Nassau County Fire Commission
Office of Fire Marshal
Public Safety Center
1194 Prospect Ave.
Westbury, New York 11590
(516) 573-9900

INDUSTRIAL DIVISION REQUEST FOR FINAL APPROVAL

	HOOD & DUCT SYSTEM		AUTOMATIC EXTINGUISHING SYSTEM
	FIRE SPRINKLER SYSTEM		AUTOMATIC FIRE SUPPRESSION SYSTEM
	FIRE STANDPIPE SYSTEM		FIRE PUMP INSTALLATION
	FIRE & SMOKE DETECTION SYSTEM		MANUAL FIRE ALARM SYSTEM
	LPG INSTALLATION		TANK AND PIPING INSTALLATION
	GENERATOR INSTALLATION		OTHER

TEST LOCATION

LOCATION NAME _____

ADDRESS _____ TOWN _____

CROSS STREET _____ NCFM ID# _____

INSTALLING COMPANY _____

CONTACT PERSON _____

BUSINESS PHONE# _____ CELL PHONE# _____ FAX# _____

THIS FORM SHALL BE SENT NO LATER THAN SEVENTY TWO (72) HOURS AFTER COMPLETION OF INSTALLATION. AN EXPEDITED TEST AVAILABLE FOR ADDITIONAL FEE.

FAX THIS REQUEST FORM TO 516-573-9074 AND YOU WILL BE CONTACTED BY A FIRE MARSHAL TO SCHEDULE THE SYSTEM TEST. ANY QUESTIONS PLEASE CONTACT THE INDUSTRIAL DIVISION AT 516-573-9940.

ADDITIONAL INFO: _____

WATER TREATMENT PLANT
Fire Sprinkler Reports

for

US Navy

370 Seamans Neck Rd.
Seaford, NY 11783

STATE OF NEW YORK
THOMAS PATRICK KENNY
071550
LICENSED PROFESSIONAL ENGINEER

FIRE MARSHAL
NASSAU COUNTY, N.Y.
These plans are accepted as proposed construction but examination does not mean approval or any liability therefore. They must meet all requirements of all applicable laws or ordinances whether or not correctly or incorrectly shown.
Date APR 3 2013

20000833
LOCATION I.D. NUMBER
20001123
PLANS I.D. NUMBER
DiLavore 4/3/2013
FIRE MARSHAL DATE

FIRE MARSHAL ROBERT J. DILAVORE
SHIELD # 90
OFFICE OF THE FIRE MARSHAL
COUNTY OF NASSAU, N.Y.

Prepared By:

Thomas Kenny, P.E.
KG Mechanical
162 Milbar Blvd.
Farmingdale, NY 11735
631-777-2627

January 29, 2013

N.C.F.M. INSPECTORS COPY
APPROVED PLANS MUST BE ON JOB SITE DURING SYSTEM INSTALLATION

General Project Data Report

General Data

Project Title:	Water Treatment Plant	Project File Name:	373-Water Treatment Plant..fiw
Designed By:	Thomas Kenny, P.E.	Date:	January 29, 2013
Code Reference:	NFPA 13-2007	Approving Agency:	NCFM
Client Name:	US Navy	Phone:	
Address:	370 Seamans Neck Rd.	City, State Zip Code:	Seaford, NY 11783
Company Name:	KG Mechanical	Representative:	Ken Gordon
Company Address:	162 Milbar Blvd.	City And State:	Farmingdale, NY 11735
Phone:	631-777-2627		
Building Name:	Water Treatment Plant	Building Owner:	US Navy
Contact at Building:		Phone at Building:	
Address Of Building:	370 Seamans Neck Rd	City, State Zip Code:	Seaford, NY 11783

Project Data

Description Of Hazard:	Light Hazard		Sprinkler System Type:	Wet	
Design Area Of Water Application:	1950	ft²	Maximum Area Per Sprinkler:	130	ft²
Default Sprinkler K-Factor:	5.60	K	Default Pipe Material:	SCHED 40 WET STEEL	
Inside Hose Stream Allowance:	0.00	gpm	Outside Hose Stream Allowance:	250.00	gpm
In Rack Sprinkler Allowance:	0.00	gpm			

