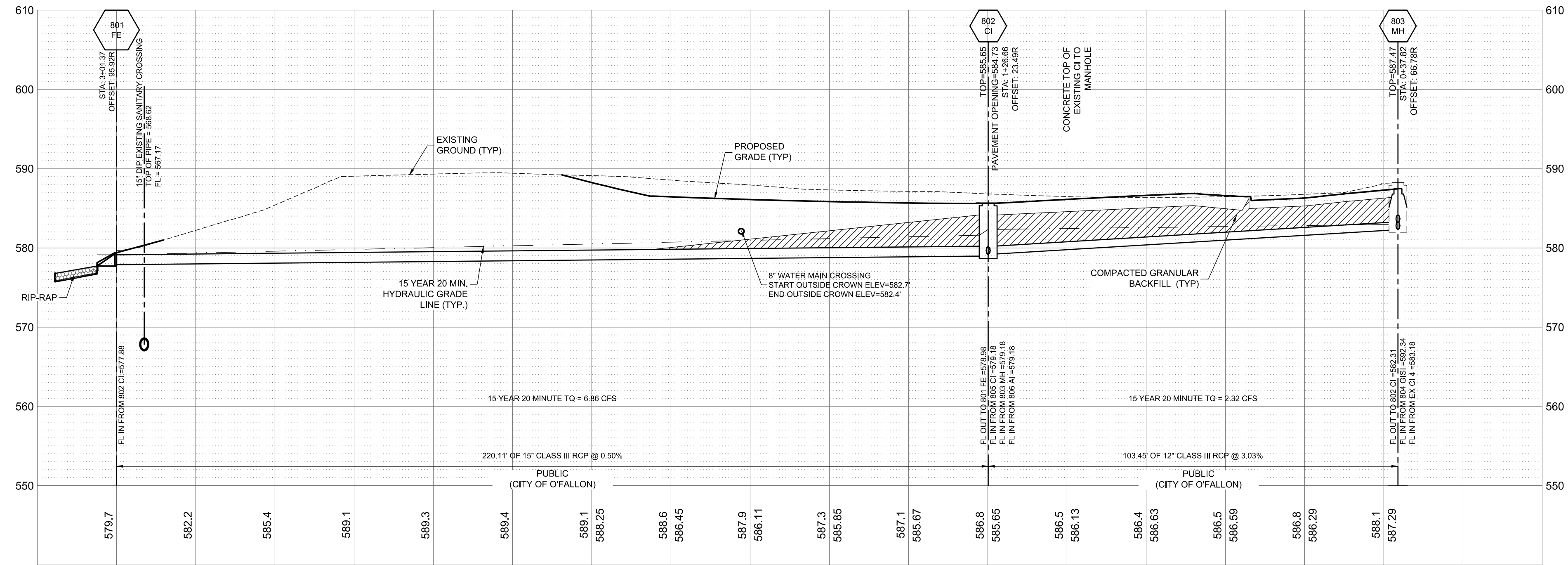


ENGINEERS AUTHENTICATION

The responsibility for professional engineering liability on this project is hereby limited to the act of those authorized by the seal, signature, and date hereon attached. Responsibility is disclaimed for all other engineering plans involved in this project and specifically includes responses after the date of this authentication.

