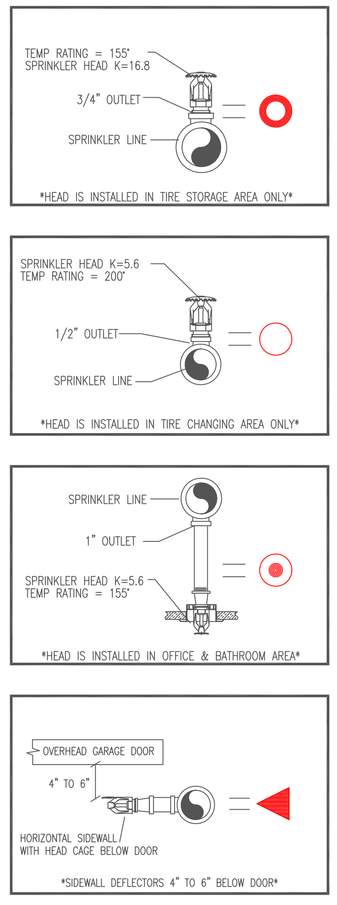
36" OF CLEARANCE REQUIRED FROM TOP OF TIRE STORAGE TO SPRINKLER DEFLECTOR

DESIGN AREA NUMBER 1

HYDRAULIC DESIGN CRITERIA

LOCATION= RACK TIRE STORAGE
TYPE OF SYSTEM= NFPA 13 WET
AREA OF OPERATION= 1024-SQ.FT.
NUMBER OF SPRINKLERS= 15
DENSITY= CMSA W/ HOSE DEMAND OF 500 GPM
HAZARD CLASS= TIRE STORAGE UP TO 25'
HEAD SPACING= 80 SQ.FT.

SYSTEM DEMAND INCLUDING HOSE @
BASE OF RISER= 2001-GPM 70-PSI
SAFETY MARGIN= 28-PSI



1.3 SPRINKLER HEAD DETAIL
SCALE: N.T.S.

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:
SOC CONSTRUCTION INC.
294 MAIN ST. WINSTED, CT 06098
GEORGE CLOSSON 860-379-3891
CELL# 860-485-2027 #6 KEY CODE

SPECIAL APPLICATIONS:

LEGEND:

- RN/DN PIPE RISER UP OR DOWN
- AUXILIARY DRAIN
- PROPOSED PIPE
- SYSTEM RISER
- PIPE PITCH 1/4 MAINS 1/2 LINES
- SWAY BRACING
- HYDRAULIC CALC. POINT

DESIGN & SYSTEM NOTES:

ALL PIPING 1 1/2" & LARGER TO BE SCHEDULE 10 WITH GROOVED DUCTILE IRON FITTING.

ALL PIPING 1 1/4" & SMALLER TO BE SCHEDULE 40 WITH APPROPRIATE FITTING.

POSITION, LOCATION, SPACING, AND USE OF SPRINKLERS SHALL BE IN ACCORDANCE WITH NFPA 13.

POSITION, LOCATION, SPACING, AND USE OF HANGERS 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' AFF 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 TRI-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:

TYCO*
MODEL ULTRA K17
32 /155°
K=16.8
1" CMSA BRASS UPRIGHT
ON THE LINE DEFLECTORS UP
TO 6" BELOW DECK
12' MAX SPACING 8' MIN
80 SQ.FT. MAX
36" MINIMUM CLEARANCE
REQUIRED FROM TOP OF STORAGE

GLOBE*
MODEL GL5615
42 /200°
K=5.6
1/2" BRASS UPRIGHT
DEFLECTORS UP TO 6"
BELOW THE 2X MEMBERS

GLOBE*
MODEL GL5601
10 /155°
K=5.6
1/2" WHITE PENDENT
SEMI-RECESSED ESC.
IN ACT CEILINGS

GLOBE*
MODEL GL5626
7 /200°
K=5.6
1/2" BRASS HORIZONTAL
SIDEWALL EXPOSED WITH CAGE
DEFLECTORS 4" TO 6" BELOW
OVERHEAD GARAGE DOOR

OR APPROVED EQUAL

TOTAL HEADS ON THIS SHEET: 91

SCALE: 1 1/2 0 2 4
SCALE 1/4"=1'-0"

REVISIONS:

NO.	DATE:	DESCRIPTION:

DATE: OCTOBER 27, 2016
DESIGNER: ED POULIN (RMS# 515)
NICET LEVEL: IV CERT # 108534
CHECKED BY: J. FOSS

LOCATION:
126 NORTH BOYD STREET
PORTLAND, ME

DRAWING TITLE:
TIRE WAREHOUSE
PORTLAND

FIRE PROTECTION PLAN
(NFPA 13 2016ed.)

DRAWING NO.:
FP-01