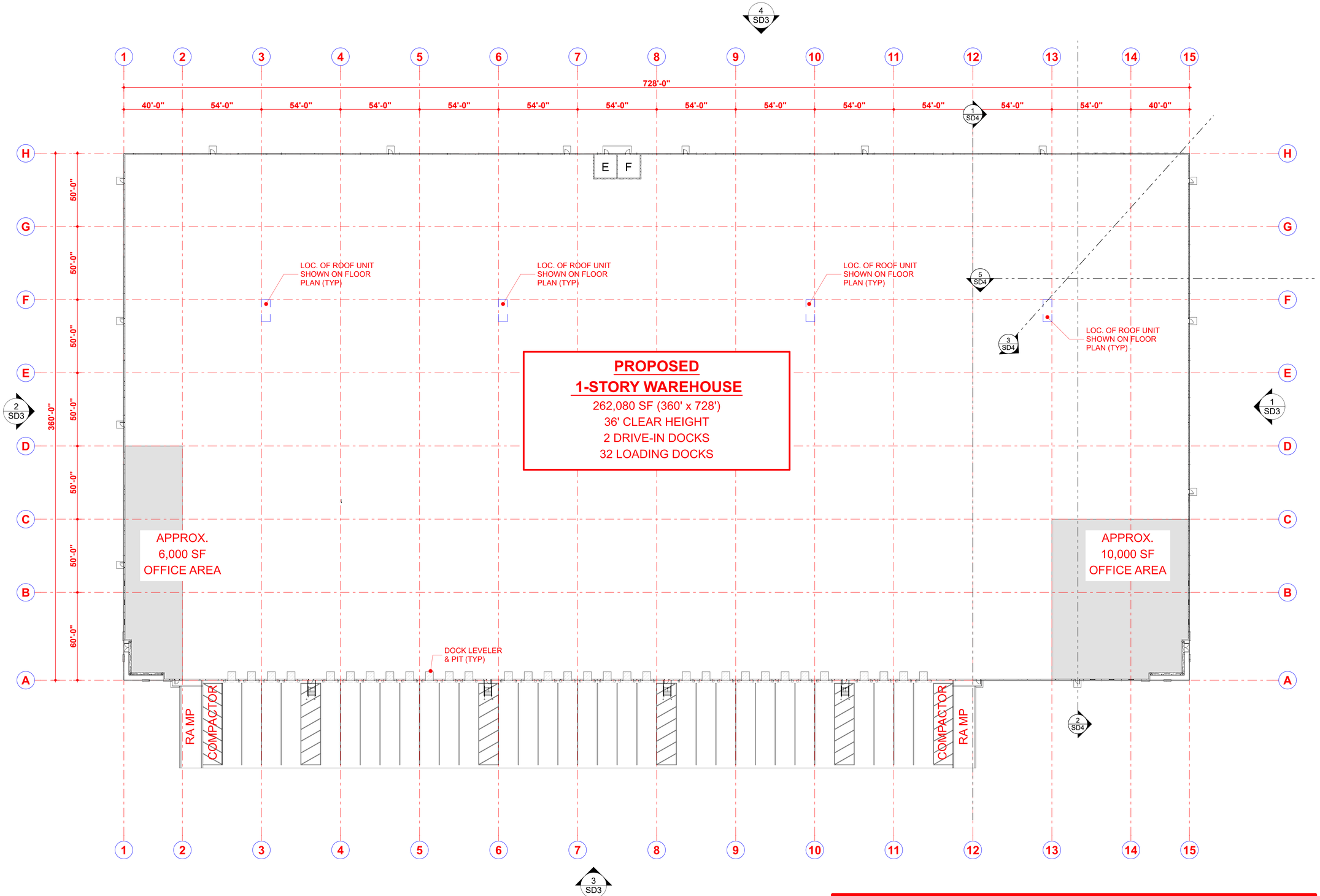


NOTE: ARCHITECT MUST INCLUDE CERTIFICATION THAT DRAWINGS CONFORM WITH SITE PLAN WITH RESPECT TO OUTDOOR FIXTURES AND AMENTITIES

1 **GROUND FLOOR PLAN**
SCALE: 1" = 30'

0 30' 60'

/Users/Rick/Pratt Design Studio Dropbox/Pratt Design Studio, LLC/02-PDS Projects/23006-Jiffy-Newburgh/03 ARCHITECTURE/a CADD/23006-JIFFY.pln

PRATT DESIGN STUDIO, LLC

N

PROJECT
Proposed Warehouse

FOR
YM & YH Developers, LLC

DESCRIPTION | DATE | REV

175 10th Street
Belford, NJ 07718
732.908.7232
Pratt-DS.com

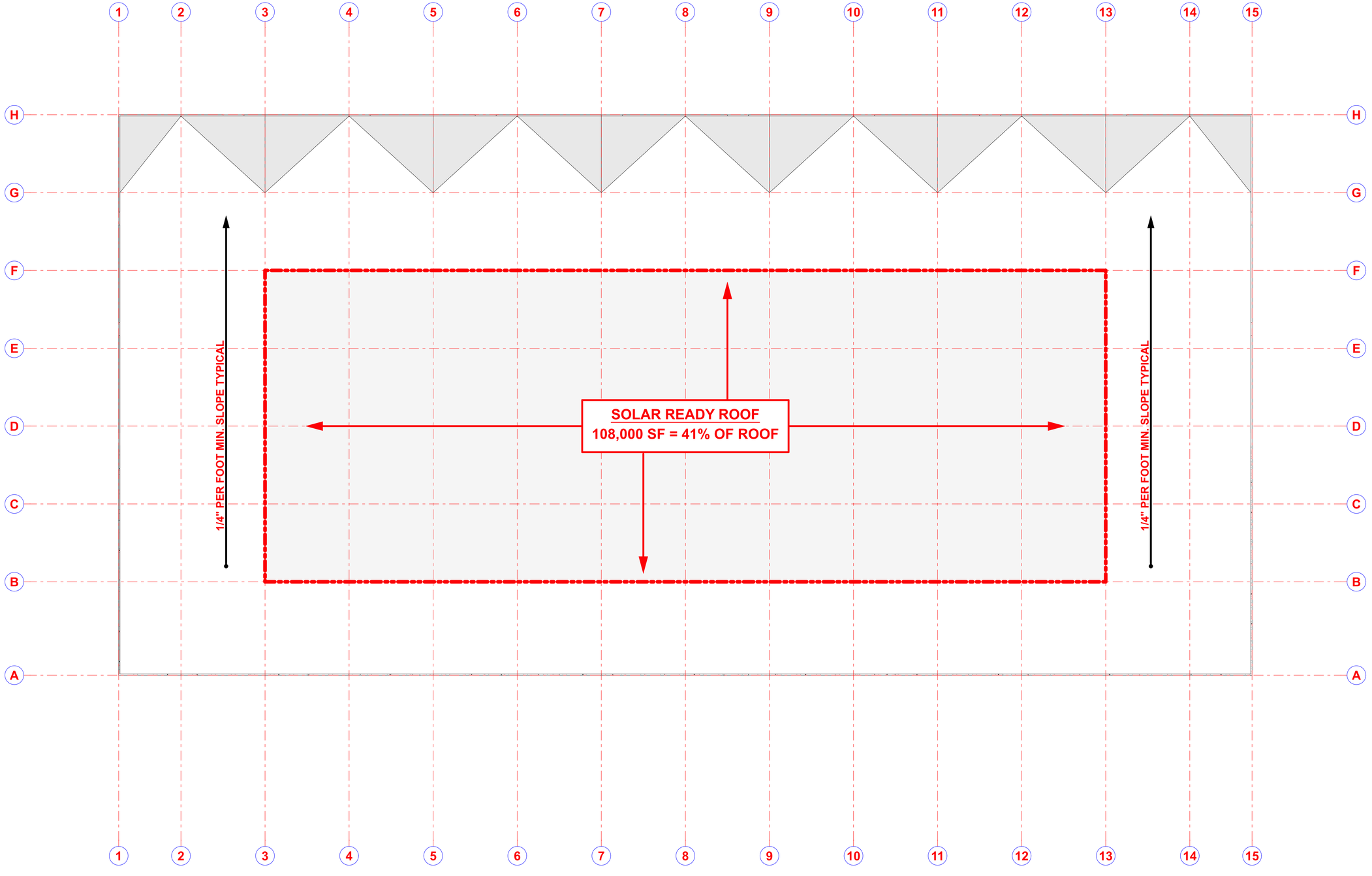
RICK PRATT, AIA
NY - 032887-1

ISSUED: 4/19/23
JOB NO. 23006

REGISTERED ARCHITECT RICK PRATT 032887-1 STATE OF NEW YORK

GROUND FLOOR PLAN

SD1



NOTE: ARCHITECT MUST INCLUDE CERTIFICATION THAT DRAWINGS CONFORM WITH SITE PLAN WITH RESPECT TO OUTDOOR FIXTURES AND AMENTITIES

1 **OVERALL ROOF PLAN**
SCALE: 1" = 30'

0 30' 60'

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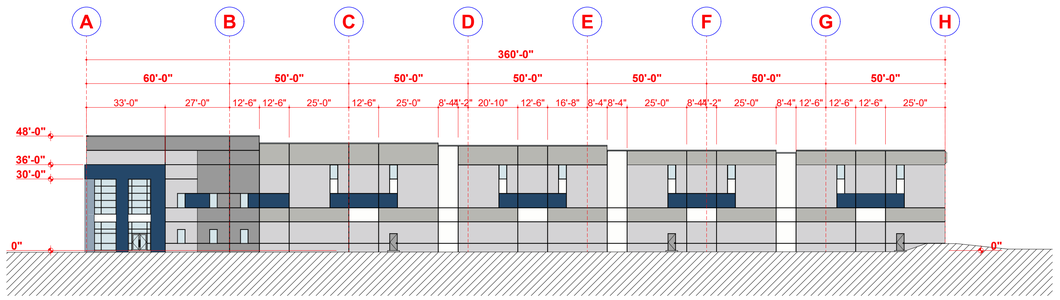
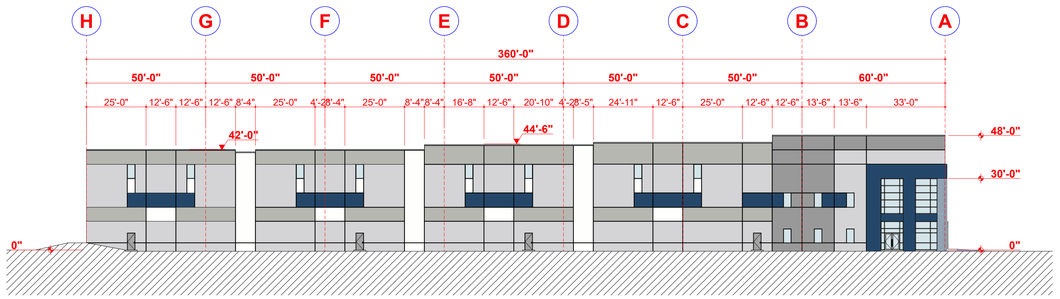
OVERALL ROOF PLAN

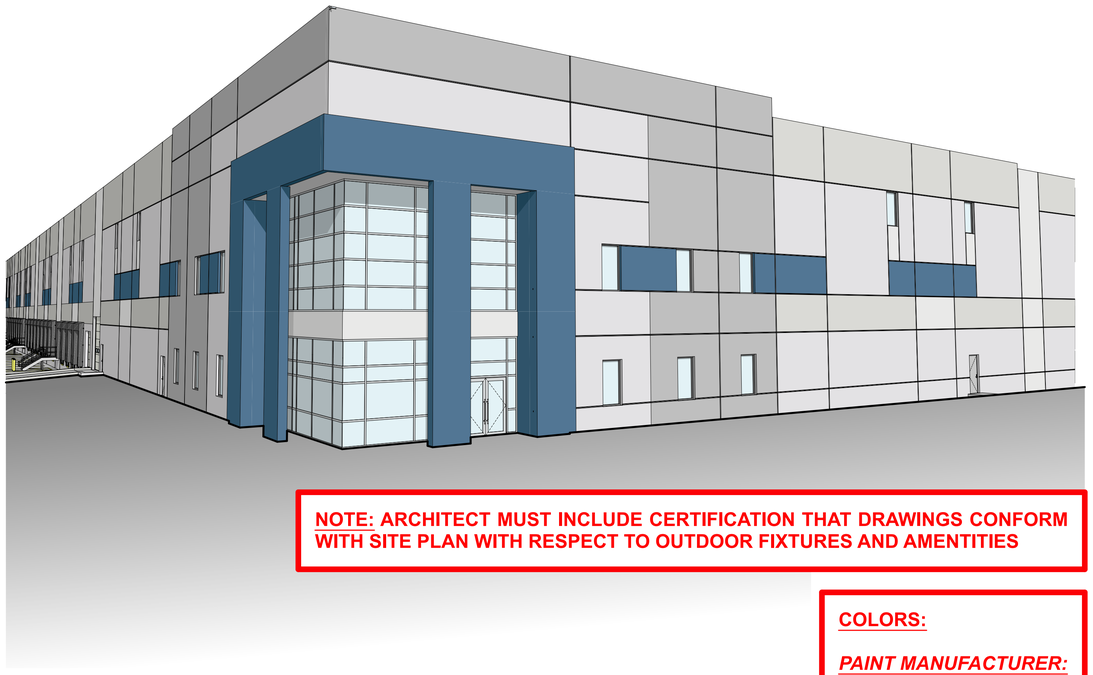
SD2



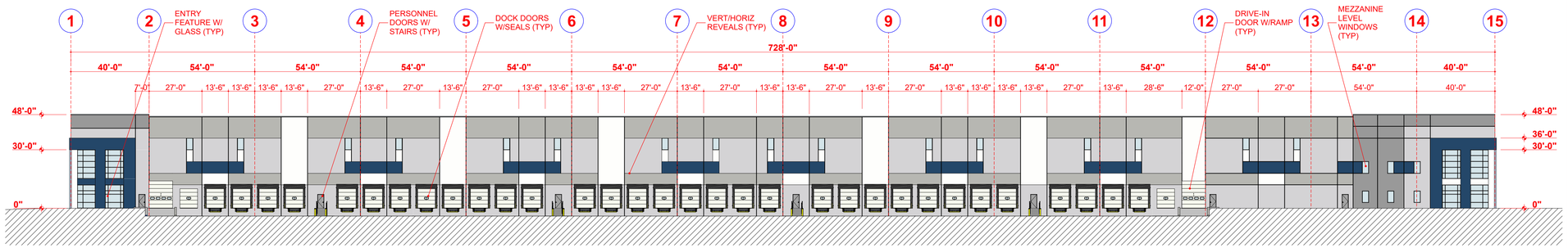
1 **NORTH ELEVATION**
SCALE: 1" = 30'



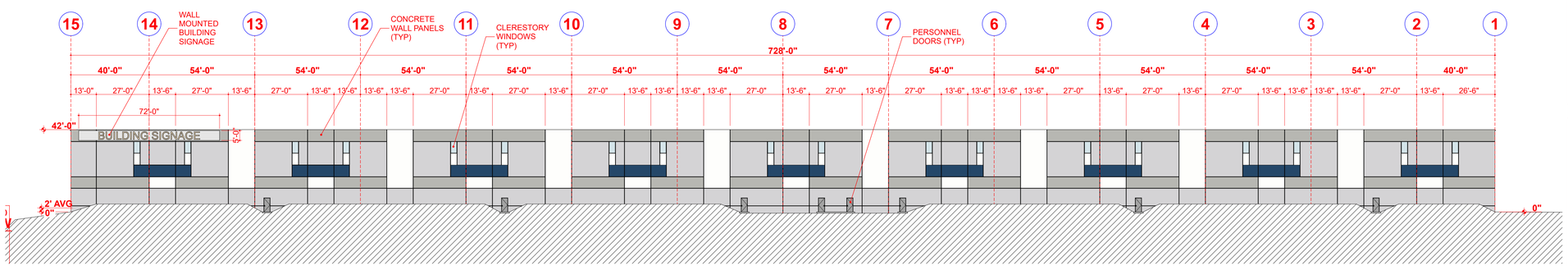
2 **SOUTH ELEVATION**
SCALE: 1" = 30'



VIEW TOWARDS OFFICE ENTRY CORNER



3 **EAST ELEVATION**
SCALE: 1" = 30'



4 **WEST ELEVATION**
SCALE: 1" = 30'

NOTE: ARCHITECT MUST INCLUDE CERTIFICATION THAT DRAWINGS CONFORM WITH SITE PLAN WITH RESPECT TO OUTDOOR FIXTURES AND AMENTITIES

COLORS:

PAINT MANUFACTURER: SHERWIN WILLIAMS

P1 "WHITE" / SW6252 - ICE CUBE

P2 "LIGHT GRAY" / SW7653 - SILVERPOINTE

P3 "MEDIUM GRAY" / SW7658 - GRAY CLOUDS

P4 "DARK GRAY" / SW7660 - EARL GRAY

P5 "DARK BLUE" / SW6517 - REGATTA

BUILDING SIGNAGE:

ALLOWED 1 SF PER LF OF STREET FACING BUILDING ELEVATION = 728 SF ALLOWED. 360 SF PROPOSED

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ELEVATIONS

SD3

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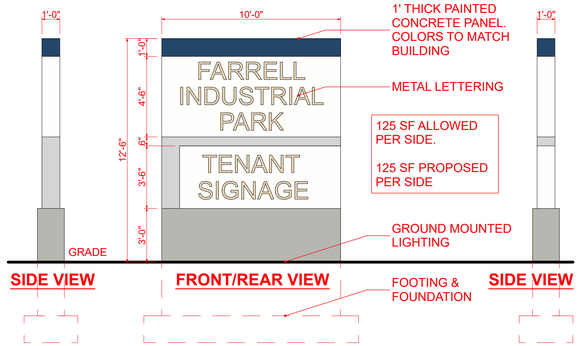
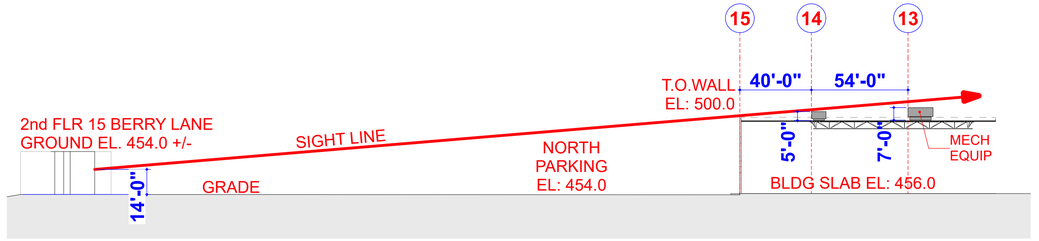
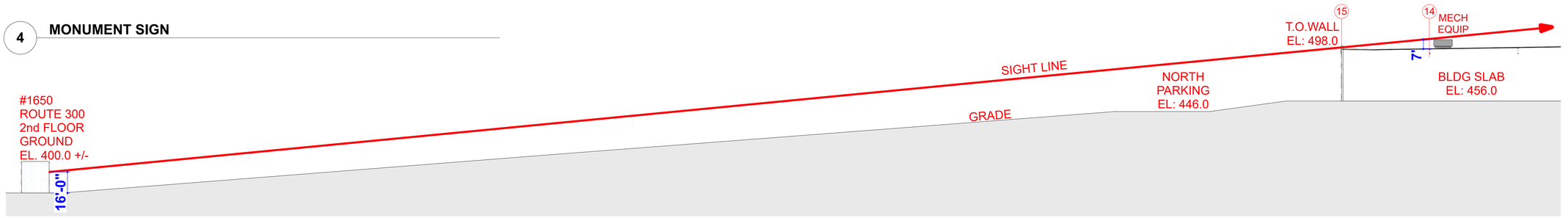


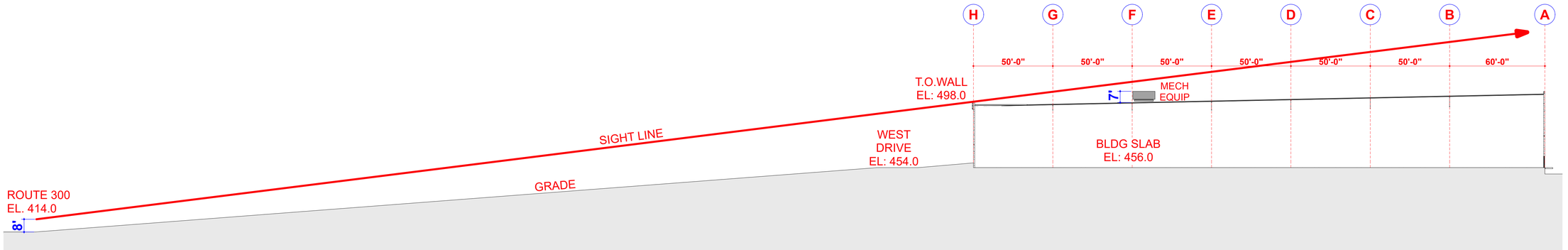
4 **MONUMENT SIGN**



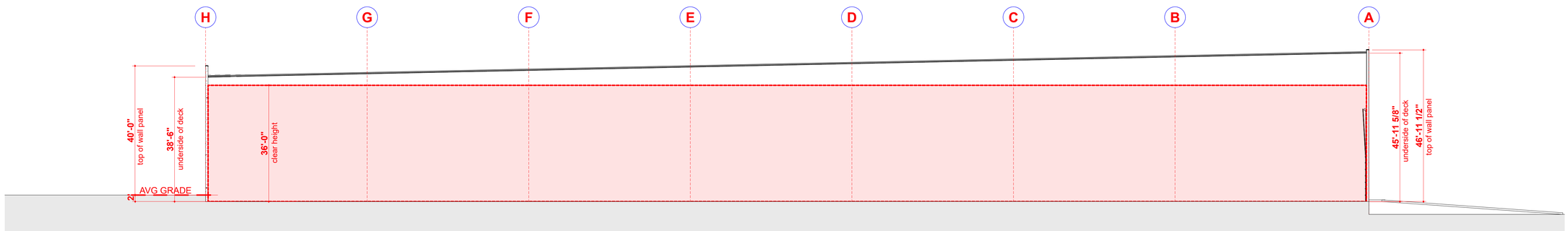
5 **SITE SECTION FROM 15 BERRY LANE 2nd FLOOR (IF APPLICABLE)**



3 **SITE SECTION FROM #1650 ROUTE 300**



2 **SITE SECTION FROM ROUTE 300**



1 **BUILDING SECTION**

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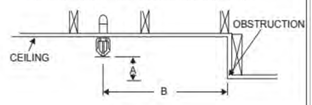
REGISTERED ARCHITECT RICK PRATT 032887-1 STATE OF NEW YORK

CROSS SECTIONS & MONUMENT SIGN

SD4

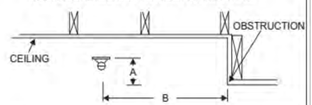
STANDARD SPRINKLER OBSTRUCTION RULES

PENDANT SPRINKLER TO SIDE OBSTRUCTION



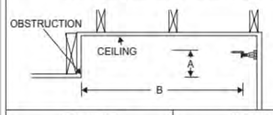
WHERE A IS LESS THAN OR EQUAL TO: (INCHES)	WHERE A IS LESS THAN OR EQUAL TO: (FEET)
1	1½
3	3
5	4
7	4½
9	1½
11	6½
14	7

SIDEWALL SPRINKLER TO SIDE OBSTRUCTION



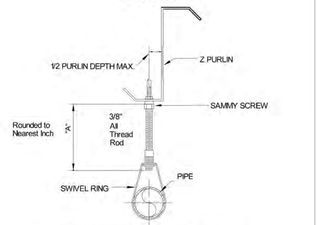
WHERE A IS LESS THAN OR EQUAL TO: (INCHES)	WHERE A IS LESS THAN OR EQUAL TO: (FEET)
1	1½
3	3
5	4
7	4½
9	6
11	6½
14	7

SIDEWALL SPRINKLER TO FORWARD OBSTRUCTION



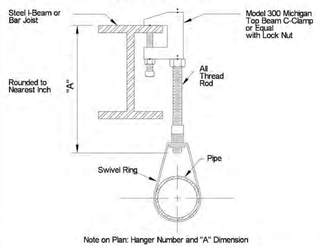
WHERE A IS LESS THAN OR EQUAL TO: (INCHES)	WHERE A IS LESS THAN OR EQUAL TO: (FEET)
1	8
2	10
3	11
4	12
6	13
7	14
9	15
11	16
14	17

HANGER NO. 17S
STEEL SAMMY SCREW AND ROD



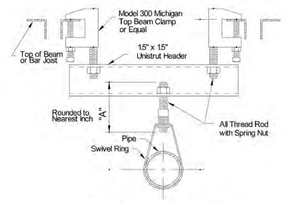
NOTE ON PLAN: HANGER NUMBER AND "A" DIMENSION

Hanger No. 01S
Top Beam C-Clamp



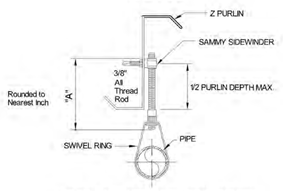
Note on Plan: Hanger Number and "A" Dimension

Hanger No. 04T
Unistrut/Top Beam C-Clamps Inverted



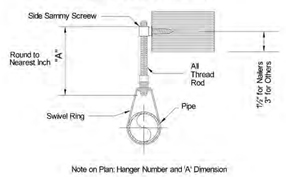
Note on Plan: Hanger Number, "A" Dimension, Unistrut Size and Length

HANGER NO. 18S
STEEL SAMMY SIDEWINDER AND ROD



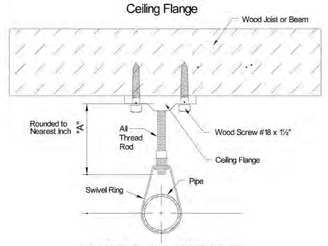
NOTE ON PLAN: HANGER NUMBER AND "A" DIMENSION

HANGER NO. 15W
SIDE SAMMY SCREW



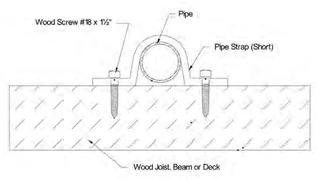
Note on Plan: Hanger Number and 'A' Dimension

Hanger No. 08W
Ceiling Flange

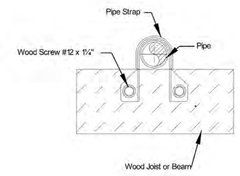


Note on Plan: Hanger Number and "A" Dimension

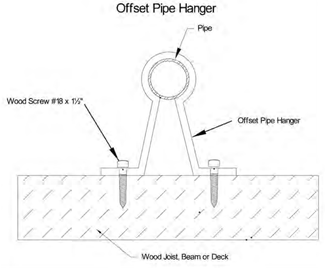
Hanger No. 09W
Pipe Strap



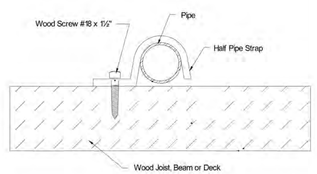
Hanger No. 17W
Pipe Strap



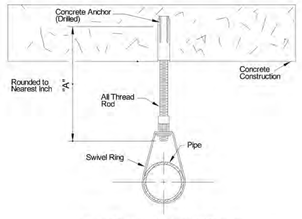
Hanger No. 19W
Offset Pipe Hanger



Hanger No. 18W
Half Strap



Hanger No. 02C
Concrete Anchor



Note on Plan: Hanger Number and "A" Dimension

CPVC PIPING NOTES

CPVC piping components may be damaged by certain substances and construction practices.
– DO NOT stack, support/clamp equipment or hang flexible wires/cable, especially communications cable, or other material on the fire sprinkler system.
– ONLY system compatible materials including, but not limited to solvent cements, caulks, sealants, cutting oils and thread pastes as noted by the CPVC fire sprinkler piping system manufacturer's installation instructions should be used in contact with this system.
– DO NOT expose CPVC products to incompatible substances, such as cutting oils, packing oils, traditional pipe thread pastes and dope,fungicides, termiticides, insecticides, detergents, building caulks, adhesive vinyl, electrical tape, solder flux, flexible wire/cable (with special consideration for communications cabling), and non-approved spray foam insulation materials.
– DO NOT expose CPVC products to edible oils, solvents, or glycol-based anti-freeze fluids.
– DO NOT expose CPVC products to open flame, solder, and soldering flux.
– DO NOT drop, distort, or impact CPVC products or allow objects to be dropped on them.
– DO NOT use two-part epoxy paint. There is no known issue with other types of paints being applied in normal coats to CPVC, including water-based latex paints, alkyd paints, enamels, spray paints, or paints with added mold inhibiting ingredients. Failure to follow this notice may cause cracks or fractures to develop in CPVC products resulting in property damage due to leaks or flooding.

CURE TIMES WITH ONE STEP SOLVENT CEMENT
200 psi (MAXIMUM) TEST PRESSURE

PIPE SIZE inches	Ambient Temperature During Cure Period		
	60°F to 120°F	40°F to 59°F	0°F to 39°F
3/4"	3 Hrs	7 Hrs.	16 Hrs.
1"	3 Hrs.	7 Hrs.	16 Hrs.
1-1/4"	5 Hrs.	16 Hrs.	32 Hrs.
1-1/2"	5 Hrs.	16 Hrs.	32 Hrs.
2"	7 Hrs.	32 Hrs.	72 Hrs.

