

THE MERTON GROUP

Feasibility Study Results

Belmont Municipal Light Department



June 2nd, 2003

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Market Research Analysis

Objectives

“Establish viability for conversion of users to MBN in wide enough user base to ensure bond coverage”

- Ascertain current use of Internet access & CATV by key demographics metrics (age, income, etc.)*
- Determine current ISP penetrations*
- Ascertain conversion rates to MBN for existing Internet and CATV users by key demographic metrics*
- Ascertain price points for MBN acceptance for different services (broadband Internet, CATV)*

Implementation

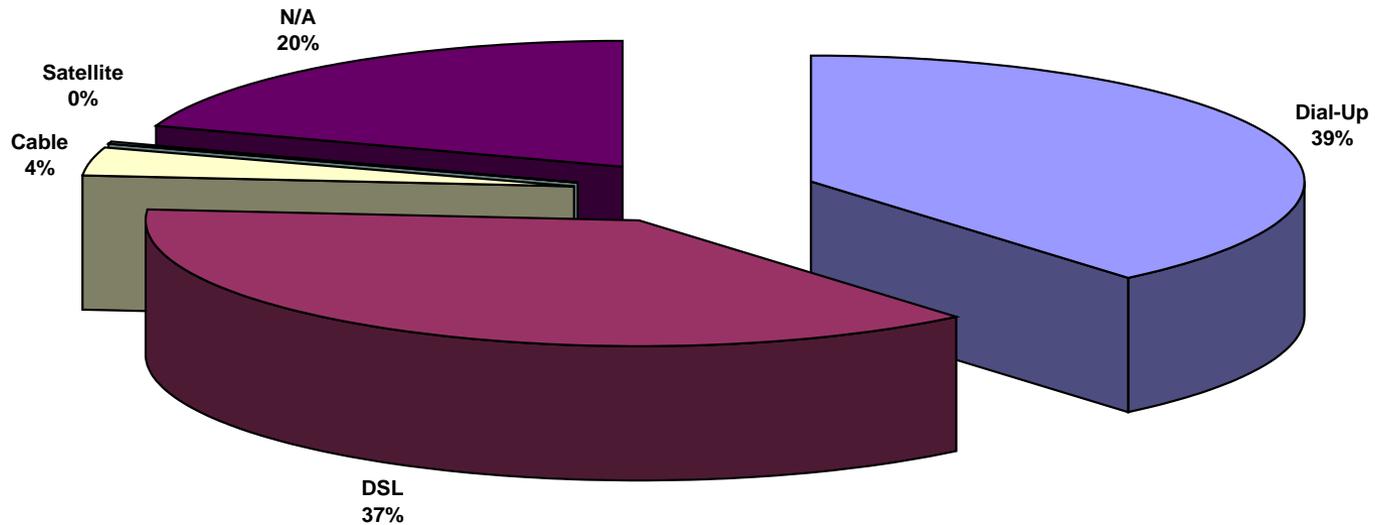
- *Survey questionnaire mailed by BMLD to 4,800 randomly selected homes in April 2003; 2,400 of each of two forms*
- *1,624 questionnaires completed and returned by 5/20/03: extraordinarily high response rate (34%)*
- *All 1,624 responses used in analysis*
- *Accuracy level from sample size better than +/- 3%*

Highlights of Study

- *80% of Belmont households (HH) have Internet access (39% dial-up, 37% DSL, 4% cable modem)*
- *39% of HH are likely or very likely to switch to MBN for broadband Internet at \$40/month*
- *43% of HH are likely or very likely to switch to MBN for enhanced video at \$40/month*
- *55% of current DSL users are likely or very likely to switch to MBN at \$40/month*
- *Target market potential is very strong for age groups below 65*

