

SUPPLEMENTAL PACKET



WSB & Associates, Inc.
ESTIMATE OF COST - Engineering Services
Downtown Village Improvement Project
January & February 2017

10.B.4

	WORK TASK	Principal TH	Senior Project Manger NG/DH	Project Engineer JN	Designer	CAD Designer GIS	Administration	Total Hours	Cost
<i>Task</i>	<i>Description</i>								
A	320 FLOOD PROTECTION IMPROVEMENT PROJECT								
	Project Coordination with Sanitary, Storm and CR 21	1	8					9	\$1,371.00
	USACE & VBWD review and coordination	1	4	6				11	\$1,553.00
	Auto Cad		2	4		16		22	\$2,906.00
	Construction Plan Review, Tabulation, Design, Flow calculations	2	4	6	8		2	22	\$2,790.00
	Subtotal	4	18	16	8	16	2	64	\$8,620.00
B	400 LOCAL ROAD IMPROVEMENTS								
	Design, plan review redlines, hydraulic design, utility alignments	2	8	8	4			22	\$3,042.00
	Quantity Tabulations		2	4	6			12	\$1,516.00
	Storm sewer revisions	2	2	6	16			26	\$3,254.00
	CAD design				4	16		20	\$2,540.00
	Revised specifications and contract documents	1	6	4	12		6	29	\$3,435.00
	Prepare Change Order	1	4	2			2	9	\$1,183.00
	Property Owner Coordination		3					3	\$453.00
	Subtotal	6	25	24	42	16	8	121	\$15,423.00
C	410 SANITARY SEWER IMPROVEMENTS								
	Sanitary Sewer Revisions	2	8		8	16		34	\$4,534.00
	Specifications and contract documents	1	8		10	2	6	27	\$3,243.00
	Coordination with property owners and plumber	1	8		8			17	\$2,291.00
	Permits		2		4			6	\$762.00
	Subtotal	4	26		30	18	6	84	\$10,830.00
D	SECTION 106 CLOSEOUT								
	Meetings and conference calls (Project Team, MPCA, SHPO)	12	16					28	\$4,372.00
	Coordination with Prairie Island (Tribal Observer, Educational Piece)	2	8					10	\$1,534.00
	Development of Historical/Education Piece	8	8		10	12		38	\$5,222.00
	Agency Responses	2	4					6	\$930.00
	Subtotal	24	36		10	12		82	\$12,058.00
Total Hours		38	105	40	90	62	16	351	
Hourly Costs		163.00	151.00	131.00	115.00	130.00	77.00		
TOTAL COSTS		\$6,194.00	\$15,855.00	\$5,240.00	\$10,350.00	\$8,060.00	\$1,232.00		\$46,931.00

Afton Road Planning Spread Sheet - 2016

10.C.A

Joe R. 4%

09.13.16
Designed By: Stan Ross

Today's Costs (per mile):

Reclamation = \$350,000
Mill & Overlay = \$240,000
Micro Coat = \$120,000
Seal / Skim Coating = \$35,000
Crack Sealing = \$6,000

Inflation Rate = 4.0%
2017 PFA One Time Adjust = \$400,000

Bond Amount = \$0
Bond Duration (years) = 10
Bond Rate (%) = 2.0%

PROJECT DEFINITIONS

1.91	R1 = Reclamation Project - Top Priority	8.08	M1 = Mill and Overlay Top Priority, 0 - 5 years from 2016
0.60	R2 = Reclamation Project - Second Priority	4.38	M2 = Mill and Overlay Second Priority, 5 - 8 years from 2016
2.25	R3 = Reclamation Project - Third Priority	1.61	M3 = Mill and Overlay Third Priority, 8 - 12 years from 2016
2.00	R4 = Reclamation Project - Fourth Priority	14.07	
0.90	R5 = Reclamation Project - Fifth Priority		

7.66		0.85	L = Special Condition (Dirt, Shared, ect.)
19.62	G = Good Condition as of 2016, Micro Coat In 2023 - 2026		
0.11	G2 = Good Condition as of 2016, Micro Coat in 2023 - 2026		
3.41	N = New As of 2011		
23.14			