TABLE 1
MAXIMUM SUPPORT SPACING DISTANCE
END LINE SPRINKLER HEAD DROP ELBOW

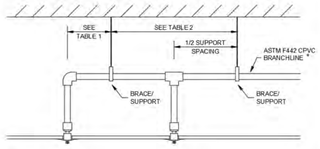
PIPE SIZE inches	SYSTEM PRESSURE: < 100 psi	SYSTEM PRESSURE: > 100 psi
1"	12"	9"
1-1/4"	16"	12"
1-1/2"-3"	24"	12"

TABLE 2
MAXIMUM SUPPORT SPACING DISTANCE
INLINE SPRINKLER HEAD DROP TEE

PIPE SIZE inches	SYSTEM PRESSURE: < 100 psi	SYSTEM PRESSURE: > 100 psi
1"	5'	4'
1-1/4"	6'	5'
1-1/2"-3"	7'	7'

BLAZEMASTER 2000 PIPE
SDR 13.5 (ASTM F442)
HANGER SPACING

NOMINAL SIZE inches	(mm)	MAX SPACING feet	(m)
1"	(25.0)	6.0'	(1.8)
1-1/4"	(32.0)	6.5'	(2.0)
1-1/2"	(40.0)	7.0'	(2.1)
2"	(50.0)	8.0'	(2.4)
2-1/2"	(65.0)	9.0'	(2.7)
3"	(80.0)	10.0'	(3.0)



* NATIONAL SANITATION FOUNDATION (NSF) APPROVED FOR USE WITH POTABLE WATER

STEEL PIPING NOTES

STEEL PIPING SHALL BE SEAMLESS AND MANUFACTURED IN ACCORDANCE WITH ASTM A53, ASTM A120 OR ASTM A135.

THE THREADING OF SCHEDULE-10 PIPING IS NOT PERMITTED

WELDING OF SPRINKLER PIPING OUTLETS TO BE PERFORMED BY A QUALIFIED CONTRACTOR OR FABRICATOR. CONTRACTORS OR FABRICATORS SHALL MAINTAIN CERTIFIED RECORDS WHICH SHALL BE AVAILABLE TO THE AUTHORITY HAVING JURISDICTION, OF THE PROCEDURES USED AND THE WELDERS OR WELDING MACHINE OPERATORS EMPLOYED BY THEM, ALONG WITH THEIR WELDING IDENTIFICATION RECORDS SHALL SHOW THE DATE AND THE RESULTS OF PROCEDURE AND PERFORMANCE QUALIFICATIONS.

PIPE TO BE JOINED WITH GROOVED COUPLINGS SHALL CONTAIN CUT, ROLLED OR CAST GROOVES THAT ARE DIMENSIONALLY COMPATIBLE WITH THE COUPLINGS.

STEEL PIPING HANGER REQUIREMENTS

HANGER ROD SIZE	3/8	1/2
UP TO AND INCLUDING 4" PIPE	●	
6" AND 8" PIPE		●

DISTANCE BETWEEN HANGERS	12'-0"	15'-0"
NOMINAL STEEL PIPING ≥ 1¼"	●	
NOMINAL STEEL PIPING ≥ 1½"		●

STOCK OF SPARE SPRINKLERS

A SUPPLY OF AT LEAST SIX (6) SPARE SPRINKLERS SHALL BE MAINTAINED ON THE PREMISES SO THAT ANY SPRINKLERS THAT HAVE OPERATED OR BEEN DAMAGED IN ANY WAY CAN BE PROMPTLY REPLACED.

FIRE DEPARTMENT CONNECTION

FIRE DEPARTMENT CONNECTION SHALL BE FIELD COORDINATED WITH THE LOCAL AUTHORITY HAVING JURISDICTION, PRIOR TO INSTALLATION, FOR REQUIREMENTS INCLUDING BUT NOT LIMITED TO: NUMBER OF HOSE CONNECTIONS, SIZE OF CONNECTIONS, HOSE THREAD AND INSTALLATION LOCATION.

FDC SHALL NOT HAVE ANY SHUT-OFF VALVES LOCATED BETWEEN HOSE CONNECTION AND CONNECTION TO SYSTEM.

ATTICS SHALL NOT TO BE USED FOR STORAGE OR LIVING SPACE

UNLESS SPECIFICALLY NOTED OTHERWISE - SPRINKLERED AND UN-SPRINKLERED ATTIC SPACES SHALL NOT BE USED FOR ANY STORAGE OR LIVING SPACE.

MECHANICAL EQUIPMENT (SUCH AS HVAC UNITS OR BOILER ROOMS) LOCATED IN ATTIC SPACES TO BE PROTECTED PER NFPA REQUIREMENTS.

SCOPE OF WORK

1. PROVIDED PLANS REPRESENT A CONTRACT BEGINNING AT THE WATER LINE INSIDE THE BUILDING LOCATED A MINIMUM OF 1'-0" ABOVE FINISHED FLOOR DESIGNATED FOR FIRE PROTECTION USE.

2. ALL UNDERGROUND PIPING SHALL BE DESIGNED AND INSTALLED BY OTHERS IN ACCORDANCE WITH SITE PLANS, UNDERGROUND UTILITY PLANS, AND ALL APPLICABLE CODES, INCLUDING BUT NOT LIMITED TO BURIAL DEPTH, MATERIAL OF PIPE, LABELING, FLUSHING AND APPROVALS.

3. IN LOCATIONS SUBJECT TO FREEZING CONDITIONS, IT IS THE OWNERS RESPONSIBILITY TO PROVIDE SUFFICIENT HEAT TO MAINTAIN A MINIMUM OF 40°F THROUGHOUT WET PIPE SPRINKLER SYSTEM AREAS AND IN ENCLOSURES FOR DRY PIPE, DELUGE AND OTHER TYPES OF VALVES CONTROLLING WATER SUPPLIES TO SPRINKLER SYSTEMS.

4. ACCEPTANCE TESTING, HYDROSTATIC TESTS, AIR TEST, MAIN DRAIN TEST, FLOW TEST, AND CERTIFICATION DOCUMENTS WILL BE PROVIDED BY THE INSTALLATION CONTRACTOR AS REQUIRED BY NFPA 13 AND ALL APPLICABLE CODES AT THE COMPLETION OF TESTING.

5. AUTOMATIC SPRINKLER SYSTEM DEVICES REQUIRING DEDICATED ELECTRICAL CIRCUITS OR LOW VOLTAGE MONITORING CIRCUITS ARE TO BE DESIGNED AND INSTALLED BY OTHERS IN ACCORDANCE WITH ALL APPLICABLE CODES.

APPLICABLE CODES

ALL FIRE SPRINKLER WORK AND MATERIALS SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF THE FOLLOWING CODES, AND ANY AUTHORITIES HAVING JURISDICTION:

CODE REFERENCE	APPLICABLE YES	APPLICABLE NO
BUILDING CODE OF NY STATE (2020 EDITION)	●	
FIRE CODE OF NY STATE (2020 EDITION)	●	
NFPA 13 (2016 EDITION)	●	●
NFPA 13-R (2016 EDITION)		●
NFPA 13-D (2016 EDITION)		●
NFPA 14 (2016 EDITION)		●
NFPA 20 (2016 EDITION)	●	
NFPA 24 (2016 EDITION)		●
UNDERWRITER'S LABORATORIES (UL)	●	
FACTORY MUTUAL (FM) GLOBAL		●

DESIGN CRITERIA

SPRINKLER SYSTEM PROTECTION DESIGNS FOR THE FOLLOWING OCCUPANCY CLASSIFICATIONS, COMMODITY CLASSIFICATIONS AND OTHER SPECIFIC DESIGN COMPONENTS:

	DESIGN CRITERIA	APPLICABLE YES	APPLICABLE NO
OCCUPANCY	RESIDENTIAL OCCUPANCY		●
	LIGHT HAZARD OCCUPANCY	●	
	ORDINARY HAZARD GRP I OCCUPANCY		●
	ORDINARY HAZARD GRP II OCCUPANCY		●
	EXTRA HAZARD OCCUPANCY		●
	MISC. STORAGE ≥ 12'-0"		●
	HIGH-PILED STORAGE > 12'-0"	●	
	RACK STORAGE > 12'-0"	●	
STORAGE	CLASS I COMMODITIES	●	
	CLASS II COMMODITIES	●	
	CLASS III COMMODITIES	●	
	CLASS IV COMMODITIES	●	
	GRP A PLASTIC COMMODITIES	●	
	DESIGN COMPONENTS	APPLICABLE YES	APPLICABLE NO
SYSTEM TYPE	WET SYSTEM	●	
	DRY SYSTEM		●
	ANTI-FREEZE LOOP SYSTEM		●
	SINGLE INTERLOCK PRE-ACTION		●
	DOUBLE INTERLOCK PRE-ACTION		●
	DELUGE SYSTEM		●
	STORAGE - CMSA		●
	STORAGE - ESFR	●	
STANDPIPE REQUIRED			●
FIRE PUMP REQUIRED		●	

FITTINGS	PIPE TYPE
CPVC	
THREADED	
GROOVED	●

PIPE MATERIAL	LINE - 1"	LINE - 1¼"	LINE - 1½"	LINE - 2"	MAIN - 1½"	MAIN - 2"	MAIN - 2½"	MAIN - 3"	MAIN - 4"	MAIN - 6"	STANDPIPE
CPVC											
SCHED - 40 BLK							●			●	
SCHED -10 BLK											
SCHED - 40 GALV											
NOT APPLICABLE	●	●	●	●	●	●		●	●		●

GENERAL NOTES

1. GENERAL NOTES SHALL APPLY TO ALL DRAWINGS REFERENCED HEREIN.

2. THE GENERAL CONTRACTOR SHALL VERIFY THAT ALL WORK CONFORMS WITH THE REQUIREMENTS AND ALL APPLICABLE LOCAL CODES ENFORCED BY THE AUTHORITY HAVING JURISDICTION.

3. ALL WORK SHALL COMPLY WITH APPLICABLE LOCAL AND MUNICIPAL BUILDING CODES, AS WELL AS ANY AND ALL REGULATORY AGENCIES.

4. THE GENERAL CONTRACTOR SHALL VERIFY ALL JOB CONDITIONS, DIMENSIONS AND DETAILS PRIOR TO CONSTRUCTION.

5. THE GENERAL CONTRACTOR SHALL PROVIDE NOTIFICATION OF ANY DISCREPANCIES OR OMISSION WHICH WOULD INTERFERE WITH THE SATISFACTORY COMPLETION OF WORK, PRIOR TO THE START OF ANY AND ALL WORK.

6. ALL WORK, WHETHER SHOWN OR IMPLIED, UNLESS SPECIFICALLY QUESTIONED, SHALL BE CONSIDERED FULLY UNDERSTOOD IN ALL RESPECTS BY THE GENERAL CONTRACTOR, AND HE WILL BE RESPONSIBLE FOR ANY MISINTERPRETATIONS OR CONSEQUENCES THEREOF FOR ALL WORK ON ALL DRAWINGS.

7. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO PICK UP THE BUILDING PERMIT AT THE BUILDING DEPARTMENT OFFICES AND PAY ALL OUTSTANDING FEES.

8. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL DRAWINGS, COMPLETED PAPERWORK, CERTIFICATES OF INSPECTION AND SHALL PERFORM ALL THE CONTROLLED INSPECTIONS AS REQUIRED FOR BUILDING DEPARTMENT APPROVAL.

9. UPON COMPLETION OF THE JOB, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTAL OF ALL REQUIRED CERTIFICATES OF INSPECTION AND A CERTIFICATE OF SUBSTANTIAL COMPLETION, AS REQUIRED BY THE BUILDING DEPARTMENT.

10. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ARRANGING WITH THE BUILDING MANAGEMENT THE USE OF ELEVATOR OR OTHER HOISTING FACILITIES FOR HANDLING THE DELIVERY OF MATERIALS. ANY AND ALL FEES INVOLVED FOR THE USE OF THE HOISTING FACILITIES WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

11. THE GENERAL CONTRACTOR SHALL CONFORM TO BUILDING STANDARD PROCEDURES FOR THE THE SCHEDULING OF DEMOLITION, INSTALLATION, AND CORE DRILLING.

12. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING FOR THE REMOVAL OF RUBBISH FROM THE PROPERTY. ANY AND ALL FEES INVOLVED FOR THE REMOVAL OF RUBBISH SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A SAFE WORKING ENVIRONMENT, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:

A. PROVIDING AND MAINTAINING FIRE EXTINGUISHERS ON THE JOBSITE DURING CONSTRUCTION.

B. ALL FIRE EXITS SHALL BE KEPT CLEAR AND ACCESSIBLE AT ALL TIMES.

C. REASONABLE JOBSITE SECURITY TO PROVIDE FOR A SAFE PLACE TO STOCK MATERIALS AND PREVENT THEFT OR DAMAGE DURING CONSTRUCTION.

D. ADEQUATE LIGHTING IN ALL WORK AREAS DURING CONSTRUCTION HOURS.

E. ADEQUATE FALL PROTECTION SHALL BE PROVIDED AT ALL BUILDING ENTRANCES, WINDOWS, AND SHAFTS AS REQUIRED BY OSHA.

FIRE PROTECTION NOTES

1. SPRINKLER SYSTEM NOTES SHALL APPLY TO ALL DRAWINGS REFERENCED HEREIN.

2. ALL FIRE PROTECTION WORK SHALL CONFORM WITH THE REQUIREMENTS AND ALL APPLICABLE LOCAL CODES ENFORCED BY THE AUTHORITY HAVING JURISDICTION.

3. SPRINKLER SYSTEM INSTALLATION SHALL BE COMPLETE WITH ALL FITTINGS, PIPES, SPRINKLERS, HANGERS, DRAINS AT LOW POINTS, VALVES, AND OTHER DEVICES SPECIFIED IN SHOP DRAWINGS AND SPECIFICATIONS.

4. ALL EQUIPMENT SPECIFIED IS FOR TYPE AND CAPACITY ONLY. THE CONTRACTOR MAY SUBSTITUTE OTHER MAKES OR TYPES WITH APPROVED EQUAL SPECIFICATIONS.

IMPORTANT

IN LOCATIONS SUBJECT TO FREEZING CONDITIONS, IT IS THE OWNERS RESPONSIBILITY TO PROVIDE SUFFICIENT HEAT TO MAINTAIN A MINIMUM OF 40°F THROUGHOUT WET PIPE SPRINKLER SYSTEM AREAS AND IN ENCLOSURES FOR DRY PIPE, DELUGE AND OTHER TYPES OF VALVES CONTROLLING WATER SUPPLIES TO SPRINKLER SYSTEMS.

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CONTRACTOR

GLOBAL FIRE PREVENTION
AUTOMATIC FIRE SPRINKLERS

59 GILBERT STREET, SUITE 101
MONROE, NY 10950
845-781-0117
INFO@GLOBALFIREUSA.COM
www.globalfireusa.com

DISCLAIMER

THIS DRAWING REPRESENTS THE DRAFTING WORK PERFORMED BY ALL IN ONE FIRE PROTECTION INC. (DBA GLOBAL FIRE PREVENTION) HEREAFTER KNOWN AS AIOFP INC. ONCE THIS DRAWING LEAVES OUR OFFICE, WE HAVE NO CONTROL OVER ANY CHANGES MADE TO THE BLUEPRINTS AND/OR COPIES OF THE ORIGINAL DRAWING. AIOFP INC. IS NOT RESPONSIBLE FOR THE INSTALLATION AND CANNOT BE HELD RESPONSIBLE FOR ANY CLAIMS THAT MAY ARISE FROM THE INSTALLATION OF THIS SYSTEM. THE OWNER, GC, SUB-CONTRACTOR, OR ANY PERSON OR ENTITY WHICH ACQUIRES OR OBTAINS THIS DRAWING SHALL, TO THE FULLEST EXTENT PERMITTED BY LAW, INDEMNIFY AND HOLD AIOFP INC. AND ITS OFFICES, EMPLOYEES & SUBSIDIARIES HARMLESS FROM ANY DAMAGE, LIABILITY OR COST, INCLUDING REASONABLE ATTORNEY FEES AND COST OF DEFENSE, ARISING FROM ANY REUSE OR MODIFICATIONS MADE TO THIS DRAWING AND/OR INSTALLATION OF THIS SYSTEM. IN NO EVENT SHOULD AIOFP INC. BE LIABLE FOR ANY LOSS OF INCOME, PROFITS OR ANY DAMAGES. AIOFP INC. TOTAL LIABILITY ARISING OUT OF, OR IN ANYWAY CONNECTED WITH, THIS DRAWING WILL NOT EXCEED THE TOTAL AMOUNT OF OUR CONTRACT. FURTHERMORE, BY ACCEPTING THIS DRAWING THE OWNER, GC, SUB-CONTRACTOR OR ANY PERSON OR ENTITY WHICH ACQUIRES OR OBTAINS THIS DRAWING ACCEPT & AGREES TO THE TERMS OUTLINED HEREIN.

SEAL AND SIGNATURE

MICHAEL E. MIELE, PE
LIC # 079676

PROJECT INFORMATION:
PROPOSED WAREHOUSE
FARRELL INDUSTRIAL PARK

PROJECT LOCATION:
ROUTE 300
NEWBURGH, NY

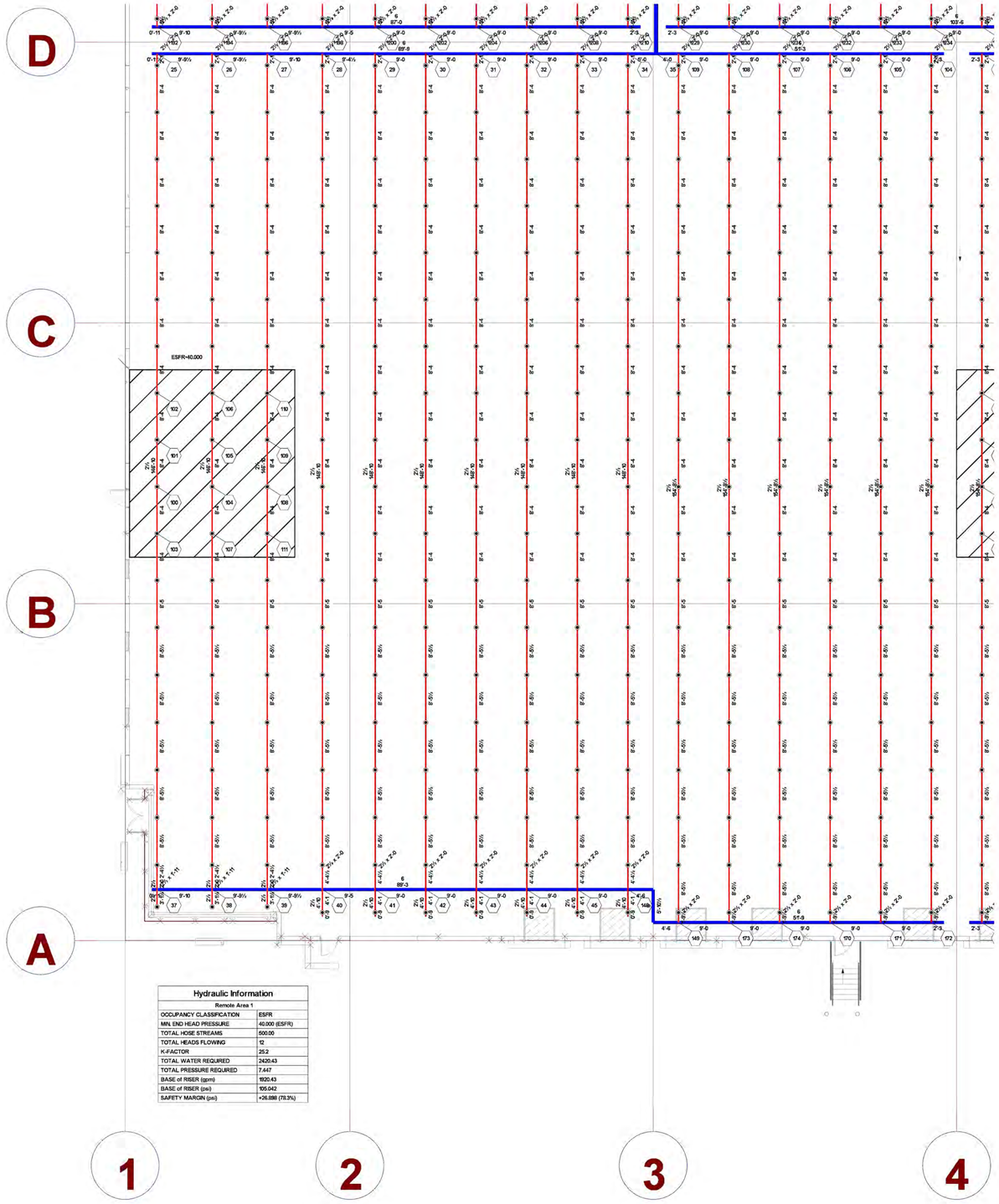
TAX LOT ID:	XX.XX-XX-XX
DRAWN BY	AJH
SCALE	1/8" = 1'-0" U.N.O.
DATE	04/18/2023

FIRE PROTECTION PLAN

FP-0 | 1 of 12

Sprinkler Legend - Project Total

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Spacing
◉	Reliable	RA0912	N25 ESFR	3440	25.2	Pendent	1	Fast	Brass	212 °F	
				Total = 3440							



Hydraulic Information	
Remote Area 1	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	500.00
TOTAL HEADS FLOWING	12
K-FACTOR	25.2
TOTAL WATER REQUIRED	2420.43
TOTAL PRESSURE REQUIRED	7.447
BASE of RISER (gpm)	1920.43
BASE of RISER (psi)	105.042
SAFETY MARGIN (psi)	+26.888 (78.3%)

1 SYSTEM 1
0-3/32 " = 1 Foot

SYSTEM 1	
Symbol	# OF HEADS
◉	340
	Total = 340

IMPORTANT

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MICHAEL E. MIELE, PE
LIC # 079676

PROJECT INFORMATION:
PROPOSED WAREHOUSE
FARRELL INDUSTRIAL PARK

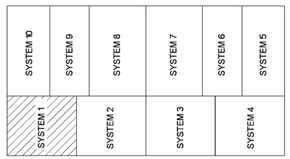
PROJECT LOCATION:
ROUTE 300
NEWBURGH, NY

TAX LOT ID:	XX.XX-XX-XX
DRAWN BY	AJH
SCALE	1/8" = 1-0" U.N.O.
DATE	04/18/2023

FIRE PROTECTION PLAN

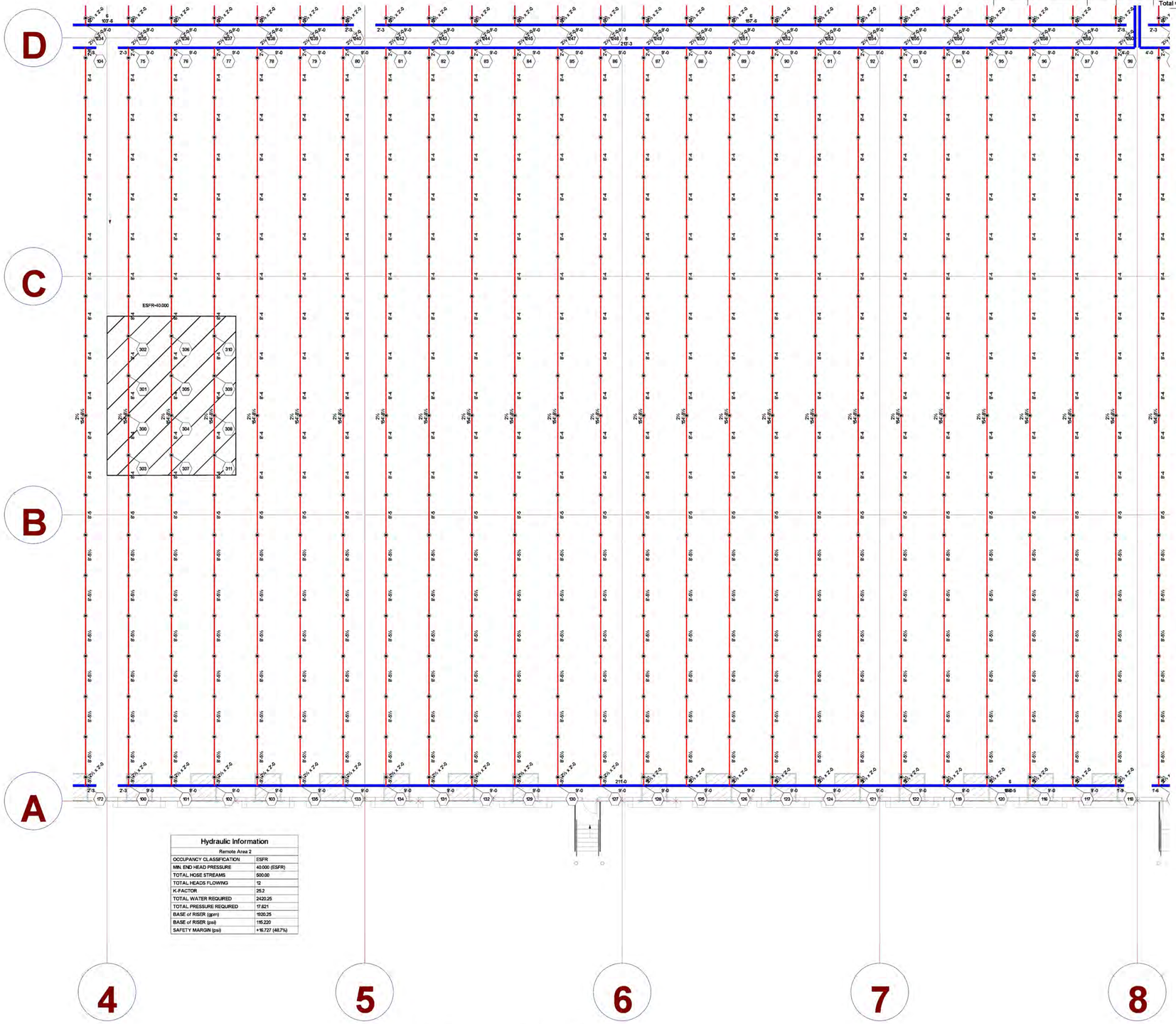
FP-1 | 2 of 12

KEY PLAN



Sprinkler Legend - Project Total

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Spacing
◉	Reliable	RA0912	N25 ESFR	3440	25.2	Pendent	1	Fast	Brass	212 °F	
				Total = 3440							



Hydraulic Information	
Remote Area 2	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	500.00
TOTAL HEADS FLOWING	12
K-FACTOR	25.2
TOTAL WATER REQUIRED	2420.25
TOTAL PRESSURE REQUIRED	17.621
BASE of RISER (gpm)	1920.25
BASE of RISER (psi)	195.220
SAFETY MARGIN (psi)	+16.727 (48.7%)

SYSTEM 2	
Symbol	# OF HEADS
◉	520
	Total = 520

IMPORTANT

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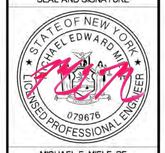
www.globalfireusa.com

DISCLAIMER

SEAL AND SIGNATURE

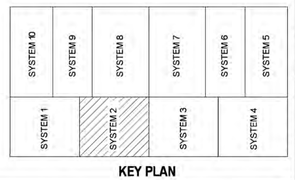


MICHAEL E. MIELE, PE
LIC # 079676

PROJECT INFORMATION:
PROPOSED WAREHOUSE
FARRELL INDUSTRIAL PARK

PROJECT LOCATION:
ROUTE 300
NEWBURGH, NY

KEY PLAN



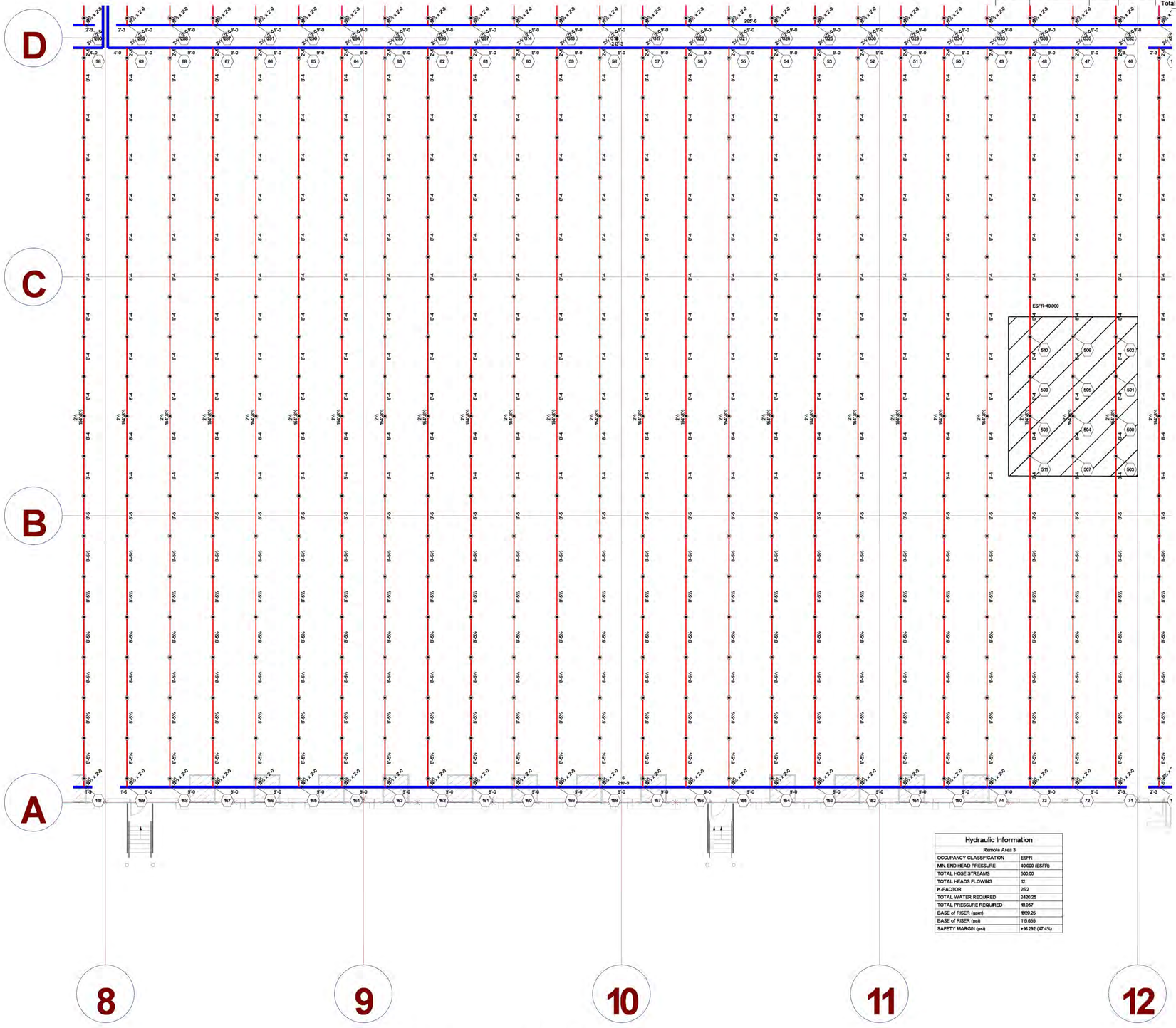
TAX LOT ID:	XX.XX-XX-XX
DRAWN BY	AJH
SCALE	1/8" = 1'-0" U.N.O.
DATE	04/18/2023