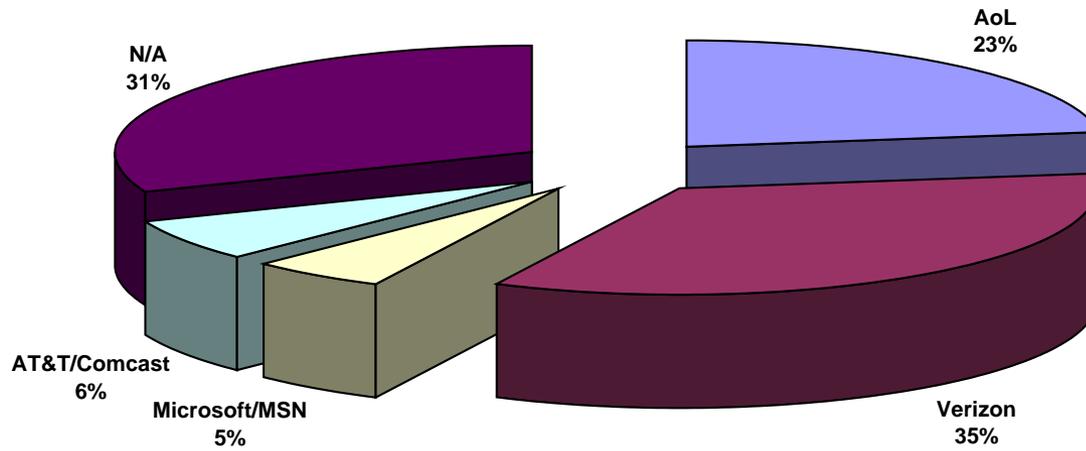
Internet Access Demographics

Current Internet Access Demographics



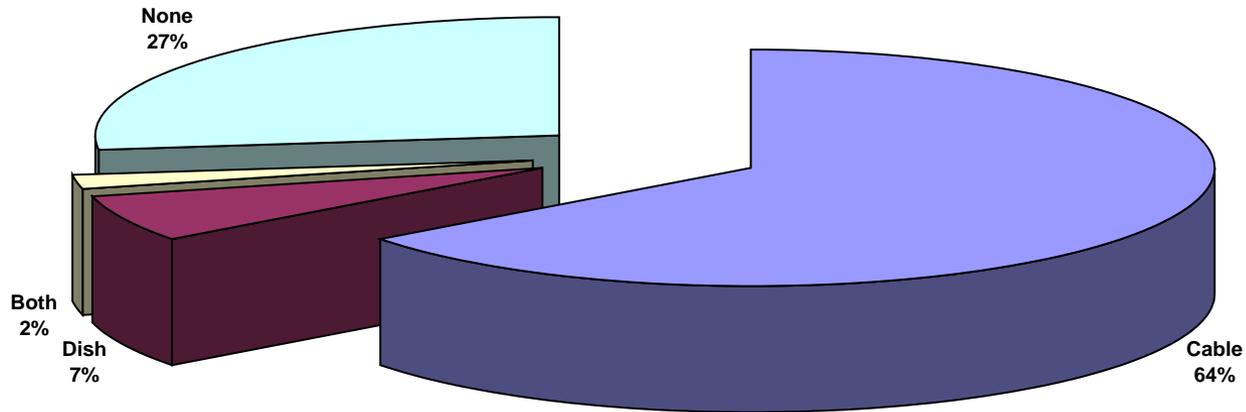
ISPs

Internet Access by ISP



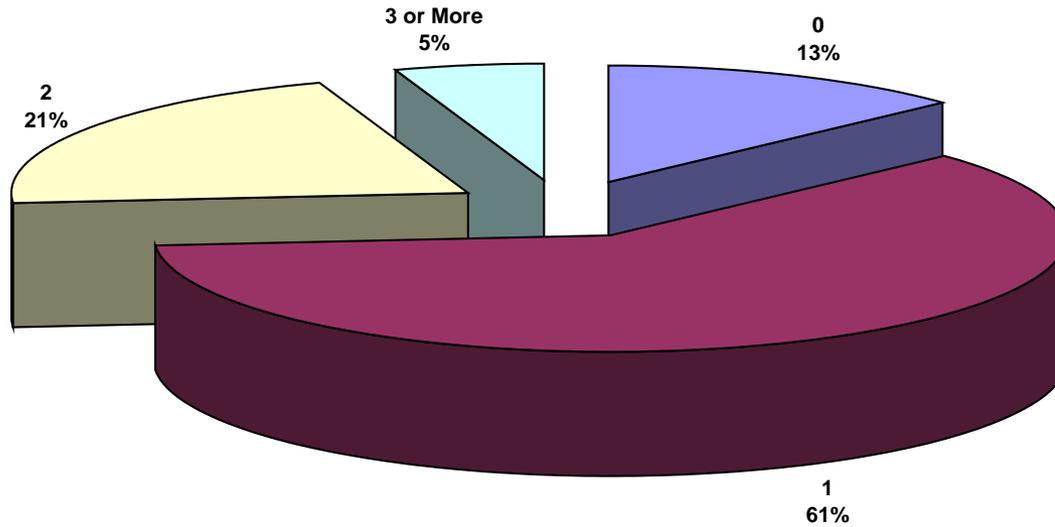
Cable TV Demographics

Current Cable/Dish TV Demographics



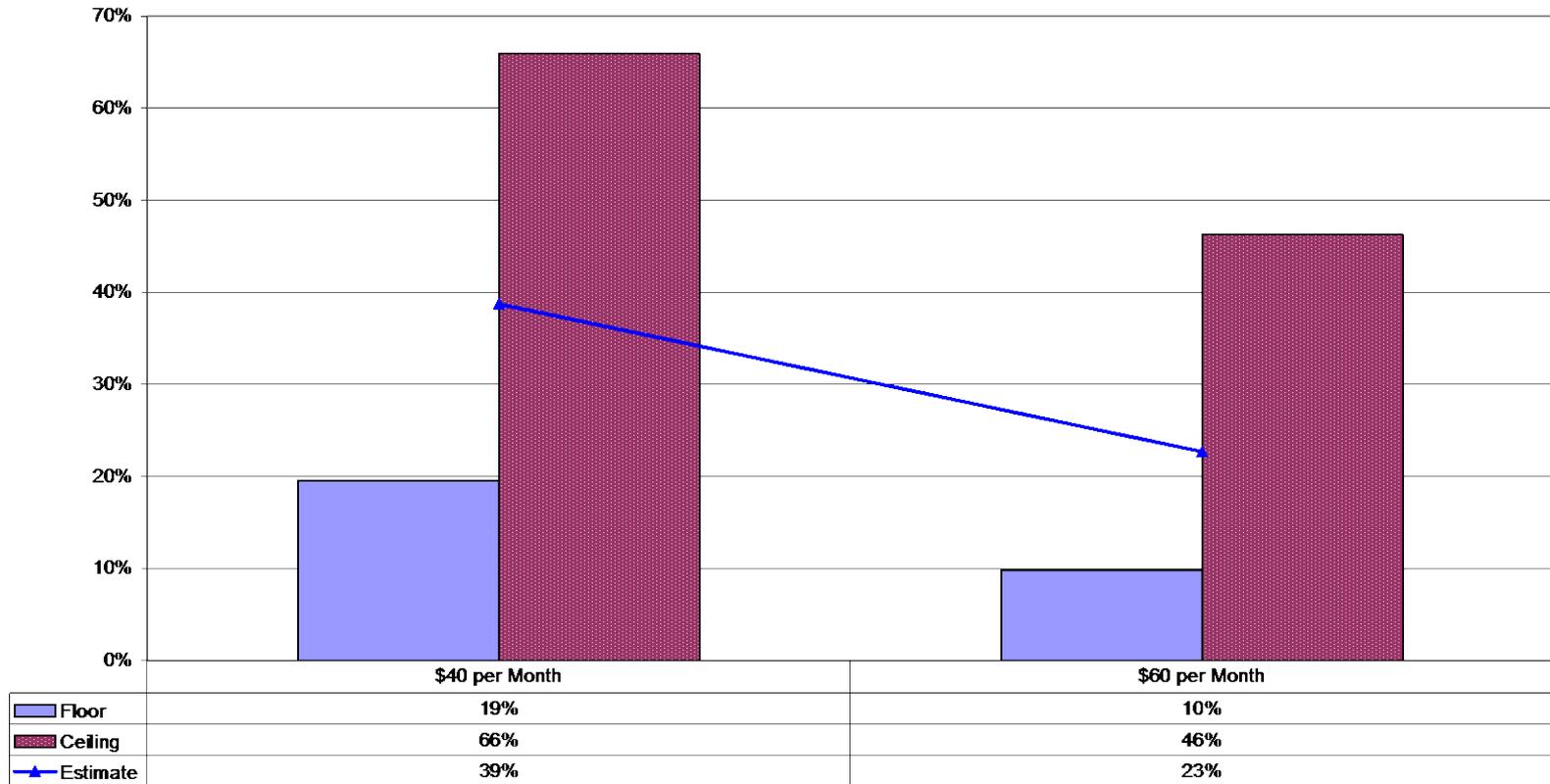
Number Telephone Lines per Home

Number Telephone Lines



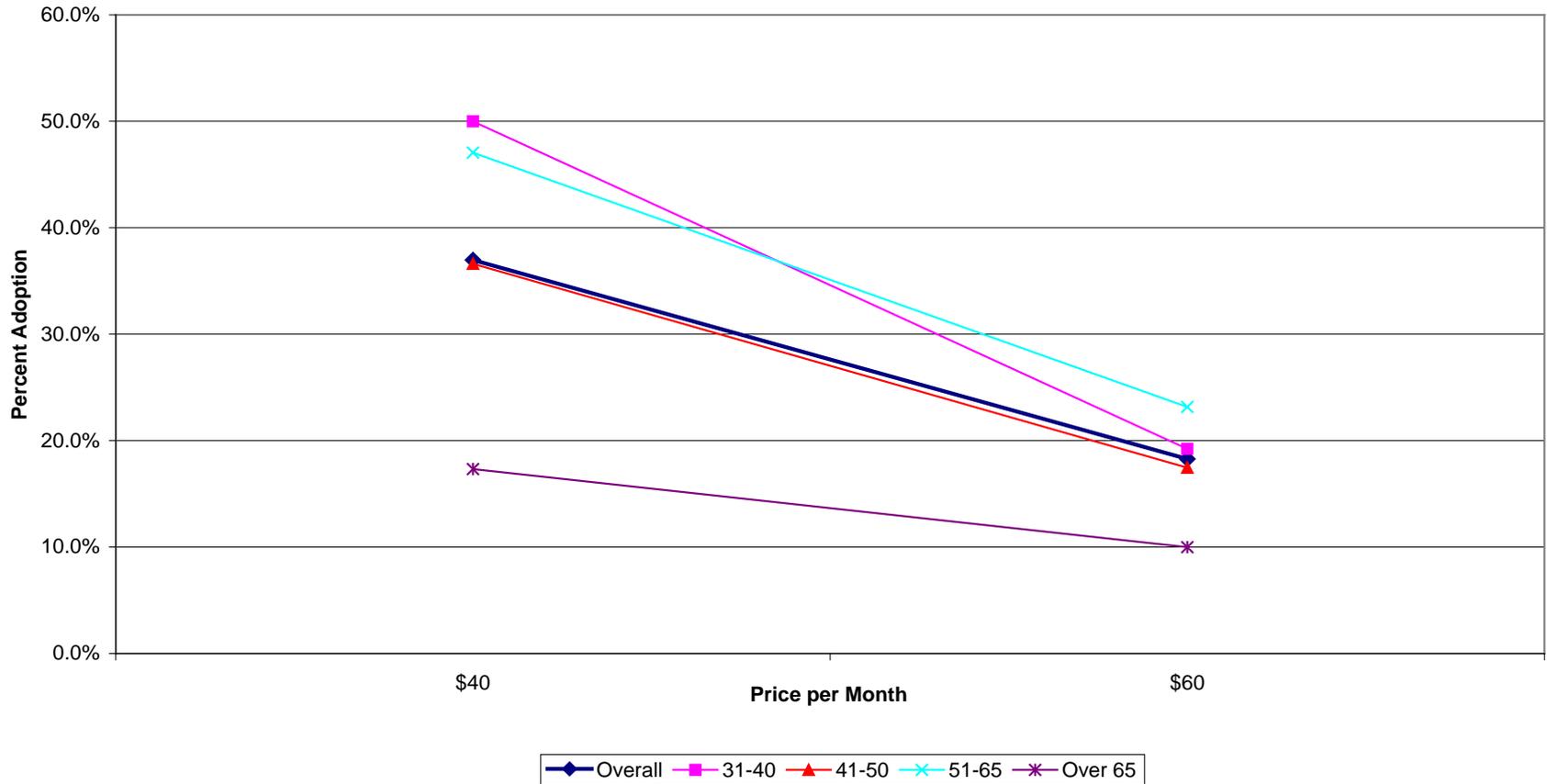
Conversion to MBN for Broadband

MBN Internet Access



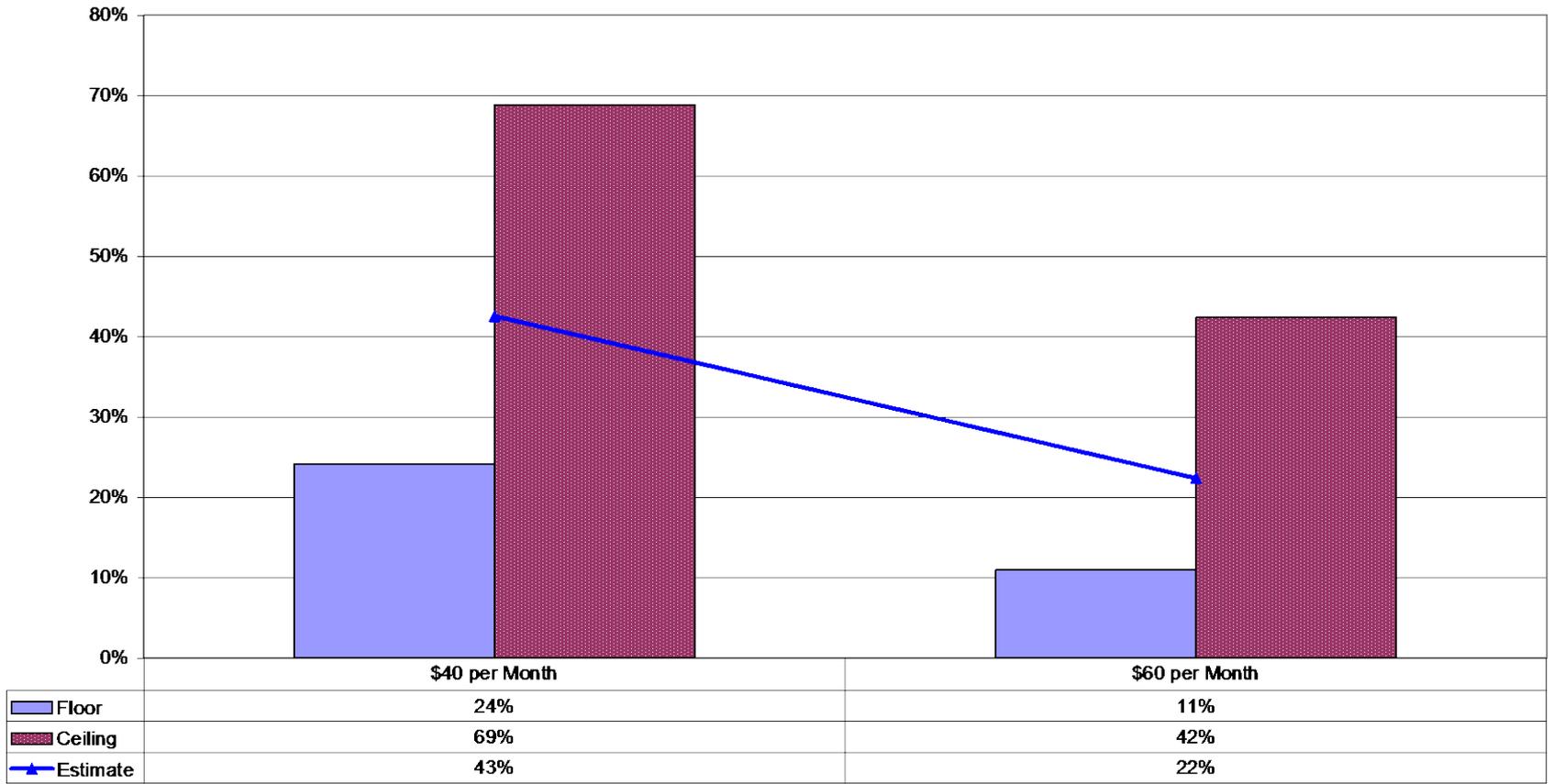
