STORM SEWER CALCULATIONS

Design Return Period: 25 Year

Mannings 'n': 0.012

Project Name: **Browning Manor**
Project #: 18-3294
Date: 10/24/18

1 NO.	SUB-BASIN NO.	UPSTREAM STRUCTURE	PIPE #	DOWNSTREAM STRUCTURE	LENGTH (ft)	Cj	Aj (ac.)	CjAj	SUM CjAj	Tj (min)	Tcum (min)	I (in/hr)	PIPE Q (cfs)	PIPE DIA. (in)	PIPE SLOPE (ft/ft)	I.E. (Upstream)	I.E. (Downstream)	CAP. (cfs)	TRAVEL VELOCITY (ft/sec)	TIME (min)
1	3	Double CI 500	501	AD 502	156	0.666	0.90	0.60	0.60	15.74	15.74	4.965	2.98	12	0.0160	488.99	486.49	4.88	6.22	0.42
1	4	AD 502	503	CI 504	47	0.692	0.52	0.36	0.96	6.66	16.16	4.909	4.71	12	0.0562	486.49	483.85	9.15	11.65	0.07
1	5	CI 504	505	CI 506	26	0.602	0.80	0.48	1.44	16.86	16.86	4.861	7.00	12	0.0420	483.85	482.76	7.91	10.07	0.04
1	6	CI 506	507	CI 510	75	0.536	1.11	0.59	2.04	14.04	16.90	4.857	9.89	15	0.0246	482.76	480.92	10.97	8.95	0.14
1	7	CI 508	509	CI 510	26	0.737	0.54	0.40	0.40	14.74	14.74	5.079	2.02	12	0.0100	485.47	485.21	3.86	4.92	0.09
1	8	CI 510	511	MH 512	90	0.702	0.81	0.57	3.00	15.56	17.04	4.844	14.54	15	0.0691	480.92	474.70	18.39	14.99	0.10
1		MH 512	513	FES 514	39				3.00		17.14	4.835	14.52	15	0.0691	474.70	472.00	18.39	14.99	0.04
2	OS-1	CI 520	521	FES 522	75	0.772	0.35	0.27	0.27	0.89	0.89	6.218	1.68	12	0.0930	459.97	453.00	11.77	14.99	0.08
3	1	CI 528	529	CI 530	30	0.492	0.69	0.34	0.34	16.93	16.93	4.855	1.65	12	0.0043	500.01	499.88	2.53	3.22	0.16
3	2	CI 530	531	FES 532	26	0.610	0.34	0.21	0.55	12.79	17.09	4.840	2.65	12	0.0062	499.88	499.72	3.04	3.87	0.11
4	13	FES 534	535	FES 536	90	0.683	0.09	0.06	0.06	5.00	5.00	7.208	0.44	12	0.0096	501.11	500.25	3.78	4.82	0.31

10/24/2018

STORM SEWER CALCULATIONS

Design Return Period: 25 Year

Mannings 'n': 0.012

Project Name: **Browning Manor**

Project #: 18-3294

Date: 9/26/18

1 NO.	SUB-BASIN NO.	UPSTREAM STRUCTURE	PIPE #	DOWNSTREAM STRUCTURE	LENGTH (ft)	Cj	Aj (ac.)	CjAj	SUM CjAj	Tj (min)	Tcum (min)	I (in/hr)	PIPE Q (cfs)	PIPE DIA. (in)	PIPE SLOPE (ft/ft)	I.E. (Upstream)	I.E. (Downstream)	CAP. (cfs)	TRAVEL VELOCITY (ft/sec)	TIME (min)
1	3	Double CI 500	501	AD 502	156	0.666	0.90	0.60	0.60	15.74	15.74	4.965	2.98	12	0.0160	488.99	486.49	4.88	6.22	0.42
1	4	AD 502	503	CI 504	47	0.692	0.52	0.36	0.96	6.66	16.16	4.909	4.71	12	0.0714	486.49	483.14	10.31	13.13	0.06
1	5	CI 504	505	CI 506	26	0.602	0.80	0.48	1.44	16.86	16.86	4.861	7.00	12	0.0420	483.14	482.05	7.91	10.07	0.04
1	6	CI 506	507	CI 510	75	0.536	1.11	0.59	2.04	14.04	16.90	4.857	9.89	15	0.0246	482.05	480.20	10.97	8.95	0.14
1	7	CI 508	509	CI 510	26	0.737	0.54	0.40	0.40	14.74	14.74	5.079	2.02	12	0.0100	485.47	485.21	3.86	4.92	0.09
1	8	CI 510	511	MH 512	90	0.702	0.81	0.57	3.00	15.56	17.04	4.844	14.54	15	0.0691	480.20	473.98	18.39	14.99	0.10
1		MH 512	513	FES 514	47				3.00		17.14	4.835	14.52	15	0.0635	473.98	471.00	17.63	14.37	0.05
2	OS-1	CI 520	521	FES 522	75	0.772	0.35	0.27	0.27	0.89	0.89	6.218	1.68	12	0.0930	459.97	453.00	11.77	14.99	0.08
3	1	CI 528	529	CI 530	30	0.492	0.69	0.34	0.34	16.93	16.93	4.855	1.65	12	0.0043	500.01	499.88	2.53	3.22	0.16
3	2	CI 530	531	FES 532	26	0.610	0.34	0.21	0.55	12.79	17.09	4.840	2.65	12	0.0062	499.88	499.72	3.04	3.87	0.11
4	13	FES 534	535	FES 536	78	0.683	0.09	0.06	0.06	5.00	5.00	7.208	0.44	12	0.0096	501.00	500.25	3.78	4.82	0.27

REVISED BY 10/24/2018 SUBMITTAL