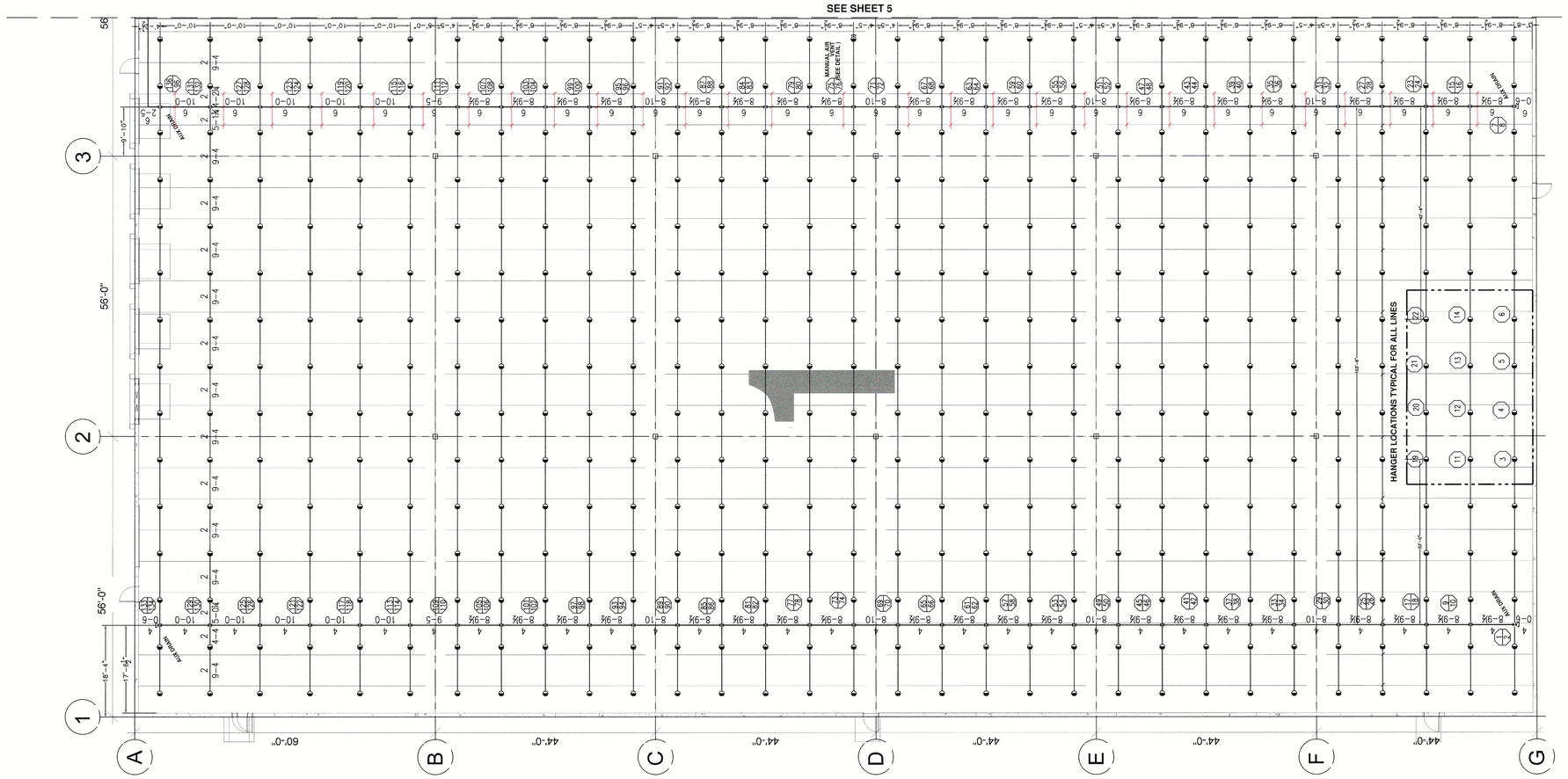
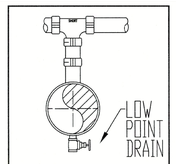
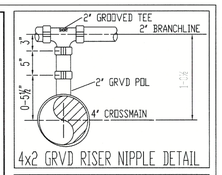
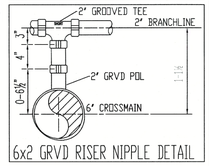




