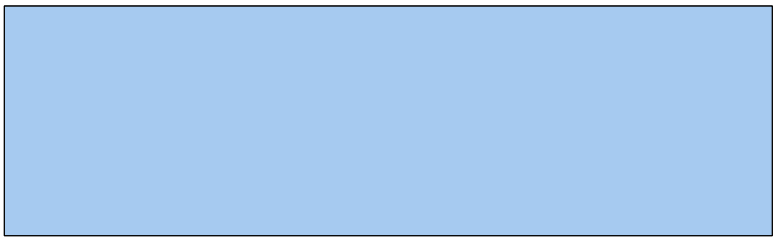
BAIT HOLIM BARZILAE - KOMAT MARTEF
Fire Sprinkler Reports

for



Prepared By:

01/10/2024

General Project Data Report

General Data

Project Title:	bait holim barzilae - komat martef	Project File Name:	bait holim barzilay - komat martef..fiw
Designed By:		Date:	01/10/2024
Code Reference:		Approving Agency:	
Client Name:		Phone:	
Address:		City, State Zip Code:	
Company Name:		Representative:	
Company Address:		City And State:	
Phone:			
Building Name:		Building Owner:	
Contact at Building:		Phone at Building:	
Address Of Building:		City, State Zip Code:	

Project Data

Description Of Hazard:	Ordinary 2		Sprinkler System Type:	Wet	
Design Area Of Water Application:	900	ft²	Maximum Area Per Sprinkler:	129	ft²
Default Sprinkler K-Factor:	5.60	K	Default Pipe Material:	SCHED 10 WET STEEL	
Inside Hose Stream Allowance:	0.00	gpm	Outside Hose Stream Allowance:	0.00	gpm
In Rack Sprinkler Allowance:	0.00	gpm			

Sprinkler Specifications

Make:		Model:	
Size:		Temperature Rating:	0 F

Water Supply Test Data

Source Of Information:
Test Hydrant ID:
Date Of Test:

Hydrant Elevation:	0	ft	Static Pressure:	0.00	psi
Test Flow Rate:	0.00	gpm	Test Residual Pressure:	0.00	psi
Calculated System Flow Rate:	310.11	gpm	Calculated Inflow Residual Pressure:	97.78	psi

Calculation Project Data

Calculation Mode:	Demand				
HMD Minimum Residual Pressure:	14.78	psi	Minimum Desired Flow Density:	0.20	gpm/ft²
Number Of Active Nodes:	21				
Number Of Active Pipes:	20		Number Of Inactive Pipes:	0	
Number Of Active Sprinklers:	11		Number Of Inactive Sprinklers:	0	