Sprinkler Specifications

Make:	Reliable		Model:	F1FR	
Size:	1/2"		Temperature Rating:	165	F

Water Supply Test Data

Source Of Information:					
Test Hydrant ID:			Date Of Test:		
Hydrant Elevation:	0	ft	Static Pressure:	65.00	psi
Test Flow Rate:	1060.00	gpm	Test Residual Pressure:	53.00	psi
Calculated System Flow Rate:	726.52	gpm	Calculated Inflow Residual Pressure:	42.74	psi
Available Residual Pressure At System Flow:	59.03	psi			

Calculation Project Data

Calculation Mode:	Demand				
HMD Minimum Residual Pressure:	7.00	psi	Minimum Desired Flow Density:	0.20	gpm/ft²
Number Of Active Nodes:	41				
Number Of Active Pipes:	40		Number Of Inactive Pipes:	0	
Number Of Active Sprinklers:	23		Number Of Inactive Sprinklers:	0	

Fire Sprinkler Output Data

Overall Pipe Output Data

Beg. End. Node	Nodal KFactor (K)	Elevation (feet)	Spk/Hose Discharge (gpm)	Residual Pressure (psi)	Nom. Dia. Inside Dia. C-Value	q (gpm) Q (gpm) Velocity (fps)	F. L./ft (psi/ft) Fittings Type-Grp	Pipe-Len. Fit-Len. Tot-Len. (ft)	PF-(psi) PE-(psi) PT-(psi)
10	5.60	27.00	18.40	10.80	1.25	18.40	0.02934	8.75	0.257
20	5.60	25.00	19.33	11.92	1.380	18.40	-----	0.00	0.866
	SCHED 40 WET STEEL				120	3.95	0	8.75	1.123
20	5.60	25.00	19.33	11.92	1.25	19.33	0.11081	1.75	1.524
30	0.00	23.00	0.00	14.31	1.380	37.73	2ET	12.00	0.866
	SCHED 40 WET STEEL				120	8.09	0	13.75	2.390
40	5.60	27.00	18.41	10.81	1.25	18.41	0.02938	8.75	0.257
50	5.60	25.00	19.35	11.93	1.380	18.41	-----	0.00	0.866
	SCHED 40 WET STEEL				120	3.95	0	8.75	1.123
30	0.00	23.00	0.00	14.31	3.00	0.00	0.00168	10.50	0.018
60	0.00	23.00	0.00	14.33	3.260	37.73	-----	0.00	0.000
	SCHED 10 WET STEEL				120	1.45	0	10.50	0.018
50	5.60	25.00	19.35	11.93	1.25	19.35	0.11096	1.75	1.526
60	0.00	23.00	0.00	14.33	1.380	37.76	2ET	12.00	0.866
	SCHED 40 WET STEEL				120	8.10	0	13.75	2.392
70	5.60	27.00	18.46	10.87	1.25	18.46	0.02952	8.75	0.258
80	5.60	25.00	19.39	11.99	1.380	18.46	-----	0.00	0.866
	SCHED 40 WET STEEL				120	3.96	0	8.75	1.124
60	0.00	23.00	0.00	14.33	3.00	0.00	0.00608	10.50	0.064
90	0.00	23.00	0.00	14.39	3.260	75.49	-----	0.00	0.000
	SCHED 10 WET STEEL				120	2.90	0	10.50	0.064
80	5.60	25.00	19.39	11.99	1.25	19.39	0.11146	1.75	1.533
90	0.00	23.00	0.00	14.39	1.380	37.85	2ET	12.00	0.866
	SCHED 40 WET STEEL				120	8.12	0	13.75	2.399
100	5.60	27.00	18.56	10.98	1.25	18.56	0.02982	8.75	0.261
110	5.60	25.00	19.49	12.11	1.380	18.56	-----	0.00	0.866
	SCHED 40 WET STEEL				120	3.98	0	8.75	1.127
90	0.00	23.00	0.00	14.39	3.00	0.00	0.01289	10.50	0.135
120	0.00	23.00	0.00	14.53	3.260	113.34	-----	0.00	0.000
	SCHED 10 WET STEEL				120	4.36	0	10.50	0.135
110	5.60	25.00	19.49	12.11	1.25	19.49	0.11254	1.75	1.547
120	0.00	23.00	0.00	14.53	1.380	38.05	2ET	12.00	0.866
	SCHED 40 WET STEEL				120	8.16	0	13.75	2.413
130	5.60	27.00	18.73	11.19	1.25	18.73	0.03033	8.75	0.265
140	5.60	25.00	19.65	12.32	1.380	18.73	-----	0.00	0.866
	SCHED 40 WET STEEL				120	4.02	0	8.75	1.131

