

Middlefield's Fiber Financing Costs

According to an email from MBI Director Eric Nakajima to the Middlefield Selectboard, the total cost to build Middlefield's fiber-to-the-home network would be \$1.59M.¹ The email goes on to suggest that "you appropriate 1.01 M for the amount of debt to be authorized by your town. This figure reflects the benefit of your town's allocation of a share of available state grant funds." Moreover, the town should consider "administrative fees" to issue the bonds of approximately 3% for up to \$1M, or \$30,000 in Middlefield's case.

How will this \$1.01M be financed, and how will it be paid off? According to the WiredWest/MBI financial forum held in December 2014, the town would issue notes for a portion of the total cost in years 1 & 2, on which it would pay interest at the nominal rate of 0.5 percent. At the end of year 2:

- Town has the option of renewing notes into Years 3-4-5; pays interest plus minimal principal (approximately 3.8% of principal in Year 3)
- On project completion, town issues long-term bonds (assume interest rate 4%)²

Assuming this information is accurate, the spreadsheet on the next page of how this would play out in Middlefield employs the parameters above, including 3.8% principal in years 3-5 and 4% interest from year 3 on. The town would have estimated up-front costs of \$261,233 in the first five years (when there would be no prospect of revenues from WiredWest or another ISP), and total payments over the 20-year period would amount to \$1,448,142.

Middlefield Communications Committee

¹ "Draft Article, Motion, and Ballot Question," email from MBI Director Eric Nakajima to the Middlefield Selectboard, March 4, 2015, <http://middlefieldma.net/wp-content/uploads/comcom/lastmile/2015-03-04-nakajima-to-selectboard.png>.

² *Last Mile Broadband Financial Forum*, <http://middlefieldma.net/wp-content/uploads/comcom/lastmile/december-financial-presentation.pdf>, slide 22.

Middlefield's MBI Fiber Financing

Borrowed amount = \$1,010,000 (year 3) at 4%; renewed year 6				
Year 1 = 0.5% interest + legal fees				
Year 2 = 0.5% interest only				
Years 3-5 = 3.8% principal + 4% interest (no WW reimbursement)				
Years 6-20 = Principal + 4% interest				
Year	Bond Balance	Owed		Total Payment*
		Principal	Interest	
1	\$ 250,000		\$ 1,250	\$ 31,250
2	\$ 500,000		\$ 2,500	\$ 2,500
3	\$ 1,010,000	\$ 38,380	\$ 40,400	\$ 78,780
4	\$ 971,620	\$ 36,922	\$ 38,865	\$ 75,786
5	\$ 934,698	\$ 35,519	\$ 37,388	\$ 72,906
6	\$ 899,180	\$ 59,945	\$ 35,967	\$ 95,912
7	\$ 839,235	\$ 59,945	\$ 33,569	\$ 93,514
8	\$ 779,290	\$ 59,945	\$ 31,172	\$ 91,117
9	\$ 719,345	\$ 59,945	\$ 28,774	\$ 88,719
10	\$ 659,400	\$ 59,945	\$ 26,376	\$ 86,321
11	\$ 599,455	\$ 59,945	\$ 23,978	\$ 83,923
12	\$ 539,510	\$ 59,945	\$ 21,580	\$ 81,525
13	\$ 479,565	\$ 59,945	\$ 19,183	\$ 79,128
14	\$ 419,620	\$ 59,945	\$ 16,785	\$ 76,730
15	\$ 359,675	\$ 59,945	\$ 14,387	\$ 74,332
16	\$ 299,730	\$ 59,945	\$ 11,989	\$ 71,934
17	\$ 239,785	\$ 59,945	\$ 9,591	\$ 69,536
18	\$ 179,840	\$ 59,945	\$ 7,194	\$ 67,139
19	\$ 119,895	\$ 59,945	\$ 4,796	\$ 64,741
20	\$ 59,950	\$ 59,950	\$ 2,398	\$ 62,348
Total		\$ 1,010,000	\$ 408,142	\$ 1,448,142