FIRE PROTECTION PLAN

FP-2 | 3 of 12

Sprinkler Legend - Project Total

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Spacing
◉	Reliable	RA0912	N25 ESFR	3440	25.2	Pendent	1	Fast	Brass	212 °F	
				Total = 3440							



1 SYSTEM 3
0-3/32 " = 1 Foot

SYSTEM 3	
Symbol	# OF HEADS
◉	520
	Total = 520

Hydraulic Information	
Remote Area 3	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	500.00
TOTAL HEADS FLOWING	12
K-FACTOR	25.2
TOTAL WATER REQUIRED	2420.25
TOTAL PRESSURE REQUIRED	18.057
BASE of RISER (gpm)	1900.25
BASE of RISER (psi)	115.655
SAFETY MARGIN (psi)	+ 16.292 (47.4%)

KEY PLAN

SYSTEM 10	SYSTEM 9	SYSTEM 8	SYSTEM 7	SYSTEM 6	SYSTEM 5
SYSTEM 1	SYSTEM 2		SYSTEM 3	SYSTEM 4	

IMPORTANT

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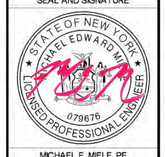


MICHAEL E. MIELE, PE.
LIC # 079676

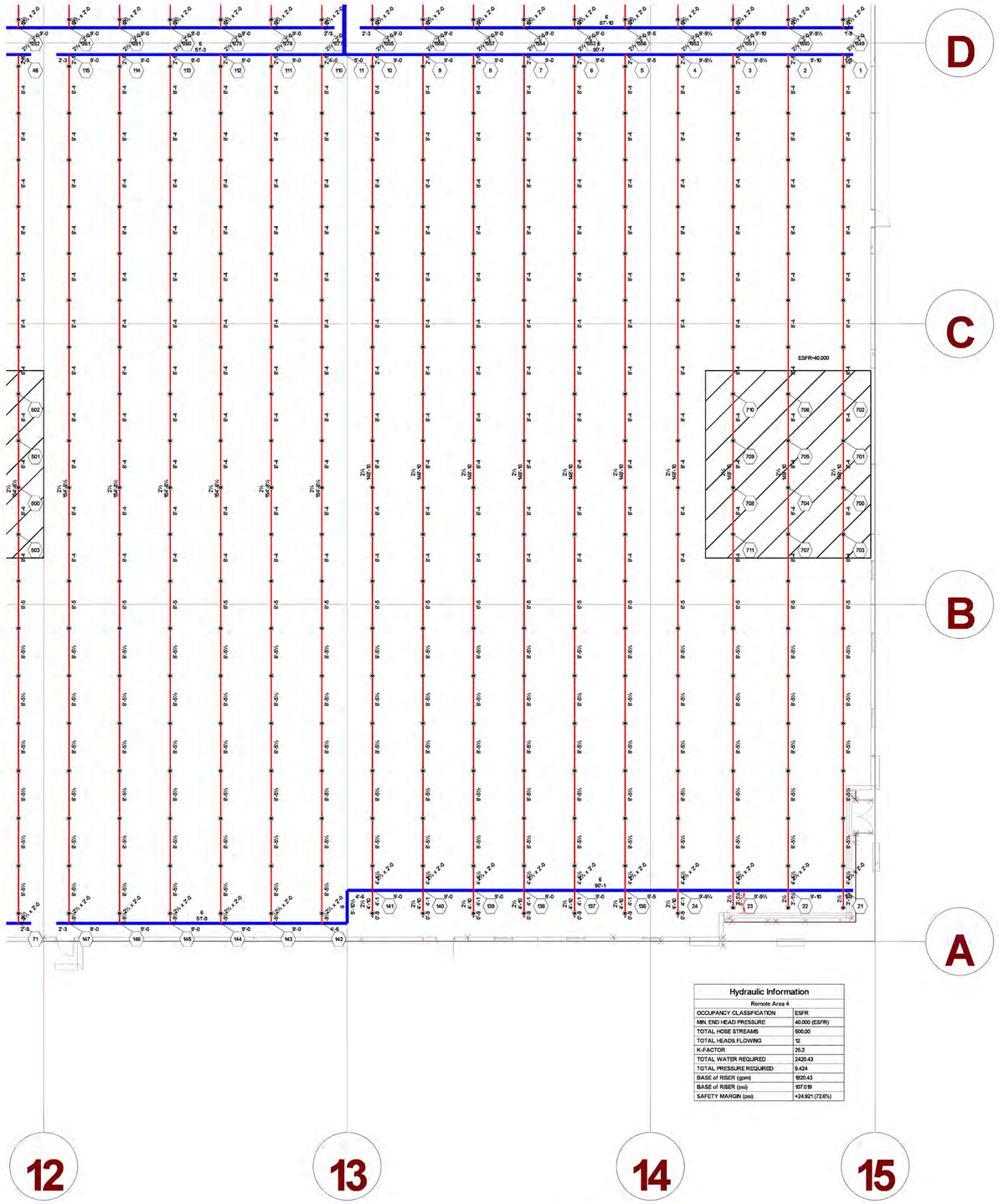
PROJECT INFORMATION:
PROPOSED WAREHOUSE
FARRELL INDUSTRIAL PARK

PROJECT LOCATION:
ROUTE 300
NEWBURGH, NY

TAX LOT ID:	xx.xx-xx-xx
DRAWN BY	AJH
SCALE	1/8" = 1'-0" U.N.O.
DATE	04/18/2023

FIRE PROTECTION PLAN

FP-3 | 4 of 12



1 SYSTEM 4
0-3/32 " = 1 Foot

Hydraulic Information	
Remote Area 4	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	500.00
TOTAL HEADS FLOWING	12
K-FACTOR	25.2
TOTAL WATER REQUIRED	2420.43
TOTAL PRESSURE REQUIRED	9.424
BASE of RISER (gpm)	1920.43
BASE of RISER (psi)	107.019
SAFETY MARGIN (psi)	+24.921 (72.6%)

SYSTEM 4	
Symbol	# OF HEADS
◉	340
Total = 340	

Sprinkler Legend - Project Total											
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Spacing
◉	Reliable	RA0912	N25 ESFR	3440	25.2	Pendent	1	Fast	Brass	212 °F	
				Total = 3440							

IMPORTANT

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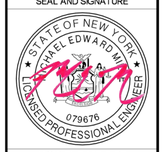


MICHAEL E. MIELE, PE
LIC # 079676

PROJECT INFORMATION:
PROPOSED WAREHOUSE
FARRELL INDUSTRIAL PARK

PROJECT LOCATION:
ROUTE 300
NEWBURGH, NY

TAX LOT ID:	XX.XX-XX-XX
DRAWN BY	AJH
SCALE	1/8" = 1'-0" U.N.O.
DATE	04/18/2023

FIRE PROTECTION PLAN

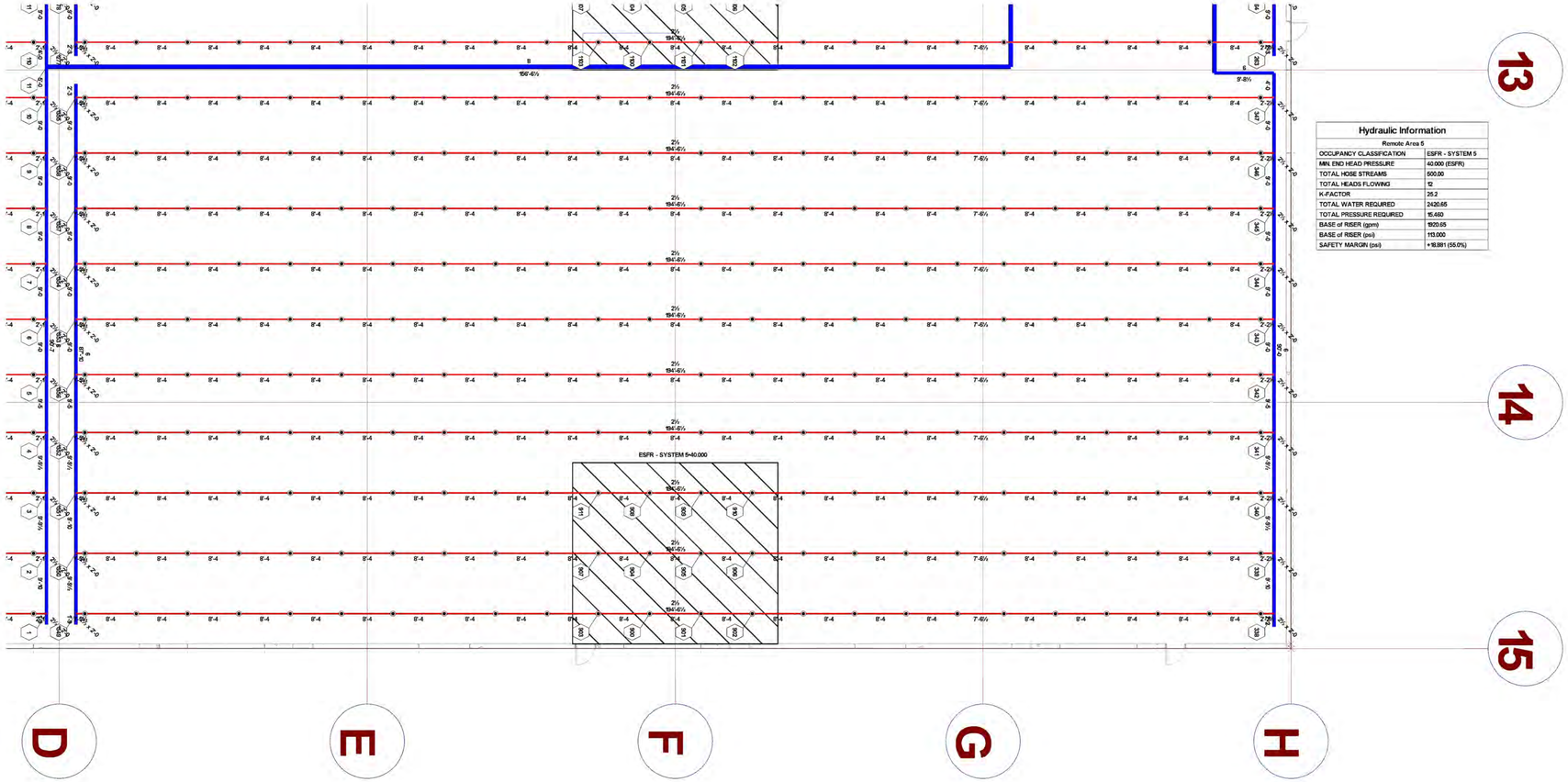
FP-4 | 5 of 12

KEY PLAN

SYSTEM 10	SYSTEM 9	SYSTEM 8	SYSTEM 7	SYSTEM 6	SYSTEM 5
SYSTEM 1		SYSTEM 2	SYSTEM 3	SYSTEM 4	

Sprinkler Legend - Project Total

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Spacing
◉	Reliable	RA0912	N25 ESFR	3440	25.2	Pendent	1	Fast	Brass	212 °F	
				Total = 3440							



1 SYSTEM 5
0-3/32 " = 1 Foot

SYSTEM 5	
Symbol	# OF HEADS
◉	275
	Total = 275

Hydraulic Information	
Remote Area 5	
OCCUPANCY CLASSIFICATION	ESFR - SYSTEM 5
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	500.00
TOTAL HEADS FLOWING	12
K-FACTOR	25.2
TOTAL WATER REQUIRED	2430.65
TOTAL PRESSURE REQUIRED	15.460
BASE of RISER (gpm)	1920.65
BASE of RISER (psi)	113.000
SAFETY MARGIN (psi)	+ 16.991 (56.0%)

IMPORTANT

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DISCLAIMER

SEAL AND SIGNATURE

MICHAEL E. MIELE, PE.
LIC # 079676

PROJECT INFORMATION:
PROPOSED WAREHOUSE
FARRELL INDUSTRIAL PARK

PROJECT LOCATION:
ROUTE 300
NEWBURGH, NY

TAX LOT ID:	XXXX-XX-XX
DRAWN BY	AJH
SCALE	1/8" = 1'-0" U.N.O.
DATE	04/18/2023

FIRE PROTECTION PLAN

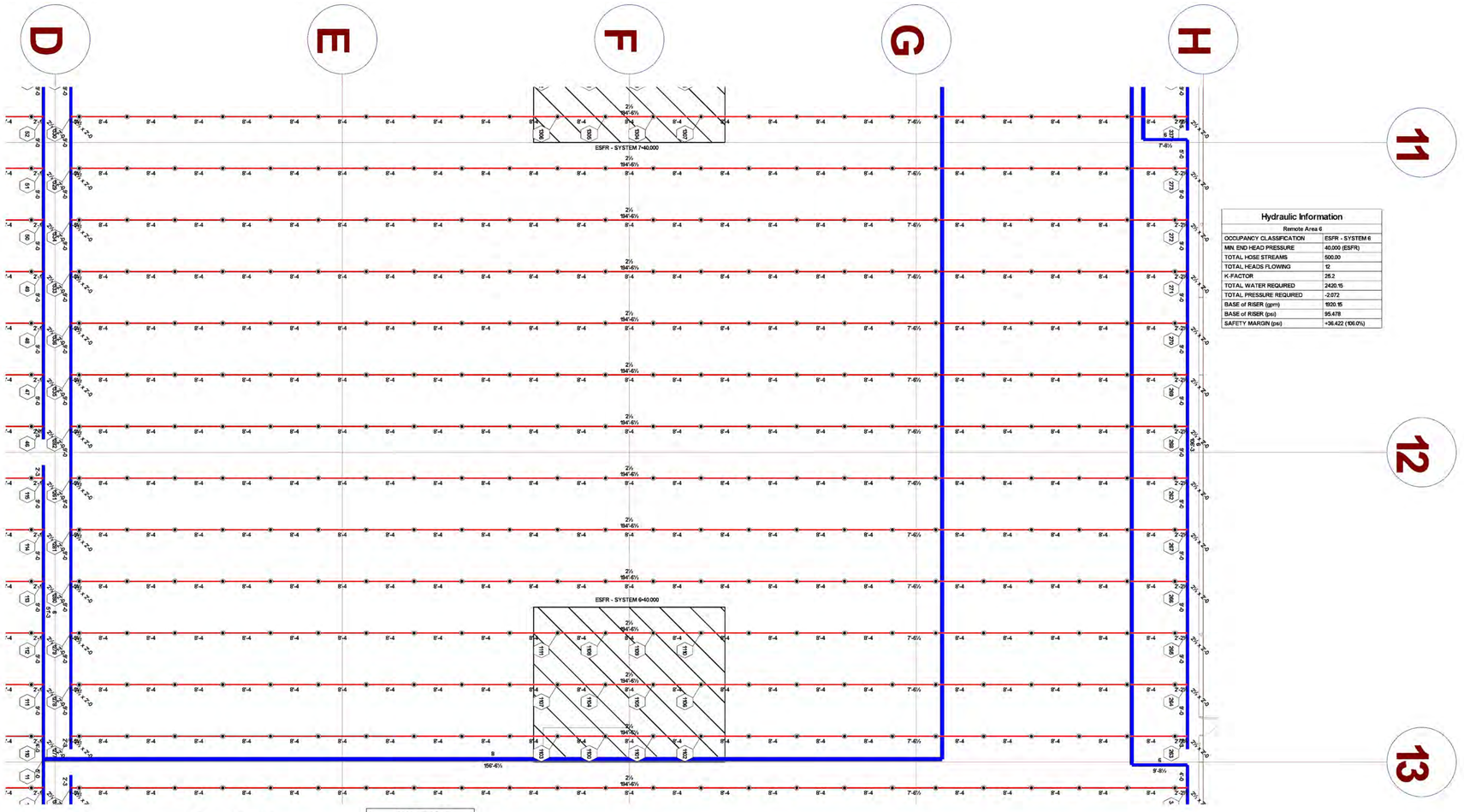
FP-5 | 6 of 12

KEY PLAN

SYSTEM 10	SYSTEM 9	SYSTEM 8	SYSTEM 7	SYSTEM 6	SYSTEM 5
SYSTEM 1		SYSTEM 2	SYSTEM 3		SYSTEM 4

Sprinkler Legend - Project Total

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Spacing
◉	Reliable	RA0912	N25 ESFR	3440	25.2	Pendent	1	Fast	Brass	212 °F	
				Total = 3440							



1 SYSTEM 6
0-3/32 " = 1 Foot

SYSTEM 6	
Symbol	# OF HEADS
◉	350
	Total = 350

Hydraulic Information	
Remote Area 6	
OCCUPANCY CLASSIFICATION	ESFR - SYSTEM 6
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	500.00
TOTAL HEADS FLOWING	12
K-FACTOR	25.2
TOTAL WATER REQUIRED	2420.15
TOTAL PRESSURE REQUIRED	-2.072
BASE of RISER (gpm)	1920.15
BASE of RISER (psi)	95.478
SAFETY MARGIN (psi)	+36.422 (106.0%)

KEY PLAN

SYSTEM 10	SYSTEM 9	SYSTEM 8	SYSTEM 7	SYSTEM 6	SYSTEM 5
SYSTEM 1	SYSTEM 2		SYSTEM 3	SYSTEM 4	

IMPORTANT

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DISCLAIMER

SEAL AND SIGNATURE

STATE OF NEW YORK · MICHAEL EDWARD MIELE · 079676 · LICENSED PROFESSIONAL ENGINEER

MICHAEL E. MIELE, PE
LIC # 079676

PROJECT INFORMATION:
PROPOSED WAREHOUSE
FARRELL INDUSTRIAL PARK

PROJECT LOCATION:
ROUTE 300
NEWBURGH, NY

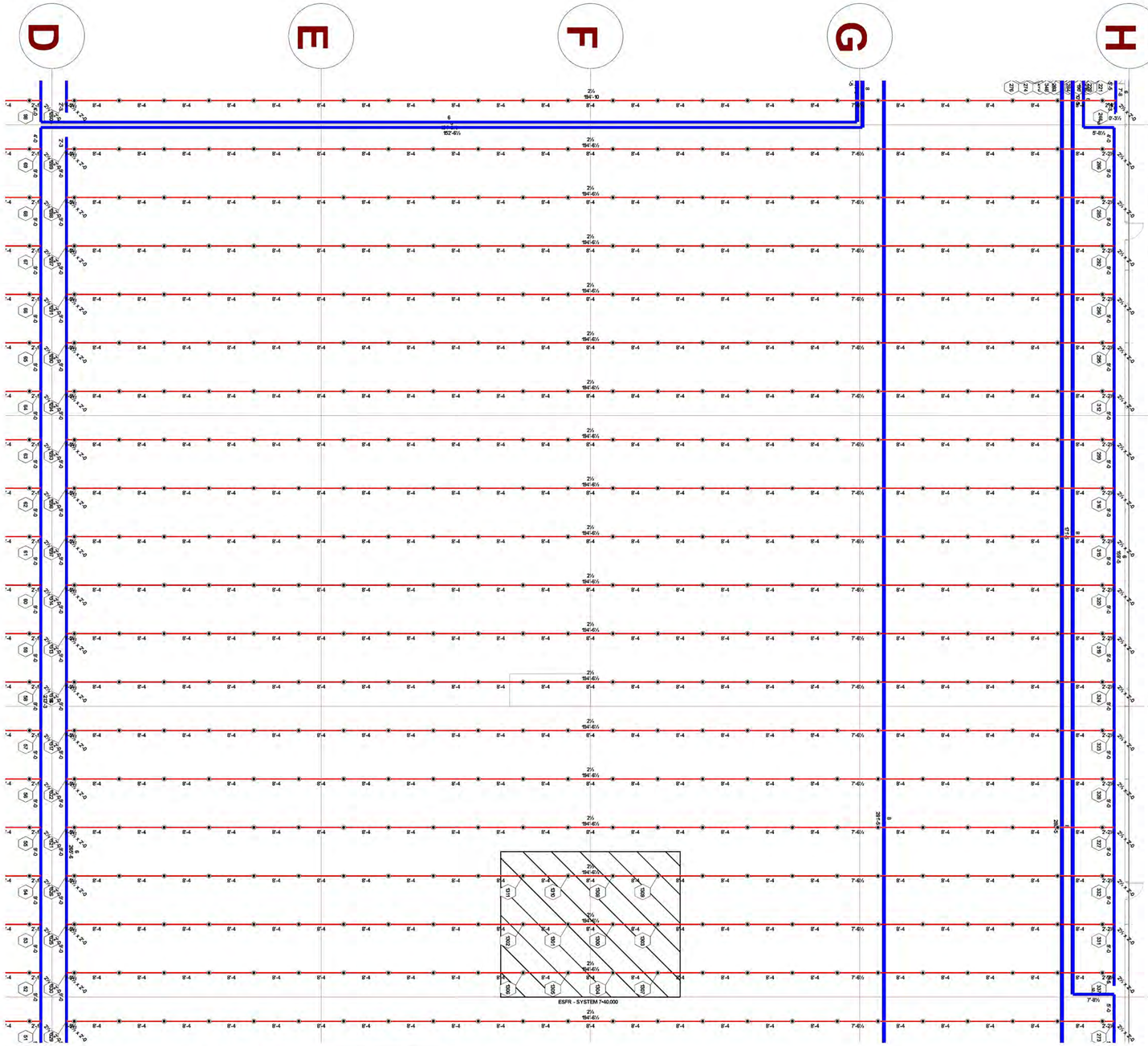
TAX LOT ID:	xx.xx-xx-xx
DRAWN BY	AJH
SCALE	1/8" = 1'-0" U.N.O.
DATE	04/18/2023

FIRE PROTECTION PLAN

FP-6 | 7 of 12

Sprinkler Legend - Project Total

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Spacing
◉	Reliable	RA0912	N25 ESFR	3440	25.2	Pendent	1	Fast	Brass	212 °F	
				Total = 3440							



1 SYSTEM 7
0-3/32 " = 1 Foot

SYSTEM 7	
Symbol	# OF HEADS
◉	500
	Total = 500

Hydraulic Information	
Remote Area 7	
OCCUPANCY CLASSIFICATION	ESFR - SYSTEM 7
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	500.00
TOTAL HEADS FLOWING	12
K-FACTOR	25.2
TOTAL WATER REQUIRED	2419.64
TOTAL PRESSURE REQUIRED	-2.396
BASE of RISER (gpm)	1919.64
BASE of RISER (psi)	95.163
SAFETY MARGIN (psi)	+36.757 (107.0%)

IMPORTANT

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CONTRACTOR

GLOBAL FIRE PREVENTION
AUTOMATIC FIRE SPRINKLERS
59 GILBERT STREET, SUITE 101
MONROE, NY 10950
845-7814017
INFO@GLOBALFIREUSA.COM
www.globalfireusa.com

DISCLAIMER

SEAL AND SIGNATURE

MICHAEL E. MIELE, PE
LIC # 079676

PROJECT INFORMATION:
PROPOSED WAREHOUSE
FARRELL INDUSTRIAL PARK

PROJECT LOCATION:
ROUTE 300
NEWBURGH, NY

TAX LOT ID:	xx.xx-xx-xx
DRAWN BY	AJH
SCALE	1/8" = 1'-0" U.N.O.
DATE	04/18/2023

FIRE PROTECTION PLAN

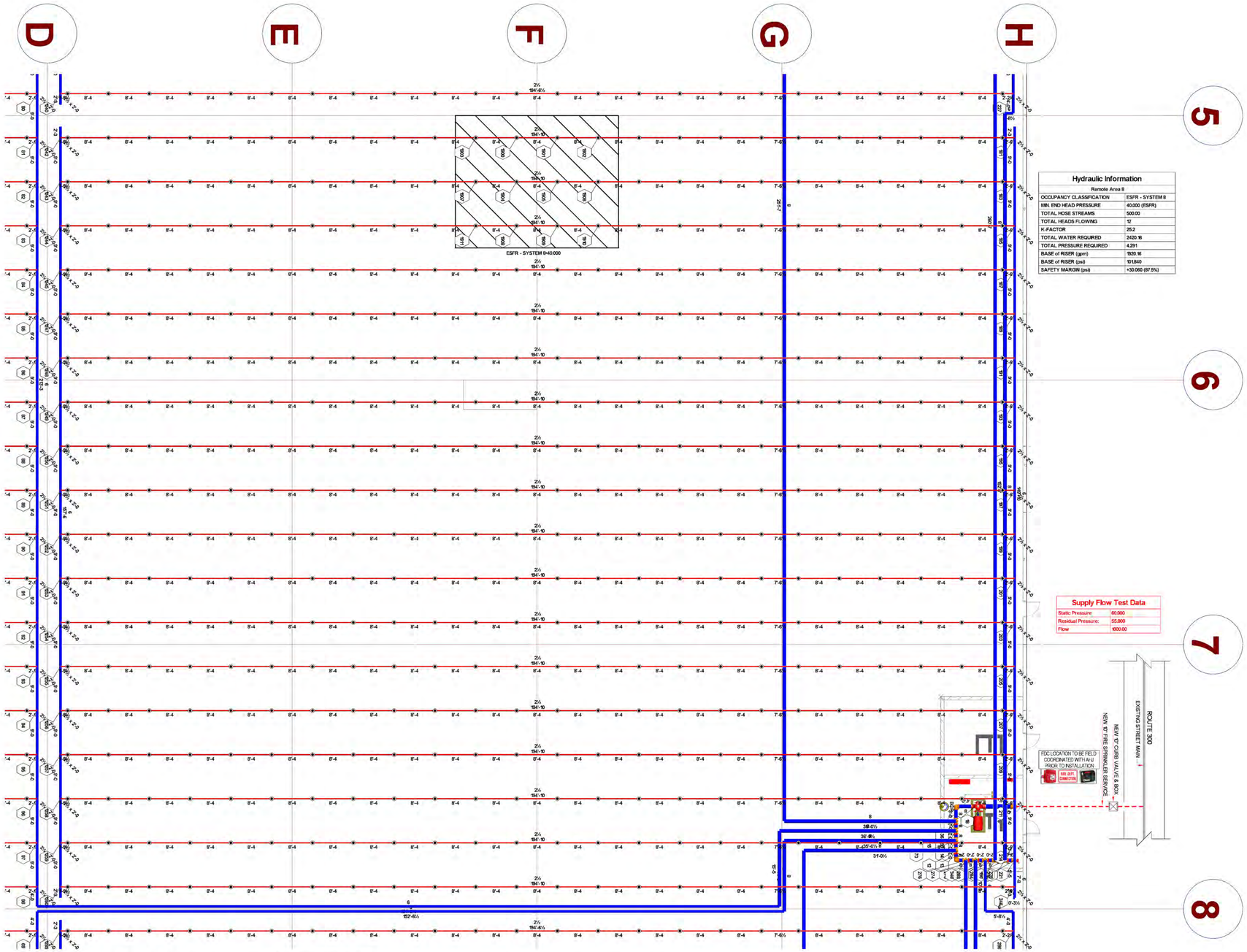
FP-7 | 8 of 12

KEY PLAN

SYSTEM 10	SYSTEM 9	SYSTEM 8	SYSTEM 7	SYSTEM 6	SYSTEM 5
SYSTEM 1		SYSTEM 2	SYSTEM 3		SYSTEM 4

Sprinkler Legend - Project Total

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Spacing
◉	Reliable	RA0912	N25 ESFR	3440	25.2	Pendent	1	Fast	Brass	212 °F	
				Total = 3440							



Hydraulic Information	
Remote Area 8	
OCCUPANCY CLASSIFICATION	ESFR - SYSTEM 8
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	500.00
TOTAL HEADS FLOWING	12
K-FACTOR	25.2
TOTAL WATER REQUIRED	2420.16
TOTAL PRESSURE REQUIRED	4.291
BASE of RISER (gpm)	1920.16
BASE of RISER (psi)	101.840
SAFETY MARGIN (psi)	+30.000 (87.5%)

Supply Flow Test Data	
Static Pressure:	60.000
Residual Pressure:	55.000
Flow	1000.00

1 SYSTEM 8
0-3/32 " = 1 Foot

SYSTEM 8	
Symbol	# OF HEADS
◉	500
	Total = 500

SYSTEM 10	SYSTEM 9	SYSTEM 8	SYSTEM 7	SYSTEM 6	SYSTEM 5
SYSTEM 1	SYSTEM 2		SYSTEM 3	SYSTEM 4	

KEY PLAN

IMPORTANT

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INFO@GLOBALFIREUSA.COM
www.globalfireusa.com

DISCLAIMER

SEAL AND SIGNATURE

MICHAEL E. MIELE, PE.
LIC # 079676

PROJECT INFORMATION:
PROPOSED WAREHOUSE
FARRELL INDUSTRIAL PARK

PROJECT LOCATION:
ROUTE 300
NEWBURGH, NY

TAX LOT ID:	XX.XX-XX-XX
DRAWN BY	AJH
SCALE	1/8" = 1-0" U.N.O.
DATE	04/18/2023

FIRE PROTECTION PLAN

FP-8 | 9 of 12

Sprinkler Legend - Project Total

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Spacing
◉	Reliable	RA0912	N25 ESFR	3440	25.2	Pendent	1	Fast	Brass	212 °F	
				Total = 3440							

1 SYSTEM 9
0-3/32 " = 1 Foot

SYSTEM 9	
Symbol	# OF HEADS
◉	350
	Total = 350

Hydraulic Information

Remote Area 9

OCCUPANCY CLASSIFICATION	ESFR - SYSTEM 9
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	500.00
TOTAL HEADS FLOWING	12
K-FACTOR	25.2
TOTAL WATER REQUIRED	2420.32
TOTAL PRESSURE REQUIRED	10.442
BASE of RISER (gpm)	1920.32
BASE of RISER (psi)	107.988
SAFETY MARGIN (psi)	+23.905 (69.6%)

KEY PLAN

SYSTEM 10	SYSTEM 9	SYSTEM 8	SYSTEM 7	SYSTEM 6	SYSTEM 5
SYSTEM 1		SYSTEM 2	SYSTEM 3		SYSTEM 4

IMPORTANT

IN LOCATIONS SUBJECT TO FREEZING CONDITIONS, IT IS THE OWNERS RESPONSIBILITY TO PROVIDE SUFFICIENT HEAT TO MAINTAIN A MINIMUM OF 40°F THROUGHOUT WET PIPE SPRINKLER SYSTEM AREAS AND IN ENCLOSURES FOR DRY PIPE, DELUGE AND OTHER TYPES OF VALVES CONTROLLING WATER SUPPLIES TO SPRINKLER SYSTEMS.