Fire Sprinkler Output Data

Overall Pipe Output Data (cont'd)

Beg. End. Node	Nodal KFactor (K)	Elevation (feet)	Spk/Hose Discharge (gpm)	Residual Pressure (psi)	Nom. Dia. Inside Dia. C-Value	q (gpm) Q (gpm) Velocity (fps)	F. L./ft (psi/ft) Fittings Type-Grp	Pipe-Len. Fit-Len. Tot-Len. (ft)	PF-(psi) PE-(psi) PT-(psi)
120	0.00	23.00	0.00	14.53	3.00	0.00	0.02202	10.50	0.231
150	0.00	23.00	0.00	14.76	3.260	151.39	-----	0.00	0.000
	SCHED 10 WET STEEL				120	5.82	0	10.50	0.231
140	5.60	25.00	19.65	12.32	1.25	19.65	0.11438	1.75	1.573
150	0.00	23.00	0.00	14.76	1.380	38.38	2ET	12.00	0.866
	SCHED 40 WET STEEL				120	8.23	0	13.75	2.439
160	5.60	27.00	18.98	11.49	1.25	18.98	0.03109	8.75	0.272
170	5.60	25.00	19.90	12.63	1.380	18.98	-----	0.00	0.866
	SCHED 40 WET STEEL				120	4.07	0	8.75	1.138
150	0.00	23.00	0.00	14.76	3.00	0.00	0.03345	10.50	0.351
180	0.00	23.00	0.00	15.11	3.260	189.78	-----	0.00	0.000
	SCHED 10 WET STEEL				120	7.29	0	10.50	0.351
170	5.60	25.00	19.90	12.63	1.25	19.90	0.11716	1.75	1.611
180	0.00	23.00	0.00	15.11	1.380	38.89	2ET	12.00	0.866
	SCHED 40 WET STEEL				120	8.34	0	13.75	2.477
190	5.60	27.00	20.84	13.86	1.25	20.84	0.03696	8.75	0.323
200	5.60	25.00	21.72	15.04	1.380	20.84	-----	0.00	0.866
	SCHED 40 WET STEEL				120	4.47	0	8.75	1.189
180	0.00	23.00	0.00	15.11	3.00	0.00	0.04722	39.33	2.707
210	0.00	23.00	0.00	17.81	3.260	228.66	2E	18.00	0.000
	SCHED 10 WET STEEL				120	8.79	0	57.33	2.707
200	5.60	25.00	21.72	15.04	1.25	21.72	0.13849	1.75	1.904
210	0.00	23.00	0.00	17.81	1.380	42.57	2ET	12.00	0.866
	SCHED 40 WET STEEL				120	9.13	0	13.75	2.770
220	5.60	27.00	21.29	14.45	1.25	21.29	0.03843	8.75	0.336
230	5.60	25.00	22.15	15.65	1.380	21.29	-----	0.00	0.866
	SCHED 40 WET STEEL				120	4.57	0	8.75	1.202
210	0.00	23.00	0.00	17.81	3.00	0.00	0.06476	10.50	0.680
240	0.00	23.00	0.00	18.49	3.260	271.23	-----	0.00	0.000
	SCHED 10 WET STEEL				120	10.43	0	10.50	0.680
230	5.60	25.00	22.15	15.65	1.25	22.15	0.14381	1.75	1.977
240	0.00	23.00	0.00	18.49	1.380	43.44	2ET	12.00	0.866
	SCHED 40 WET STEEL				120	9.32	0	13.75	2.843
250	5.60	27.00	21.86	15.23	1.25	21.86	0.04035	8.75	0.353
260	5.60	25.00	22.71	16.45	1.380	21.86	-----	0.00	0.866
	SCHED 40 WET STEEL				120	4.69	0	8.75	1.219

Fire Sprinkler Output Data

Overall Pipe Output Data (cont'd)

