



The Villas at Aragon: 15 Year-20 Minute Storm Calculations

LineNo.	LineID	Pipe Length (ft)	Pipe Size (in)	Invert Down (ft)	Invert Up (ft)	Slope (%)	n Value	Top El Down (ft)	Top El Up (ft)	HGL (Down) (ft)	HGL (Up) (ft)	Junction Loss	Velocity Average (ft/s)	Deflec. Angle (Deg)	Energy Loss (ft)	Known Q (cfs)	Flow Rate (cfs)	Minor Loss (ft)	Capacity (Full) (cfs)	Free-board (ft)
1	FE 1 - FE 2	174.69	54	488.25	490.00	1.00	0.013	492.75	494.50	492.75	493.31	0.00	9.50	-175.60	0.91	133.28	133.28	0.00	196.84	1.19
2	FE 3 - MH 4	63.18	36	488.25	488.88	1.00	0.013	491.25	509.25	491.25	491.27	0.00	4.28	154.00	0.11	0.00	27.92	0.00	66.60	17.98
3	MH 4 - MH 5	84.78	36	488.88	494.89	7.09	0.013	509.25	514.15	491.27	496.57	0.56	5.73	-63.20	0.28	0.00	27.92	0.41	177.57	17.58
4	MH 5 - MH 6	80.13	36	494.89	495.85	1.20	0.013	514.15	518.15	496.98	497.53	0.29	6.07	-23.50	0.29	0.00	27.92	0.21	73.00	20.62
5	MH 6 - MH 7	358.00	36	495.85	500.15	1.20	0.013	518.15	517.10	497.74	501.83	0.70	6.38	90.00	1.45	0.00	27.92	0.51	73.09	15.27
6	MH 7 - EX_RCB	84.06	22.2 x 35.4	500.15	505.95	6.90	0.013	517.10	507.95	502.34	507.36	0.57	5.92	-64.60	0.41	27.92	27.92	0.40	112.43	0.59

The Villas at Aragon: 100 Year-20 Minute Storm Calculations

LineNo.	LineID	Pipe Length (ft)	Pipe Size (in)	Invert Down (ft)	Invert Up (ft)	Slope (%)	n Value	Top El Down (ft)	Top El Up (ft)	HGL (Down) (ft)	HGL (Up) (ft)	Junction Loss	Velocity Average (ft/s)	Deflec. Angle (Deg)	Energy Loss (ft)	Known Q (cfs)	Flow Rate (cfs)	Minor Loss (ft)	Capacity (Full) (cfs)	Free-board (ft)
1	FE 1 - FE 2	174.69	54	488.25	490.00	1.00	0.013	492.75	494.50	492.75	493.89	0.00	11.81	-175.60	1.40	179.93	179.93	0.00	196.84	0.61
2	FE 3 - MH 4	63.18	36	488.25	488.88	1.00	0.013	491.25	509.25	491.25	491.31	0.00	5.74	154.00	0.20	0.00	37.69	0.00	66.60	17.94
3	MH 4 - MH 5	84.78	36	488.88	494.89	7.09	0.013	509.25	514.15	491.31	496.85	0.56	6.93	-63.20	0.37	0.00	37.69	0.52	177.57	17.30
4	MH 5 - MH 6	80.13	36	494.89	495.85	1.20	0.013	514.15	518.15	497.37	497.81	0.29	6.88	-23.50	0.35	0.00	37.69	0.27	73.00	20.34
5	MH 6 - MH 7	358.00	36	495.85	500.15	1.20	0.013	518.15	517.10	498.08	502.11	0.70	7.21	90.00	1.70	0.00	37.69	0.65	73.09	14.99
6	MH 7 - EX_RCB	84.06	22.2 x 35.4	500.15	505.95	6.90	0.013	517.10	507.95	502.76	507.67	0.57	7.17	-64.60	0.57	37.69	37.69	0.49	112.43	0.28

THE VILLAS AT ARAGON
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