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DISCLAIMER

SEAL AND SIGNATURE

MICHAEL E. MIELE, PE
LIC # 079676

PROJECT INFORMATION:
PROPOSED WAREHOUSE
FARRELL INDUSTRIAL PARK

PROJECT LOCATION:
ROUTE 300
NEWBURGH, NY

TAX LOT ID:	xx.xx-xx-xx
DRAWN BY	AJH
SCALE	1/8" = 1'-0" U.N.O.
DATE	04/18/2023

FIRE PROTECTION PLAN

FP-9 | 10 of 12

Sprinkler Legend - Project Total

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Spacing
◉	Reliable	RA0912	N25 ESFR	3440	25.2	Pendent	1	Fast	Brass	212 °F	
				Total = 3440							

Hydraulic Information	
Remote Area 10	
OCCUPANCY CLASSIFICATION	ESFR - SYSTEM 10
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	500.00
TOTAL HEADS FLOWING	12
K-FACTOR	25.2
TOTAL WATER REQUIRED	2420.65
TOTAL PRESSURE REQUIRED	14.534
BASE of RISER (gpm)	1920.65
BASE of RISER (psi)	112.074
SAFETY MARGIN (psi)	+ 19.807 (57.7%)

1 SYSTEM 10
0-3/32 " = 1 Foot

SYSTEM 10	
Symbol	# OF HEADS
◉	275
	Total = 275

KEY PLAN

SYSTEM 10	SYSTEM 9	SYSTEM 8	SYSTEM 7	SYSTEM 6	SYSTEM 5
SYSTEM 1		SYSTEM 2	SYSTEM 3		SYSTEM 4

IMPORTANT

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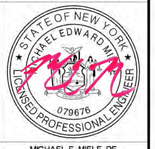


MICHAEL E. MIELE, PE
LIC # 079676

PROJECT INFORMATION:
PROPOSED WAREHOUSE
FARRELL INDUSTRIAL PARK

PROJECT LOCATION:
ROUTE 300
NEWBURGH, NY

TAX LOT ID:	XX.XX-XX-XX
DRAWN BY	AJH
SCALE	1/8" = 1'-0" U.N.O.
DATE	04/18/2023

FIRE PROTECTION PLAN

FP-10 | 11 of 12

Sprinkler Legend - Project Total											
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Spacing
◉	Reliable	RA0912	N25 ESFR	3440	25.2	Pendent	1	Fast	Brass	212 °F	
				Total = 3440							

STORAGE FOR CEILING HEIGHTS UP TO 45'-0" USING ESFR K25.0 SPRINKLERS:

COMMODITY	CONFIGURATION	RACK STORAGE (A,B)	SOLID PILED / PALLETIZED
GROUP A PLASTICS NONEXPANDED	CARTONED	40 FT	30 FT
	EXPOSED	25 FT	30 FT
CLASS IV	NON-ENCAPSULATED(D)	40 FT	35 FT
CLASS I - III	NON-ENCAPSULATED(D)	40 FT	35 FT
IDLE WOOD PALLETS	STACKED ON FLOOR	20 FT	25 FT

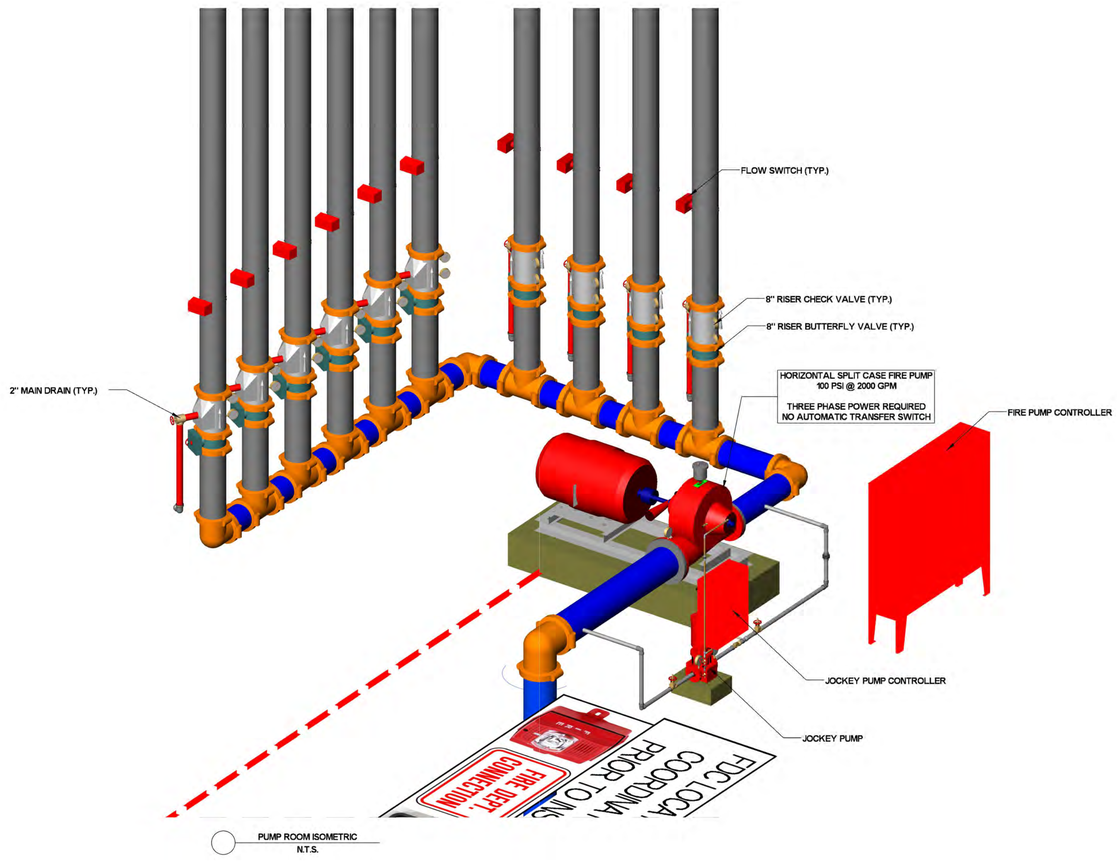
IMPORTANT: A MINIMUM CLEARANCE OF 36" BETWEEN THE SPRINKLER DEFLECTOR AND THE TOP OF STORAGE MUST BE MAINTAINED

FOOTNOTES:

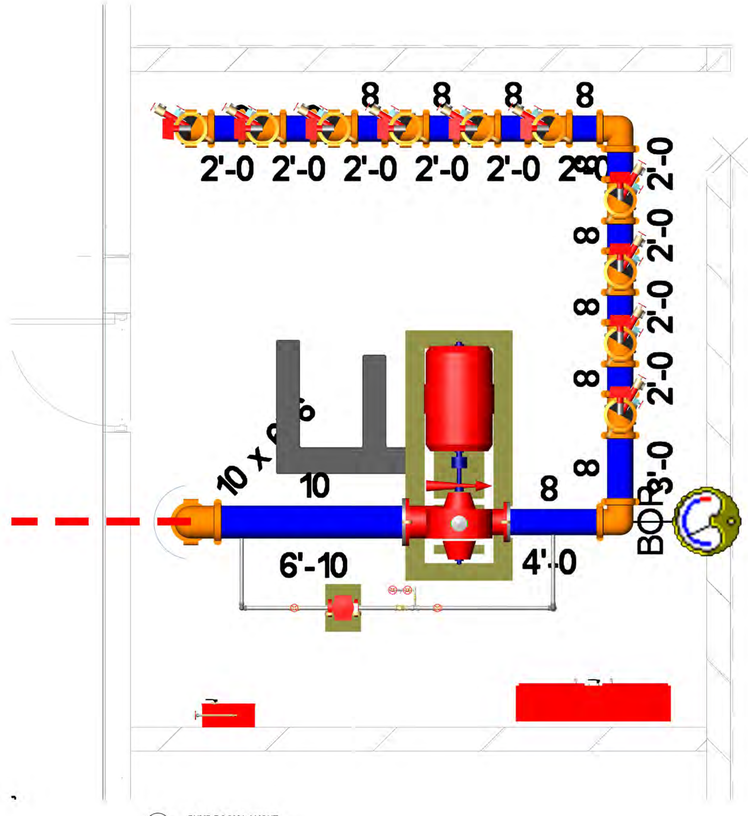
(A) Solid Shelf Racks: Will require in-rack sprinklers depending on the cubic feet of the shelf area (See Sec 16.1.6)
(B) Must comply with Flue Requirements in accordance with NFPA 13
(D) Pallets of goods are not to be wrapped on the top with plastic sheeting with greater than 50% coverage.

GENERAL RACK STORAGE NOTES:

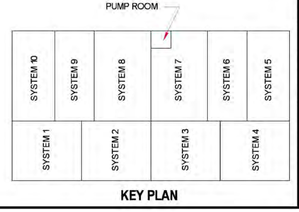
1. Racks are to be Single or Double row open grate racking, with a minimum of 8'-0" aisles between racks.
2. No longitudinal flue space required between racks. 6" nominal transverse flue spaces shall be maintained at all rack uprights.
3. Column Protection not required per NFPA 13, 16.1.4.1
4. Open top containers of all commodities shall not be stored over 12ft.



PUMP ROOM ISOMETRIC
N.T.S.



PUMP ROOM LAYOUT
0½ " = 1 Foot



KEY PLAN

IMPORTANT

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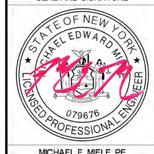


MICHAEL E. MIELE, PE
LIC # 079676

PROJECT INFORMATION:

PROPOSED WAREHOUSE
FARRELL INDUSTRIAL PARK

PROJECT LOCATION:

ROUTE 300
NEWBURGH, NY

TAX LOT ID:	XX.XX-XX-XX
DRAWN BY	AJH
SCALE	1/8" = 1'-0" U.N.O
DATE	04/18/2023

FIRE PROTECTION PLAN

FP-11 | 12 of 12

Hydraulic Summary

Job Number: Route 300
Report Description: ESFR (1)

Job

Job Number: Route 300	Design Engineer: A.Hergenreder
Job Name: Farrell Industrial Park	State Certification/License Number:
Address 1: Route 300	AHJ:
Address 2: Newburgh, NY	Job Site/Building:
Address 3:	Drawing Name: FP_Rte300_Farrell_Indust_Park.cad

System

Most Demanding Sprinkler Data: 25.2 K-Factor 159.38 at 40.000

Hose Allowance At Source: 500.00

Additional Hose Supplies

Node	Flow(gpm)

Total Hose Streams: 500.00

System Flow Demand	Total Water Required (Including Hose Allowance)
1920.43	2420.43

Maximum Pressure Unbalance In Loops: 0.000

Maximum Velocity Above Ground: 19.78 between nodes 27 and 110

Maximum Velocity Under Ground	
7.25 between nodes 20 and 19	

Volume capacity of Wet Pipes	Volume capacity of Dry Pipes
20091.78 gal	

Remote Area(s)

Occupancy	Job Suffix
ESFR	

Pressure	Area of Application
40.000	NA

Number Of Sprinklers Calculated	Number Of Nozzles Calculated	Coverage Per Sprinkler
12	0	100 ft²

AutoPeak Results: Pressure For Remote Area(s) Adjacent To Most Remote Area

Supplies

Node	Name	Hose Flow (gpm)	Static (psi)	Residual (psi)	@ Flow (gpm)	Available (psi)	@ Total Demand (gpm)	Required (psi)	Safety Margin (psi)
20	Water Supply	500.00	60.000	55.000	1000.00	34.345	2420.43	7.447	26.898
17	Pump		120.000	100.000	2000.00	132.045	1920.43	105.147	26.898

Pumps: Static = Churn (Pressure @ Zero Flow)

Contractor

	Contractor Number	Contact Name	Contact Title
	21	Andrew Hergenreder	Plans Department

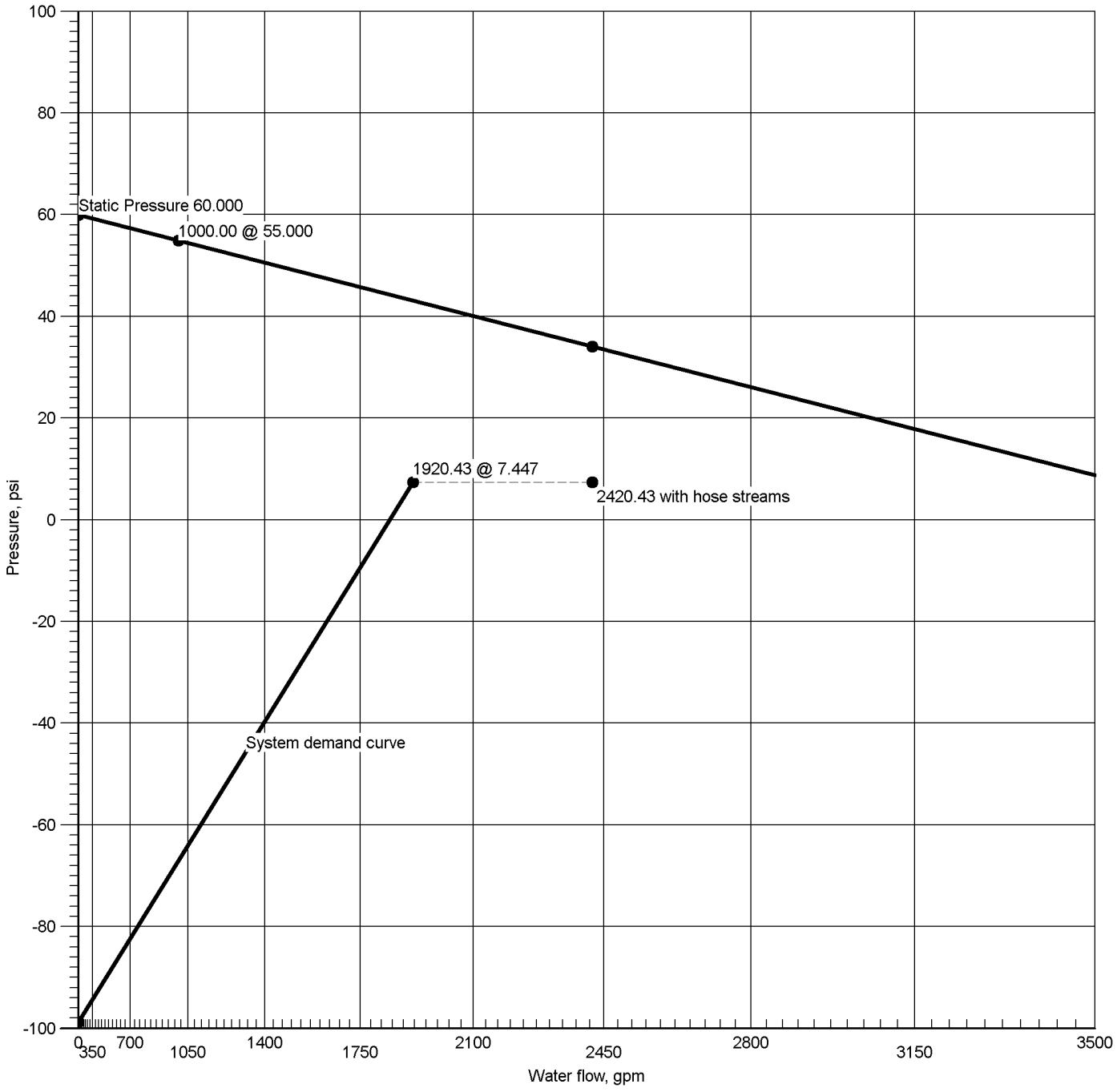
Name of Contractor:	Phone	Extension
Global Fire Prevention	845-781-0117	110

Address 1	FAX
59 Gilbert Street, Suite 101	

Address 2	E-mail
Monroe, NY 10950	andrew@globalfireusa.com

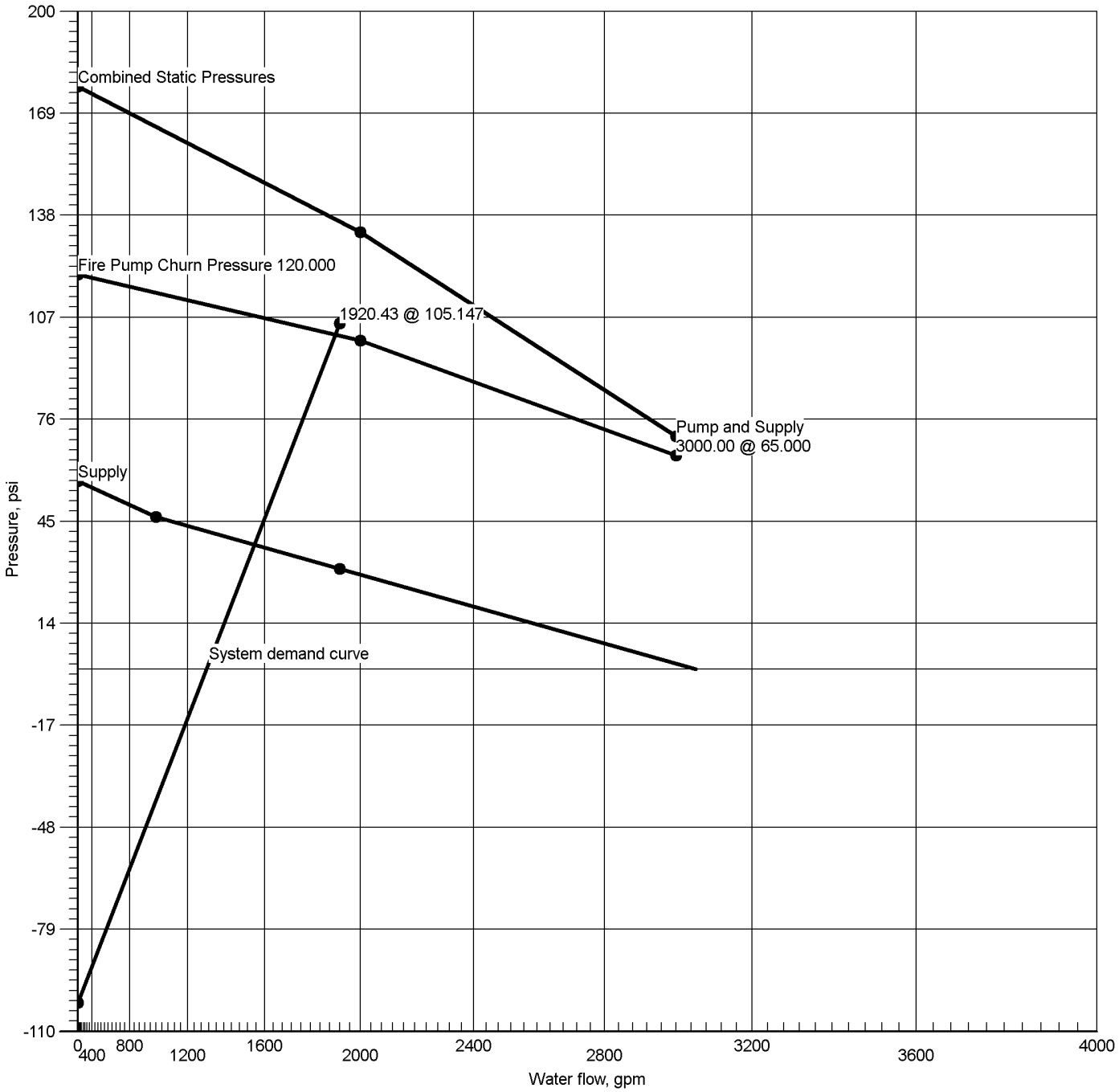
Address 3	Web-Site
	www.globalfireusa.com

Water Supply at Node 20



Hydraulic Graph	Water Supply at Node 20
Static: Pressure	60.000
Residual: Pressure	55.000 @ 1000.00
Available Pressure at System Demand	34.345 @ 2420.43
Required Pressure at System Demand	7.447 @ 1920.43
Required Pressure at System Demand (Including Hose Allowance at Source)	7.447 @ 2420.43

Pump at Node 17



Hydraulic Graph	Static + Churn Pressure	Fire Pump Rating
Pump at Node 17	177.182	100.000 @ 2000.00
Static: Pressure	**Fire Pump Churn Pressure**	
177.182	120.000	
Residual: Pressure		
101.447 @ 1920.43		
Available Pressure at System Demand		
132.045 @ 1920.43		
Required Pressure at System Demand		
105.147 @ 1920.43		

Node	Elevation(Foot)	Fittings	Pressure(psi)	Discharge(gpm)	
173	43'-0	PO(16'-5½)	65.186		
174	43'-0	PO(16'-5½)	65.220		
761	2'-6	fE(15'-3), BOR	105.042		
20	-4'-0	S	7.447	1920.43	
110	45'-0	Spr(-40.785)	40.785	160.93	
111	45'-0	Spr(-40.571)	40.571	160.51	
6909	45'-0	Spr(-40.683)	40.683	160.73	
6910	45'-0	Spr(-40.705)	40.705	160.78	
6979	45'-0	Spr(-40.008)	40.008	159.39	
6980	45'-0	Spr(-40.029)	40.029	159.44	
6981	45'-0	Spr(-40.107)	40.107	159.59	
7050	45'-0	Spr(-40.000)	40.000	159.38	
7051	45'-0	Spr(-40.022)	40.022	159.42	
7052	45'-0	Spr(-40.100)	40.100	159.58	
7121	45'-0	Spr(-40.471)	40.471	160.31	
7122	45'-0	Spr(-40.492)	40.492	160.36	
17	2'-6	P2(-101.447)	105.147		
18	2'-6	P1	3.700		
19	-4'-0	E(26'-0)	7.031		
25	43'-0	PO(16'-5½)	65.128		
26	43'-0	PO(16'-5½)	65.165		
27	43'-0	PO(16'-5½)	65.296		
28	43'-0	PO(16'-5½)	65.574		
29	43'-0	PO(16'-5½)	65.866		
30	43'-0	PO(16'-5½)	66.171		
31	43'-0	PO(16'-5½)	66.504		
32	43'-0	PO(16'-5½)	66.868		
33	43'-0	PO(16'-5½)	67.265		
34	43'-0	PO(16'-5½)	67.699		
35	43'-0	T(37'-8½)	69.958		
37	43'-0	PO(16'-5½)	63.506		
38	43'-0	PO(16'-5½)	63.537		
39	43'-0	PO(16'-5½)	63.646		
40	43'-0	PO(16'-5½)	63.878		
41	43'-0	PO(16'-5½)	64.078		
42	43'-0	PO(16'-5½)	64.249		
43	43'-0	PO(16'-5½)	64.400		
44	43'-0	PO(16'-5½)	64.530		
45	43'-0	PO(16'-5½)	64.641		
104	43'-0	PO(16'-5½)	69.505		
105	43'-0	PO(16'-5½)	69.507		
106	43'-0	PO(16'-5½)	69.517		
107	43'-0	PO(16'-5½)	69.537		
108	43'-0	PO(16'-5½)	69.572		
109	43'-0	PO(16'-5½)	69.623		
148	43'-0	PO(16'-5½)	64.732		
149	43'-0	PO(16'-5½)	65.134		
170	43'-0	PO(16'-5½)	65.240		
171	43'-0	PO(37'-8½)	65.291		
172	43'-0	PO(37'-8½)	65.316		

Hydraulic Summary

Job Number: Route 300
Report Description: ESFR (2)

Job

Job Number: Route 300	Design Engineer: A.Hergenreder
Job Name: Farrell Industrial Park	State Certification/License Number:
Address 1: Route 300	AHJ:
Address 2: Newburgh, NY	Job Site/Building:
Address 3:	Drawing Name: FP_Rte300_Farrell_Indust_Park.cad

System

Most Demanding Sprinkler Data: 25.2 K-Factor 159.38 at 40.000

Hose Allowance At Source: 500.00

Additional Hose Supplies

Node	Flow(gpm)

Total Hose Streams: 500.00

System Flow Demand	Total Water Required (Including Hose Allowance)
1920.25	2420.25

Maximum Pressure Unbalance In Loops: 0.000

Maximum Velocity Above Ground: 19.41 between nodes 1152 and 98

Maximum Velocity Under Ground	
7.25 between nodes 20 and 19	

Volume capacity of Wet Pipes	Volume capacity of Dry Pipes
20091.78 gal	

Remote Area(s)

Occupancy	Job Suffix
ESFR	

Pressure	Area of Application
40.000	NA

Number Of Sprinklers Calculated	Number Of Nozzles Calculated	Coverage Per Sprinkler
12	0	100 ft²

AutoPeak Results: Pressure For Remote Area(s) Adjacent To Most Remote Area

Supplies

Node	Name	Hose Flow (gpm)	Static (psi)	Residual (psi)	@ Flow (gpm)	Available (psi)	@ Total Demand (gpm)	Required (psi)	Safety Margin (psi)
20	Water Supply	500.00	60.000	55.000	1000.00	34.349	2420.25	17.621	16.727
17	Pump		120.000	100.000	2000.00	132.052	1920.25	115.325	16.727

Pumps: Static = Churn (Pressure @ Zero Flow)

Contractor

	Contractor Number	Contact Name	Contact Title
	21	Andrew Hergenreder	Plans Department

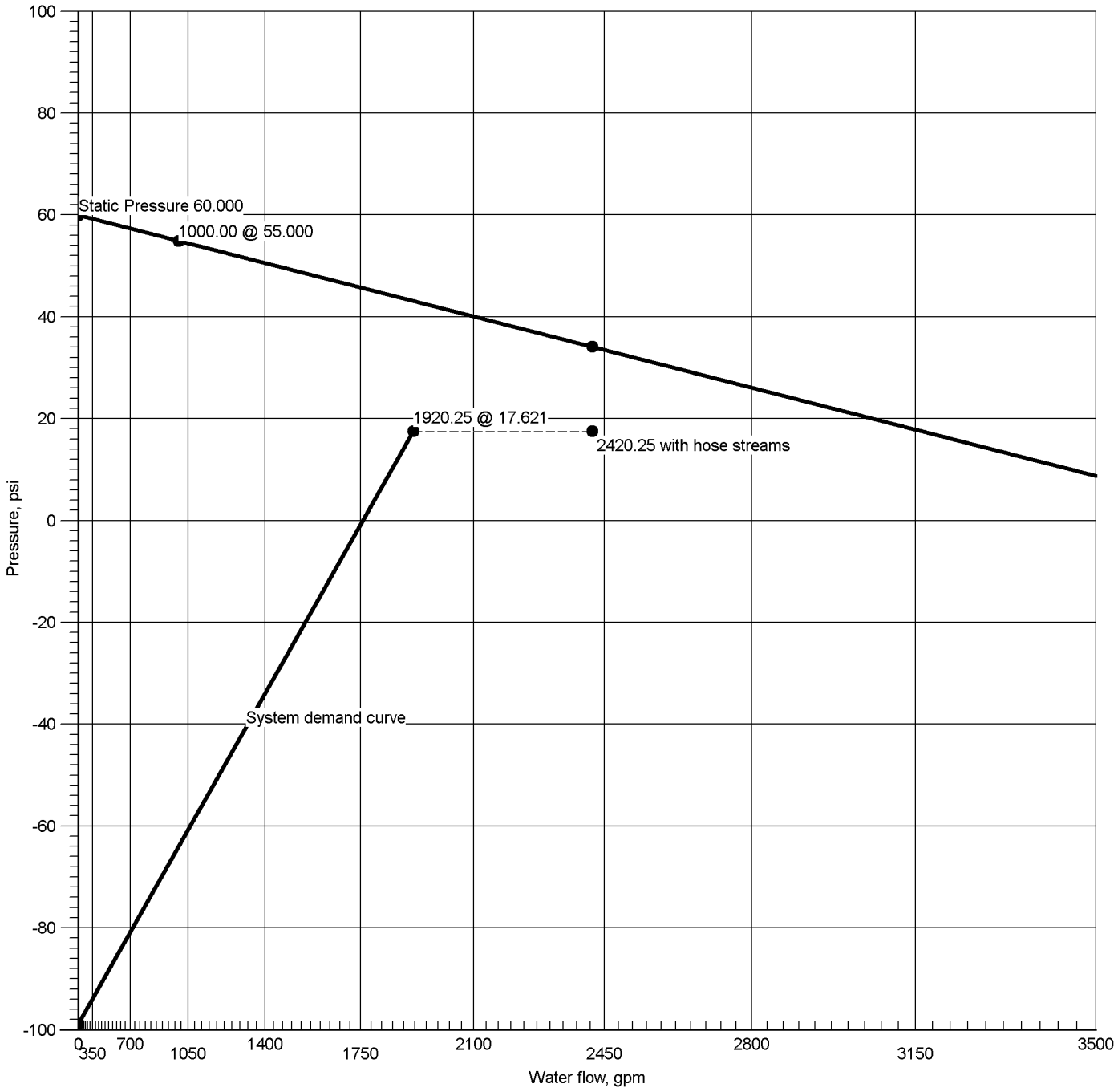
Name of Contractor:	Phone	Extension
Global Fire Prevention	845-781-0117	110

