

## APPENDIX H

# Opinions of Probable Construction Cost

# Probable Project Cost

Item Description	Construction Cost
Sanitary Sewers	\$3,372,350
Water Main Replacement	\$835,250
Drainage Repair/Improvements	\$921,500
Pavement Repair	\$1,198,000
Planning/Surveying/Engineering	\$651,100
Admin/Legal/Inspection	\$664,200
<b>Total</b>	<b>\$7,642,400</b>
Benefiting Units	293

# Probable Sources of Funds

Item Description	Funding Amount
Planning and Design Loan (WPCLF)	\$505,987
Planning and Design (Local Share)	\$145,051
Sanitary Sewer Construction Loan (WPCLF)	\$3,372,300
Water Main Design & Construction	\$904,775
NEORS (Storm Water Reimbursement)	\$300,000
OPWC (Issue I)	\$2,264,287
EPA – SWIF Grant	\$150,000
Total	\$7,642,400

HEMLOCK CREEK SANITARY SEWER IMPROVEMENTS  
 NOVEMBER 20, 2009 PROPOSAL Rev 4/5/13

LOCATION	Sanitary Sewer		Pavement Repl.		Storm Repl.		Waterline Repl.		
	In RW L.F.	In Esm't L.F.	In <sup>1</sup> L.F.	Out <sup>2</sup> L.F.	In <sup>1</sup> L.F.	Out <sup>2</sup> L.F.	Outfall <sup>3</sup> L.F.	In <sup>1</sup> L.F.	Out <sup>2</sup> L.F.
Educational Park		0	0	0	0	0	0	0	0
Hillside	1770	0	0	0	0	0	0	0	0
Cherry	1950	0	1950	1050	1970	1460	400	0	0
Nemet	2350	0	2350	250	2395	970	0	0	0
Twilight	2750	0	2750	250	2745	440	425	0	0
Easement (Hillside to Cherry)	0	700	0	0	0	0	0	0	0
Seven Hills Blvd.	1570	0	1570	0	1050	0	0	1775	0
N., S., & Mary Lane	1300	0	1750	0	1300	0	530	1800	0
Easement (Mary Lane to Ex. 10" san.) <sup>5</sup>	0	1350	0	0	0	0	0	0	0
Shady Lane <sup>4</sup>	1220	0	1170	0	1125	0	220	1220	0
Easement (Shady to 8" san. esm't sewer)	0	450	0	0	0	0	0	0	0
Oak Street (Private)	1050	0	1050	0	1230	0	0	1360	0
<b>Total Units</b>	<b>13960</b>	<b>2500</b>	<b>12590</b>	<b>1300</b>	<b>11815</b>	<b>2870</b>	<b>1575</b>	<b>6155</b>	<b>0</b>
Unit Construction Cost	205	190	75	75	100	85	95	118	118
Sub-total Construction Cost	\$2,861,800	\$475,000	\$944,250	\$97,500	\$1,181,500	\$243,950	\$149,625	\$726,290	\$0
15% Contingency	\$429,270	\$71,250	\$141,638	\$14,625	\$177,225	\$36,593	\$22,444	\$108,944	\$0
<b>Total Construction Cost</b>	<b>\$3,837,320</b>		<b>\$1,198,013</b>			<b>\$1,811,336</b>		<b>\$835,234</b>	

Legend

1. Within limits of sanitary sewer design (no additional surveying, etc. needed)
2. Outside of new sanitary sewer limits (additional surveying, etc. needed)
3. Outfall sewer - possible lining or replacement in easement areas (additional surveying, etc. needed).
4. Pavement length extended by 50' (estimated) to compensate for added cul-de-sac pavement
5. It has been assumed that the 20' wide sanitary sewer easements shown on the Forest Overlook Detention Basin plan are on an alignment suitable for use for the installation of a new sanitary sewer. It is also assumed that they are permanent recorded easements. Finally, it is assumed the easement on parcel 75 is drawn incorrectly and is intended to be contiguous with the easements to the west and east parcels.

<b>Fee per proposal of 2009</b>	<b>Original</b>	<b>BOD Adj.</b>	<b>Revised Total</b>
Sanitary Sewer	\$3,837,320	-\$465,000	\$3,372,320
Pavement Replacement	\$1,232,513	-\$34,500	\$1,198,013
Storm Sewer Replacement	\$1,669,886	-\$1,198,446	\$471,440
Water Main Replacement	\$846,090	-\$10,856	\$835,234
BMP's	\$0	\$450,000	\$450,000
Total Constr. Cost=	\$7,585,809	-\$1,258,802	\$6,327,007

Hemlock Creek  
Summary of Preliminary Probable Construction Cost  
April 2013

Item	Constr. Cost
Water Main, 8-inch diameter including appurtenances	\$835,250
Pavement replacement (@\$75/lf)	\$1,198,050
Storm sewer repair per video review	\$471,450
Bioretention	\$450,000
Sanitary Sewer, 8-inch w/aerial sewer	\$3,372,320
<b>Total Construction Cost</b>	<b>\$6,327,070</b>