STEVEN D. MARSH, P.E.
PROFESSIONAL ENGINEER



STORM SEWER PROFILE

1"=20' HORIZONTAL
1"=10' VERTICAL

15 YEAR 20 MINUTE STORM																									
LineNo.	LineID	LineSize (in)	LineLength (ft)	LineSlope (%)	InvertDn (ft)	InvertUp (ft)	Grnd/RimElev Up (ft)	DepthUp (ft)	HGLDn (ft)	HGLUp (ft)	Rim-Hw (ft)	VelDn (ft/s)	VelHd On (ft)	J-LossCoeff	EnergyLoss (ft)	MinorLoss (ft)	CrossSlope, Sx (ft/ft)	CapacityFull (cfs)	KnownQ (cfs)	FlowRate (cfs)	QCaptured (cfs)	InletEff (%)	GutterDepth (ft)	GutterSpread (ft)	
1	EP-501	36	14.61	1.03	571.9	572.05	590.28	2.88	574.9	574.93	14.99	5.1	0.4	0.88	0.04	0.37	....	67.57	0	36.02	....	....	....	....
2	501-502	36	63.86	1	572.25	572.89	590.56	2.47	575.29	575.36	14.68	5.1	0.4	0.99	0.185	0.51	....	66.77	0	36.02	....	....	....	....
3	502-503	36	83.34	0.83	573.09	573.78	588.86	1.95**	575.88	575.73	13.13	5.26	0.85	0.43 z	0	n/a	....	60.69	0	36.02	....	....	....	....
4	503-504	36	157.82	0.99	575	576.57	586.31	1.95**	576.57	578.52	7.79	9.6	0.85	1.50 z	0	n/a	0.025	66.52	1.22	36.02	1.49	100	0.18	7.74	
5	504-505	30	114.33	1	576.77	577.91	587.64	1.96**	578.52	579.87	7.77	9.1	1.01	0.40 z	0	0.4	....	40.95	0	33.37	....	....	....	....
6	505-506	30	119.69	1	578.11	579.31	589.01	1.96**	579.87	581.27	7.74	9.02	1.01	1.50 z	0	1.52	0.025	41.07	1.1	33.37	0.83	76	0.12	5.18	
7	506-507	30	118.83	2.97	579.51	583.04	590.8	1.90**	581.27	584.94	5.86	8.39	0.94	1.00 z	0	0.94	....	70.69	31.07	31.07	....	....	....	....
8	506-509	12	47.01	1	582.05	582.52	589	0.46**	582.45	582.98	6.02	4.09	0.18	1.00 z	0	n/a	0.025	3.56	1.2	1.2	0.88	73	0.12	5.35	
9	504-508	12	46.96	1	578.53	579	586.31	0.51**	578.97	579.51	6.8	4.29	0.2	1.00 z	0	0.2	0.025	3.56	1.43	1.43	1.75	100	0.21	8.62	
10	801-802	15	220.11	0.5	577.88	578.98	585.65	1.25	579.13	581.61	3.31	5.59	0.49	1.5	2.485	0.73	0.02	4.56	1.78	6.86	1.78	100	0.28	10.89	
11	802-803	12	103.45	3.03	579.18	582.31	587.47	0.65**	582.34	582.96 j	4.51	2.95	0.14	0.97 z	0	0.601	n/a	6.19	0.55	2.32
12	803-804	12	201.02	0.06	592.34	592.47	597.65	1	593.34	593.84	3.73	2.25	0.08	1	0.497	0.08	0.02	0.91	1.77	1.77	1.77	100	0.09	1.73	
13	802-805	12	47.01	1	579.18	579.65	585.64	1	582.34	582.36	3.27	0.83	0.01	1	0.016	0.01	0.02	3.56	0.65	0.65	0.65	100	0.17	5.56	
14	802-806	12	29.03	1	579.18	579.47	586.69	1	582.34	582.45	4.13	2.69	0.11	1	0.102	0.11	0.02	3.56	2.11	2.11	2.11	100	0.19	6.49	
15	EX - 900	15	42.7	1.59	589.09	589.77	594.8	0.56	590.34	590.33	4.44	0.81	0.01	0.52	0.034	0.03	....	8.15	0	0.99	....	....	....	....
16	900-901	15	19.63	1.02	589.97	590.17	595.3	0.39**	590.36	590.56	4.74	3.05	0.14	1.00 z	0	n/a	0.02	6.52	0.99	0.99	0.99	100	0.16	4.93	