Address 1	FAX
59 Gilbert Street, Suite 101	

Address 2	E-mail
Monroe, NY 10950	andrew@globalfireusa.com

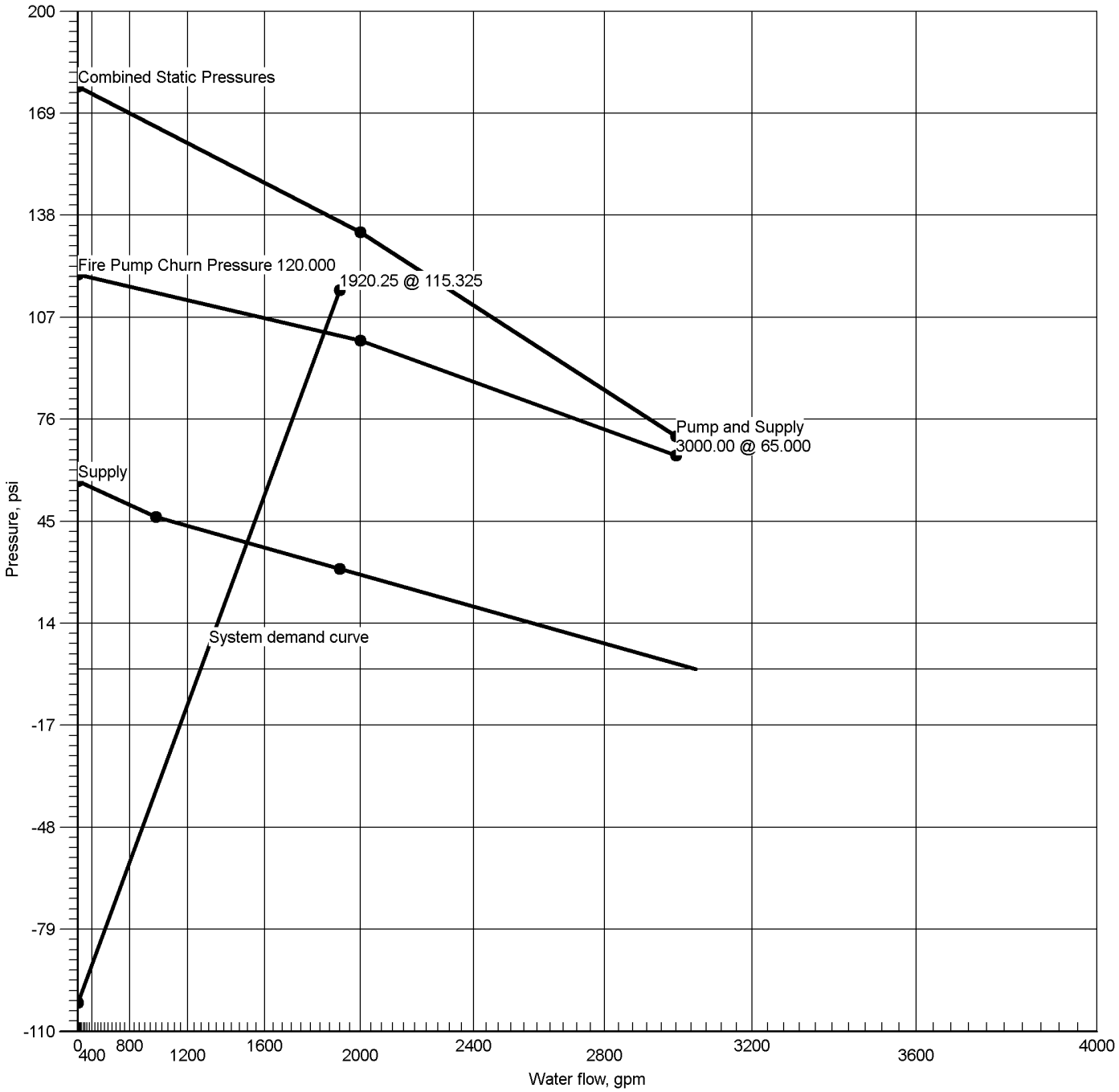
Address 3	Web-Site
	www.globalfireusa.com

Water Supply at Node 20



Hydraulic Graph	Water Supply at Node 20
Static: Pressure	60.000
Residual: Pressure	55.000 @ 1000.00
Available Pressure at System Demand	34.349 @ 2420.25
Required Pressure at System Demand	17.621 @ 1920.25
Required Pressure at System Demand (Including Hose Allowance at Source)	17.621 @ 2420.25

Pump at Node 17



Hydraulic Graph	Static + Churn Pressure	Fire Pump Rating
Pump at Node 17	177.182	100.000 @ 2000.00
Static: Pressure	**Fire Pump Churn Pressure**	
177.182	120.000	
Residual: Pressure		
101.450 @ 1920.25		
Available Pressure at System Demand		
132.052 @ 1920.25		
Required Pressure at System Demand		
115.325 @ 1920.25		

Node	Elevation(Foot)	Fittings	Pressure(psi)	Discharge(gpm)	
20	-4'-0	S	17.621	1920.25	
300	45'-0	Spr(-40.000)	40.000	159.38	
301	45'-0	Spr(-40.002)	40.002	159.38	
302	45'-0	Spr(-40.624)	40.624	160.62	
303	45'-0	Spr(-40.517)	40.517	160.41	
304	45'-0	Spr(-40.020)	40.020	159.42	
305	45'-0	Spr(-40.022)	40.022	159.42	
306	45'-0	Spr(-40.645)	40.645	160.66	
307	45'-0	Spr(-40.537)	40.537	160.45	
308	45'-0	Spr(-40.092)	40.092	159.56	
309	45'-0	Spr(-40.094)	40.094	159.57	
310	45'-0	Spr(-40.718)	40.718	160.80	
311	45'-0	Spr(-40.610)	40.610	160.59	
17	2'-6	P2(-101.450)	115.325		
18	2'-6	P1	13.875		
19	-4'-0	E(26'-0)	17.205		
75	43'-0	PO(16'-5½)	64.082		
76	43'-0	PO(16'-5½)	64.114		
77	43'-0	PO(16'-5½)	64.229		
78	43'-0	PO(16'-5½)	64.474		
79	43'-0	PO(16'-5½)	64.722		
80	43'-0	PO(16'-5½)	64.975		
81	43'-0	PO(16'-5½)	65.235		
82	43'-0	PO(16'-5½)	65.501		
83	43'-0	PO(16'-5½)	65.776		
84	43'-0	PO(16'-5½)	66.061		
85	43'-0	PO(16'-5½)	66.358		
86	43'-0	PO(16'-5½)	66.669		
87	43'-0	PO(16'-5½)	66.996		
88	43'-0	PO(16'-5½)	67.341		
89	43'-0	PO(16'-5½)	67.708		
90	43'-0	PO(16'-5½)	68.100		
91	43'-0	PO(16'-5½)	68.519		
92	43'-0	PO(16'-5½)	68.971		
93	43'-0	PO(16'-5½)	69.460		
94	43'-0	PO(16'-5½)	69.990		
95	43'-0	PO(16'-5½)	70.568		
96	43'-0	PO(16'-5½)	71.199		
97	43'-0	PO(16'-5½)	71.892		
98	43'-0	PO(16'-5½)	72.652		
100	43'-0	PO(16'-5½)	64.054		
101	43'-0	PO(16'-5½)	64.083		
102	43'-0	PO(16'-5½)	64.189		
103	43'-0	PO(16'-5½)	64.411		
116	43'-0	PO(16'-5½)	66.882		
117	43'-0	PO(16'-5½)	66.894		
118	43'-0	PO(37'-8½)	66.913		
119	43'-0	PO(16'-5½)	66.821		
120	43'-0	PO(16'-5½)	66.858		
121	43'-0	PO(16'-5½)	66.703		
122	43'-0	PO(16'-5½)	66.770		
123	43'-0	PO(16'-5½)	66.521		
124	43'-0	PO(16'-5½)	66.620		
125	43'-0	PO(16'-5½)	66.279		
126	43'-0	PO(16'-5½)	66.408		
127	43'-0	PO(16'-5½)	65.982		
128	43'-0	PO(16'-5½)	66.137		
129	43'-0	PO(16'-5½)	65.639		
130	43'-0	PO(16'-5½)	65.816		
131	43'-0	PO(16'-5½)	65.257		
132	43'-0	PO(16'-5½)	65.452		
133	43'-0	PO(16'-5½)	64.845		

Node	Elevation(Foot)	Fittings	Pressure(psi)	Discharge(gpm)	
134	43'-0	PO(16'-5½)	65.054		
135	43'-0	PO(16'-5½)	64.630		
761	2'-6	fE(15'-3), BOR	115.220		
1152	43'-0	E(17'-7)	90.498		

Hydraulic Summary

Job

Job Number: Route 300	Design Engineer: A.Hergenreder
Job Name: Farrell Industrial Park	State Certification/License Number:
Address 1: Route 300	AHJ:
Address 2: Newburgh, NY	Job Site/Building:
Address 3:	Drawing Name: FP_Rte300_Farrell_Indust_Park.cad

System

Most Demanding Sprinkler Data: 25.2 K-Factor 159.38 at 40.000

Hose Allowance At Source: 500.00

Additional Hose Supplies

Node	Flow(gpm)

Total Hose Streams: 500.00

System Flow Demand	Total Water Required (Including Hose Allowance)
1920.25	2420.25

Maximum Pressure Unbalance In Loops: 0.000

Maximum Velocity Above Ground: 19.41 between nodes 1150 and 69

Maximum Velocity Under Ground	
7.25 between nodes 20 and 19	

Volume capacity of Wet Pipes	Volume capacity of Dry Pipes
20091.78 gal	

Remote Area(s)

Occupancy	Job Suffix
ESFR	

Pressure	Area of Application
40.000	NA

Number Of Sprinklers Calculated	Number Of Nozzles Calculated	Coverage Per Sprinkler
12	0	100 ft²

AutoPeak Results: Pressure For Remote Area(s) Adjacent To Most Remote Area

Supplies

Node	Name	Hose Flow (gpm)	Static (psi)	Residual (psi)	@ Flow (gpm)	Available (psi)	@ Total Demand (gpm)	Required (psi)	Safety Margin (psi)
20	Water Supply	500.00	60.000	55.000	1000.00	34.349	2420.25	18.057	16.292
17	Pump		120.000	100.000	2000.00	132.052	1920.25	115.760	16.292

Pumps: Static = Churn (Pressure @ Zero Flow)

Contractor

	Contractor Number	Contact Name	Contact Title
	21	Andrew Hergenreder	Plans Department

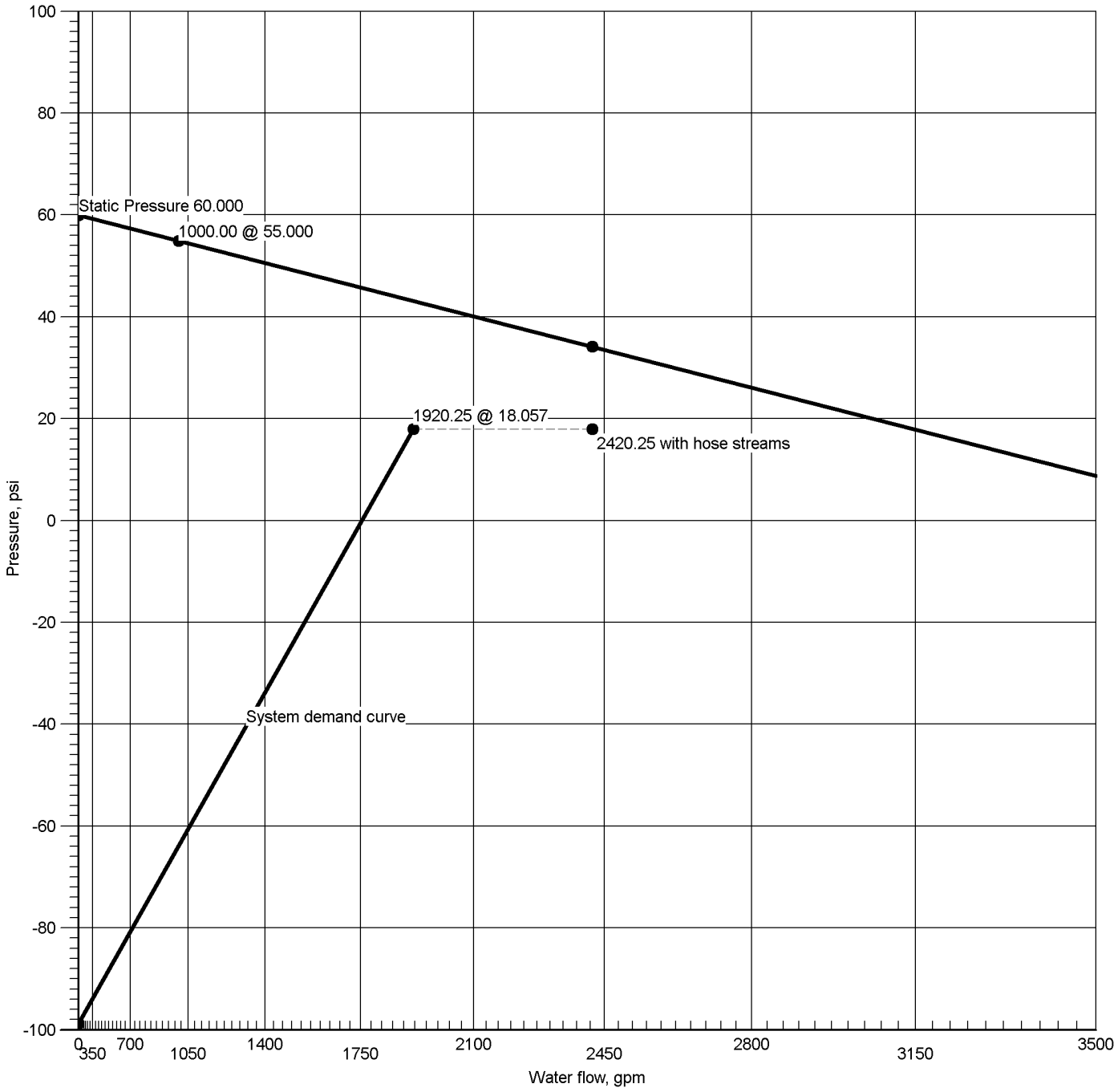
Name of Contractor:	Phone	Extension
Global Fire Prevention	845-781-0117	110

Address 1	FAX
59 Gilbert Street, Suite 101	

Address 2	E-mail
Monroe, NY 10950	andrew@globalfireusa.com

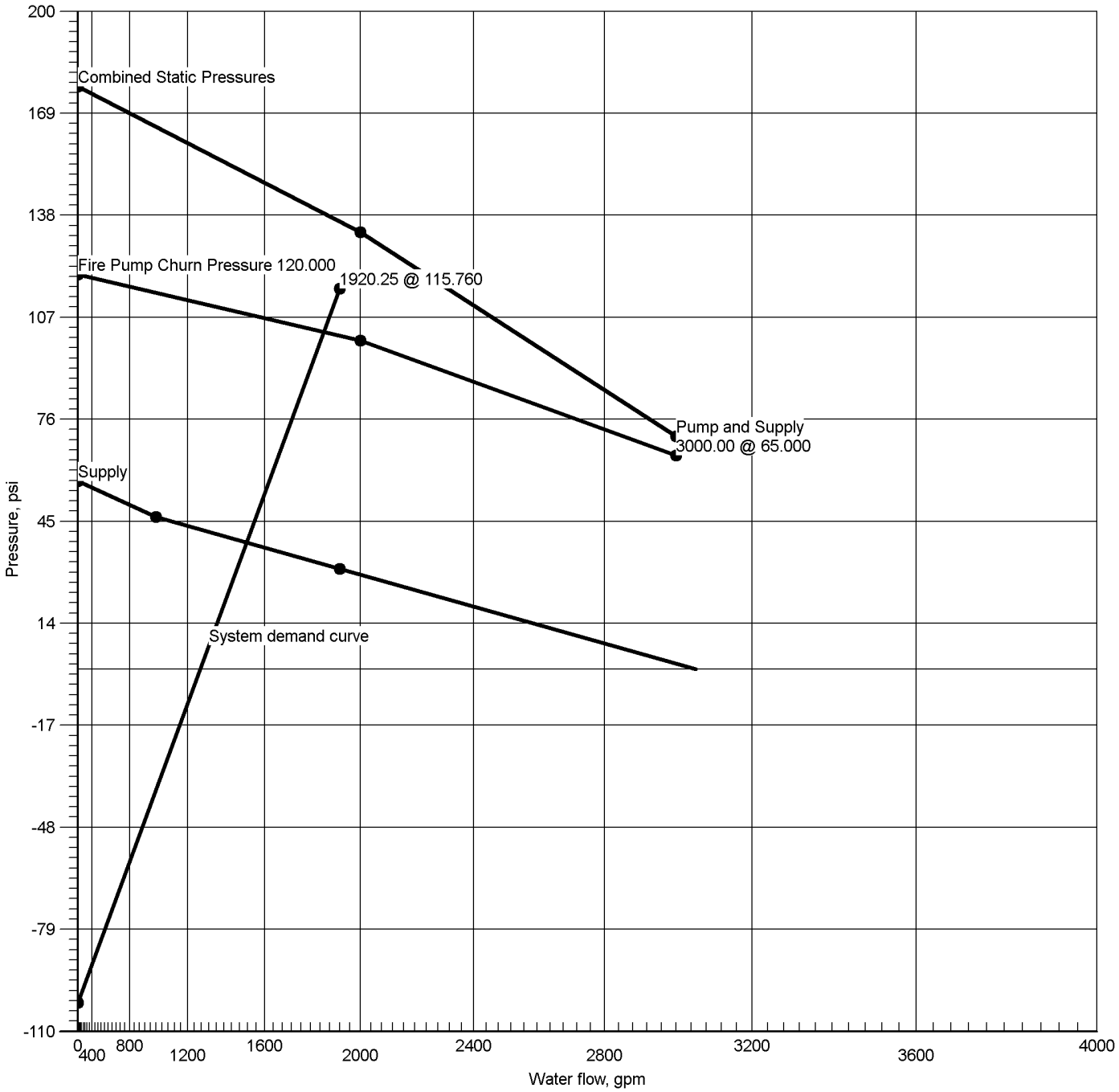
Address 3	Web-Site
	www.globalfireusa.com

Water Supply at Node 20



Hydraulic Graph	Water Supply at Node 20
Static: Pressure	60.000
Residual: Pressure	55.000 @ 1000.00
Available Pressure at System Demand	34.349 @ 2420.25
Required Pressure at System Demand	18.057 @ 1920.25
Required Pressure at System Demand (Including Hose Allowance at Source)	18.057 @ 2420.25

Pump at Node 17



Hydraulic Graph	Static + Churn Pressure	Fire Pump Rating
Pump at Node 17	177.182	100.000 @ 2000.00
Static: Pressure	**Fire Pump Churn Pressure**	
177.182	120.000	
Residual: Pressure		
101.450 @ 1920.25		
Available Pressure at System Demand		
132.052 @ 1920.25		
Required Pressure at System Demand		
115.760 @ 1920.25		

Node	Elevation(Foot)	Fittings	Pressure(psi)	Discharge(gpm)	
20	-4'-0	S	18.057	1920.25	
500	45'-0	Spr(-40.000)	40.000	159.38	
501	45'-0	Spr(-40.002)	40.002	159.38	
502	45'-0	Spr(-40.624)	40.624	160.62	
503	45'-0	Spr(-40.517)	40.517	160.41	
504	45'-0	Spr(-40.020)	40.020	159.42	
505	45'-0	Spr(-40.022)	40.022	159.42	
506	45'-0	Spr(-40.645)	40.645	160.66	
507	45'-0	Spr(-40.537)	40.537	160.45	
508	45'-0	Spr(-40.092)	40.092	159.56	
509	45'-0	Spr(-40.094)	40.094	159.57	
510	45'-0	Spr(-40.718)	40.718	160.80	
511	45'-0	Spr(-40.610)	40.610	160.59	
17	2'-6	P2(-101.450)	115.760		
18	2'-6	P1	14.310		
19	-4'-0	E(26'-0)	17.641		
46	43'-0	PO(16'-5½)	64.082		
47	43'-0	PO(16'-5½)	64.114		
48	43'-0	PO(16'-5½)	64.229		
49	43'-0	PO(16'-5½)	64.474		
50	43'-0	PO(16'-5½)	64.722		
51	43'-0	PO(16'-5½)	64.975		
52	43'-0	PO(16'-5½)	65.235		
53	43'-0	PO(16'-5½)	65.501		
54	43'-0	PO(16'-5½)	65.776		
55	43'-0	PO(16'-5½)	66.061		
56	43'-0	PO(16'-5½)	66.358		
57	43'-0	PO(16'-5½)	66.669		
58	43'-0	PO(16'-5½)	66.996		
59	43'-0	PO(16'-5½)	67.341		
60	43'-0	PO(16'-5½)	67.708		
61	43'-0	PO(16'-5½)	68.100		
62	43'-0	PO(16'-5½)	68.519		
63	43'-0	PO(16'-5½)	68.971		
64	43'-0	PO(16'-5½)	69.460		
65	43'-0	PO(16'-5½)	69.990		
66	43'-0	PO(16'-5½)	70.568		
67	43'-0	PO(16'-5½)	71.199		
68	43'-0	PO(16'-5½)	71.892		
69	43'-0	PO(16'-5½)	72.652		
71	43'-0	PO(16'-5½)	64.054		
72	43'-0	PO(16'-5½)	64.083		
73	43'-0	PO(16'-5½)	64.189		
74	43'-0	PO(16'-5½)	64.411		
150	43'-0	PO(16'-5½)	64.630		
151	43'-0	PO(16'-5½)	64.845		
152	43'-0	PO(16'-5½)	65.054		
153	43'-0	PO(16'-5½)	65.257		
154	43'-0	PO(16'-5½)	65.452		
155	43'-0	PO(16'-5½)	65.639		
156	43'-0	PO(16'-5½)	65.816		
157	43'-0	PO(16'-5½)	65.982		
158	43'-0	PO(16'-5½)	66.137		
159	43'-0	PO(16'-5½)	66.279		
160	43'-0	PO(16'-5½)	66.408		
161	43'-0	PO(16'-5½)	66.521		
162	43'-0	PO(16'-5½)	66.620		
163	43'-0	PO(16'-5½)	66.703		
164	43'-0	PO(16'-5½)	66.770		
165	43'-0	PO(16'-5½)	66.821		
166	43'-0	PO(16'-5½)	66.858		
167	43'-0	PO(16'-5½)	66.882		

Node Analysis

Job Number: Route 300
Report Description: ESFR (3)

Node	Elevation(Foot)	Fittings	Pressure(psi)	Discharge(gpm)	
168	43'-0	PO(16'-5½)	66.894		
169	43'-0	PO(37'-8½)	66.913		
761	2'-6	fE(15'-3), BOR	115.655		
1150	43'-0	E(17'-7)	90.592		

Hydraulic Summary

Job Number: Route 300
Report Description: ESFR (4)

Job

Job Number: Route 300	Design Engineer: A.Hergenreder
Job Name: Farrell Industrial Park	State Certification/License Number:
Address 1: Route 300	AHJ:
Address 2: Newburgh, NY	Job Site/Building:
Address 3:	Drawing Name: FP_Rte300_Farrell_Indust_Park.cad

System

Most Demanding Sprinkler Data: 25.2 K-Factor 159.38 at 40.000

Hose Allowance At Source: 500.00

Additional Hose Supplies

Node	Flow(gpm)

Total Hose Streams: 500.00	
System Flow Demand: 1920.43	Total Water Required (Including Hose Allowance): 2420.43
Maximum Pressure Unbalance In Loops: 0.000	
Maximum Velocity Above Ground: 19.78 between nodes 3 and 710	
Maximum Velocity Under Ground: 7.25 between nodes 20 and 19	
Volume capacity of Wet Pipes: 20091.78 gal	Volume capacity of Dry Pipes:

Remote Area(s)

Occupancy: ESFR		Job Suffix:
Pressure: 40.000		Area of Application: NA
Number Of Sprinklers Calculated: 12	Number Of Nozzles Calculated: 0	Coverage Per Sprinkler: 100 ft²

AutoPeak Results: Pressure For Remote Area(s) Adjacent To Most Remote Area

STATE OF NEW YORK
MICHAEL EDWARD MI...
079676
LICENSED PROFESSIONAL ENGINEER

Supplies

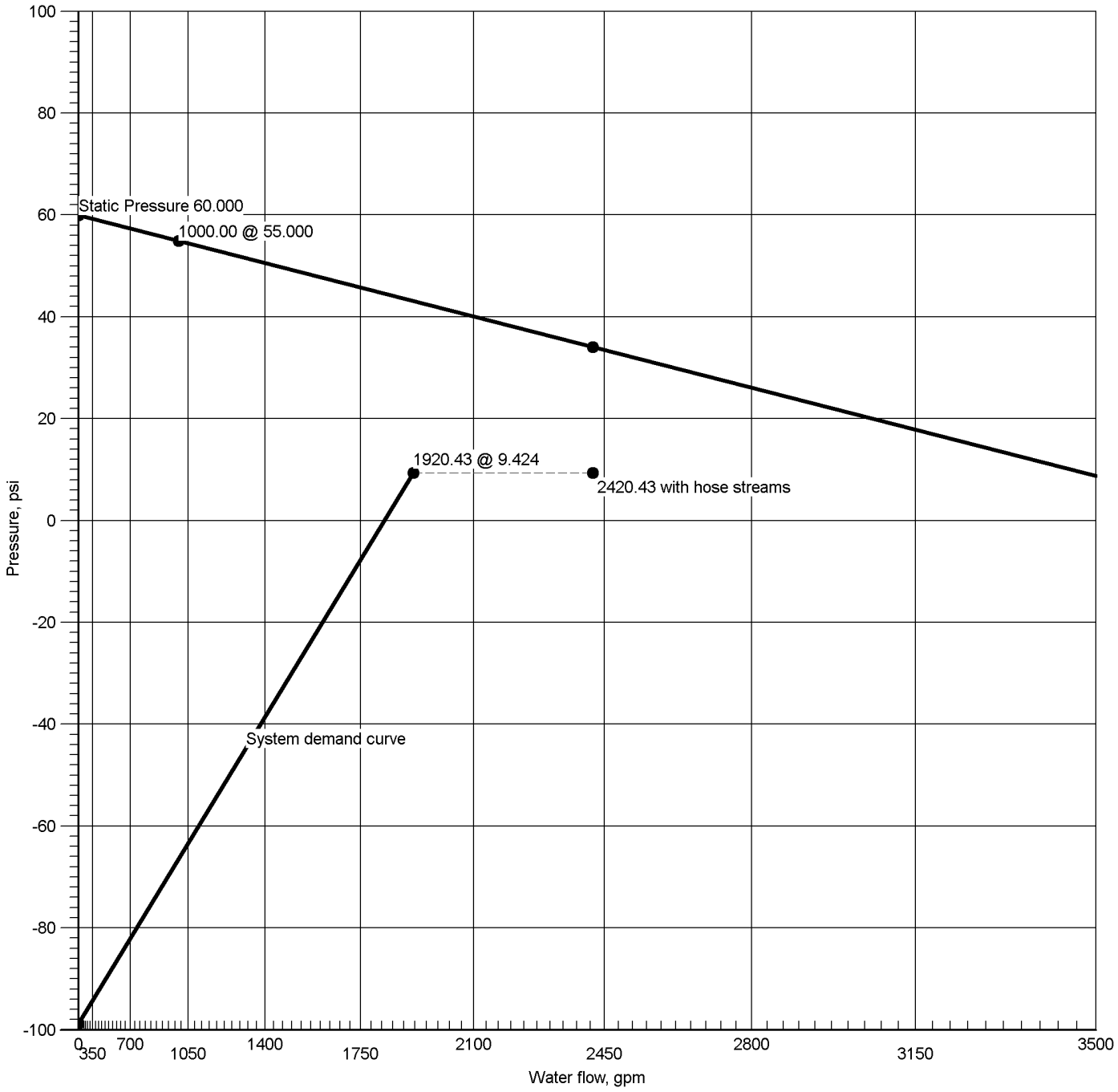
Node	Name	Hose Flow (gpm)	Static (psi)	Residual (psi) @ Flow (gpm)		Available (psi) @ Total Demand (gpm)		Required (psi)	Safety Margin (psi)
20	Water Supply	500.00	60.000	55.000	1000.00	34.345	2420.43	9.424	24.921
17	Pump		120.000	100.000	2000.00	132.045	1920.43	107.125	24.921