Hemlock Creek Storm Sewer Investigation  
Preliminary Storm Sewer Improvements

Street Name	From Address	To Address	Pipe size (in)	Pipe length (ft)	Cost	Catch Basin 2-2B	Cost	Catch Basin 3A	Cost	Storm Manhole	Cost
Seven Hill Blvd.	7135	7127					\$ -		\$ -	1	\$ 3,000.00
	7095	7085					\$ -		\$ -	1	\$ 3,000.00
	7065	7065					\$ -		\$ -	1	\$ 3,000.00
Shady Lane	7031	2283				1	\$ 1,800.00		\$ -		\$ -
	2302	2263	12	44	\$ 2,200.00	1	\$ 1,800.00		\$ -		\$ -
	2364	2325	12	38	\$ 1,900.00	1	\$ 1,800.00		\$ -		\$ -
	2434	2500	12	73	\$ 3,650.00	1	\$ 1,800.00		\$ -		\$ -
	2500	2457	12	35	\$ 1,750.00	2	\$ 3,600.00		\$ -		\$ -
	2457	2457	12	36	\$ 1,800.00	1	\$ 1,800.00		\$ -		\$ -
	2574	2527	12	38	\$ 1,900.00	2	\$ 3,600.00		\$ -		\$ -
	2658	2667	12	38	\$ 1,900.00	2	\$ 3,600.00		\$ -		\$ -
	2738	2737	12	38	\$ 1,900.00	2	\$ 3,600.00		\$ -		\$ -
	2738	2813	12	36	\$ 1,800.00	2	\$ 3,600.00		\$ -		\$ -
	2869	2879	12	36	\$ 1,800.00	2	\$ 3,600.00		\$ -		\$ -
N. Mary Lane	3014	3051	12	209	\$ 10,450.00	3	\$ 5,400.00	3	\$ 7,500.00		\$ -
	7105	2302	12	152	\$ 7,600.00	1	\$ 1,800.00		\$ -		\$ -
	2302	2302	12	75	\$ 3,750.00	1	\$ 1,800.00		\$ -		\$ -
	7095	2301	12	65	\$ 3,250.00	1	\$ 1,800.00		\$ -		\$ -
	2301	2301	12	66	\$ 3,300.00	1	\$ 1,800.00		\$ -		\$ -
	2302	2370	12	62	\$ 3,100.00	1	\$ 1,800.00		\$ -		\$ -
	2370	2450	12	95	\$ 4,750.00	1	\$ 1,800.00		\$ -		\$ -
	2363	2450	12	115	\$ 5,750.00	2	\$ 3,600.00		\$ -		\$ -
	2450	2700	12	65	\$ 3,250.00	1	\$ 1,800.00		\$ -		\$ -
	2567	2700	12	45	\$ 2,250.00	2	\$ 3,600.00		\$ -		\$ -
	S. Mary Lane	7151	2303	12	193	\$ 9,650.00	2	\$ 3,600.00		\$ -	
2303		2303	12	68	\$ 3,400.00	1	\$ 1,800.00		\$ -		\$ -
2375		2375	12	62	\$ 3,100.00	1	\$ 1,800.00		\$ -		\$ -
2376		2449	12	116	\$ 5,800.00	3	\$ 5,400.00		\$ -		\$ -
2450		2690	12	130	\$ 6,500.00	3	\$ 5,400.00		\$ -		\$ -
Mary Lane	2660	2690	12	40	\$ 2,000.00	1	\$ 1,800.00		\$ -		\$ -
	2687	2720	12	58	\$ 2,900.00	2	\$ 3,600.00		\$ -		\$ -
	2730	2701	12	38	\$ 1,900.00	1	\$ 1,800.00		\$ -		\$ -
	2701	2675	12	50	\$ 2,500.00	1	\$ 1,800.00		\$ -		\$ -
				2016	\$ 100,800.00	46	\$ 82,800.00	3	\$ 7,500.00	3	\$ 9,000.00
<b>Total All Improvements</b>											<b>\$ 200,100.00</b>
Pipe dia	Cost/lf	Catch Basin No. 2-2B	Catch Basin No. 3A	Storm Manhole							
12	50	1800	2500	3000							
15	60										
18	70										
21	80										
24	100										
27	120										
30	140										