Fire Sprinkler Input Data

Node Input Data

Node No.	Node Description Branch Description	Area Group Branch Dia. (in)	Sprinkler KFactor (K) Branch Len. (ft)	Pressure Estimate (psi) Branch Stnd Fittings	Node Elev (ft) Branch Non-Stnd Fittings (ft)	Non-Sprinkler Flow (gpm) Branch Sprk KFactor (K)
1	Sprinkler ----	---- 0.000	5.60 0.0	25.22 ----	9.84 0.0	0.00 0.00
2	No Discharge ----	---- 0.000	N/A 0.0	25.46 ----	9.84 0.0	0.00 0.00
3	Sprinkler ----	---- 0.000	5.60 0.0	24.08 ----	9.84 0.0	0.00 0.00
4	Sprinkler ----	---- 0.000	5.60 0.0	25.71 ----	9.84 0.0	0.00 0.00
5	No Discharge ----	---- 0.000	N/A 0.0	27.18 ----	9.84 0.0	0.00 0.00
6	Sprinkler ----	---- 0.000	5.60 0.0	21.33 ----	9.80 0.0	0.00 0.00
7	Sprinkler ----	---- 0.000	5.60 0.0	24.55 ----	9.80 0.0	0.00 0.00
8	Sprinkler ----	---- 0.000	5.60 0.0	22.09 ----	9.80 0.0	0.00 0.00
9	Sprinkler ----	---- 0.000	5.60 0.0	21.28 ----	9.80 0.0	0.00 0.00
10	No Discharge ----	---- 0.000	N/A 0.0	22.57 ----	9.80 0.0	0.00 0.00
11	Sprinkler ----	---- 0.000	5.60 0.0	21.40 ----	9.80 0.0	0.00 0.00
12	Sprinkler ----	---- 0.000	5.60 0.0	21.91 ----	9.80 0.0	0.00 0.00
13	No Discharge ----	---- 0.000	N/A 0.0	28.91 ----	9.80 0.0	0.00 0.00
14	No Discharge ----	---- 0.000	N/A 0.0	30.25 ----	9.80 0.0	0.00 0.00
15	No Discharge ----	---- 0.000	N/A 0.0	32.35 ----	9.80 0.0	0.00 0.00
16	Sprinkler ----	---- 0.000	5.60 0.0	30.63 ----	9.80 0.0	0.00 0.00
17	No Discharge ----	---- 0.000	N/A 0.0	45.34 ----	9.80 0.0	0.00 0.00

Fire Sprinkler Input Data

Node Input Data (cont'd)

Node No.	Node Description Branch Description	Area Group Branch Dia. (in)	Sprinkler KFactor (K) Branch Len. (ft)	Pressure Estimate (psi) Branch Stnd Fittings	Node Elev (ft) Branch Non-Stnd Fittings (ft)	Non-Sprinkler Flow (gpm) Branch Sprk KFactor (K)
18	Sprinkler ----	---- 0.000	5.60 0.0	44.22 ----	9.80 0.0	0.00 0.00
19	No Discharge ----	---- 0.000	N/A 0.0	53.59 ----	9.80 0.0	0.00 0.00
20	No Discharge ----	---- 0.000	N/A 0.0	82.91 ----	3.00 0.0	0.00 0.00
21	No Discharge ----	---- 0.000	N/A 0.0	97.78 ----	3.00 0.0	0.00 0.00

Fire Sprinkler Input Data

Pipe Input Data

Beg. Node	End. Node	Pipe Description	Nominal Diameter (inch)	Type Group	Fitting Data	Nominal Length (feet)	Fitting Length (feet)	Total Length (feet)	CFactor (gpm/inch-psi)
1	2	SCHED 10 WET STEEL	1.500	0		9.84	0.00	9.84	120
3	2	SCHED 10 WET STEEL	1.000	0	T	1.31	6.00	7.31	120
2	5	SCHED 10 WET STEEL	1.500	0	T	9.84	10.00	19.84	120
4	5	SCHED 10 WET STEEL	1.000	0	T	1.31	6.00	7.31	120
5	14	SCHED 10 WET STEEL	1.500	0	T	6.43	10.00	16.43	120
11	12	SCHED 10 WET STEEL	1.500	0	2E	14.44	10.00	24.44	120
12	10	SCHED 10 WET STEEL	1.500	0		8.53	0.00	8.53	120
8	10	SCHED 10 WET STEEL	1.500	0	T	11.71	10.00	21.71	120
9	10	SCHED 10 WET STEEL	1.000	0	T	1.64	6.00	7.64	120
10	7	SCHED 10 WET STEEL	1.500	0		7.15	0.00	7.15	120
6	7	SCHED 10 WET STEEL	1.000	0	T	13.12	6.00	19.12	120
7	13	SCHED 10 WET STEEL	1.500	0	E	2.30	5.00	7.30	120
13	14	SCHED 10 WET STEEL	2.000	0		7.55	0.00	7.55	120
14	15	SCHED 10 WET STEEL	2.000	0		5.38	0.00	5.38	120
16	15	SCHED 10 WET STEEL	1.000	0	T	1.31	6.00	7.31	120
15	17	SCHED 10 WET STEEL	2.000	0	ET	8.53	18.00	26.53	120
18	17	SCHED 10 WET STEEL	1.500	0	ET	12.17	15.00	27.17	120
17	19	SCHED 10 WET STEEL	2.000	0	T	1.31	12.00	13.31	120
19	20	SCHED 10 WET STEEL	3.000	0	7EBC	219.82	98.00	317.82	120
20	21	SCHED 10 WET STEEL	4.000	0	10E3BC	452.76	207.00	659.76	120