Pumps: Static = Churn (Pressure @ Zero Flow)

Contractor

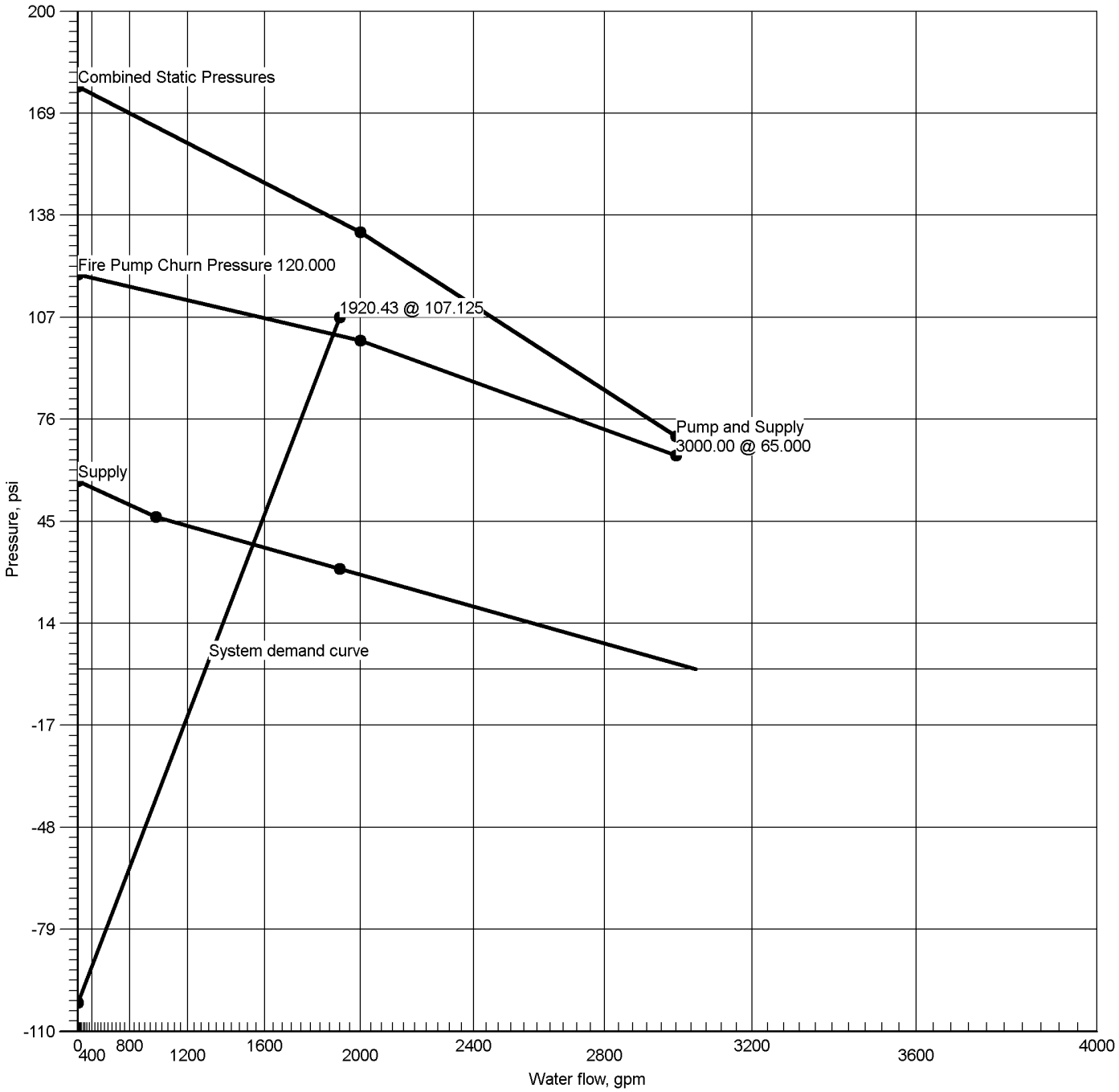
Contractor Number: 21		Contact Name: Andrew Hergenreder	Contact Title: Plans Department
Name of Contractor: Global Fire Prevention		Phone: 845-781-0117	Extension: 110
Address 1: 59 Gilbert Street, Suite 101		FAX:	
Address 2: Monroe, NY 10950		E-mail: andrew@globalfireusa.com	
Address 3:		Web-Site: www.globalfireusa.com	

Water Supply at Node 20



Hydraulic Graph	Water Supply at Node 20
Static: Pressure	60.000
Residual: Pressure	55.000 @ 1000.00
Available Pressure at System Demand	34.345 @ 2420.43
Required Pressure at System Demand	9.424 @ 1920.43
Required Pressure at System Demand (Including Hose Allowance at Source)	9.424 @ 2420.43

Pump at Node 17



Hydraulic Graph	Static + Churn Pressure	Fire Pump Rating
Pump at Node 17	177.182	100.000 @ 2000.00
Static: Pressure	**Fire Pump Churn Pressure**	
177.182	120.000	
Residual: Pressure		
101.447 @ 1920.43		
Available Pressure at System Demand		
132.045 @ 1920.43		
Required Pressure at System Demand		
107.125 @ 1920.43		

Node	Elevation(Foot)	Fittings	Pressure(psi)	Discharge(gpm)	
20	-4'-0	S	9.424	1920.43	
700	45'-0	Spr(-40.000)	40.000	159.38	
701	45'-0	Spr(-40.008)	40.008	159.39	
702	45'-0	Spr(-40.683)	40.683	160.73	
703	45'-0	Spr(-40.470)	40.470	160.31	
704	45'-0	Spr(-40.022)	40.022	159.42	
705	45'-0	Spr(-40.029)	40.029	159.44	
706	45'-0	Spr(-40.705)	40.705	160.78	
707	45'-0	Spr(-40.492)	40.492	160.36	
708	45'-0	Spr(-40.100)	40.100	159.58	
709	45'-0	Spr(-40.108)	40.108	159.59	
710	45'-0	Spr(-40.785)	40.785	160.94	
711	45'-0	Spr(-40.571)	40.571	160.51	
1	43'-0	PO(16'-5½)	65.136		
2	43'-0	PO(16'-5½)	65.172		
3	43'-0	PO(16'-5½)	65.303		
4	43'-0	PO(16'-5½)	65.582		
5	43'-0	PO(16'-5½)	65.874		
6	43'-0	PO(16'-5½)	66.179		
7	43'-0	PO(16'-5½)	66.512		
8	43'-0	PO(16'-5½)	66.875		
9	43'-0	PO(16'-5½)	67.273		
10	43'-0	PO(16'-5½)	67.707		
11	43'-0	T(37'-8½)	69.967		
17	2'-6	P2(-101.447)	107.125		
18	2'-6	P1	5.678		
19	-4'-0	E(26'-0)	9.009		
21	43'-0	PO(16'-5½)	63.515		
22	43'-0	PO(16'-5½)	63.546		
23	43'-0	PO(16'-5½)	63.655		
24	43'-0	PO(16'-5½)	63.887		
112	43'-0	PO(16'-5½)	69.546		
113	43'-0	PO(16'-5½)	69.525		
114	43'-0	PO(16'-5½)	69.516		
115	43'-0	PO(16'-5½)	69.513		
136	43'-0	PO(16'-5½)	64.087		
137	43'-0	PO(16'-5½)	64.258		
138	43'-0	PO(16'-5½)	64.409		
139	43'-0	PO(16'-5½)	64.539		
140	43'-0	PO(16'-5½)	64.650		
141	43'-0	PO(16'-5½)	64.741		
142	43'-0	PO(16'-5½)	65.143		
143	43'-0	PO(16'-5½)	65.195		
144	43'-0	PO(16'-5½)	65.229		
145	43'-0	PO(16'-5½)	65.249		
146	43'-0	PO(37'-8½)	65.300		
147	43'-0	PO(37'-8½)	65.325		
761	2'-6	fE(15'-3), BOR	107.019		
2806	43'-0	PO(16'-5½)	69.580		
2808	43'-0	PO(16'-5½)	69.631		

Hydraulic Summary

Job Number: Route 300
Report Description: ESFR - SYSTEM 5 (5)

Job

Job Number: Route 300	Design Engineer: A.Hergenreder
Job Name: Farrell Industrial Park	State Certification/License Number:
Address 1: Route 300	AHJ:
Address 2: Newburgh, NY	Job Site/Building:
Address 3:	Drawing Name: FP_Rte300_Farrell_Indust_Park.cad

System

Most Demanding Sprinkler Data: 25.2 K-Factor 159.38 at 40.000

Hose Allowance At Source: 500.00

Additional Hose Supplies

Node	Flow(gpm)

Total Hose Streams: 500.00

System Flow Demand	Total Water Required (Including Hose Allowance)
1920.65	2420.65

Maximum Pressure Unbalance In Loops: 0.000

Maximum Velocity Above Ground: 20.53 between nodes 340 and 910

Maximum Velocity Under Ground	
7.25 between nodes 20 and 19	

Volume capacity of Wet Pipes	Volume capacity of Dry Pipes
20091.78 gal	

Remote Area(s)

Occupancy	Job Suffix
ESFR - SYSTEM 5	

Pressure	Area of Application
40.000	NA

Number Of Sprinklers Calculated	Number Of Nozzles Calculated	Coverage Per Sprinkler
12	0	100 ft²

AutoPeak Results: Pressure For Remote Area(s) Adjacent To Most Remote Area

Supplies

Node	Name	Hose Flow (gpm)	Static (psi)	Residual (psi)	@ Flow (gpm)	Available (psi)	@ Total Demand (gpm)	Required (psi)	Safety Margin (psi)
20	Water Supply	500.00	60.000	55.000	1000.00	34.341	2420.65	16.406	17.934
17	Pump		120.000	100.000	2000.00	132.037	1920.65	114.103	17.934

Pumps: Static = Churn (Pressure @ Zero Flow)

Contractor

	Contractor Number	Contact Name	Contact Title
	21	Andrew Hergenreder	Plans Department

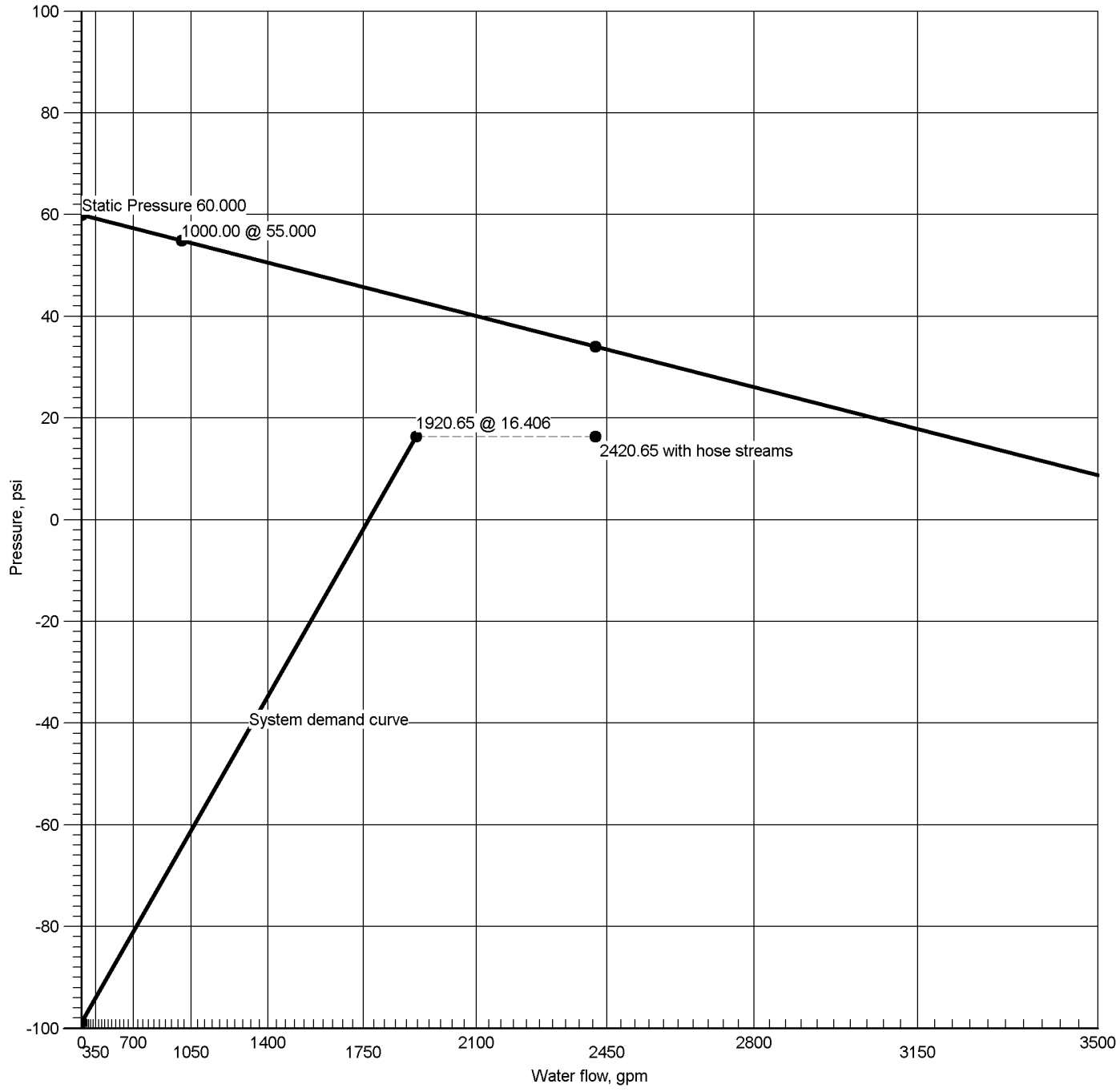
Name of Contractor:	Phone	Extension
Global Fire Prevention	845-781-0117	110

Address 1	FAX
59 Gilbert Street, Suite 101	

Address 2	E-mail
Monroe, NY 10950	andrew@globalfireusa.com

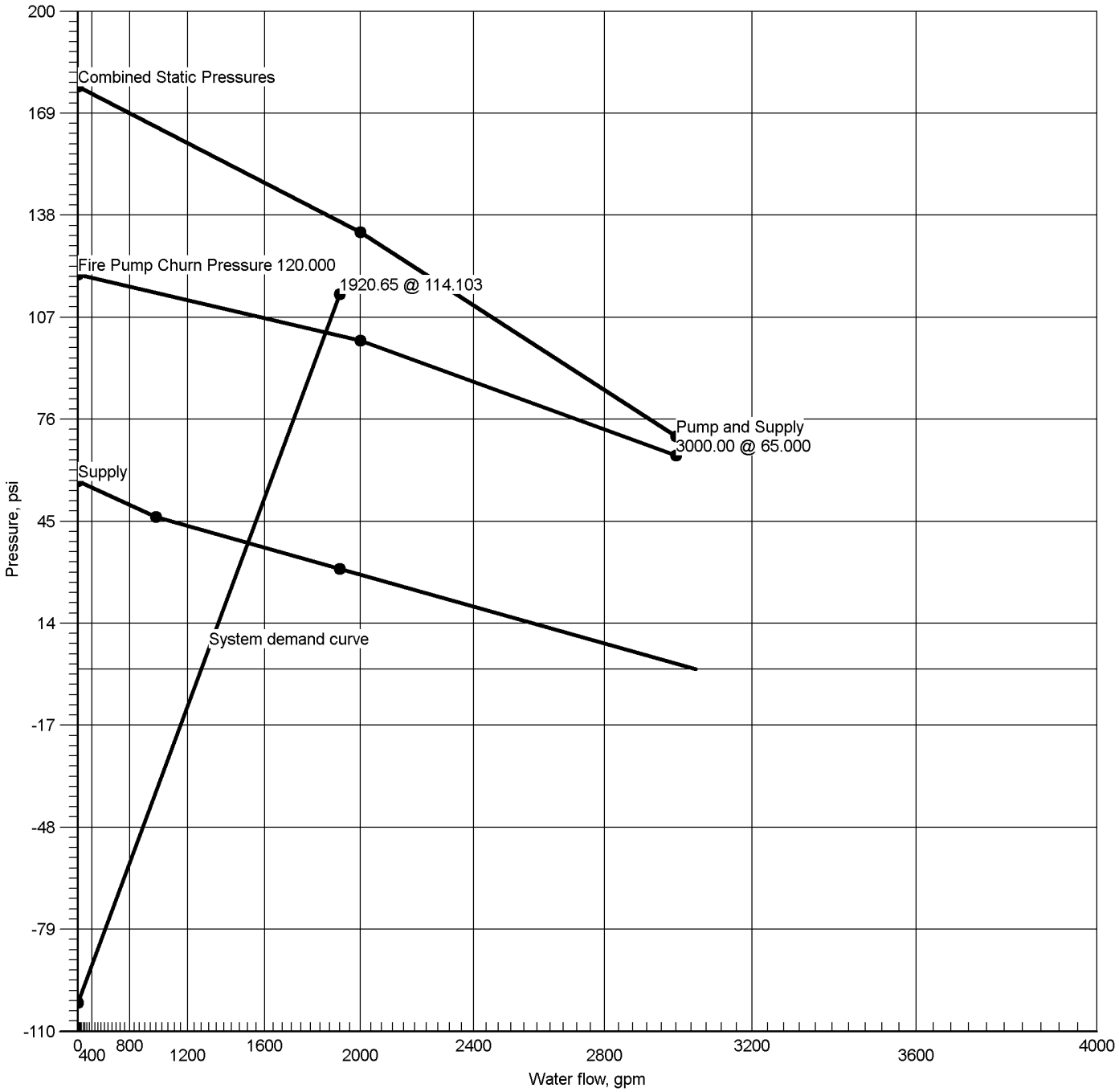
Address 3	Web-Site
	www.globalfireusa.com

Water Supply at Node 20



Hydraulic Graph	Water Supply at Node 20
Static: Pressure	60.000
Residual: Pressure	55.000 @ 1000.00
Available Pressure at System Demand	34.341 @ 2420.65
Required Pressure at System Demand	16.406 @ 1920.65
Required Pressure at System Demand (Including Hose Allowance at Source)	16.406 @ 2420.65

Pump at Node 17



Hydraulic Graph	Static + Churn Pressure	Fire Pump Rating
Pump at Node 17	177.182	100.000 @ 2000.00
Static: Pressure	**Fire Pump Churn Pressure**	
177.182	120.000	
Residual: Pressure		
101.443 @ 1920.65		
Available Pressure at System Demand		
132.037 @ 1920.65		
Required Pressure at System Demand		
114.103 @ 1920.65		

Node	Elevation(Foot)	Fittings	Pressure(psi)	Discharge(gpm)	
20	-4'-0	S	16.406	1920.65	
900	45'-0	Spr(-40.000)	40.000	159.38	
901	45'-0	Spr(-40.023)	40.023	159.42	
902	45'-0	Spr(-40.791)	40.791	160.95	
903	45'-0	Spr(-40.397)	40.397	160.17	
904	45'-0	Spr(-40.020)	40.020	159.42	
905	45'-0	Spr(-40.043)	40.043	159.46	
906	45'-0	Spr(-40.811)	40.811	160.99	
907	45'-0	Spr(-40.418)	40.418	160.21	
908	45'-0	Spr(-40.092)	40.092	159.56	
909	45'-0	Spr(-40.116)	40.116	159.61	
910	45'-0	Spr(-40.886)	40.886	161.13	
911	45'-0	Spr(-40.490)	40.490	160.35	
17	2'-6	P2(-101.443)	114.103		
18	2'-6	P1	12.659		
19	-4'-0	E(26'-0)	15.990		
338	43'-0	PO(16'-5½)	73.975		
339	43'-0	PO(16'-5½)	74.014		
340	43'-0	PO(16'-5½)	74.154		
341	43'-0	PO(16'-5½)	74.453		
342	43'-0	PO(16'-5½)	74.801		
343	43'-0	PO(16'-5½)	75.199		
344	43'-0	PO(16'-5½)	75.670		
345	43'-0	PO(16'-5½)	76.220		
346	43'-0	PO(16'-5½)	76.857		
347	43'-0	PO(16'-5½)	77.590		
349	43'-0	PO(16'-5½)	64.507		
350	43'-0	PO(16'-5½)	64.536		
351	43'-0	PO(16'-5½)	64.637		
352	43'-0	PO(16'-5½)	64.851		
353	43'-0	PO(16'-5½)	65.118		
354	43'-0	PO(16'-5½)	65.193		
355	43'-0	PO(37'-8½)	65.294		
356	43'-0	PO(16'-5½)	65.008		
357	43'-0	PO(16'-5½)	65.238		
358	43'-0	PO(16'-5½)	65.260		
654	43'-0	E(17'-7)	82.166		
761	2'-6	fE(15'-3), BOR	113.997		

Hydraulic Summary

Job Number: Route 300
Report Description: ESFR - SYSTEM 6 (6)

Job

Job Number: Route 300	Design Engineer: A.Hergenreder
Job Name: Farrell Industrial Park	State Certification/License Number:
Address 1: Route 300	AHJ:
Address 2: Newburgh, NY	Job Site/Building:
Address 3:	Drawing Name: FP_Rte300_Farrell_Indust_Park.cad

System

Most Demanding Sprinkler Data: 25.2 K-Factor 159.38 at 40.000

Hose Allowance At Source: 500.00

Additional Hose Supplies

Node	Flow(gpm)

Total Hose Streams: 500.00

System Flow Demand	Total Water Required (Including Hose Allowance)
1920.32	2420.32

Maximum Pressure Unbalance In Loops: 0.000

Maximum Velocity Above Ground: 19.88 between nodes 265 and 1110

Maximum Velocity Under Ground	
7.25 between nodes 20 and 19	

Volume capacity of Wet Pipes	Volume capacity of Dry Pipes
20084.36 gal	

Remote Area(s)

Occupancy	Job Suffix
ESFR - SYSTEM 6	

Pressure	Area of Application
40.000	NA

Number Of Sprinklers Calculated	Number Of Nozzles Calculated	Coverage Per Sprinkler
12	0	100 ft²

AutoPeak Results: Pressure For Remote Area(s) Adjacent To Most Remote Area

Supplies

Node	Name	Hose Flow (gpm)	Static (psi)	Residual (psi)	@ Flow (gpm)	Available (psi)	@ Total Demand (gpm)	Required (psi)	Safety Margin (psi)
20	Water Supply	500.00	60.000	55.000	1000.00	34.347	2420.32	12.723	21.624
17	Pump		120.000	100.000	2000.00	132.049	1920.32	110.426	21.624

Pumps: Static = Churn (Pressure @ Zero Flow)

Contractor

	Contractor Number	Contact Name	Contact Title
	21	Andrew Hergenreder	Plans Department

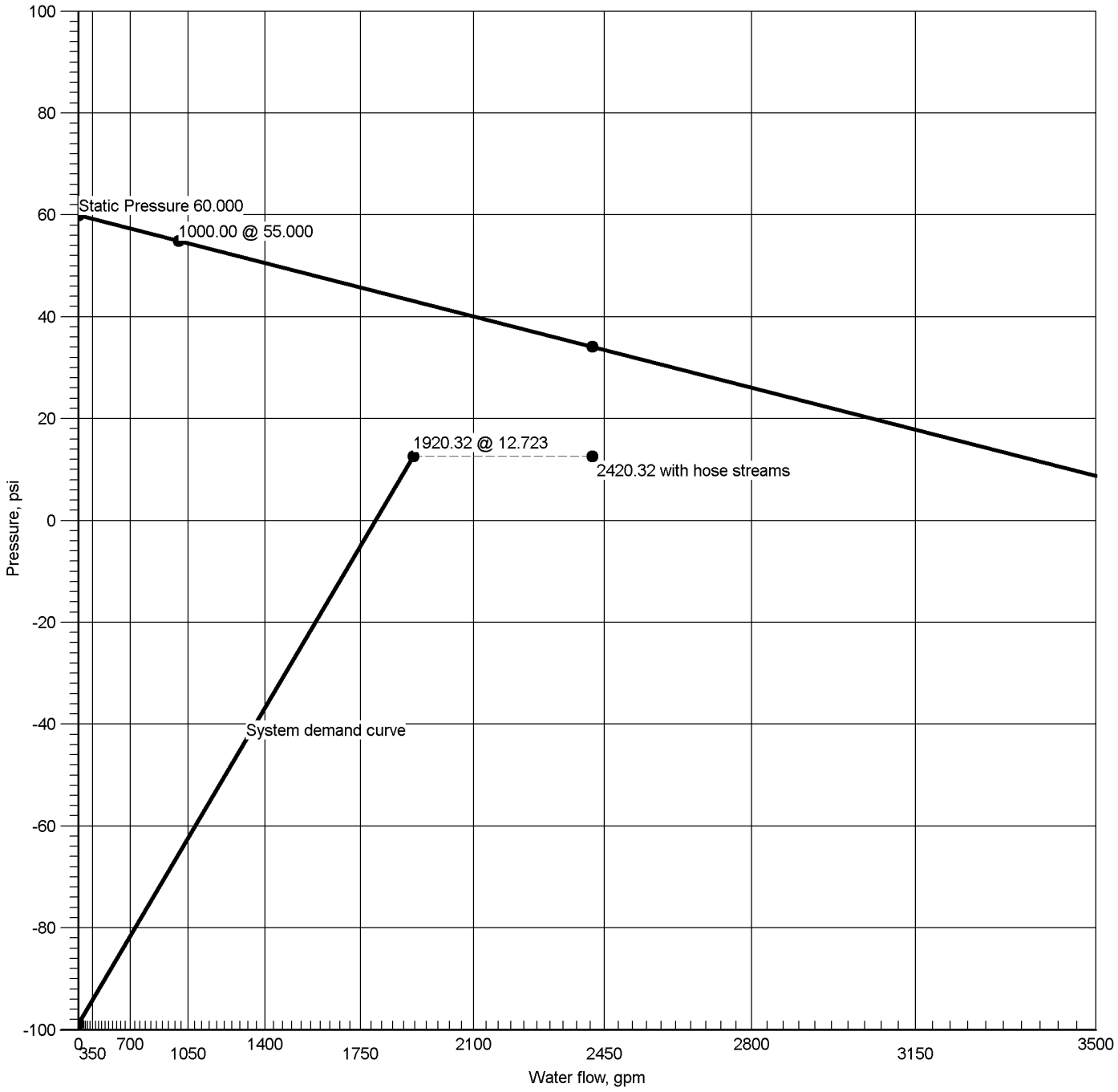
Name of Contractor:	Phone	Extension
Global Fire Prevention	845-781-0117	110

Address 1	FAX
59 Gilbert Street, Suite 101	

Address 2	E-mail
Monroe, NY 10950	andrew@globalfireusa.com

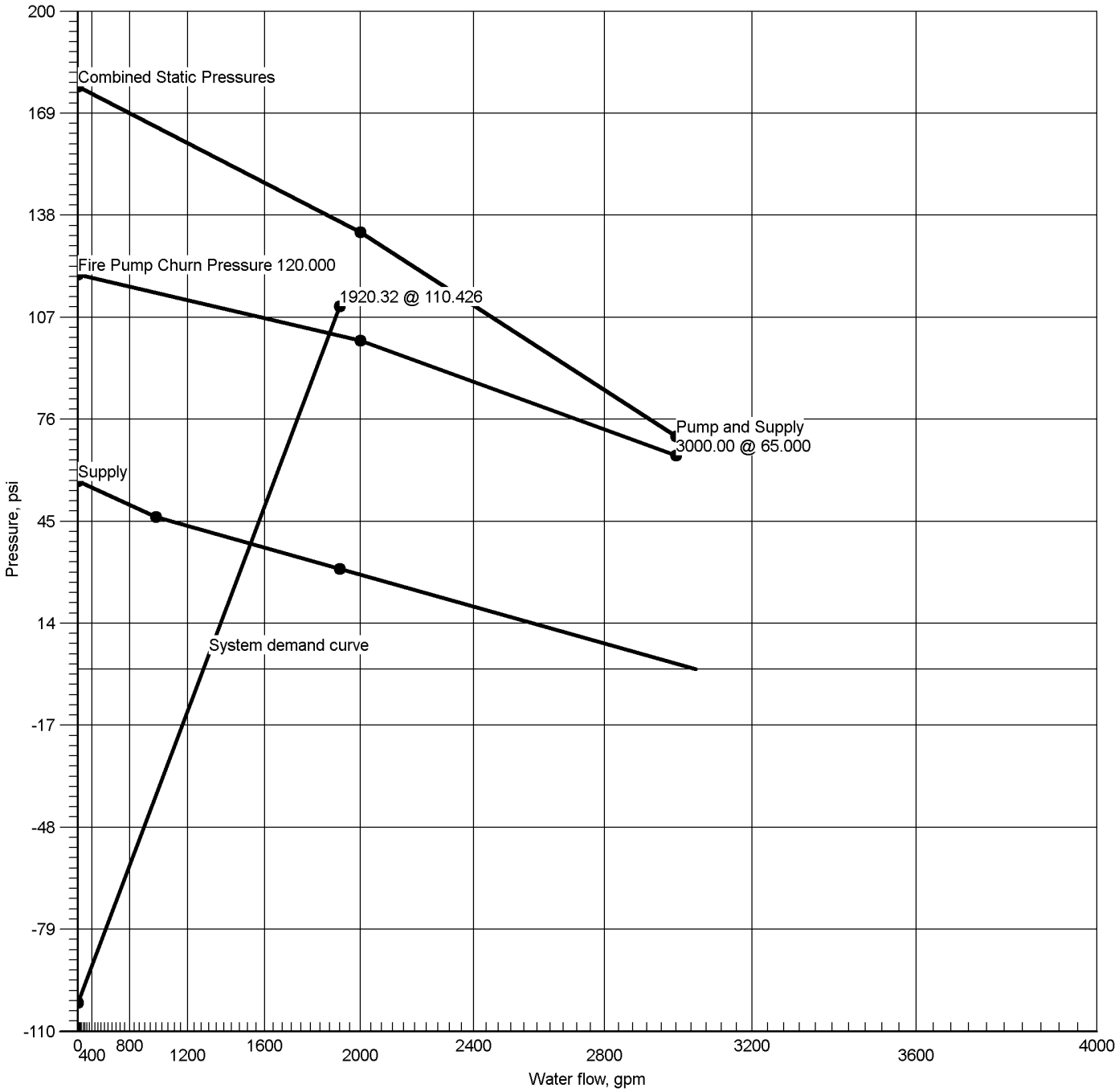
Address 3	Web-Site
	www.globalfireusa.com