AUX DRAIN DETAIL



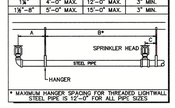
4x2 GRVD RISER NIPPLE DETAIL



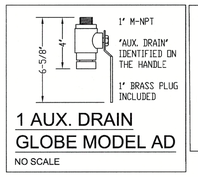
6x2 GRVD RISER NIPPLE DETAIL

HANGER LOCATION DETAIL

PIPE SIZE	A	B*	C
1"	3'-0" MAX.	12'-0" MAX.	3" MIN.
1¼"	4'-0" MAX.	12'-0" MAX.	3" MIN.
1½"-8"	5'-0" MAX.	15'-0" MAX.	3" MIN.

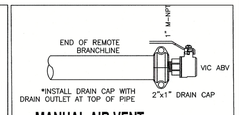


* MAXIMUM HANGER SPACING FOR THREADED LIGHTWALL STEEL PIPE IS 12'-0" FOR ALL PIPE SIZES



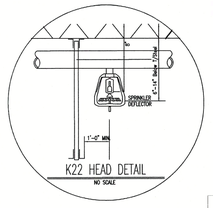
1 AUX. DRAIN GLOBE MODEL AD

NO SCALE



MANUAL AIR VENT

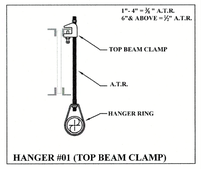
VALVE TO BE LOCATED AT APPROX. HIGH POINT OF EACH NEW SYSTEM



K22 HEAD DETAIL

NO SCALE

1"- 4" = ½" A.T.R.
6"& ABOVE = ½" A.T.R.



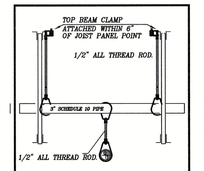
HANGER #01 (TOP BEAM CLAMP)

HYDRAULIC - SYSTEM

This building is protected by a Hydraulically Designed Automatic Sprinkler System.

Location	SYSTEM 1	
No. of Sprinklers	12	
Basis Of Design		
1. END HEAD PRESSURE	40	PSI
2. SPRINKLER K-FACTOR	22.4	
System Demand		
1. GPM DISCHARGE	1813	GPM
2. RESIDUAL PRESSURE AT THE BASE OF THE RISER	116	PSI
Building Information		
1. COMMODITY CLASSIFICATION	CLASS I-IV, CARTONED UNEXPANDED PLASTICS SEE SHEET 1 FOR CRITERIA DETAILS	

**MUST MAINTAIN 36" FROM DEFLECTOR TO TOP OF STORAGE



PIPE TRAPEZE DETAIL

FOR 6" - 8" PIPE

SYSTEMS 1

SCALE = 3/32" = 1'-0"

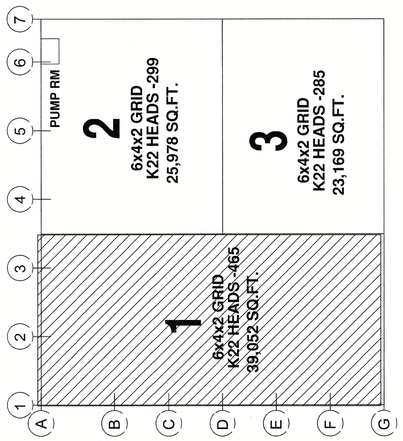
4' 2' 0 4' 8'
3/32" = 1'-0"