MBN Broadband Demand by Age

MBN Internet Demand By Age



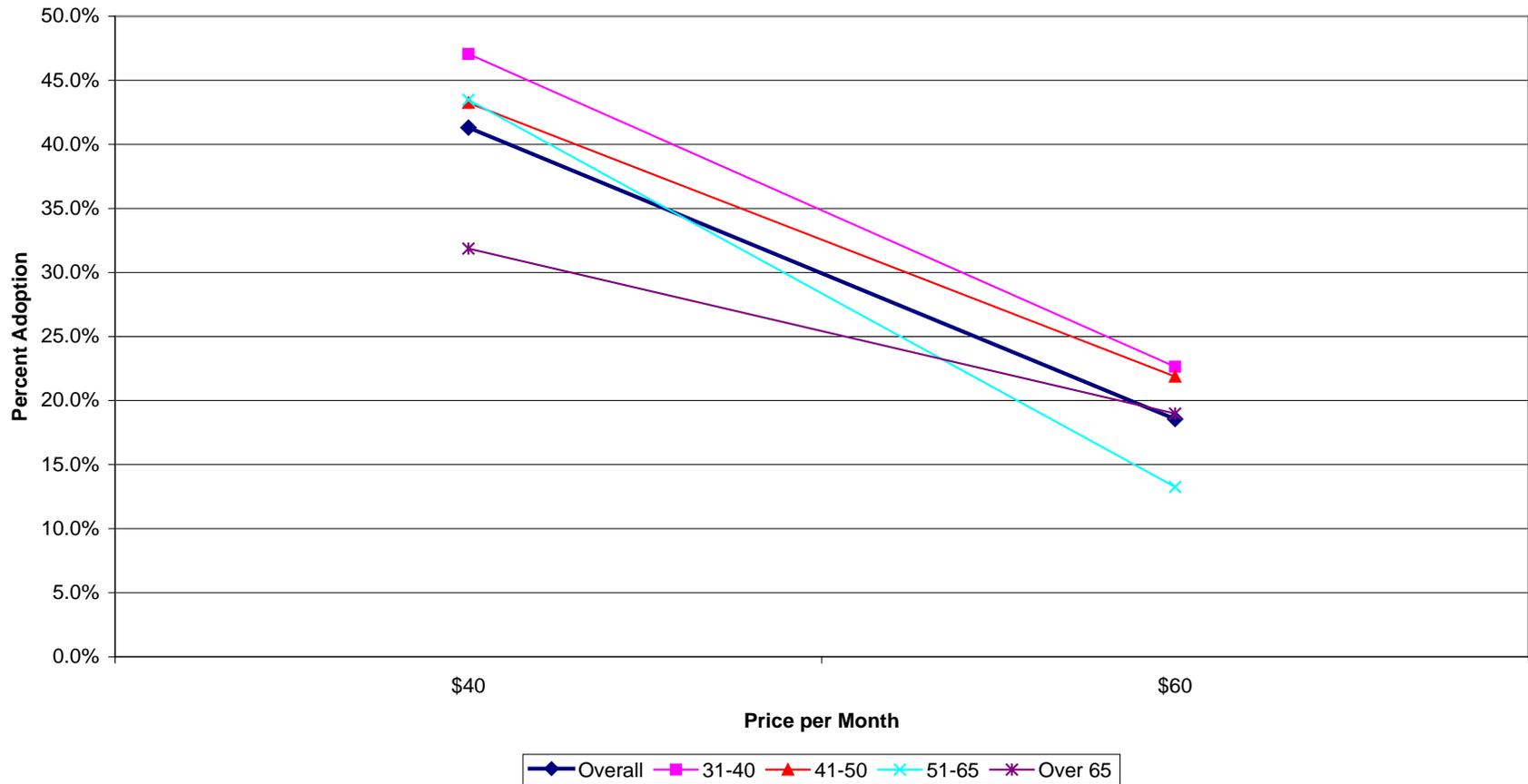
Conversion to MBN for Enhanced Video

MBN Enhanced Video



MBN Video Demand by Age

MBN Video Demand By Age



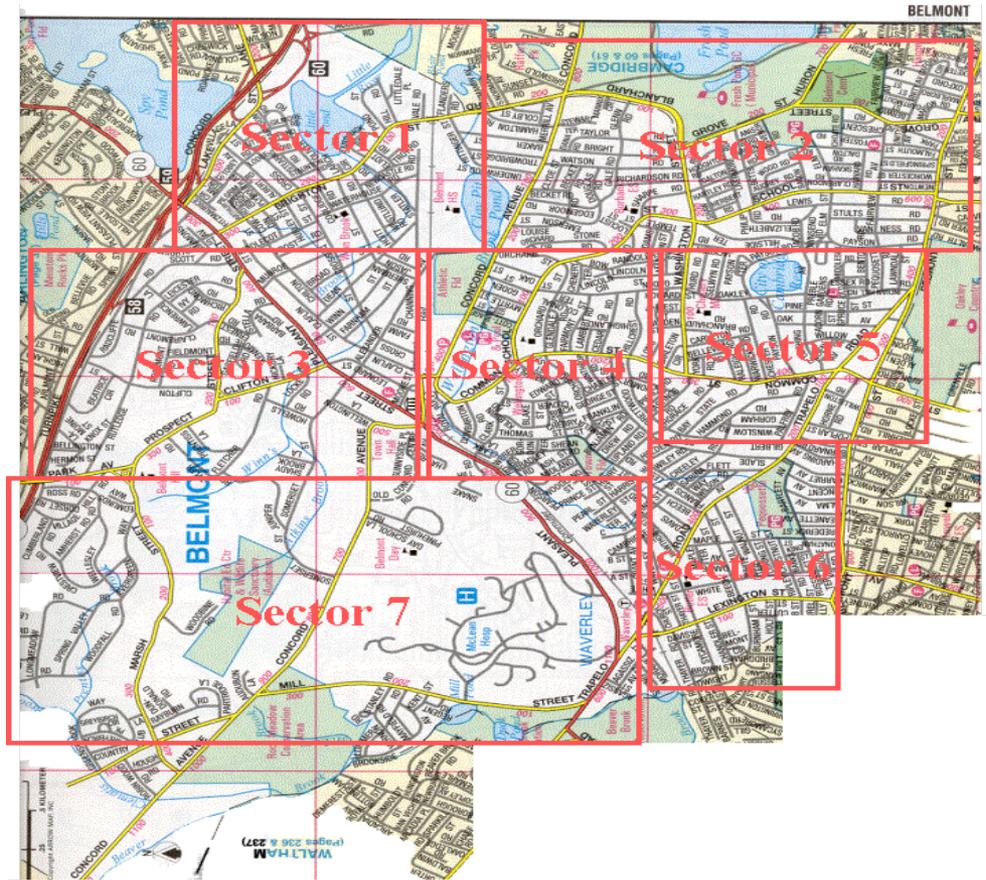
Municipal Broadband Network Details

Belmont MBN Review

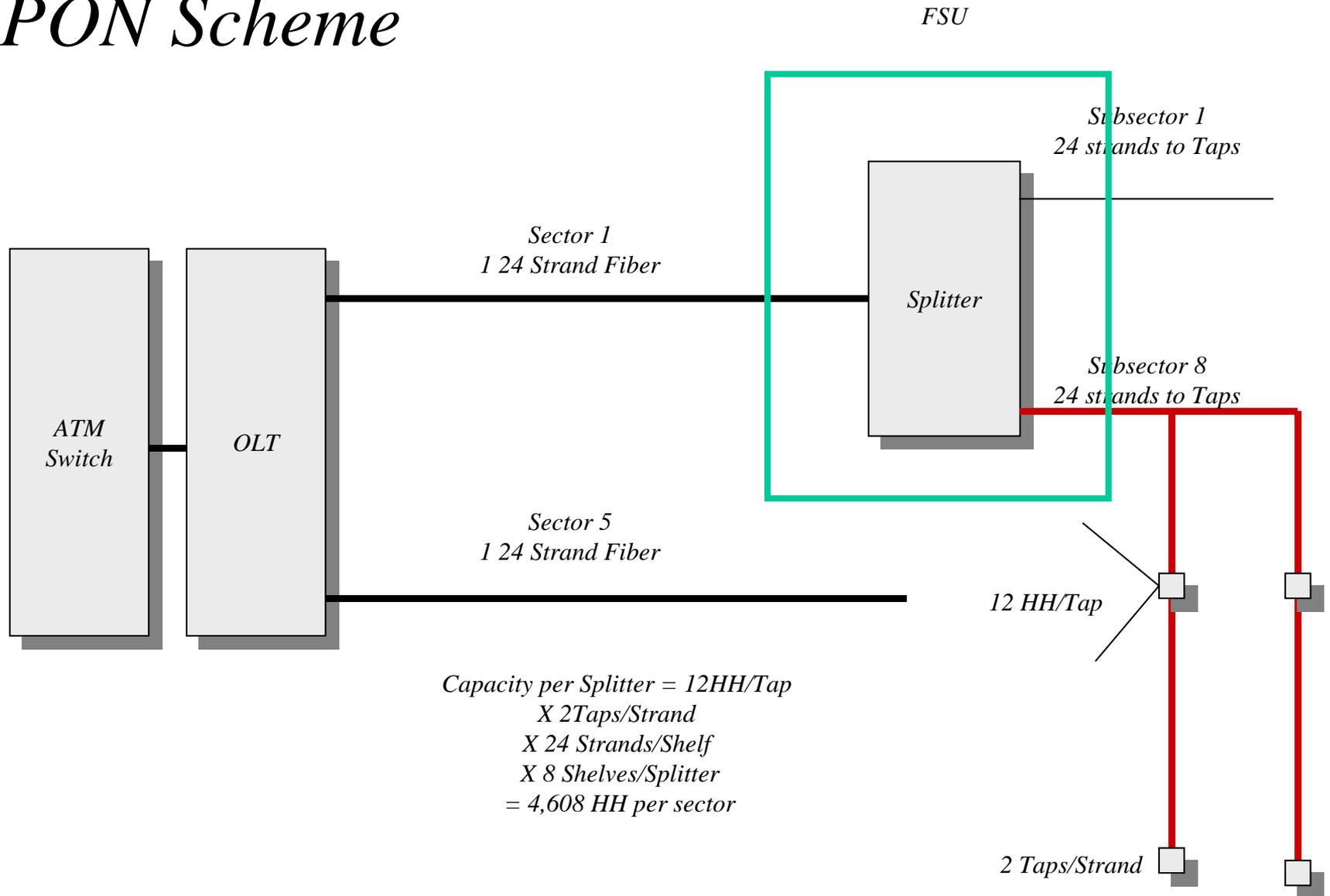
- *Total homes passed: 9,700*
- *Build fiber backbone over 100% of streets in Year 1*
- *99% aerial construction, 1% trenching*
- *No Make Ready issues with poles expected (use electrical space for fiber cables)*