** In 2017; a \$150k increases the overall budget by 9.86% = \$121 per year total tax increase on \$500k house.

SUMMARY

SUMMARY										Reclamation (25 year life)		Mill & Overlay (10 - 15 year life)		Micro Surfacing / Thin Overlay (Extends life by 25 years)		Crack Seal		
Year	Year Number	Yearly Allocation (includes Budget Increases)	Periodic Adjustment Notes	Dollar Amount Increase based on %	Annual % Road Budget Increase	Annual Projected Cost	Bond Annual Cost (P&I)	Balance After Expense	Distance (Miles)	Cost	Distance (miles)	Cost	Distance (miles)	Cost	Distance (miles)	Cost	Year	
2016	1	\$145,000				\$0		145,000	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	2016	
2017	2	\$275,800	\$25,000	\$150,800	104%	\$728,000	\$0	92,800	2.0	\$728,000	0.0	\$0	0.0	\$0	0.0	\$0	2017	
2018	3	\$577,490	\$150,000	\$151,690	55%	\$259,584	\$0	410,706	0.0	\$0	1.0	\$259,584	0.0	\$0	0.0	\$0	2018	
2019	4	\$652,564		\$75,074	13%	\$1,057,372	\$0	5,898	2.0	\$787,405	1.0	\$269,967	0.0	\$0	0.0	\$0	2019	
2020	5	\$724,346		\$71,782	11%	\$280,766	\$0	449,477	0.0	\$0	1.0	\$280,766	0.0	\$0	0.0	\$0	2020	
2021	6	\$796,780		\$72,435	10%	\$1,143,654	\$0	102,604	2.0	\$851,657	1.0	\$291,997	0.0	\$0	0.0	\$0	2021	
2022	7	\$955,523	\$95,000	\$63,742	8%	\$318,860	\$0	739,266	0.0	\$0	1.0	\$303,677	0.0	\$0	2.0	\$15,184	2022	
2023	8	\$1,003,299		\$47,776	5%	\$1,580,434	\$0	162,131	1.7	\$782,979	2.5	\$789,559	0.0	\$0	1.0	\$7,896	2023	
2024	9	\$1,053,464		\$50,165	5%	\$1,060,211	\$0	155,384	0.0	\$0	1.5	\$492,685	3.3	\$542,892	3.0	\$24,634	2024	
2025	10	\$1,106,137		\$52,673	5%	\$1,085,540	\$0	175,981	0.0	\$0	1.5	\$512,392	3.3	\$564,607	1.0	\$8,540	2025	
2026	11	\$1,161,444		\$55,307	5%	\$1,146,724	\$0	190,701	0.0	\$0	1.5	\$532,888	3.3	\$587,192	3.0	\$26,644	2026	
2027	12	\$1,479,516	\$260,000	\$58,072	5%	\$1,414,274	\$0	255,942	0.0	\$0	2.1	\$775,885	3.3	\$610,679	3.0	\$27,710	2027	
2028	13	\$1,553,492		\$73,976	5%	\$685,059	\$0	1,124,375	0.0	\$0	0.0	\$0	3.3	\$635,107	5.2	\$49,952	2028	
2029	14	\$1,631,166		\$77,675	5%	\$705,468	\$0	2,050,074	0.0	\$0	0.0	\$0	3.3	\$660,511	4.5	\$44,957	2029	
2030	15	\$1,712,725		\$81,558	5%	\$712,906	\$0	3,049,892	0.0	\$0	0.0	\$0	3.3	\$686,931	2.5	\$25,975	2030	
2031	16	\$1,798,361		\$85,636	5%	\$48,625	\$0	4,799,628	0.0	\$0	0.0	\$0	0.0	\$0	4.5	\$48,625	2031	
2032	17	\$1,888,279		\$89,918	5%	\$57,313	\$0	6,630,593	0.0	\$0	0.0	\$0	0.0	\$0	5.1	\$57,313	2032	
2033	18	\$1,982,693		\$94,414	5%	\$60,774	\$0	8,552,512	0.0	\$0	0.0	\$0	0.0	\$0	5.2	\$60,774	2033	
2034	19	\$2,081,828		\$99,135	5%	\$54,697	\$0	10,579,642	0.0	\$0	0.0	\$0	0.0	\$0	4.5	\$54,697	2034	
2035	20	\$2,185,919		\$104,091	5%	\$31,603	\$0	12,733,959	0.0	\$0	0.0	\$0	0.0	\$0	2.5	\$31,603	2035	
								\$0	7.70		14.10		23.1					

Afton Road Planning Spread Sheet - 2016

J.R.R. 5%

09.13.16
Designed By: Stan Ross

Bond Amount = **\$400,000**
Bond Duration (years) = **0**
Bond Rate (%) = **0.0%**