TOP OF STEEL HIGH POINT = 41'-0½" @ COL. D

TOP OF STEEL LOW POINT= 35'-6½" @ COL. A&G

ALL 2" LINES TO BE 8" FROM TOP OF STEEL UNLESS NOTED OTHERWISE
ALL 4" MAINS TO BE 1'-8½" FROM TOP OF STEEL UNLESS NOTED OTHERWISE
ALL 6" MAINS TO BE 1'-9½" FROM TOP OF STEEL UNLESS NOTED OTHERWISE

ALL BAY DOORS ARE VERTICAL LIFT AND DO NOT REQUIRE ADDITIONAL HEADS



KEY PLAN

NOT TO SCALE

SEISMIC DESIGN CATEGORY 'B', SEISMIC BRACING NOT REQUIRED

USE GROUP: S-1

CONSTRUCTION TYPE: II-B

AREA OF WORK: 88,200 SQ.FT

PROJECT NAME:
NY145 BROOKFIELD SUFFERN

PROJECT LOCATION:
SUFFERN NY

TIM SURMAN
PROFESSIONAL ENGINEER
NY PE LIC.# 107503

STATE OF NEW YORK · TIMOTHY SURMAN · 107503 · LICENSED PROFESSIONAL ENGINEER

SIGNATURE:
DATE SIGNED: 2/9/24

HYDROSTATIC TEST TO BE CONDUCTED AT 225 PSI

STANDARD DRAWING SYMBOLS

	DENOTES CENTERLINE OF PIPE ABOVE FINISH FLOOR
	DENOTES CENTERLINE OF PIPE BELOW TOP OF STEEL
	DENOTES CENTERLINE OF PIPE BELOW BOTTOM OF JOIST
	DENOTES CENTERLINE OF PIPE BELOW BOTTOM OF BEAM
	DENOTES CENTERLINE OF PIPE BELOW THE CEILING
	DENOTES HANGER
	DENOTES HANGER ROD LENGTH
	DENOTES CEILING HEIGHT
	HYDRAULIC CALC. REF. POINT
	GROOVE COUPLING
	GROOVE CHECK VA.
	FIRE HOSE VALVE CABINET
	HYDRAULIC DATA STICKER
	FIRE HOSE VALVE
	FIRE HYDRANT
	ELECTRIC BELL
	RISER
	FLOW SWITCH
	FIRE DEPT. CONN.
	AUXILIARY DRAIN
	PRESSURE GAUGE

TYPICAL HANGER ASSEMBLIES BY NUMBER

01	TOP BEAM CLAMP (TBC)	08A	SAMMY SWC-20 SIDE CONCRETE
01A	WIDE MOUTH TOP BEAM CLAMP	09	SAMMY GST-20 STRAIGHT WOOD
01B	INVERTED TOP BEAM CLAMP	09A	SAMMY SWG-20 SIDE WOOD
01C	INVERTED WIDE MOUTH TBC	10	
01D	TBC w/CLEVIS RING	10B	SAMMY SWHS-556 SIDE STEEL
01E	TBC w/ 8" RETAINING STRAP	11A	EYE SOCKET
01S	TBC w/ 12" RETAINING STRAP	12	
04	ROD, RING	13A	U-HOOK HANGER
04A	ROD, RING, NUTS & WASHER	14	STRUT NUT, ROD & RING
04C	CLEVIS HANGER w/ROD	15	
06	CONCRETE/HILTI DROP IN ANCHOR	16	Z-PURLIN CLAMP
07	HILTI SHOT & STUD	17	SAMMY DSTR.70 STRAIGHT LIGHT WEIGHT STEEL
08	SAMMY GST-20 STRAIGHT CONCRETE	18	SAMMY SWGR.516 SIDE, HEAVY WEIGHT STEEL