Water Supply at Node 20



Hydraulic Graph	Water Supply at Node 20
Static: Pressure	60.000
Residual: Pressure	55.000 @ 1000.00
Available Pressure at System Demand	34.347 @ 2420.32
Required Pressure at System Demand	12.723 @ 1920.32
Required Pressure at System Demand (Including Hose Allowance at Source)	12.723 @ 2420.32

Pump at Node 17



Hydraulic Graph	Static + Churn Pressure	Fire Pump Rating
Pump at Node 17	177.182	100.000 @ 2000.00
Static: Pressure	**Fire Pump Churn Pressure**	
177.182	120.000	
Residual: Pressure		
101.449 @ 1920.32		
Available Pressure at System Demand		
132.049 @ 1920.32		
Required Pressure at System Demand		
110.426 @ 1920.32		

Node	Elevation(Foot)	Fittings	Pressure(psi)	Discharge(gpm)	
20	-4'-0	S	12.723	1920.32	
1100	45'-0	Spr(-40.000)	40.000	159.38	
1101	45'-0	Spr(-40.009)	40.009	159.40	
1102	45'-0	Spr(-40.698)	40.698	160.76	
1103	45'-0	Spr(-40.459)	40.459	160.29	
1104	45'-0	Spr(-40.018)	40.018	159.42	
1105	45'-0	Spr(-40.028)	40.028	159.43	
1106	45'-0	Spr(-40.717)	40.717	160.80	
1107	45'-0	Spr(-40.478)	40.478	160.33	
1108	45'-0	Spr(-40.085)	40.085	159.55	
1109	45'-0	Spr(-40.095)	40.095	159.57	
1110	45'-0	Spr(-40.785)	40.785	160.93	
1111	45'-0	Spr(-40.545)	40.545	160.46	
17	2'-6	P2(-101.449)	110.426		
18	2'-6	P1	8.977		
19	-4'-0	E(26'-0)	12.308		
261	43'-0	PO(16'-5½)	66.840		
262	43'-0	PO(16'-5½)	73.101		
263	43'-0	PO(16'-5½)	72.036		
264	43'-0	PO(16'-5½)	72.069		
265	43'-0	PO(16'-5½)	72.191		
266	43'-0	PO(16'-5½)	72.449		
267	43'-0	PO(16'-5½)	72.751		
268	43'-0	PO(16'-5½)	73.503		
269	43'-0	PO(16'-5½)	73.962		
270	43'-0	PO(16'-5½)	74.484		
271	43'-0	PO(16'-5½)	75.073		
272	43'-0	PO(16'-5½)	75.738		
273	43'-0	PO(16'-5½)	76.485		
277	43'-0	PO(16'-5½)	66.190		
278	43'-0	PO(16'-5½)	66.218		
279	43'-0	PO(16'-5½)	66.317		
280	43'-0	PO(16'-5½)	66.528		
281	43'-0	PO(16'-5½)	66.701		
282	43'-0	PO(16'-5½)	66.948		
329	43'-0	PO(37'-8½)	67.158		
333	43'-0	PO(16'-5½)	67.116		
334	43'-0	PO(16'-5½)	67.132		
335	43'-0	PO(16'-5½)	67.027		
336	43'-0	PO(16'-5½)	67.082		
641	43'-0	E(17'-7)	80.967		
761	2'-6	fE(15'-3), BOR	110.321		

Hydraulic Summary

Job

Job Number: Route 300	Design Engineer: A.Hergenreder
Job Name: Farrell Industrial Park	State Certification/License Number:
Address 1: Route 300	AHJ:
Address 2: Newburgh, NY	Job Site/Building:
Address 3:	Drawing Name: FP_Rte300_Farrell_Indust_Park.cad

System

Most Demanding Sprinkler Data: 25.2 K-Factor 159.38 at 40.000

Hose Allowance At Source: 500.00

Additional Hose Supplies

Node	Flow(gpm)

Total Hose Streams: 500.00

System Flow Demand	Total Water Required (Including Hose Allowance)
1920.16	2420.16

Maximum Pressure Unbalance In Loops: 0.000

Maximum Velocity Above Ground: 19.41 between nodes 596 and 384

Maximum Velocity Under Ground	
7.25 between nodes 20 and 19	

Volume capacity of Wet Pipes	Volume capacity of Dry Pipes
20084.36 gal	

Remote Area(s)

Occupancy	Job Suffix
ESFR - SYSTEM 7	

Pressure	Area of Application
40.000	NA

Number Of Sprinklers Calculated	Number Of Nozzles Calculated	Coverage Per Sprinkler
12	0	100 ft²

AutoPeak Results: Pressure For Remote Area(s) Adjacent To Most Remote Area

Supplies

Node	Name	Hose Flow (gpm)	Static (psi)	Residual (psi)	@ Flow (gpm)	Available (psi)	@ Total Demand (gpm)	Required (psi)	Safety Margin (psi)
20	Water Supply	500.00	60.000	55.000	1000.00	34.350	2420.16	10.510	23.840
17	Pump		120.000	100.000	2000.00	132.056	1920.16	108.215	23.840

Pumps: Static = Churn (Pressure @ Zero Flow)

Contractor

	Contractor Number	Contact Name	Contact Title
	21	Andrew Hergenreder	Plans Department

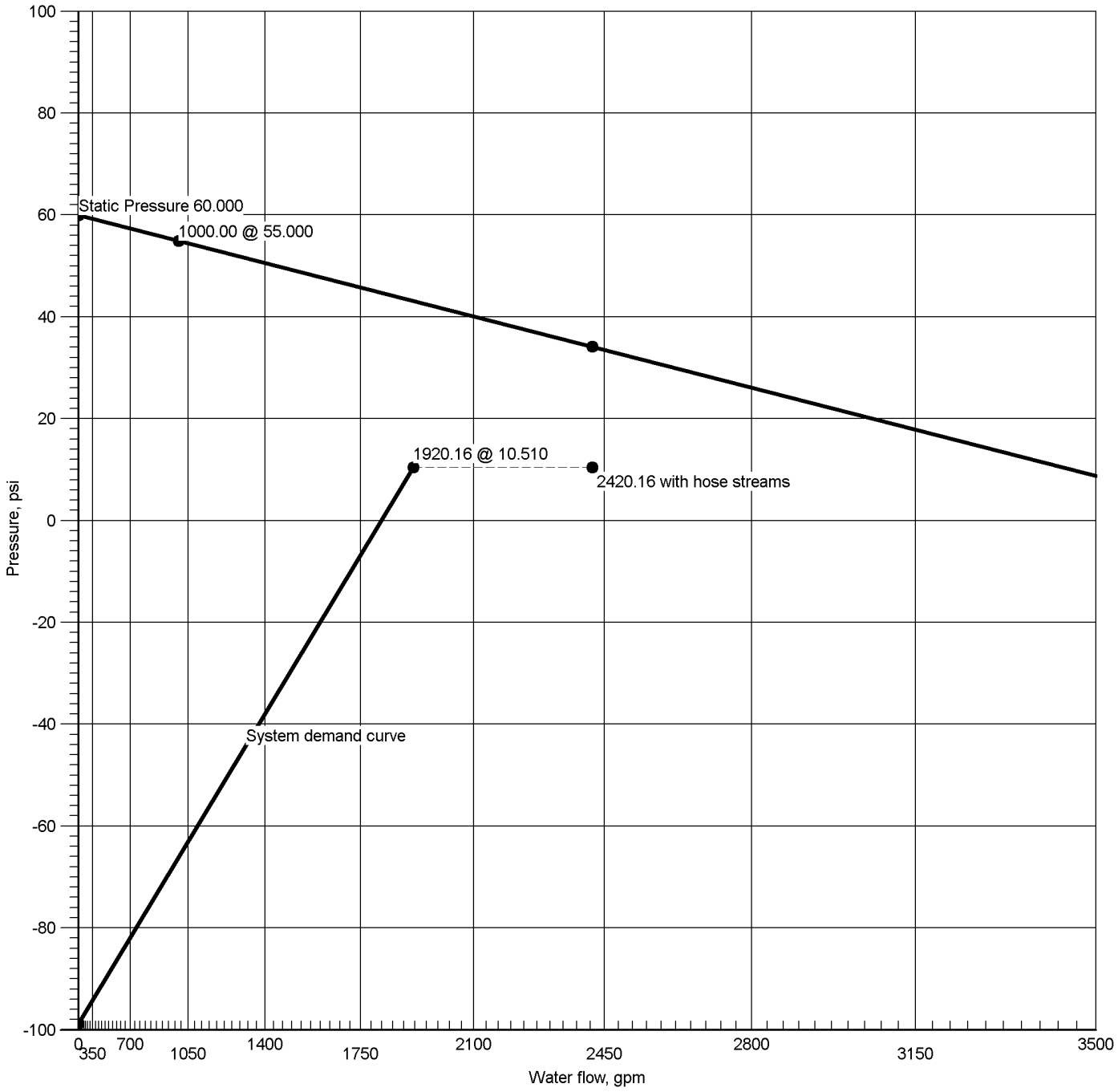
Name of Contractor:	Phone	Extension
Global Fire Prevention	845-781-0117	110

Address 1	FAX
59 Gilbert Street, Suite 101	

Address 2	E-mail
Monroe, NY 10950	andrew@globalfireusa.com

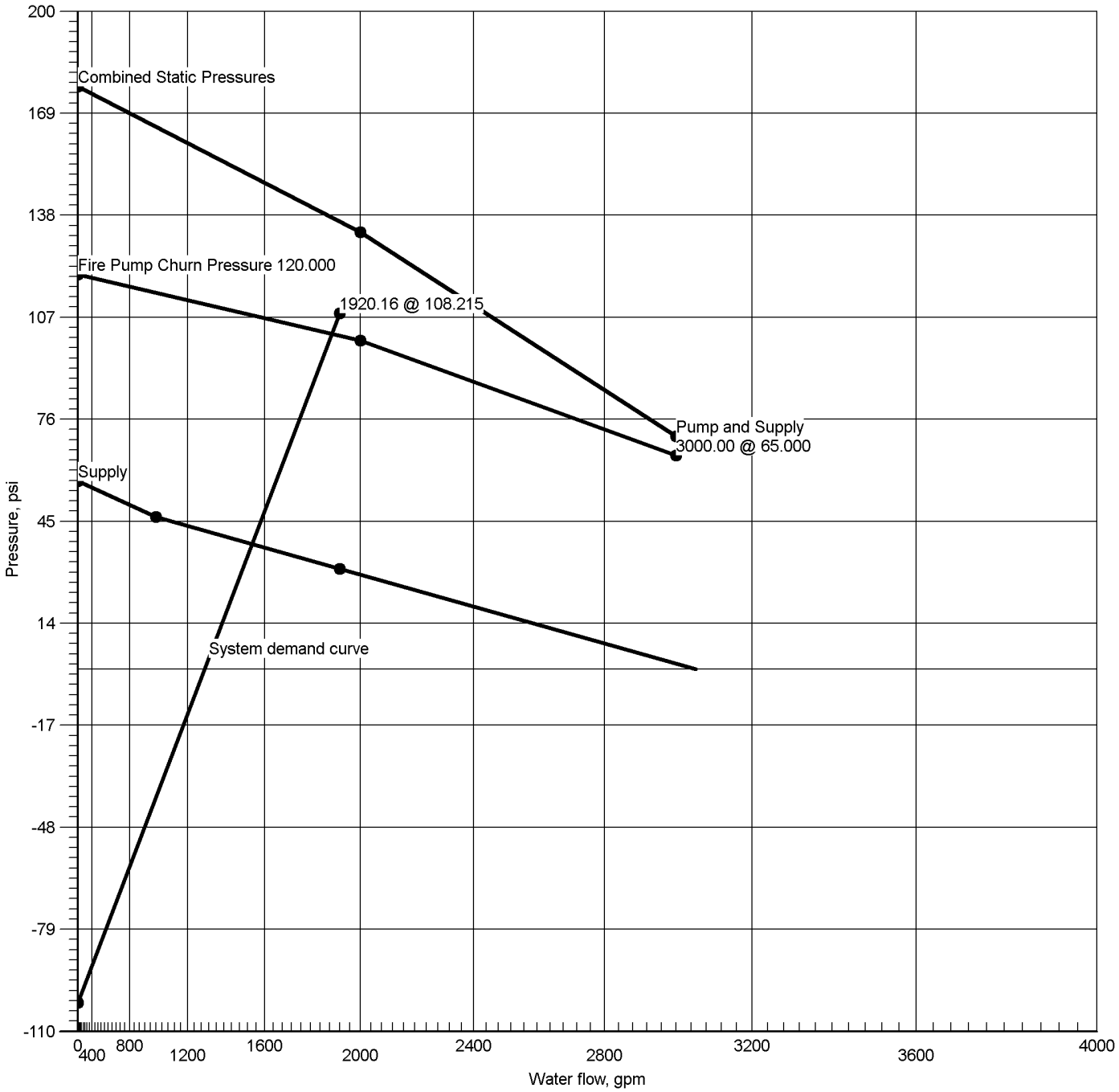
Address 3	Web-Site
	www.globalfireusa.com

Water Supply at Node 20



Hydraulic Graph	Water Supply at Node 20
Static: Pressure	60.000
Residual: Pressure	55.000 @ 1000.00
Available Pressure at System Demand	34.350 @ 2420.16
Required Pressure at System Demand	10.510 @ 1920.16
Required Pressure at System Demand (Including Hose Allowance at Source)	10.510 @ 2420.16

Pump at Node 17



Hydraulic Graph	Static + Churn Pressure	Fire Pump Rating
Pump at Node 17	177.182	100.000 @ 2000.00
Static: Pressure	**Fire Pump Churn Pressure**	
177.182	120.000	
Residual: Pressure		
101.452 @ 1920.16		
Available Pressure at System Demand		
132.056 @ 1920.16		
Required Pressure at System Demand		
108.215 @ 1920.16		

Node	Elevation(Foot)	Fittings	Pressure(psi)	Discharge(gpm)	
20	-4'-0	S	10.510	1920.16	
1300	45'-0	Spr(-40.019)	40.019	159.42	
1301	45'-0	Spr(-40.019)	40.019	159.42	
1302	45'-0	Spr(-40.559)	40.559	160.49	
1303	45'-0	Spr(-40.617)	40.617	160.60	
1304	45'-0	Spr(-40.001)	40.001	159.38	
1305	45'-0	Spr(-40.000)	40.000	159.38	
1306	45'-0	Spr(-40.540)	40.540	160.45	
1307	45'-0	Spr(-40.598)	40.598	160.57	
1308	45'-0	Spr(-40.086)	40.086	159.55	
1309	45'-0	Spr(-40.685)	40.685	160.74	
1310	45'-0	Spr(-40.085)	40.085	159.55	
1311	45'-0	Spr(-40.626)	40.626	160.62	
17	2'-6	P2(-101.452)	108.215		
18	2'-6	P1	6.763		
19	-4'-0	E(26'-0)	10.094		
384	43'-0	PO(16'-5½)	76.606		
386	43'-0	PO(16'-5½)	75.842		
388	43'-0	PO(16'-5½)	75.147		
390	43'-0	PO(16'-5½)	74.512		
392	43'-0	PO(16'-5½)	73.932		
394	43'-0	PO(16'-5½)	73.401		
396	43'-0	PO(16'-5½)	72.913		
398	43'-0	PO(16'-5½)	72.465		
400	43'-0	PO(16'-5½)	72.051		
402	43'-0	PO(16'-5½)	71.670		
404	43'-0	PO(16'-5½)	71.317		
406	43'-0	PO(16'-5½)	70.991		
408	43'-0	PO(16'-5½)	70.688		
410	43'-0	PO(16'-5½)	70.408		
412	43'-0	PO(16'-5½)	70.149		
414	43'-0	PO(16'-5½)	69.910		
416	43'-0	PO(16'-5½)	69.796		
418	43'-0	PO(16'-5½)	69.765		
596	43'-0	E(17'-7)	83.428		
761	2'-6	fE(15'-3), BOR	108.110		
2670	43'-0	PO(37'-8½)	70.054		
2672	43'-0	PO(16'-5½)	70.036		
2674	43'-0	PO(16'-5½)	70.025		
2676	43'-0	PO(16'-5½)	70.002		
2678	43'-0	PO(16'-5½)	69.966		
2680	43'-0	PO(16'-5½)	69.915		
2682	43'-0	PO(16'-5½)	69.847		
2684	43'-0	PO(16'-5½)	69.763		
2686	43'-0	PO(16'-5½)	69.661		
2688	43'-0	PO(16'-5½)	69.541		
2690	43'-0	PO(16'-5½)	69.404		
2692	43'-0	PO(16'-5½)	69.249		
2694	43'-0	PO(16'-5½)	69.076		
2696	43'-0	PO(16'-5½)	68.885		
2698	43'-0	PO(16'-5½)	68.676		
2700	43'-0	PO(16'-5½)	68.449		
2702	43'-0	PO(16'-5½)	68.341		
2704	43'-0	PO(16'-5½)	68.311		

Hydraulic Summary

Job

Job Number: Route 300	Design Engineer: A.Hergenreder
Job Name: Farrell Industrial Park	State Certification/License Number:
Address 1: Route 300	AHJ:
Address 2: Newburgh, NY	Job Site/Building:
Address 3:	Drawing Name: FP_Rte300_Farrell_Indust_Park.cad

System

Most Demanding Sprinkler Data: 25.2 K-Factor 159.38 at 40.000

Hose Allowance At Source: 500.00

Additional Hose Supplies

Node	Flow(gpm)

Total Hose Streams: 500.00

System Flow Demand	Total Water Required (Including Hose Allowance)
1920.16	2420.16

Maximum Pressure Unbalance In Loops: 0.000

Maximum Velocity Above Ground: 19.08 between nodes 185 and 1910

Maximum Velocity Under Ground	
7.25 between nodes 20 and 19	

Volume capacity of Wet Pipes	Volume capacity of Dry Pipes
20084.36 gal	

Remote Area(s)

Occupancy	Job Suffix
ESFR - SYSTEM 8	

Pressure	Area of Application
40.000	NA

Number Of Sprinklers Calculated	Number Of Nozzles Calculated	Coverage Per Sprinkler
12	0	100 ft²

AutoPeak Results: Pressure For Remote Area(s) Adjacent To Most Remote Area

Supplies

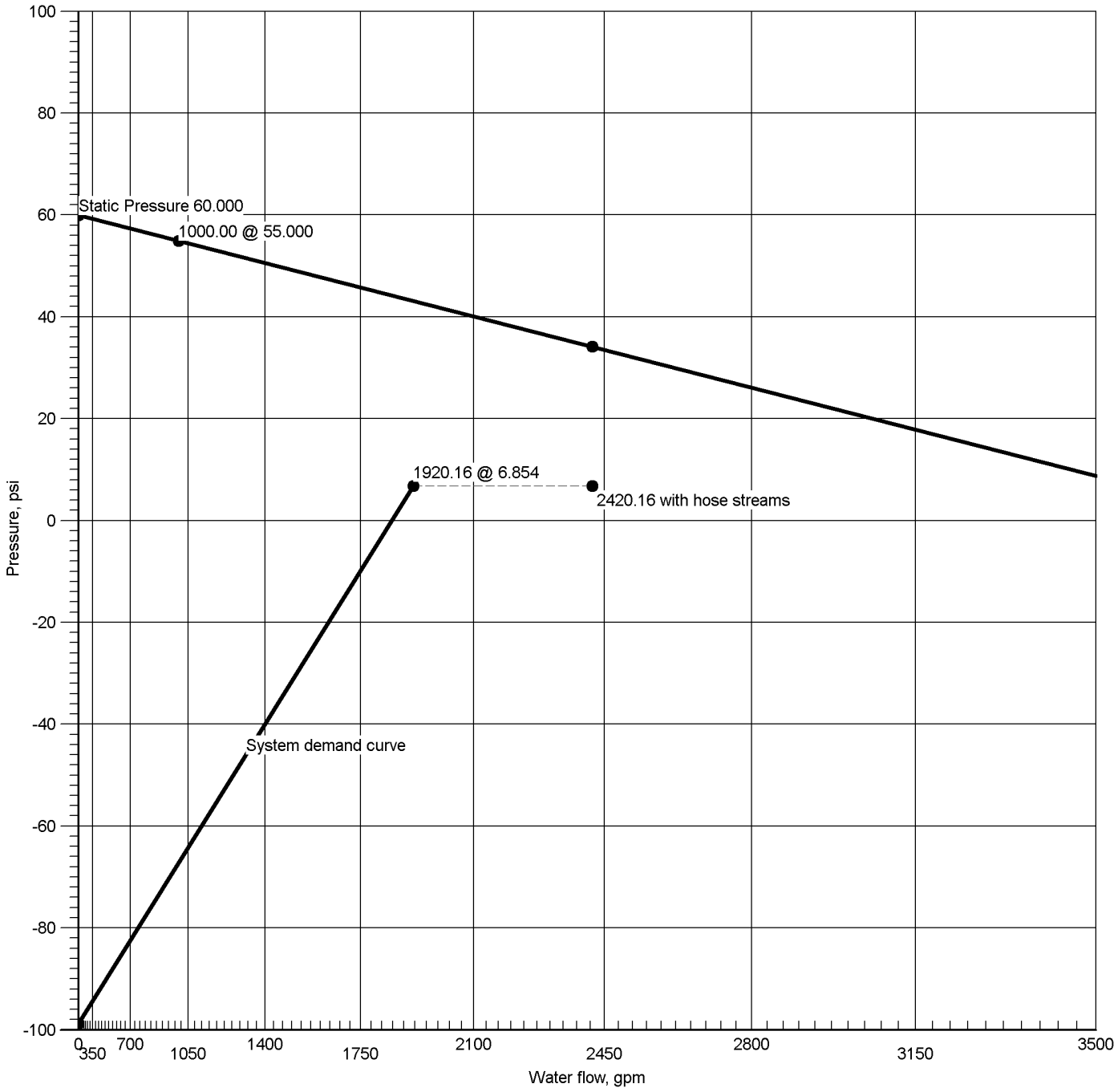
Node	Name	Hose Flow (gpm)	Static (psi)	Residual (psi)	@ Flow (gpm)	Available (psi)	@ Total Demand (gpm)	Required (psi)	Safety Margin (psi)
20	Water Supply	500.00	60.000	55.000	1000.00	34.350	2420.16	6.854	27.497
17	Pump		120.000	100.000	2000.00	132.056	1920.16	104.559	27.497

Pumps: Static = Churn (Pressure @ Zero Flow)

Contractor

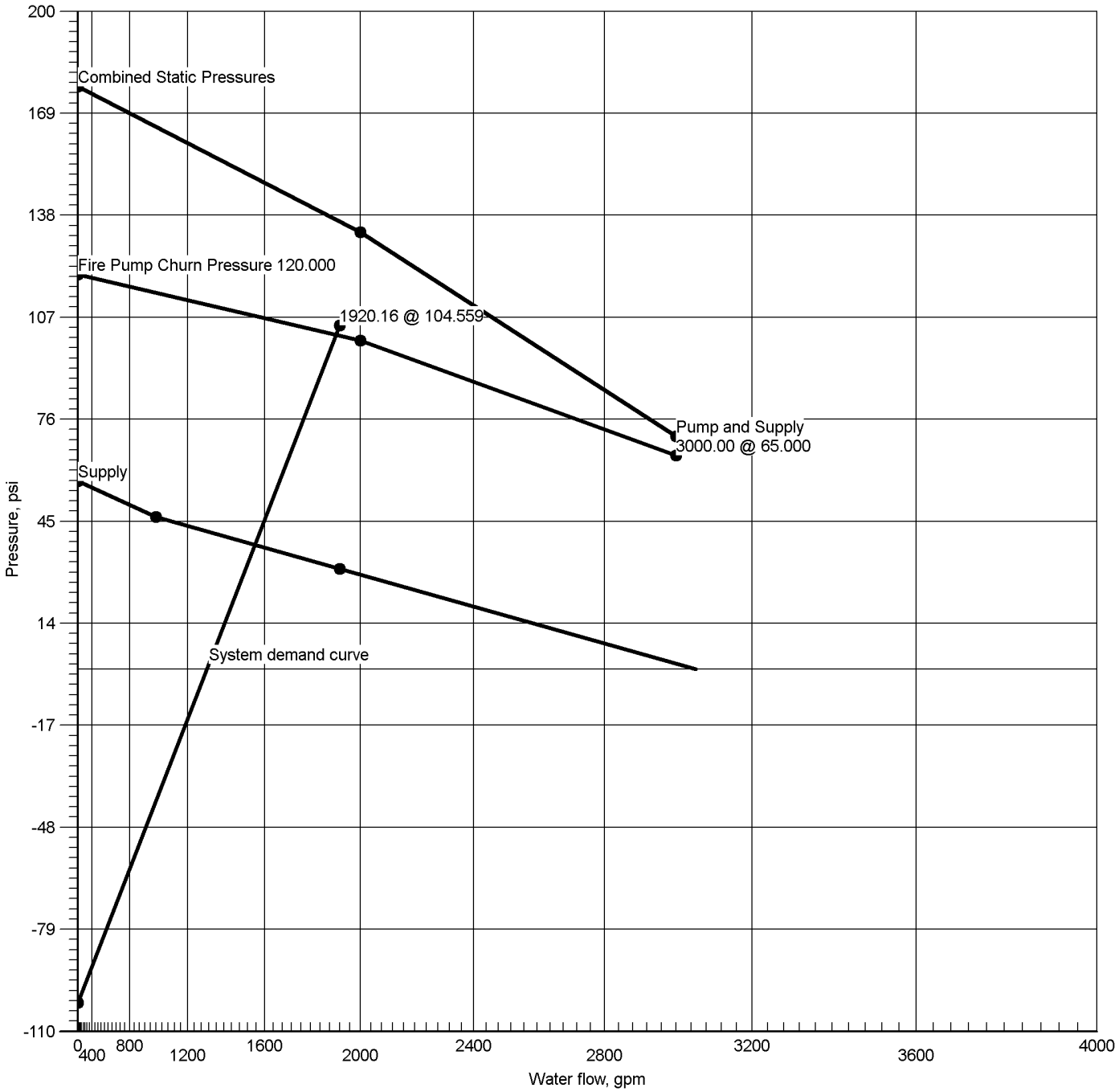
	Contractor Number: 21	Contact Name: Andrew Hergenreder	Contact Title: Plans Department
Name of Contractor: Global Fire Prevention		Phone: 845-781-0117	Extension: 110
Address 1: 59 Gilbert Street, Suite 101		FAX:	
Address 2: Monroe, NY 10950		E-mail: andrew@globalfireusa.com	
Address 3:		Web-Site: www.globalfireusa.com	

Water Supply at Node 20



Hydraulic Graph	Water Supply at Node 20
Static: Pressure	60.000
Residual: Pressure	55.000 @ 1000.00
Available Pressure at System Demand	34.350 @ 2420.16
Required Pressure at System Demand	6.854 @ 1920.16
Required Pressure at System Demand (Including Hose Allowance at Source)	6.854 @ 2420.16

Pump at Node 17



Hydraulic Graph	Static + Churn Pressure	Fire Pump Rating
Pump at Node 17	177.182	100.000 @ 2000.00
Static: Pressure	**Fire Pump Churn Pressure**	
177.182	120.000	
Residual: Pressure		
101.452 @ 1920.16		
Available Pressure at System Demand		
132.056 @ 1920.16		
Required Pressure at System Demand		
104.559 @ 1920.16		