- *Target 30% subscribers in Year 1*
- *Build drop cables to HH as service is provided*
- *May need fiber optic rings to provide redundancy*

Passive Optical Network (PON) Design

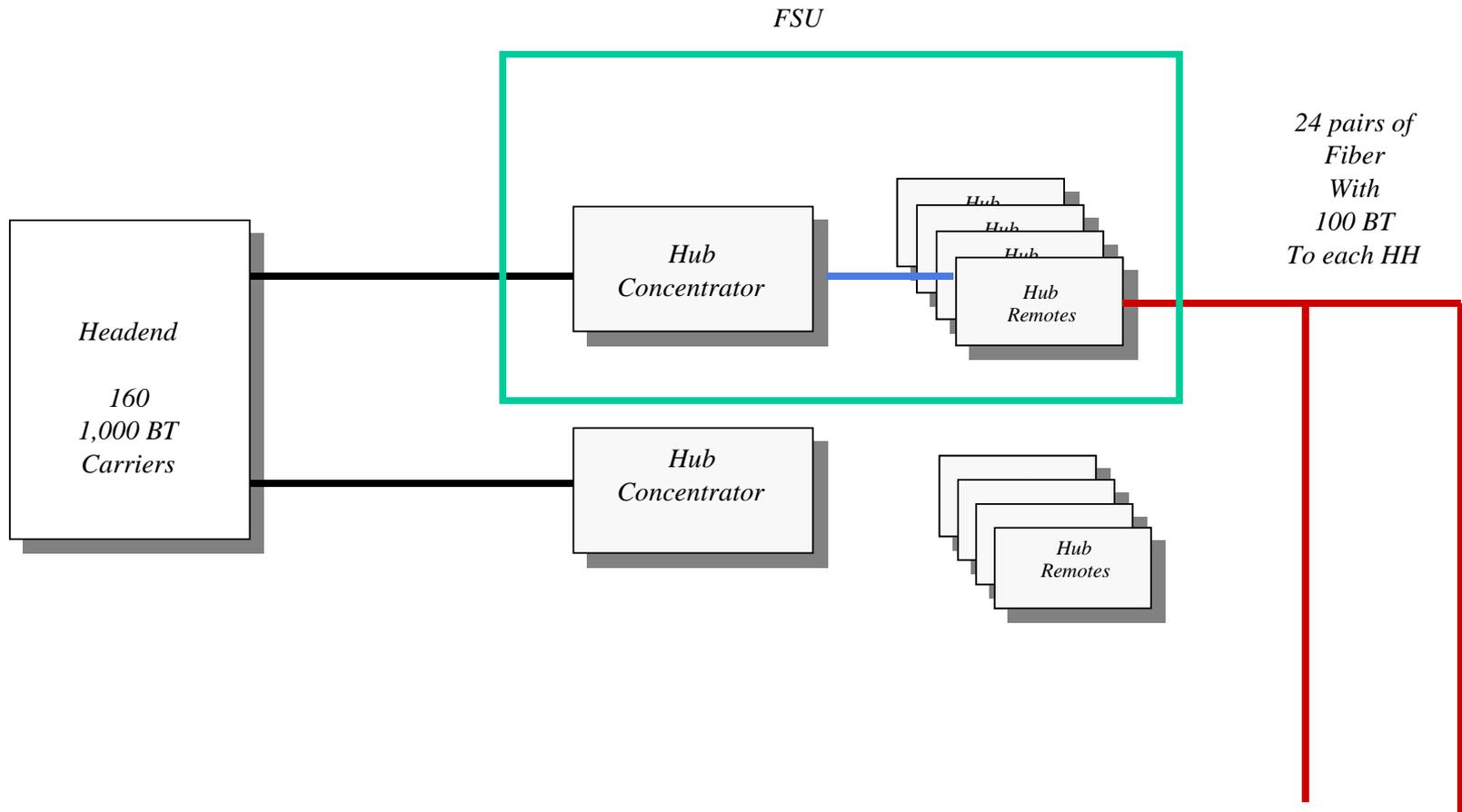
- *7 sectors overlaid on town GIS map*
- *Smaller sectors have higher density of users*
- *Larger sectors have lower density of users*
- *Capital expenses driven by total subscribers passed, and distance between and center of serving area and radius of serving area*