Notes: j-Line contains hyd. jump; z-Zero Junction Loss

100 YEAR 20 MINUTE STORM																									
LineNo.	LineID	LineSize (in)	LineLength (ft)	LineSlope (%)	InvertDn (ft)	InvertUp (ft)	Grnd/RimElev Up (ft)	DepthUp (ft)	HGLDn (ft)	HGLUp (ft)	Rim-Hw (ft)	VelDn (ft/s)	VelHd On (ft)	J-LossCoeff	EnergyLoss (ft)	MinorLoss (ft)	CrossSlope, Sx (ft/ft)	CapacityFull (cfs)	KnownQ (cfs)	FlowRate (cfs)	QCaptured (cfs)	InletEff (%)	GutterDepth (ft)	GutterSpread (ft)	
1	EP-501	36	14.61	1.03	571.9	572.05	590.28	2.92	574.9	574.97	14.62	7.08	0.78	0.88	0.078	0.7	67.57	0	50.07
2	501-502	36	63.86	1	572.25	572.89	590.56	3	575.66	576.02	11.76	7.08	0.78	0.99	0.36	0.77	66.77	0	50.07
3	502-503	36	83.34	0.83	573.09	573.78	588.86	3	576.8	577.27	11.26	7.08	0.78	0.43	0.47	0.34	60.69	0	50.07
4	503-504	36	157.82	0.99	575	576.57	586.31	2.30**	577.6	578.87	7.44	7.69	1.15	1.50 z	0	1.73	0.025	66.52	1.64	50.07	2.12	100	0.23	9.79	
5	504-505	30	114.33	1	576.77	577.91	587.64	2.5	579.27	580.74	6.34	9.47	1.4	0.4	1.47	0.56	40.95	0	46.5
6	505-506	30	119.69	1	578.11	579.31	589.01	2.5	581.3	582.84	4.08	9.47	1.4	1.5	1.539	2.09	0.025	41.07	1.47	46.5	0.99	67	0.13	5.75	
7	506-507	30	118.83	2.97	579.51	583.04	590.8	2.5	584.93	586.26	3.32	8.85	1.22	1	1.332	1.22	70.69	43.41	43.41
8	506-509	12	47.01	1	582.05	582.52	589	1	584.93	585.03	3.91	2.06	0.07	1	0.097	0.07	0.025	3.56	1.62	1.62	1.62	1.05	65	0.14	5.96
9	504-508	12	46.96	1	578.53	579	586.31	0.59**	579.05	579.59	6.72	4.63	0.25	1.00 z	0	n/a	0.025	3.56	1.93	1.93	2.5	100	0.26	10.93	
10	801-802	15	220.11	0.5	577.88	578.98	585.65	1.25	579.13	583.77	0.52	7.64	0.91	1.5	4.636	1.36	0.02	4.56	2.39	9.37	2.39	100	0.33	13.26	
11	802-803	12	103.45	3.03	579.18	582.31	587.47	1	585.13	585.99	1.22	4.14	0.27	0.97	0.862	0.26	6.19	0.73	3.25
12	803-804	12	201.02	0.06	592.34	592.47	597.65	1	593.34	594.35	3.14	3.21	0.16	1	1.007	0.16	0.02	0.91	2.52	2.52	2.52	100	0.1	1.97	
13	802-805	12	47.01	1	579.18	579.65	585.64	1	585.13	585.15	0.47	1.12	0.02	1	0.029	0.02	0.02	3.56	0.88	0.88	0.88	100	0.2	6.81	
14	802-806	12	29.03	1	579.18	579.47	586.69	1	585.13	585.31	1.17	3.63	0.2	1	0.186	0.2	0.02	3.56	2.85	2.85	2.85	100	0.22	7.93	
15	EX - 900	15	42.7	1.59	589.09	589.77	594.8	0.55	590.34	590.32	4.42	1.08	0.02	0.52	0.064	0.05	8.15	0	1.33
16	900-901	15	19.63	1.02	589.97	590.17	595.3	0.46**	590.38	590.63	4.67	3.86	0.17	1.00 z	0	n/a	0.02	6.52	1.33	1.33	1.33	100	0.17	5.71	

Notes: j-Line contains hyd. jump; z-Zero Junction Loss



UNDERGROUND UTILITIES AND OSHA SAFETY NOTE:
Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction. All O.S.H.A. rules and regulations established for the type of construction required by these plans shall be strictly followed (ie. trenching, blasting, etc.)

SOUTH RIDGE SHOPPES, L.L.C.
OLD HIGHWAY N ROAD IMPROVEMENTS

8288 HWY N
OFALLON, MO
NEIL KERSTEN
16761 CONCORD HILL
MARTHASVILLE, MO 63357

Project
Date 2-08-2020

Revision Date	Description of Changes
1: 03-20-20	REVISIONS PER CITY COMMENTS
2: 04-08-20	REVISIONS PER CITY COMMENTS
3: 04-24-20	REVISIONS PER CITY COMMENTS
4: 05-12-20	REVISIONS PER CITY COMMENTS

Sheet Number
C-601
Project No. 168305
Drawn By A. JONES
Checked By J. WINTERS

NOT RELEASED FOR CONSTRUCTION

STORM SEWER PROFILES