Fire Sprinkler Output Data

Overall Node Groupings Output Data

Pipe Segment Beg. Node	End. Node	Pipe Type Group	Pipe Flow Rate (gpm)	Sprinkler Flow At Beg. Node (gpm)	Non-Sprinkler Flow Out (+) (gpm)	In (-) (gpm)	Beg. Node Residual Pressure (psi)	Imbalance Flow At Beg. Node (gpm)
1	2	0	-28.12	28.12	0.00	0.00	25.22	
2	1	0	28.12	0.00	0.00	0.00	25.46	0.00000
2	3	0	27.48					
2	5	0	-55.60					
3	2	0	-27.48	27.48	0.00	0.00	24.08	0.00015
4	5	0	-28.40	28.40	0.00	0.00	25.71	0.00021
5	2	0	55.60	0.00	0.00	0.00	27.18	0.00000
5	4	0	28.40					
5	14	0	-84.00					
6	7	0	-25.86	25.86	0.00	0.00	21.33	0.00011
7	6	0	25.86	27.75	0.00	0.00	24.55	0.00023
7	10	0	104.27					
7	13	0	-157.88					
8	10	0	-26.32	26.32	0.00	0.00	22.09	0.00015
9	10	0	-25.83	25.83	0.00	0.00	21.28	0.00019
10	7	0	-104.27	0.00	0.00	0.00	22.57	-0.00018
10	8	0	26.32					
10	9	0	25.83					
10	12	0	52.12					
11	12	0	-25.90	25.90	0.00	0.00	21.40	0.00012
12	10	0	-52.12	26.21	0.00	0.00	21.91	0.00014
12	11	0	25.90					
13	7	0	157.88	0.00	0.00	0.00	28.91	0.00000
13	14	0	-157.88					
14	5	0	84.00	0.00	0.00	0.00	30.25	0.00000
14	13	0	157.88					
14	15	0	-241.88					
15	14	0	241.88	0.00	0.00	0.00	32.35	0.00000
15	16	0	30.99					
15	17	0	-272.87					
16	15	0	-30.99	30.99	0.00	0.00	30.63	0.00038
17	15	0	272.87	0.00	0.00	0.00	45.34	0.00000
17	18	0	37.24					
17	19	0	-310.11					

Fire Sprinkler Output Data

Overall Node Groupings Output Data (cont'd)

Pipe Segment Beg. Node	End. Node	Pipe Type Group	Pipe Flow Rate (gpm)	Sprinkler Flow At Beg. Node (gpm)	Non-Sprinkler Flow Out (+) (gpm)	In (-) (gpm)	Beg. Node Residual Pressure (psi)	Imbalance Flow At Beg. Node (gpm)
18	17	0	-37.24	37.24	0.00	0.00	44.22	0.00081
19	17	0	310.11	0.00	0.00	0.00	53.59	0.00000
19	20	0	-310.11					
20	19	0	310.11	0.00	0.00	0.00	82.91	0.00000
20	21	0	-310.11					
21	20	0	310.11	0.00	0.00	-310.11	97.78	