										Reclamation (25 year life)		Mill & Overlay (10 - 15 year life)		Micro Surfacing / Thin Overlay (Extends life by 25 years)		Crack Seal			
Year	Year Number	Yearly Allocation (includes Budget Increases)	Periodic Adjustment Notes	Dollar Amount Increase based on %	Annual % Road Budget Increase		Annual Projected Cost	Bond Annual Cost (P&I)	Balance After Expense	Distance (Miles)	Cost	Distance (miles)	Cost	Distance (miles)	Cost	Distance (miles)	Cost	Year	Year Number
2016	1	\$145,000					\$0		145,000	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	2016	1
2017	2	\$275,800	\$25,000	\$150,800	104%		\$735,000	\$0	85,800	2.0	\$735,000	0.0	\$0	0.0	\$0	0.0	\$0	2017	2
2018	3	\$577,490	\$150,000	\$151,690	55%		\$264,600	\$0	398,690	0.0	\$0	1.0	\$264,600	0.0	\$0	0.0	\$0	2018	3
2019	4	\$652,564		\$75,074	13%		\$810,338	\$0	240,916	2.0	\$810,338	0.0	\$0	0.0	\$0	0.0	\$0	2019	4
2020	5	\$724,346		\$71,782	11%		\$583,443	\$0	381,819	0.0	\$0	2.0	\$583,443	0.0	\$0	0.0	\$0	2020	5
2021	6	\$796,780		\$72,435	10%		\$893,397	\$0	285,202	2.0	\$893,397	0.0	\$0	0.0	\$0	0.0	\$0	2021	6
2022	7	\$955,523	\$95,000	\$63,742	8%		\$659,327	\$0	581,398	0.0	\$0	2.0	\$643,246	0.0	\$0	2.0	\$16,081	2022	7
2023	8	\$1,003,299		\$47,776	5%		\$993,413	\$0	591,284	2.0	\$984,970	0.0	\$0	0.0	\$0	1.0	\$8,443	2023	8
2024	9	\$1,053,464		\$50,165	5%		\$815,555	\$0	829,192	0.0	\$0	1.0	\$354,589	2.5	\$443,237	2.0	\$17,729	2024	9
2025	10	\$1,106,137		\$52,673	5%		\$1,026,979	\$0	908,350	1.0	\$542,965	0.0	\$0	2.5	\$465,398	2.0	\$18,616	2025	10
2026	11	\$1,161,444		\$55,307	5%		\$1,290,085	\$0	779,709	0.0	\$0	2.0	\$781,869	2.5	\$488,668	2.0	\$19,547	2026	11
2027	12	\$1,479,516	\$260,000	\$58,072	5%		\$1,152,769	\$0	1,106,456	1.0	\$598,619	0.0	\$0	2.5	\$513,102	4.0	\$41,048	2027	12
2028	13	\$1,553,492		\$73,976	5%		\$571,082	\$0	2,088,866	0.0	\$0	0.0	\$0	2.5	\$538,757	3.0	\$32,325	2028	13
2029	14	\$1,631,166		\$77,675	5%		\$2,164,725	\$0	1,555,307	1.0	\$659,977	2.0	\$905,112	2.5	\$565,695	3.0	\$33,942	2029	14
2030	15	\$1,712,725		\$81,558	5%		\$1,223,598	\$0	2,044,434	0.0	\$0	0.0	\$0	5.0	\$1,187,959	3.0	\$35,639	2030	15
2031	16	\$1,798,361		\$85,636	5%		\$2,295,137	\$0	1,547,658	0.0	\$0	2.0	\$997,886	5.0	\$1,247,357	4.0	\$49,894	2031	16
2032	17	\$1,888,279		\$89,918	5%		\$65,486	\$0	3,370,451	0.0	\$0	0.0	\$0	0.0	\$0	5.0	\$65,486	2032	17
2033	18	\$1,982,693		\$94,414	5%		\$1,141,425	\$0	4,211,719	0.0	\$0	2.0	\$1,100,169	0.0	\$0	3.0	\$41,256	2033	18
2034	19	\$2,081,828		\$99,135	5%		\$86,638	\$0	6,206,908	0.0	\$0	0.0	\$0	0.0	\$0	6.0	\$86,638	2034	19
2035	20	\$2,185,919		\$104,091	5%		\$45,485	\$0	8,347,342	0.0	\$0	0.0	\$0	0.0	\$0	3.0	\$45,485	2035	20
				\$1,082,725			\$16,818,482	\$0		11.00	\$5,225,266	14.00	\$5,630,914	25	\$5,450,173	43.0	\$512,130		