Hemlock Creek  
Storm Sewer Condition Assessment

Street Name	From CB	To CB	Comments	Pipe size (in)	Replacement length (ft)	Replacement Cost
Nemet Drive	2363	2197	Debris in pipe run	15		
	2197	2263	Debris in pipe run	18		
	2263	1939	No repairs recommended	18		
	1939	1784	No repairs recommended	18		
	1784	1718	No repairs recommended	18		
	1718	1660	Replace pipe @ 282 ft	21	12	\$ 960.00
	1660	1607	No repairs recommended	21		
	1607	1336	Replace pipe @ 57, 73 & 170 ft	21	36	\$ 2,880.00
	1336	1265	Replace pipe @ 66, 267	21	24	\$ 1,920.00
	1265	4490	Replace entire pipe length	21	279	\$ 22,320.00
Twilight Drive	4091	3799	Replace pipe @ 70 ft	12	12	\$ 600.00
	3799	3718	Replace pipe @ 77 ft, from 300 ft to CB 3718	12	36	\$ 1,800.00
	3718	3406	No repairs recommended	15		
	3406	3286	No repairs recommended	18		
	3286	3353	Replace pipe from 225-240 ft	18	15	\$ 1,050.00
	3353	3069	Replace pipe from 30-60 ft	18	30	\$ 2,100.00
	3069	3139	Replace from CB 3067 - 55 ft, @ 93 ft	18	65	\$ 4,550.00
	3139	2769	Replace from 123-170 ft	24	47	\$ 4,700.00
	2689	2769	Replace from CB 2689 to 45 ft, 75-140 ft, 165-175 ft	24	120	\$ 12,000.00
	2689	2727	Replace entire pipe length	24	185	\$ 18,500.00
Cherry Lane	2727	2727A	No repairs recommended	24		
	2727A	Outlet	No repairs recommended	30		
	7339	7672	Debris in pipe run	12		
	7672	7848	No repairs recommended	12		
	7848	7783	No repairs recommended	12		
	7783	7786	No repairs recommended	18		
	7339	7153	Debris in pipe run	15		
	7153	7063	Replace entire pipe length	18	299	\$ 20,930.00
	7063	6731A	Replace entire pipe length	21	299	\$ 23,920.00
	6731A	6731	Replace entire pipe length	21	298	\$ 23,840.00
Seven Hill Blvd.	6731	6682	Replace pipe from CB 6731 - 61 ft, 176 ft - CB 6682	24	185	\$ 18,500.00
	6682	6426	Replace pipe from 11 - 16 ft, 236 - 271 ft	24	40	\$ 4,000.00
	6426	6360	No repairs recommended	27		
	6360	4875	No repairs recommended	27		
	4875	4857	Replace pipe from CB 4875 to 22 ft	30	22	\$ 3,080.00
	4857	7993	Replace entire pipe length	30	461	\$ 64,540.00
	7993	7981	Pipe from northwest is blocked with debris	30		\$ -
	7981	outfall	Replace entire pipe length	30	30	\$ 4,200.00



Hemlock Creek  
Storm Sewer Condition Assessment

Street Name	From CB	To CB	Comments	Pipe size (in)	Replacement length (ft)	Replacement Cost
	Unknown	4711	No repairs recommended	12		
	4711	4678	No repairs recommended	12		
	4678	4490	No repairs recommended	12		
	4490	4466	Replace pipe from 85 - 105 ft	24	20	\$ 2,000.00
	4466	4276	No repairs recommended	24		
	4276	outlet	No repairs recommended			
	4276	4290	Replace pipe @ 34 ft	24	6	\$ 600.00
	4170	4133	Unable to televise, CB 4133 full of debris, unable to open CB 4170	12		
	4115	4133	Replace pipe from CB 4115 to 5 ft, @ 48", CB 4133 full of debris	12	20	\$ 1,000.00
	4115	4115A	Replace pipe @ 48 ft, Debris in pipe run	12	12	\$ 600.00
<b>Shady Lane</b>	4115	5017	No repairs recommended	12		
	5017	5017A	Replace pipe at 29 ft and from 100 ft to CB 5017A	12	185	\$ 9,250.00
	5017A	5225	Replace entire pipe length	15	282	\$ 16,920.00
	5225	5416	Replace entire pipe length	15	258	\$ 15,480.00
	5416	outlet	Replace pipe from 78 - 158 ft	15	80	\$ 4,800.00
	5416	5365	Pipe appears to be blocked at 80 ft from 5416. Further investigation needed. Televised section of pipe needs replacement	12	68	\$ 3,400.00
<b>N. Mary Lane</b>	5581	5847	No repairs recommended	12		
	5847	5819	Unable to televise due to 4"- 6" of debris	12		
<b>S. Mary Lane</b>	6052	6052A	No repairs recommended	12		
	6052A	6307	No repairs recommended	12		
<b>Mary Lane</b>	6307	5786	Replace pipe @ 20 ft	12	6	\$ 300.00
	5786	5819	Replace pipe @ 24 ft	12	6	\$ 300.00
	5819	5707	No repairs recommended	12		
	5707	5707A	Repair pipe at joint @ 45 ft	12	6	\$ 300.00
	5707A	Outlet	No repairs recommended	21		
			<b>Totals</b>		3,444	\$ 291,340
			<b>Legend</b>			
			Pipe repair needed			
			Unable to televise			
			Debris in pipe			
			No repairs recommended			