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)
1	5.60	9.84	28.12	25.22	1.50	28.12	0.02454	9.84	0.242
2	0.00	9.84	0.00	25.46	1.682	28.12	-----	0.00	0.000
	SCHED 10 WET STEEL				120	4.06	0	9.84	0.242
3	5.60	9.84	27.48	24.08	1.00	27.48	0.18846	1.31	1.378
2	0.00	9.84	0.00	25.46	1.097	27.48	T	6.00	0.000
	SCHED 10 WET STEEL				120	9.33	0	7.31	1.378
2	0.00	9.84	0.00	25.46	1.50	0.00	0.08660	9.84	1.718
5	0.00	9.84	0.00	27.18	1.682	55.60	T	10.00	0.000
	SCHED 10 WET STEEL				120	8.03	0	19.84	1.718
4	5.60	9.84	28.40	25.71	1.00	28.40	0.20025	1.31	1.464
5	0.00	9.84	0.00	27.18	1.097	28.40	T	6.00	0.000
	SCHED 10 WET STEEL				120	9.64	0	7.31	1.464
6	5.60	9.80	25.86	21.33	1.00	25.86	0.16844	13.12	3.221
7	5.60	9.80	27.75	24.55	1.097	25.86	T	6.00	0.000
	SCHED 10 WET STEEL				120	8.78	0	19.12	3.221
10	0.00	9.80	0.00	22.57	1.50	0.00	0.27719	7.15	1.982
7	5.60	9.80	27.75	24.55	1.682	104.27	-----	0.00	0.000
	SCHED 10 WET STEEL				120	15.06	0	7.15	1.982
8	5.60	9.80	26.32	22.09	1.50	26.32	0.02171	11.71	0.471
10	0.00	9.80	0.00	22.57	1.682	26.32	T	10.00	0.000
	SCHED 10 WET STEEL				120	3.80	0	21.71	0.471
9	5.60	9.80	25.83	21.28	1.00	25.83	0.16811	1.64	1.284
10	0.00	9.80	0.00	22.57	1.097	25.83	T	6.00	0.000
	SCHED 10 WET STEEL				120	8.77	0	7.64	1.284
12	5.60	9.80	26.21	21.91	1.50	26.21	0.07683	8.53	0.655
10	0.00	9.80	0.00	22.57	1.682	52.12	-----	0.00	0.000
	SCHED 10 WET STEEL				120	7.53	0	8.53	0.655
11	5.60	9.80	25.90	21.40	1.50	25.90	0.02108	14.44	0.515
12	5.60	9.80	26.21	21.91	1.682	25.90	2E	10.00	0.000
	SCHED 10 WET STEEL				120	3.74	0	24.44	0.515
7	5.60	9.80	27.75	24.55	1.50	27.75	0.59716	2.30	4.357
13	0.00	9.80	0.00	28.91	1.682	157.88	E	5.00	0.000
	SCHED 10 WET STEEL				120	22.80	0	7.30	4.357
5	0.00	9.84	0.00	27.18	1.50	0.00	0.18580	6.43	3.053
14	0.00	9.80	0.00	30.25	1.682	84.00	T	10.00	0.018
	SCHED 10 WET STEEL				120	12.13	0	16.43	3.071