PON Scheme



Gigabit Ethernet (GigE)

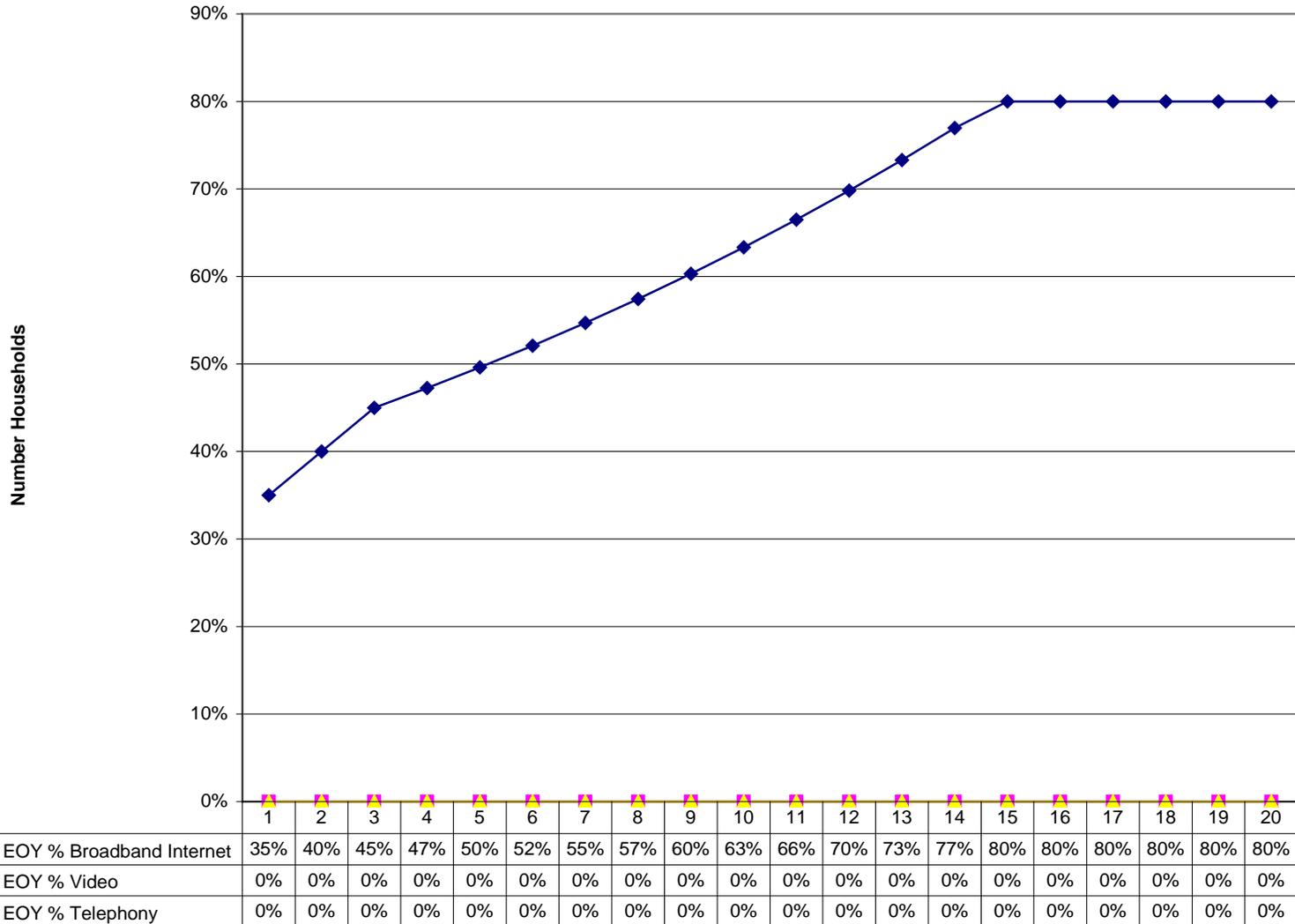


Network Operations & Maintenance

- *Operations*
 - *Business Management*
 - *Operations Support System (OSS) driven by network and subscriber requirement*
 - *Network management*
 - *Network provisioning, monitoring and management provided by Merton / third party*
- *Maintenance*
 - *First Level Maintenance, repair and return provided by Merton / third party*