Beg. End. Node	Nodal KFactor (K)	Elevation (feet)	Spk/Hose Discharge (gpm)	Residual Pressure (psi)	Nom. Dia. Inside Dia. C-Value	q (gpm) Q (gpm) Velocity (fps)	F. L./ft (psi/ft) Fittings Type-Grp	Pipe-Len. Fit-Len. Tot-Len. (ft)	PF-(psi) PE-(psi) PT-(psi)
240	0.00	23.00	0.00	18.49	3.00	0.00	0.08524	10.50	0.895
270	0.00	23.00	0.00	19.39	3.260	314.67	-----	0.00	0.000
	SCHED 10 WET STEEL				120	12.10	0	10.50	0.895
260	5.60	25.00	22.71	16.45	1.25	22.71	0.15079	1.75	2.073
270	0.00	23.00	0.00	19.39	1.380	44.57	2ET	12.00	0.866
	SCHED 40 WET STEEL				120	9.56	0	13.75	2.939
280	5.60	27.00	22.56	16.23	1.25	22.56	0.04279	8.75	0.374
290	5.60	25.00	23.41	17.47	1.380	22.56	-----	0.00	0.866
	SCHED 40 WET STEEL				120	4.84	0	8.75	1.240
270	0.00	23.00	0.00	19.39	3.00	0.00	0.10892	10.50	1.144
300	0.00	23.00	0.00	20.53	3.260	359.24	-----	0.00	0.000
	SCHED 10 WET STEEL				120	13.81	0	10.50	1.144
290	5.60	25.00	23.41	17.47	1.25	23.41	0.15967	1.75	2.196
300	0.00	23.00	0.00	20.53	1.380	45.97	2ET	12.00	0.866
	SCHED 40 WET STEEL				120	9.86	0	13.75	3.062
300	0.00	23.00	0.00	20.53	3.00	0.00	0.13610	9.00	1.225
310	0.00	23.00	0.00	21.76	3.260	405.21	-----	0.00	0.000
	SCHED 10 WET STEEL				120	15.58	0	9.00	1.225
310	0.00	23.00	0.00	21.76	3.00	0.00	0.00547	1.50	0.008
340	0.00	23.00	0.00	21.75	3.260	71.31	-----	0.00	0.000
	SCHED 10 WET STEEL				120	2.74	0	1.50	0.008
320	5.60	27.00	23.29	17.30	1.25	23.29	0.04538	8.75	0.397
330	5.60	25.00	24.12	18.56	1.380	23.29	-----	0.00	0.866
	SCHED 40 WET STEEL				120	5.00	0	8.75	1.263
330	5.60	25.00	24.12	18.56	1.25	24.12	0.16909	1.75	2.325
340	0.00	23.00	0.00	21.75	1.380	47.41	2ET	12.00	0.866
	SCHED 40 WET STEEL				120	10.17	0	13.75	3.191
340	0.00	23.00	0.00	21.75	3.00	0.00	0.00072	10.50	0.008
370	0.00	23.00	0.00	21.74	3.260	23.90	-----	0.00	0.000
	SCHED 10 WET STEEL				120	0.92	0	10.50	0.008
350	5.60	23.00	23.90	18.21	1.00	23.90	0.18100	8.75	1.584
360	0.00	25.00	0.00	18.93	1.049	23.90	-----	0.00	-0.866
	SCHED 40 WET STEEL				120	8.87	0	8.75	0.718
360	0.00	25.00	0.00	18.93	1.00	0.00	0.18100	1.75	1.946
370	0.00	23.00	0.00	21.74	1.049	23.90	2ET	9.00	0.866
	SCHED 40 WET STEEL				120	8.87	0	10.75	2.812