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)
13	0.00	9.80	0.00	28.91	2.00	0.00	0.17783	7.55	1.342
14	0.00	9.80	0.00	30.25	2.157	157.88	-----	0.00	0.000
	SCHED 10 WET STEEL				120	13.86	0	7.55	1.342
14	0.00	9.80	0.00	30.25	2.00	0.00	0.39155	5.38	2.107
15	0.00	9.80	0.00	32.35	2.157	241.88	-----	0.00	0.000
	SCHED 10 WET STEEL				120	21.24	0	5.38	2.107
16	5.60	9.80	30.99	30.63	1.00	30.99	0.23546	1.31	1.722
15	0.00	9.80	0.00	32.35	1.097	30.99	T	6.00	0.000
	SCHED 10 WET STEEL				120	10.52	0	7.31	1.722
15	0.00	9.80	0.00	32.35	2.00	0.00	0.48940	8.53	12.984
17	0.00	9.80	0.00	45.34	2.157	272.87	ET	18.00	0.000
	SCHED 10 WET STEEL				120	23.96	0	26.53	12.984
18	5.60	9.80	37.24	44.22	1.50	37.24	0.04125	12.17	1.121
17	0.00	9.80	0.00	45.34	1.682	37.24	ET	15.00	0.000
	SCHED 10 WET STEEL				120	5.38	0	27.17	1.121
17	0.00	9.80	0.00	45.34	2.00	0.00	0.62008	1.31	8.255
19	0.00	9.80	0.00	53.59	2.157	310.11	T	12.00	0.000
	SCHED 10 WET STEEL				120	27.23	0	13.31	8.255
19	0.00	9.80	0.00	53.59	3.00	0.00	0.08297	219.82	26.370
20	0.00	3.00	0.00	82.91	3.260	310.11	7EBC	98.00	2.944
	SCHED 10 WET STEEL				120	11.92	0	317.82	29.314
20	0.00	3.00	0.00	82.91	4.00	0.00	0.02255	452.76	14.875
21	0.00	3.00	0.00	97.78	4.260	310.11	10E3BC	207.00	0.000
	SCHED 10 WET STEEL				120	6.98	0	659.76	14.875

Fire Sprinkler Output Data

Overall Sprinkler Output Data

Flowing Sprinkler Node No.	Area Group Code	Sprinkler KFactor (K)	Sprinkler Elevation (feet)	Residual Pressure (psi)	Flowing Area (ft²)	Flowing Density (gpm/ft²)	Sprinkler Discharge (gpm)
1		5.60	9.84	25.22	129.17	0.218	28.12
Sub Totals For Non-Group					129.17	0.218	28.12
3		5.60	9.84	24.08	129.17	0.213	27.48
Sub Totals For Non-Group					129.17	0.213	27.48
4		5.60	9.84	25.71	129.17	0.220	28.40
Sub Totals For Non-Group					129.17	0.220	28.40
6		5.60	9.80	21.33	129.17	0.200	25.86
Sub Totals For Non-Group					129.17	0.200	25.86
7		5.60	9.80	24.55	129.17	0.215	27.75
Sub Totals For Non-Group					129.17	0.215	27.75
8		5.60	9.80	22.09	129.17	0.204	26.32
Sub Totals For Non-Group					129.17	0.204	26.32
9		5.60	9.80	21.28	129.17	0.200	25.83
Sub Totals For Non-Group					129.17	0.200	25.83
11		5.60	9.80	21.40	129.17	0.201	25.90
Sub Totals For Non-Group					129.17	0.201	25.90
12		5.60	9.80	21.91	129.17	0.203	26.21
Sub Totals For Non-Group					129.17	0.203	26.21
16		5.60	9.80	30.63	129.17	0.240	30.99
Sub Totals For Non-Group					129.17	0.240	30.99
18		5.60	9.80	44.22	129.17	0.288	37.24
Sub Totals For Non-Group					129.17	0.288	37.24
Totals For All Groups					1420.87	0.218	310.11

Fire Sprinkler Output Summary

Hydraulically Most Demanding Sprinkler Node

HMD Sprinkler Node Number:	9	
HMD Actual Residual Pressure:	21.28	psi
HMD Actual Flow:	25.83	gpm

Sprinkler Summary

Sprinkler System Type:	Wet	
Specified Area Of Application:	900.00	ft²
Minimum Desired Density:	0.200	gpm/ft²
Application Average Density:	0.345	gpm/ft²
Application Average Area Per Sprinkler:	81.82	ft²
Sprinkler Flow:	310.11	gpm
Average Sprinkler Flow:	28.19	gpm