MBN Project Financials

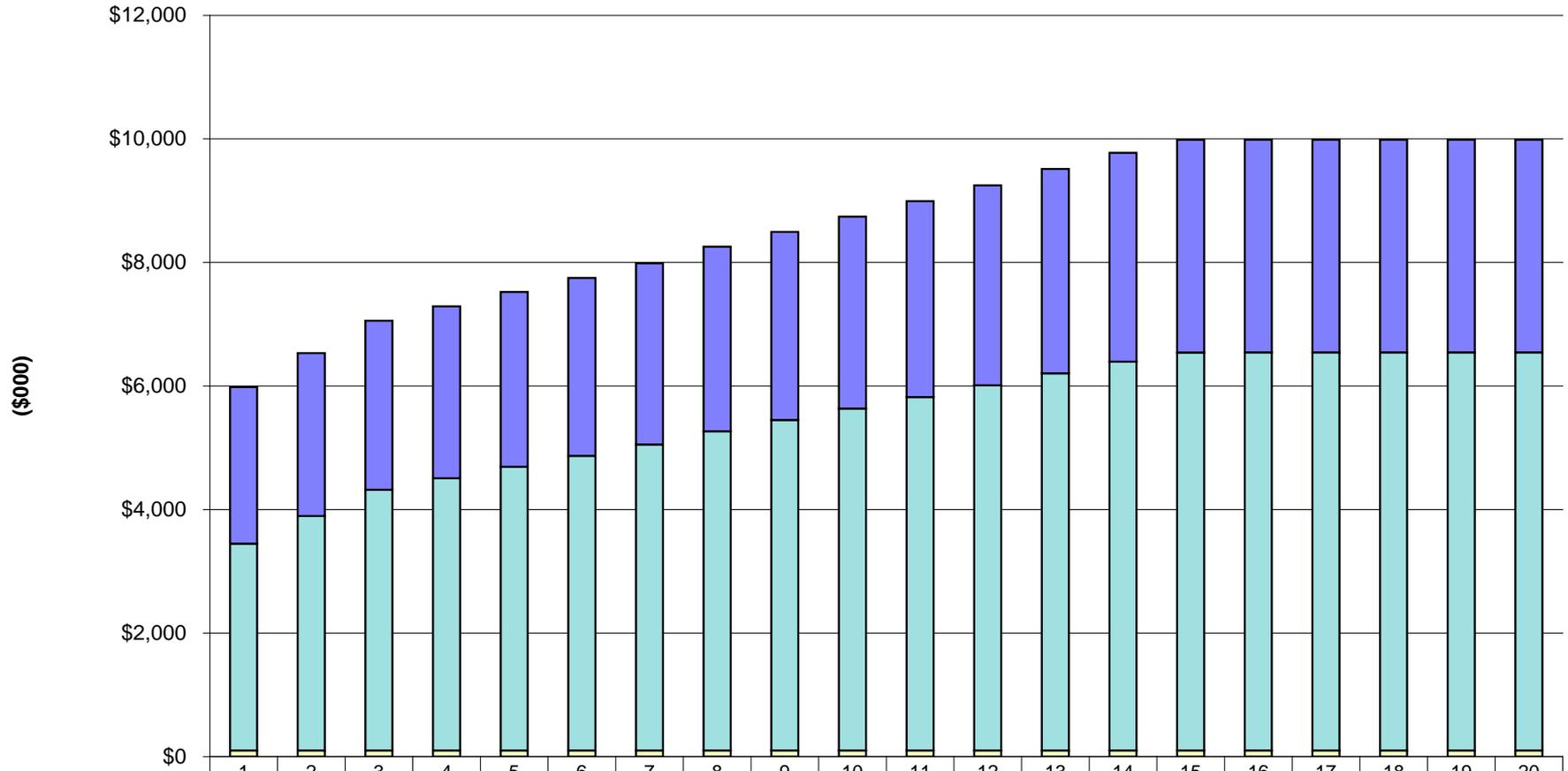
User Adoption



Key Factors

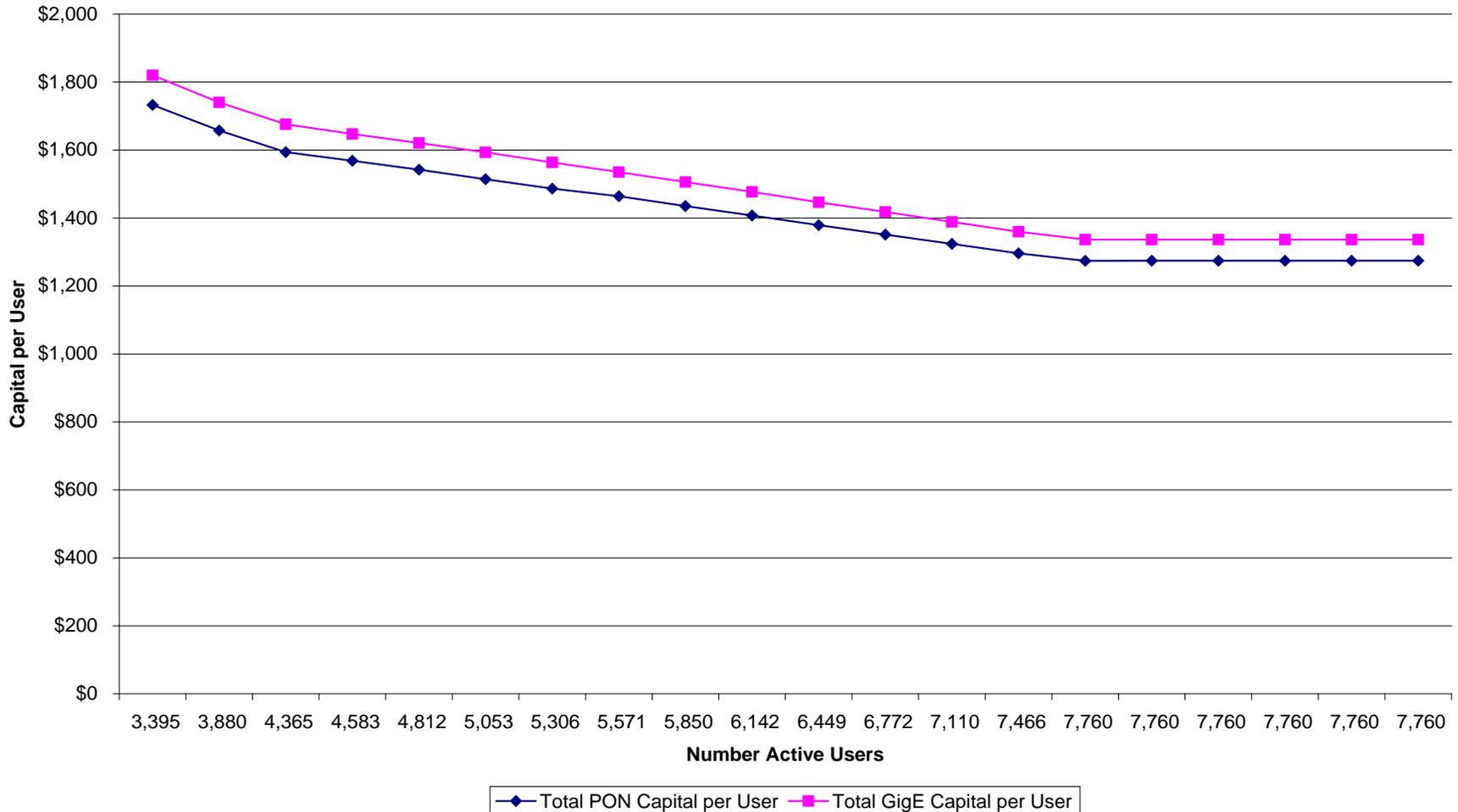
Year	1	2	3	4	5	6	7	8	9	10
<i>EOY Large Business Users</i>	-	-	-	-	-	-	-	-	-	-
<i>EOY SME Users</i>	-	-	-	-	-	-	-	-	-	-
<i>EOY Households</i>	3,395	3,880	4,365	4,583	4,812	5,053	5,306	5,571	5,850	6,142
<i>Total EOY Users</i>	3,395	3,880	4,365	4,583	4,812	5,053	5,306	5,571	5,850	6,142
<i>Total EOY Users Penetration %</i>	35%	40%	45%	47%	50%	52%	55%	57%	60%	63%
<i>Total Avg Number End-Users</i>	2,910	3,638	4,123	4,474	4,698	4,933	5,179	5,438	5,710	5,996
<i>Avg Penetration End-Users</i>	30%	38%	43%	46%	48%	51%	53%	56%	59%	62%
<u>Broadband Internet Access</u>										
<i>EOY Penetration Large Businesses</i>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<i>EOY Penetration SMEs</i>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<i>EOY Penetration Households</i>	35%	40%	45%	47%	50%	52%	55%	57%	60%	63%
<i>EOY % Broadband Internet</i>	35%	40%	45%	47%	50%	52%	55%	57%	60%	63%
<i>Installation Charge Large Businesses</i>	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
<i>Installation Charge SMEs</i>	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250
<i>Installation Charge Households</i>	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50
<i>Avg Fee/ Month/ User Large Businesses</i>	\$60	\$60	\$60	\$60	\$60	\$60	\$60	\$60	\$60	\$60
<i>Avg Fee/ Month/ User SMEs</i>	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40
<i>Avg Fee/ Month/ Households</i>	\$25	\$27	\$28	\$30	\$32	\$33	\$35	\$38	\$40	\$42