FIRE PROTECTION SPECIFICATIONS

1. DO NOT SCALE DRAWING(S).
2. ALL PIPE NOTED AS: GC=GROOVED END TO CENTER, GG = GROOVED END TO GROOVED END; INDICATES ACTUAL PIPE "CUT" LENGTHS. (U.O.N.)
3. DESIGN, INSTALLATION & MATERIALS TO BE PER N.F.P.A. #13 2016
4. HANGERS & ATTACHMENTS TO BE U.L. LISTED & SPACING PER N.F.P.A. #13 2016
5. ALL NEW PIPING SHALL BE HYDROSTATICALLY TESTED AT **225** PSI FOR 2 HOURS W/ NO VISIBLE SIGN OF LEAKAGE.
6. THE OWNER SHALL PROVIDE A MINIMUM OF 40° F TO PREVENT SPRINKLER PIPE FROM FREEZING.
7. CONTRACTOR SHALL PROVIDE THE OWNER, INSURANCE CO., & THE PROPER CITY OFFICIALS WITH COPIES OF THE MATERIAL & TEST CERTIFICATES.
8. ALL FLOW AND TAMPERS SHALL BE SUPERVISED IN ACCORDANCE WITH NFPA 72. THIS WORK IS TO BE DONE BY OTHERS AND IS NOT PART OF S A COMUNALE CONTRACT.

MATERIAL SPECIFICATIONS

Note:1" Pipe is	GRID	GRID MAIN	LINE	MAIN	LINES
Sch 40 A53 (uno)					
Sch 40 A53 Black					
Sch 10 Thinwall	X				
Sch 7		X			
Sch 40 Galvanized					
Sch 10 Galvanized					
Weld-O-Lets Thrd		X			
Weld-O-Lets Grv	X				
Weld-O-Lets Buff					
Cast Iron Fittings					
Galvanized Fittings					
Malleable Ftgs 150#					
Malleable Ftgs 300#					
Cpvc					
Number of Welds					
Cut Lengths					
Center to Center	X	X			

SUPPLY THE FOLLOWING	Yes/No
American Made (Domestic)	N
Smith-Cooper Fittings	N
Smith-Cooper Couplings	N
Firelock Fittings	Y
Firelock Couplings	Y
Standard Vic/Central Ftgs	N
Head Wrenches	Y
Spare Head Cabinet	Y
Top Beam Clamps	Y
Concrete Inserts	N
Sammy Screws	N
Pipe/Strut/Angle Iron	N
Can Heads be any brand?	Y
Fit Fittings	N
Hangers Cut Length	N
Hangers Center to Center	Y
FM Approved Material Only	N

REVISIONS

NO.	DESCRIPTION	BY	DATE

PENDENT SPRINKLERS SHALL BE INSTALLED PER THE SPACING DICTATED BY APPROPRIATE CODES AND SHALL BE ALIGNED WITHIN NORMAL FABRICATION TOLERANCES, BUT WILL NOT NECESSARILY BE CENTERED IN CEILING TILES.

SPRINKLER LEGEND

SYMBOL	QTY.	DESCRIPTION	SIN#	THD.	K=	TEMP
◑	465	RELIABLE P22 BRASS PENDENT ESFR	R661	1"	22.4	165°
	465	TOTAL SPRINKLERS THIS PAGE	1054	TOTAL SPRINKLERS ON ENTIRE PROJECT		

S.A. COMUNALE CO. INC.
FIRE PROTECTION CONTRACTORS
2900 NEWPARK DR BARBERTON, OHIO 44203 330-706-3040 FAX: 330-861-0860
CLEVELAND: 440-684-9325 COLUMBUS: 614-291-7001 CINCINNATI: 513-874-4268
FREMONT: 419-334-3841 PHILADELPHIA, PA: 856-848-4666 YOUNGSTOWN: 330-856-4440
MARION 740-383-0789 WASHINGTON, DC 410-768-1931 READING, PA: 610-670-3960

NY154 BROOKFIELD SUFFERN– BUILDING 3

25 OLD MILL, ROAD SUFFERN, NY 20901

ESFR SYSTEM I

DATE	SCALE	DRAWN	JOB NO.	DWG. NO.
01.11.24	3/32" = 1'-0"	SARAH CAREW	51718093	4 OF 5