Flow Velocity And Imbalance Summary

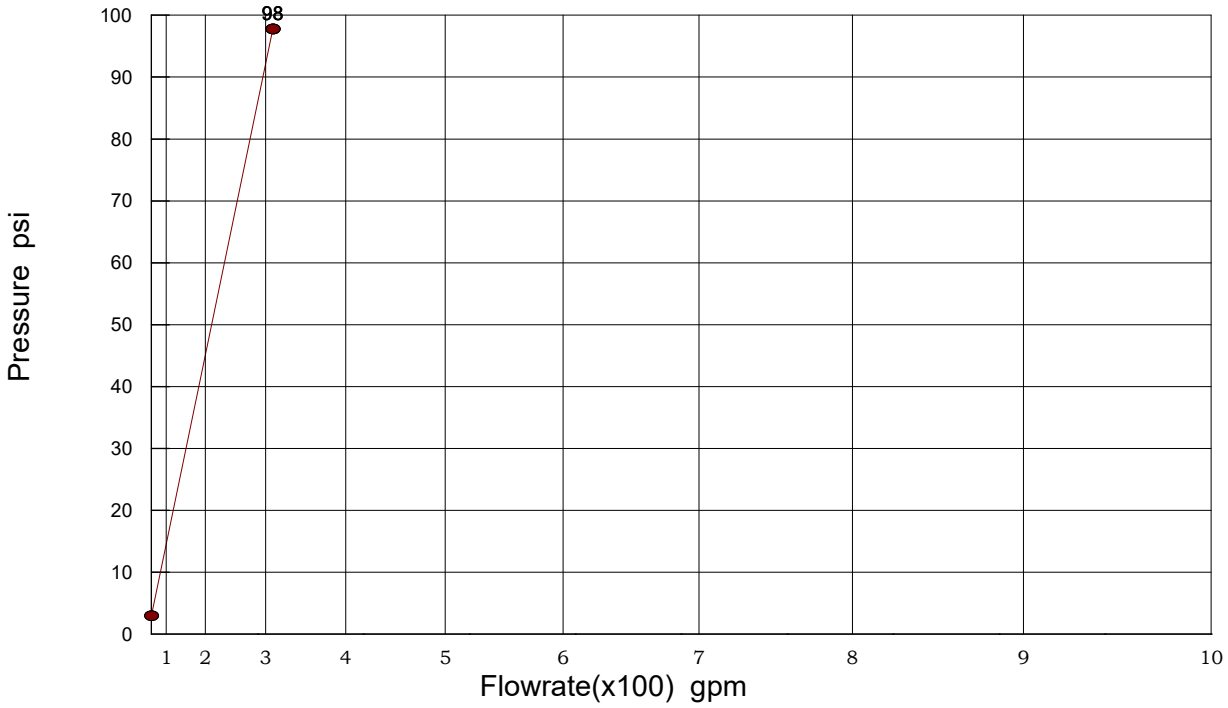
Maximum Flow Velocity (In Pipe 17 - 19)	27.23	ft/sec
Maximum Velocity Pressure (In Pipe 17 - 19)	4.99	psi
Allowable Maximum Nodal Pressure Imbalance:	0.0010	psi
Actual Maximum Nodal Pressure Imbalance:	0.0010	psi
Actual Average Nodal Pressure Imbalance:	0.0001	psi
Actual Maximum Nodal Flow Imbalance:	0.0008	gpm
Actual Average Nodal Flow Imbalance:	0.0001	gpm

Overall Network Summary

Number Of Unique Pipe Sections:	20	
Number Of Flowing Sprinklers:	11	
Pipe System Water Volume:	445.30	gal
Sprinkler Flow:	310.11	gpm
Non-Sprinkler Flow:	0.00	gpm
Minimum Required Residual Pressure At System Inflow Node:	97.78	psi
Demand Flow At System Inflow Node:	310.11	gpm

Fire Sprinkler Output Data

Hydraulic Supply/Demand Graph



Demand Curve Data

Calculated Residual Pressure: 97.78 psi
Calculated Flow Rate: 310.11 gpm
Pressure Required For First Sprinkler Downstream From Inflow Node To Flow: 2.94 psi