PON Capital

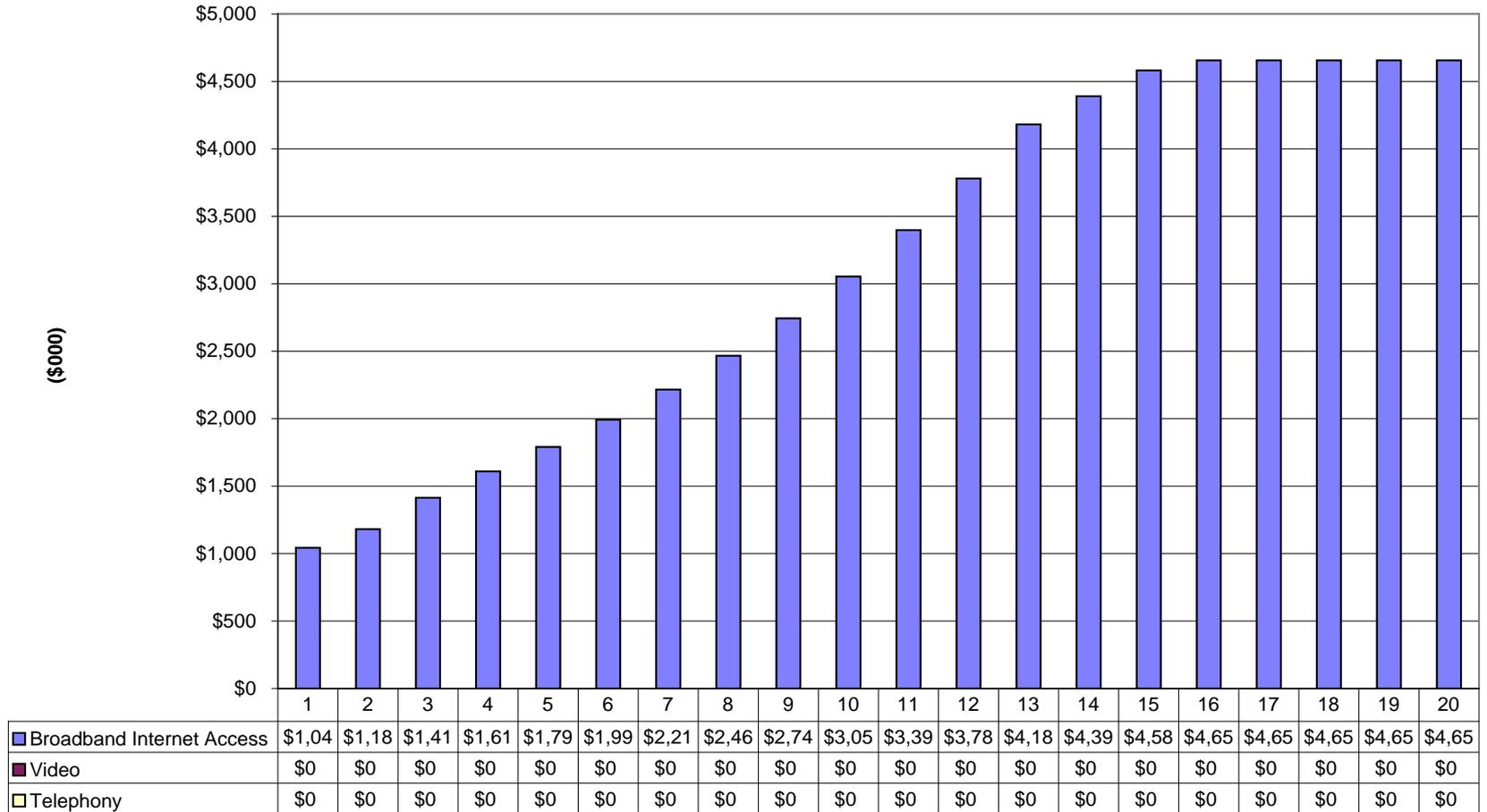


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Fiber Installation Capital	\$2,536	\$2,637	\$2,737	\$2,783	\$2,831	\$2,881	\$2,933	\$2,988	\$3,046	\$3,107	\$3,171	\$3,238	\$3,308	\$3,382	\$3,444	\$3,444	\$3,444	\$3,444	\$3,444	\$3,444
Equipment Capital	\$3,347	\$3,795	\$4,220	\$4,406	\$4,592	\$4,770	\$4,954	\$5,169	\$5,349	\$5,536	\$5,722	\$5,911	\$6,105	\$6,294	\$6,443	\$6,445	\$6,445	\$6,445	\$6,445	\$6,445
Other Capital	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100