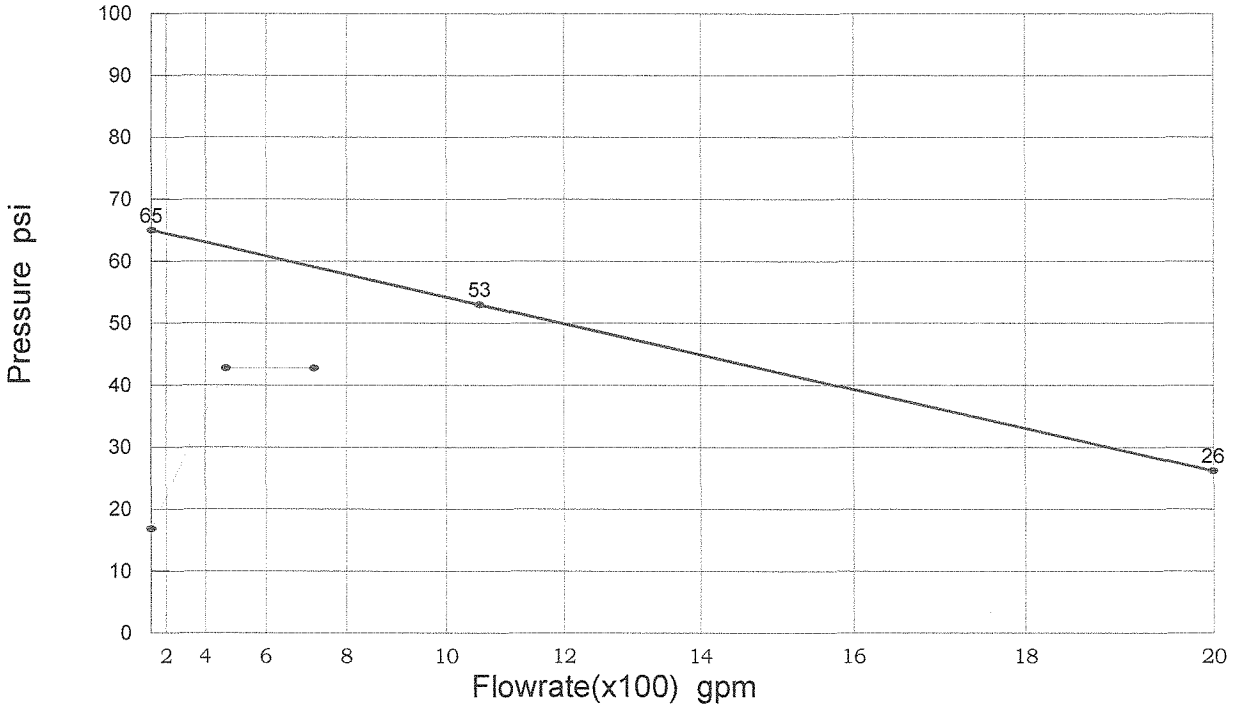
Fire Sprinkler Output Data

Overall Pipe Output Data (cont'd)

Beg. End. Node	Nodal KFactor (K)	Elevation (feet)	Spk/Hose Discharge (gpm)	Residual Pressure (psi)	Nom. Dia. Inside Dia. C-Value	q (gpm) Q (gpm) Velocity (fps)	F. L./ft (psi/ft) Fittings Type-Grp	Pipe-Len. Fit-Len. Tot-Len. (ft)	PF-(psi) PE-(psi) PT-(psi)
310	0.00	23.00	0.00	21.76	4.00	0.00	0.04992	28.00	3.544
900	0.00	0.00	0.00	35.26	4.260	476.52	2E	43.00	9.959
	SCHED 10 WET STEEL				120	10.73	0	71.00	13.503
900	Backflo Prev	0.00		35.26		476.53			
910	6.00 psi	0.00		41.29					
910	0.00	0.00	0.00	41.29	4.00	0.00	0.06573	3.00	0.854
920	0.00	0.00	0.00	42.14	4.026	476.52	E	10.00	0.000
	SCHED 40 WET STEEL				120	12.01	0	13.00	0.854
920	0.00	0.00	0.00	42.14	6.00	0.00	0.00893	20.00	0.599
999	0.00	0.00	0.00	42.74	6.065	476.52	ETG	47.00	0.000
	SCHED 40 WET STEEL				120	5.29	0	67.00	0.599

Fire Sprinkler Output Data

Hydraulic Supply/Demand Graph



Supply Curve Data

Static Pressure: 65 psi
Test Residual Pressure: 53 psi
Test Flow Rate: 1060 gpm

Demand Curve Data

Calculated Residual Pressure: 42.74 psi
Calculated Flow Rate: 726.52 gpm
Exterior Hose Flow: 250.00 gpm
Excess Available Residual Pressure At Calculated Flow: 16.3 psi
Pressure Required For First Sprinkler Downstream From Inflow Node To Flow: 16.83 psi