Node	Elevation(Foot)	Fittings	Pressure(psi)	Discharge(gpm)	
20	-4'-0	S	6.854	1920.16	
1900	45'-0	Spr(-40.000)	40.000	159.38	
1901	45'-0	Spr(-40.001)	40.001	159.38	
1902	45'-0	Spr(-40.595)	40.595	160.56	
1903	45'-0	Spr(-40.543)	40.543	160.46	
1904	45'-0	Spr(-40.019)	40.019	159.42	
1905	45'-0	Spr(-40.019)	40.019	159.42	
1906	45'-0	Spr(-40.614)	40.614	160.60	
1907	45'-0	Spr(-40.562)	40.562	160.49	
1908	45'-0	Spr(-40.085)	40.085	159.55	
1909	45'-0	Spr(-40.086)	40.086	159.55	
1910	45'-0	Spr(-40.682)	40.682	160.73	
1911	45'-0	Spr(-40.629)	40.629	160.63	
17	2'-6	P2(-101.452)	104.559		
18	2'-6	P1	3.107		
19	-4'-0	E(26'-0)	6.438		
181	43'-0	PO(16'-5½)	69.771		
183	43'-0	PO(16'-5½)	69.802		
185	43'-0	PO(16'-5½)	69.915		
187	43'-0	PO(16'-5½)	70.154		
189	43'-0	PO(16'-5½)	70.412		
191	43'-0	PO(16'-5½)	70.690		
193	43'-0	PO(16'-5½)	70.991		
195	43'-0	PO(16'-5½)	71.314		
197	43'-0	PO(16'-5½)	71.663		
199	43'-0	PO(16'-5½)	72.040		
201	43'-0	PO(16'-5½)	72.448		
203	43'-0	PO(16'-5½)	72.890		
205	43'-0	PO(16'-5½)	73.371		
207	43'-0	PO(16'-5½)	73.894		
209	43'-0	PO(16'-5½)	74.464		
211	43'-0	PO(16'-5½)	75.087		
214	43'-0	PO(16'-5½)	75.770		
216	43'-0	T(37'-8½)	79.206		
242	43'-0	PO(16'-5½)	68.380		
243	43'-0	PO(16'-5½)	68.410		
244	43'-0	PO(16'-5½)	68.518		
245	43'-0	PO(16'-5½)	68.746		
246	43'-0	PO(16'-5½)	79.183		
247	43'-0	PO(16'-5½)	68.956		
248	43'-0	PO(16'-5½)	69.148		
249	43'-0	PO(16'-5½)	69.323		
250	43'-0	PO(16'-5½)	69.480		
251	43'-0	PO(16'-5½)	69.620		
252	43'-0	PO(16'-5½)	69.742		
253	43'-0	PO(16'-5½)	69.846		
254	43'-0	PO(16'-5½)	69.934		
255	43'-0	PO(16'-5½)	70.004		
256	43'-0	PO(16'-5½)	70.058		
257	43'-0	PO(16'-5½)	70.097		
258	43'-0	PO(16'-5½)	70.122		
259	43'-0	PO(16'-5½)	70.136		
260	43'-0	PO(37'-8½)	70.161		
761	2'-6	fE(15'-3), BOR	104.454		

Hydraulic Summary

Job Number: Route 300
Report Description: ESFR - SYSTEM 9 (9)

Job

Job Number: Route 300	Design Engineer: A.Hergenreder
Job Name: Farrell Industrial Park	State Certification/License Number:
Address 1: Route 300	AHJ:
Address 2: Newburgh, NY	Job Site/Building:
Address 3:	Drawing Name: FP_Rte300_Farrell_Indust_Park.cad

System

Most Demanding Sprinkler Data: 25.2 K-Factor 159.38 at 40.000

Hose Allowance At Source: 500.00

Additional Hose Supplies

Node	Flow(gpm)

Total Hose Streams: 500.00

System Flow Demand	Total Water Required (Including Hose Allowance)
1920.32	2420.32

Maximum Pressure Unbalance In Loops: 0.000

Maximum Velocity Above Ground: 19.88 between nodes 215 and 1510

Maximum Velocity Under Ground	
7.25 between nodes 20 and 19	

Volume capacity of Wet Pipes	Volume capacity of Dry Pipes
20084.36 gal	

Remote Area(s)

Occupancy	Job Suffix
ESFR - SYSTEM 9	

Pressure	Area of Application
40.000	NA

Number Of Sprinklers Calculated	Number Of Nozzles Calculated	Coverage Per Sprinkler
12	0	100 ft²

AutoPeak Results: Pressure For Remote Area(s) Adjacent To Most Remote Area

Supplies

Node	Name	Hose Flow (gpm)	Static (psi)	Residual (psi)	@ Flow (gpm)	Available (psi)	@ Total Demand (gpm)	Required (psi)	Safety Margin (psi)
20	Water Supply	500.00	60.000	55.000	1000.00	34.347	2420.32	12.756	21.591
17	Pump		120.000	100.000	2000.00	132.049	1920.32	110.458	21.591

Pumps: Static = Churn (Pressure @ Zero Flow)

Contractor

	Contractor Number	Contact Name	Contact Title
	21	Andrew Hergenreder	Plans Department

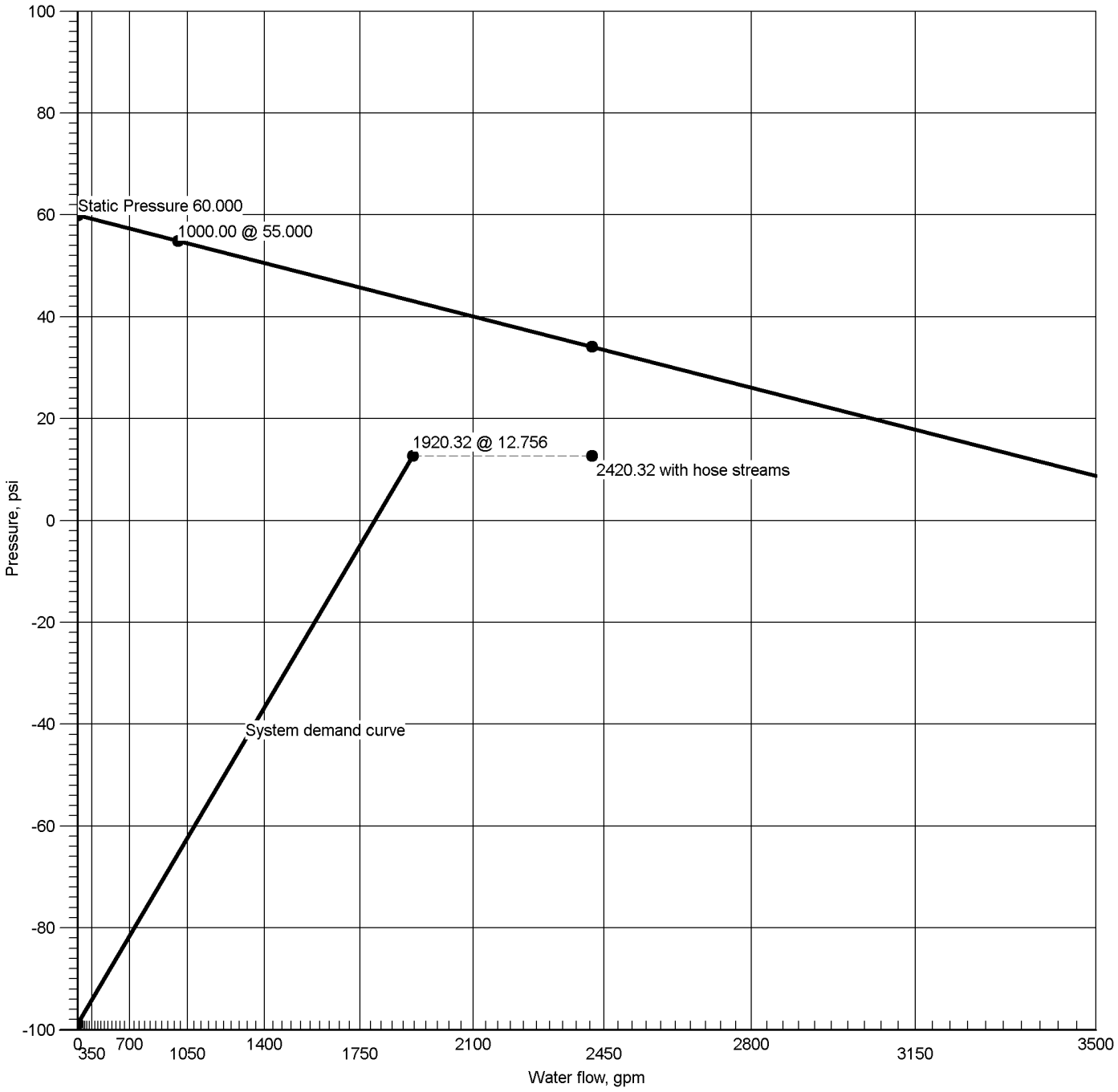
Name of Contractor:	Phone	Extension
Global Fire Prevention	845-781-0117	110

Address 1	FAX
59 Gilbert Street, Suite 101	

Address 2	E-mail
Monroe, NY 10950	andrew@globalfireusa.com

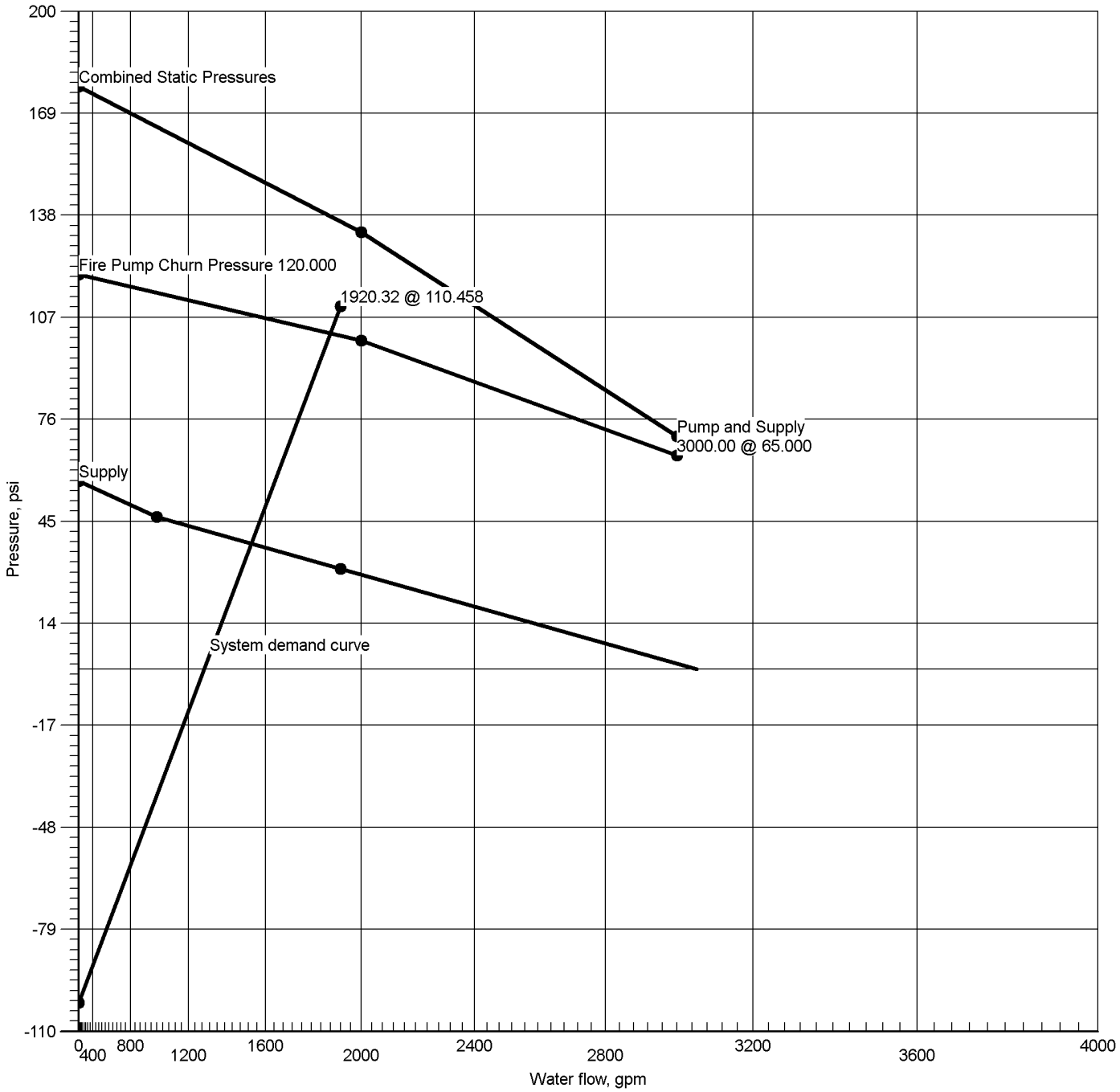
Address 3	Web-Site
	www.globalfireusa.com

Water Supply at Node 20



Hydraulic Graph Water Supply at Node 20
Static: Pressure 60.000
Residual: Pressure 55.000 @ 1000.00
Available Pressure at System Demand 34.347 @ 2420.32
Required Pressure at System Demand 12.756 @ 1920.32
Required Pressure at System Demand (Including Hose Allowance at Source) 12.756 @ 2420.32

Pump at Node 17



Hydraulic Graph	Static + Churn Pressure	Fire Pump Rating
Pump at Node 17	177.182	100.000 @ 2000.00
Static: Pressure	**Fire Pump Churn Pressure**	
177.182	120.000	
Residual: Pressure		
101.449 @ 1920.32		
Available Pressure at System Demand		
132.049 @ 1920.32		
Required Pressure at System Demand		
110.458 @ 1920.32		

Node	Elevation(Foot)	Fittings	Pressure(psi)	Discharge(gpm)	
20	-4'-0	S	12.756	1920.32	
1500	45'-0	Spr(-40.000)	40.000	159.38	
1501	45'-0	Spr(-40.009)	40.009	159.40	
1502	45'-0	Spr(-40.698)	40.698	160.76	
1503	45'-0	Spr(-40.459)	40.459	160.29	
1504	45'-0	Spr(-40.018)	40.018	159.42	
1505	45'-0	Spr(-40.028)	40.028	159.43	
1506	45'-0	Spr(-40.717)	40.717	160.80	
1507	45'-0	Spr(-40.478)	40.478	160.33	
1508	45'-0	Spr(-40.085)	40.085	159.55	
1509	45'-0	Spr(-40.095)	40.095	159.57	
1510	45'-0	Spr(-40.785)	40.785	160.93	
1511	45'-0	Spr(-40.545)	40.545	160.46	
17	2'-6	P2(-101.449)	110.458		
18	2'-6	P1	9.009		
19	-4'-0	E(26'-0)	12.340		
212	43'-0	PO(16'-5½)	72.036		
213	43'-0	PO(16'-5½)	72.069		
215	43'-0	PO(16'-5½)	72.191		
217	43'-0	PO(16'-5½)	72.449		
218	43'-0	PO(16'-5½)	72.751		
219	43'-0	PO(16'-5½)	73.101		
220	43'-0	PO(16'-5½)	73.503		
223	43'-0	PO(16'-5½)	73.962		
224	43'-0	PO(16'-5½)	74.484		
225	43'-0	PO(16'-5½)	75.073		
226	43'-0	PO(16'-5½)	75.738		
227	43'-0	PO(16'-5½)	76.485		
229	43'-0	PO(16'-5½)	66.190		
230	43'-0	PO(16'-5½)	66.218		
231	43'-0	PO(16'-5½)	66.317		
232	43'-0	PO(16'-5½)	66.528		
233	43'-0	PO(16'-5½)	66.701		
234	43'-0	PO(16'-5½)	66.840		
235	43'-0	PO(16'-5½)	66.948		
236	43'-0	PO(16'-5½)	67.027		
237	43'-0	PO(16'-5½)	67.082		
238	43'-0	PO(16'-5½)	67.116		
239	43'-0	PO(16'-5½)	67.132		
240	43'-0	PO(37'-8½)	67.158		
465	43'-0	E(17'-7)	80.312		
761	2'-6	fE(15'-3), BOR	110.353		

Hydraulic Summary

Job

Job Number: Route 300	Design Engineer: A.Hergenreder
Job Name: Farrell Industrial Park	State Certification/License Number:
Address 1: Route 300	AHJ:
Address 2: Newburgh, NY	Job Site/Building:
Address 3:	Drawing Name: FP_Rte300_Farrell_Indust_Park.cad

System

Most Demanding Sprinkler Data: 25.2 K-Factor 159.38 at 40.000

Hose Allowance At Source: 500.00

Additional Hose Supplies

Node	Flow(gpm)

Total Hose Streams: 500.00	
System Flow Demand: 1920.65	Total Water Required (Including Hose Allowance): 2420.65
Maximum Pressure Unbalance In Loops: 0.000	
Maximum Velocity Above Ground: 20.53 between nodes 177 and 1710	
Maximum Velocity Under Ground: 7.25 between nodes 20 and 19	
Volume capacity of Wet Pipes: 20084.36 gal	Volume capacity of Dry Pipes:

Remote Area(s)

Occupancy: ESFR - SYSTEM 10		Job Suffix:
Pressure: 40.000		Area of Application: NA
Number Of Sprinklers Calculated: 12	Number Of Nozzles Calculated: 0	Coverage Per Sprinkler: 100 ft²

AutoPeak Results: Pressure For Remote Area(s) Adjacent To Most Remote Area

Supplies

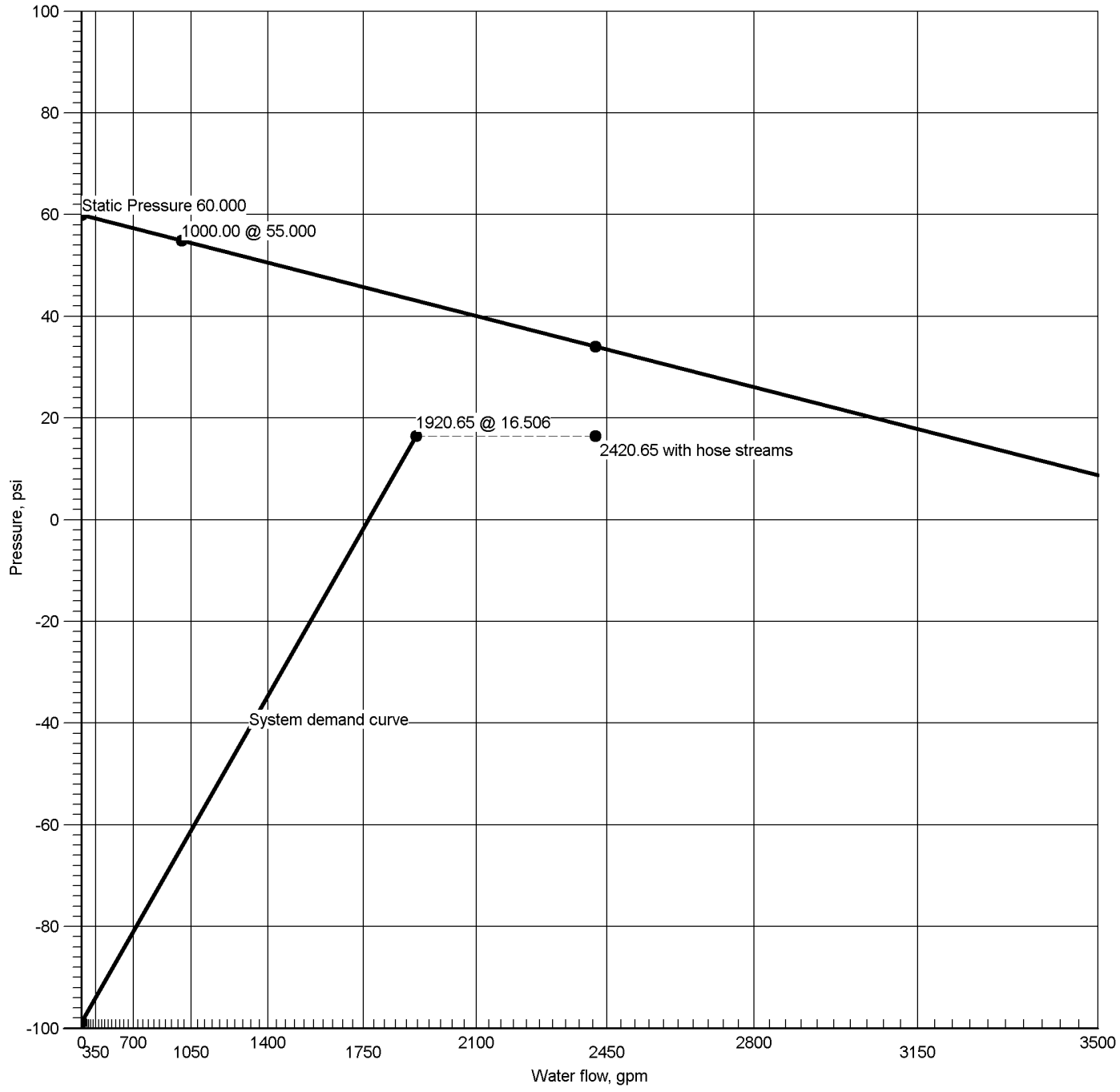
Node	Name	Hose Flow (gpm)	Static (psi)	Residual (psi) @ Flow (gpm)		Available (psi) @ Total Demand (gpm)		Required (psi)	Safety Margin (psi)
20	Water Supply	500.00	60.000	55.000	1000.00	34.341	2420.65	16.506	17.834
17	Pump		120.000	100.000	2000.00	132.037	1920.65	114.203	17.834

Pumps: Static = Churn (Pressure @ Zero Flow)

Contractor

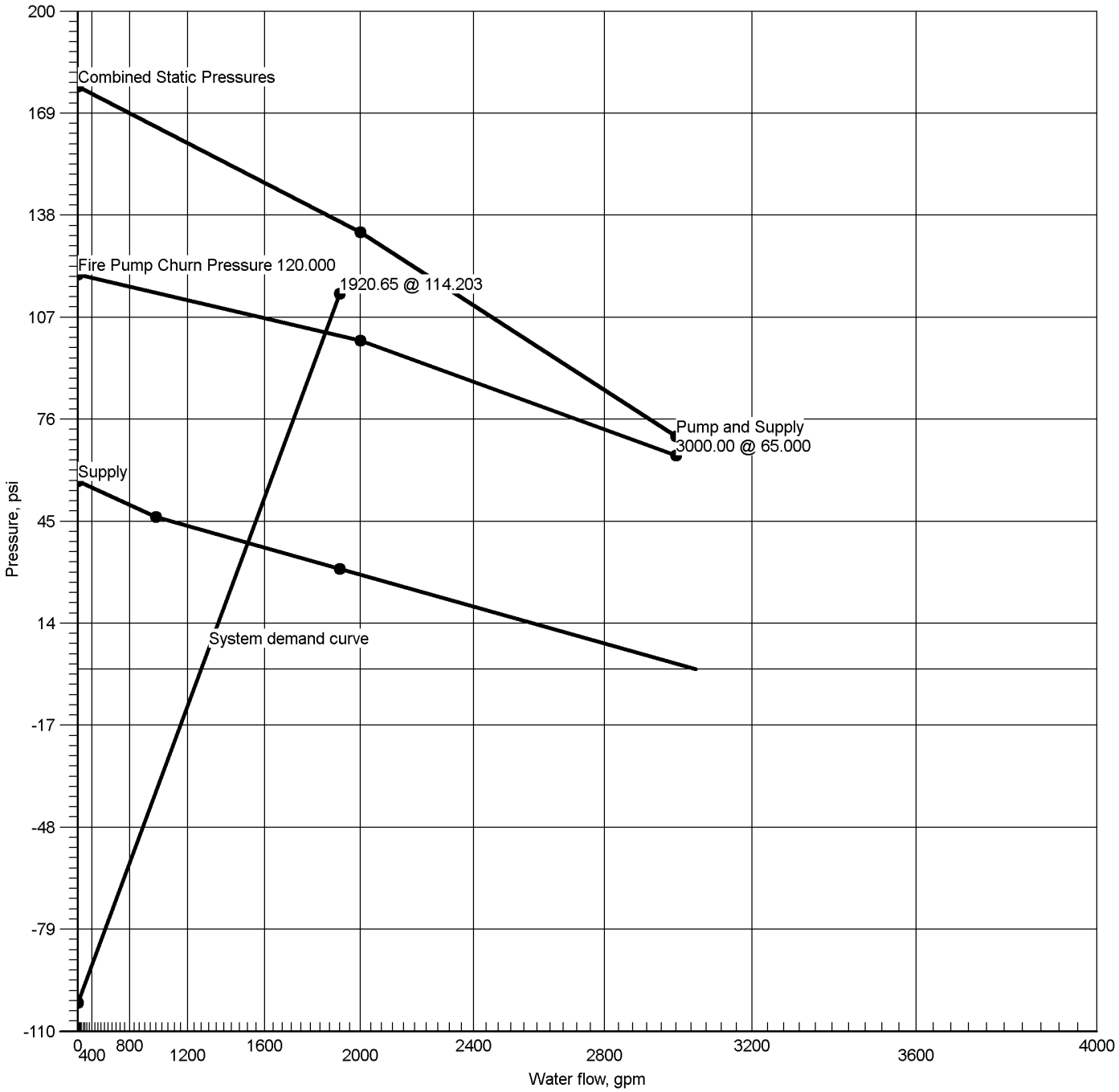
Contractor Number: 21		Contact Name: Andrew Hergenreder	Contact Title: Plans Department
Name of Contractor: Global Fire Prevention		Phone: 845-781-0117	Extension: 110
Address 1: 59 Gilbert Street, Suite 101		FAX:	
Address 2: Monroe, NY 10950		E-mail: andrew@globalfireusa.com	
Address 3:		Web-Site: www.globalfireusa.com	

Water Supply at Node 20



Hydraulic Graph	Water Supply at Node 20
Static: Pressure	60.000
Residual: Pressure	55.000 @ 1000.00
Available Pressure at System Demand	34.341 @ 2420.65
Required Pressure at System Demand	16.506 @ 1920.65
Required Pressure at System Demand (Including Hose Allowance at Source)	16.506 @ 2420.65

Pump at Node 17



Hydraulic Graph	Static + Churn Pressure	Fire Pump Rating
Pump at Node 17	177.182	100.000 @ 2000.00
Static: Pressure	**Fire Pump Churn Pressure**	
177.182	120.000	
Residual: Pressure		
101.443 @ 1920.65		
Available Pressure at System Demand		
132.037 @ 1920.65		
Required Pressure at System Demand		
114.203 @ 1920.65		

Node	Elevation(Foot)	Fittings	Pressure(psi)	Discharge(gpm)	
20	-4'-0	S	16.506	1920.65	
1700	45'-0	Spr(-40.000)	40.000	159.38	
1701	45'-0	Spr(-40.023)	40.023	159.42	
1702	45'-0	Spr(-40.791)	40.791	160.95	
1703	45'-0	Spr(-40.397)	40.397	160.17	
1704	45'-0	Spr(-40.020)	40.020	159.42	
1705	45'-0	Spr(-40.043)	40.043	159.46	
1706	45'-0	Spr(-40.811)	40.811	160.99	
1707	45'-0	Spr(-40.418)	40.418	160.21	
1708	45'-0	Spr(-40.092)	40.092	159.56	
1709	45'-0	Spr(-40.116)	40.116	159.61	
1710	45'-0	Spr(-40.886)	40.886	161.13	
1711	45'-0	Spr(-40.490)	40.490	160.35	
17	2'-6	P2(-101.443)	114.203		
18	2'-6	P1	12.759		
19	-4'-0	E(26'-0)	16.090		
175	43'-0	PO(16'-5½)	73.975		
176	43'-0	PO(16'-5½)	74.014		
177	43'-0	PO(16'-5½)	74.154		
178	43'-0	PO(16'-5½)	74.453		
179	43'-0	PO(16'-5½)	74.801		
180	43'-0	PO(16'-5½)	75.199		
182	43'-0	PO(16'-5½)	75.670		
184	43'-0	PO(16'-5½)	76.220		
186	43'-0	PO(16'-5½)	76.857		
188	43'-0	PO(16'-5½)	77.590		
192	43'-0	PO(16'-5½)	64.507		
194	43'-0	PO(16'-5½)	64.536		
196	43'-0	PO(16'-5½)	64.637		
198	43'-0	PO(16'-5½)	64.851		
200	43'-0	PO(16'-5½)	65.008		
202	43'-0	PO(16'-5½)	65.118		
204	43'-0	PO(16'-5½)	65.193		
206	43'-0	PO(16'-5½)	65.238		
208	43'-0	PO(16'-5½)	65.260		
210	43'-0	PO(37'-8½)	65.294		
572	43'-0	E(17'-7)	81.605		
761	2'-6	fE(15'-3), BOR	114.097		

The sprinkler system at Farrell Industrial Park - Route 300, Newburgh, NY has been calculated to accommodate the following:

STORAGE FOR CEILING HEIGHTS UP TO 45'-0" USING ESFR K25.0 SPRINKLERS:

COMMODITY	CONFIGURATION	RACK STORAGE (A,B)	SOLID PILED / PALLETIZED
GROUP A PLASTICS NONEXPANDED	CARTONED	40 FT	30 FT
	EXPOSED	25 FT	30 FT
CLASS IV	NON-ENCAPSULATED(D)	40 FT	35 FT
CLASS I - III	NON-ENCAPSULATED(D)	40 FT	35 FT
IDLE WOOD PALLETS	STACKED ON FLOOR	20 FT	25 FT

IMPORTANT: A MINIMUM CLEARANCE OF 36" BETWEEN THE SPRINKLER DEFLECTOR AND THE TOP OF STORAGE MUST BE MAINTAINED

FOOTNOTES:

(A) Solid Shelf Racks: Will require in-rack sprinklers depending on the cubic feet of the shelf area (See Sec 16.1.6)
(B) Must comply with Flue Requirements in accordance with NFPA 13
(D) Pallets of goods are not to be wrapped on the top with plastic sheeting with greater than 50% coverage.

GENERAL RACK STORAGE NOTES:

1. Racks are to be Single or Double row open grate racking, with a minimum of 8'-0" aisles between racks.
2. No longitudinal flue space required between racks. 6" nominal transverse flue spaces shall be maintained at all rack uprights.
3. Column Protection not required per NFPA 13, 16.1.4.1
4. Open top containers of all commodities shall not be stored over 12ft.

UNLESS NOTED OTHERWISE ALL AREAS WITH OCCUPANCIES HAVING USES AND CONDITIONS SIMILAR TO THE FOLLOWING:

HAZARD CLASSIFICATION	OCCUPANCY EXAMPLES
LIGHT HAZARD	• OFFICES, INCLUDING DATA PROCESSING
ORDINARY HAZARD GROUP 1	• BEVERAGE MANUFACTURING • DAIRY PRODUCTS MANUFACTURING AND PROCESSING • GLASS AND GLASS PRODUCTS MANUFACTURING
ORDINARY HAZARD GROUP 2	• CONFECTIONARY PRODUCTS • MACHINE SHOPS • RESIN APPLICATION AREAS • TEXTILE MANUFACTURING • WOOD MACHINING/PRODUCT ASSEMBLY

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