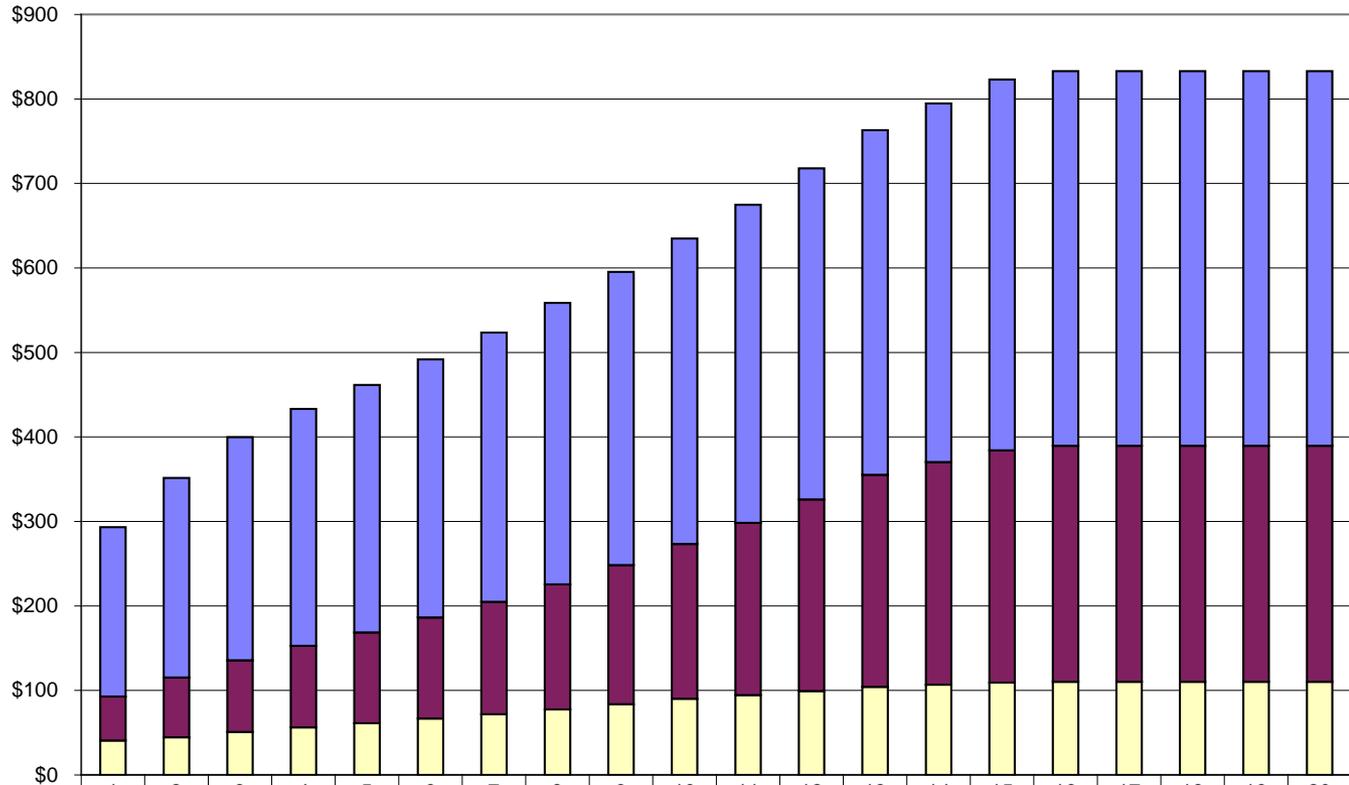
Capital per User Served



Revenues



Operating Expenses

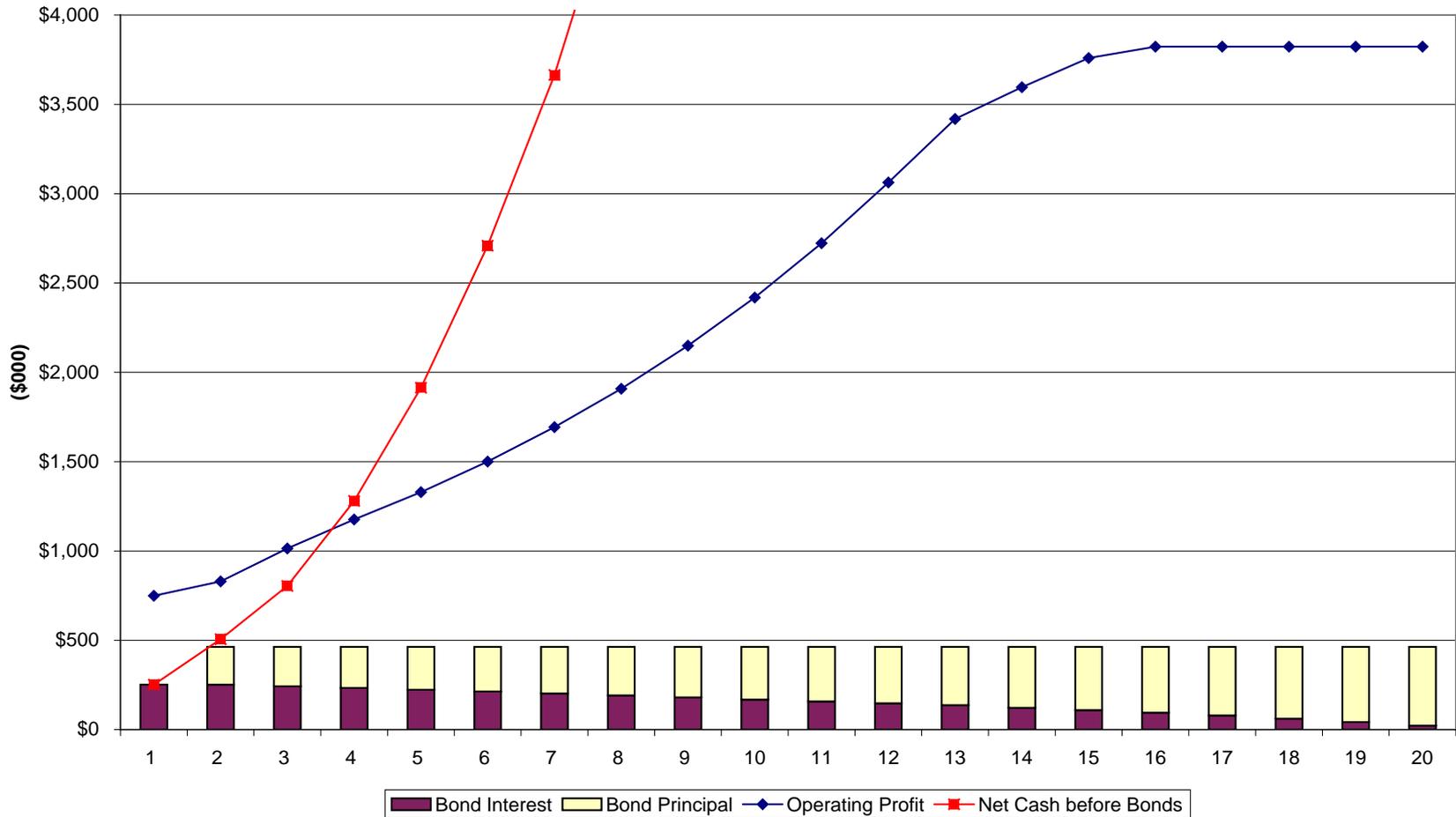


■ Network Operations & Maintenance	\$200	\$236	\$264	\$280	\$293	\$305	\$319	\$333	\$347	\$361	\$376	\$392	\$408	\$424	\$439	\$443	\$443	\$443	\$443	\$443
■ Sales Commissions	\$52	\$71	\$85	\$97	\$107	\$120	\$133	\$148	\$165	\$183	\$204	\$227	\$251	\$263	\$275	\$279	\$279	\$279	\$279	\$279
■ Billing & Administration	\$41	\$44	\$51	\$56	\$61	\$67	\$72	\$77	\$84	\$90	\$94	\$99	\$104	\$107	\$109	\$110	\$110	\$110	\$110	\$110

Bond Schedule

Year	1	2	3	4	5	6	7	8	9	10
Beginning Principal (\$000)	\$5,920	\$5,920	\$5,709	\$5,488	\$5,258	\$5,019	\$4,769	\$4,508	\$4,237	\$3,954
Interest Rate (%)	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%
Interest Payment (\$000)	\$252	\$252	\$243	\$233	\$223	\$213	\$203	\$192	\$180	\$168
Principal Payment (\$000)	\$0	\$211	\$220	\$230	\$240	\$250	\$260	\$271	\$283	\$295
Total Debt Service (\$000)	\$252	\$463	\$463	\$463	\$463	\$463	\$463	\$463	\$463	\$463
Ending Principal (\$000)	\$5,920	\$5,709	\$5,488	\$5,258	\$5,019	\$4,769	\$4,508	\$4,237	\$3,954	\$3,659

Bond Coverage



Income Statement Projections

Year	0H2	1	2	3	4	5	6	7	8	9	10
Total Revenue											
Internet Access	\$1,042,750	\$1,180,975	\$1,413,862	\$1,609,539	\$1,790,729	\$1,992,360	\$2,216,738	\$2,466,434	\$2,744,305	\$3,053,535	
Video	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Telephony	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Revenue	\$1,042,750	\$1,180,975	\$1,413,862	\$1,609,539	\$1,790,729	\$1,992,360	\$2,216,738	\$2,466,434	\$2,744,305	\$3,053,535	
Operating Expenses											
Network Operations & Maintenance	\$200,401	\$236,170	\$263,957	\$280,330	\$292,835	\$305,479	\$318,670	\$333,147	\$347,017	\$361,488	
Sales Commissions	\$52,138	\$70,859	\$84,832	\$96,572	\$107,444	\$119,542	\$133,004	\$147,986	\$164,658	\$183,212	
Billing & Administration	\$40,676	\$44,477	\$50,881	\$56,262	\$61,245	\$66,790	\$71,877	\$77,495	\$83,747	\$90,169	
Total Operating Expenses	\$293,214	\$351,505	\$399,670	\$433,164	\$461,524	\$491,810	\$523,551	\$558,628	\$595,422	\$634,869	
Operating Profit	\$749,536	\$829,470	\$1,014,193	\$1,176,375	\$1,329,205	\$1,500,550	\$1,693,187	\$1,907,806	\$2,148,884	\$2,418,665	
Operating Profit %	72%	70%	72%	73%	74%	75%	76%	77%	78%	79%	
Depreciation Expense	\$653,196	\$705,726	\$728,923	\$752,210	\$775,035	\$798,724	\$825,682	\$849,550	\$874,306	\$899,307	
Operating Income	\$96,339	\$123,744	\$285,270	\$424,164	\$554,170	\$701,826	\$867,505	\$1,058,256	\$1,274,577	\$1,519,358	
Operating Margin	9%	10%	20%	26%	31%	35%	39%	43%	46%	50%	
Interest Expense	\$125,800	\$251,600	\$251,600	\$242,612	\$233,242	\$223,475	\$213,291	\$202,676	\$191,609	\$180,071	\$168,043
Net Income	(\$125,800)	(\$155,261)	(\$127,856)	\$42,658	\$190,922	\$330,695	\$488,534	\$664,830	\$866,648	\$1,094,506	\$1,351,315
Net Income Margin	-15%	-11%	3%	12%	18%	25%	30%	35%	40%	44%	

Cash Flow Projections

Year	OH2	1	2	3	4	5	6	7	8	9	10
Cash Flow:											
Operating Income	\$0	\$96,339	\$123,744	\$285,270	\$424,164	\$554,170	\$701,826	\$867,505	\$1,058,256	\$1,274,577	\$1,519,358
+ Depreciation	\$0	\$653,196	\$705,726	\$728,923	\$752,210	\$775,035	\$798,724	\$825,682	\$849,550	\$874,306	\$899,307
+ Municipal Debt	\$5,920,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Pmt on Debt	\$125,800	\$251,600	\$251,600	\$242,612	\$233,242	\$223,475	\$213,291	\$202,676	\$191,609	\$180,071	\$168,043
- Capital Expenditures	\$5,983,098	\$548,867	\$525,294	\$231,967	\$232,877	\$228,251	\$236,888	\$269,577	\$238,680	\$247,562	\$250,012
- Principal Pmt on Debt	\$0	\$0	\$211,477	\$220,465	\$229,834	\$239,602	\$249,785	\$260,401	\$271,468	\$283,006	\$295,033
- Financing/Misc. Fees	\$207,663	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Change in Working Capital	(\$498,591)	\$51,099	(\$201,543)	\$20,229	\$5,299	\$4,149	\$4,790	\$5,178	\$9,284	\$9,424	\$11,667
Free Cash Flow	\$102,031	(\$102,031)	\$42,642	\$298,920	\$475,122	\$633,728	\$795,795	\$955,355	\$1,196,765	\$1,428,820	\$1,693,910
Cumulative Cash Flow	\$102,031	(\$0)	\$42,642	\$341,562	\$816,684	\$1,450,412	\$2,246,207	\$3,201,562	\$4,398,327	\$5,827,147	\$7,521,057

Opportunities and Risks of MBN Project

Opportunities

- *Strong demand for MBN broadband and video*
- *Estimated revenue potential from only broadband more than sufficient to cover financing bonds*
- *Substantial revenue upside from other revenue sources (video, telephony, etc.)*
- *Significant “surplus” cash likely after Year 2 with just broadband*
- *Competitive environment, enhanced services, improved economic development*

Risks

- *Senior population segment forms very weak market base*
- *ISPs, other revenue opportunities need to be established*
- *Network deployment should balance costs with revenues*
- *Choice of technology and vendors*
- *Competing new technologies: wireless, etc.*

Schedule & Next Steps

