

TOWN OF PRINCETON MA
Princeton Advisory Board
Meeting Minutes
August 31, 2016

AB members in attendance: John Shipman, Don Schoeny, Jimmy O'Coin, Wayne Adams, George Handy, Dave Cruise

BOS members in attendance: Town Administrator Nina Nazarian

AB Agenda

- Discussion for the planned Special Town Meeting Warrant September 13th and correlated Town Election Ballot, related to broadband internet services and town borrowing \$4.8M
 - - Cable Industry Internet Technology, a discussion with Steve Kroll, Sterling Resident and former Cisco Cable Industry Systems Architect
 - - Overview of exempt and non-exempt debt with respect to Tax Levy
 - - Updates from BOS and PBMLP weekly meetings 8/29 and 8/30
 - - Approve AC minutes
 - - Any other old/new business requested at start of AC meeting

Meeting started at 7:02 PM

Discussion

- **Steve Kroll led discussion**
 - Technical overview of Hybrid Fiber Cable technology, whereby fiber is typically strung to the neighborhood and coax is run to home. (see reference material)
 - Due to high volume business of HFC and cable modems, costs of the 100% fiber systems for Active Ethernet or GPON can be 50-100% more than HFC.
 - DOCSIS 3.0 is the communication protocol set for data (internet), voice, and video in a HFC cable carrier deployment. DOCSIS 3.1 is the newest standard and several major USA cities are being rolled out. DOCSIS 3.0 is backwards compatible with 2.0 and 1.0. Cable companies typically will now deploy the latest technology and may have software bit setting to run a specific version. E.g., DOCSIS 3.1 capable hardware could be a typical deployment in 2017, set to run as DOCSIS 3.0. When portions of a region are ready to run at 3.1, a software bit is flipped and the infrastructure then runs at 3.1, without replacing any deployed equipment. (see reference material)
 - DOCSIS 3.1 is capable to run symmetric upload/download speeds as fast as any fiber infrastructure can.
 - Industry developments reflect ongoing work for improving faster electronics and lower costs for devices for DOCSIS 3.1
 - <http://www.nojitter.com/post/240171912/docsis-31-give-me-more>
 - <http://www.fiercecable.com/cable/cisco-introduces-silicon-reference-design-for-cablelabs-full-duplex-vision>
 - <http://www.theverge.com/2016/8/18/12545656/comcast-gigabit->

[internet-chicago-trial-test](#)

- Steve hosted a range of questions for technical roadmaps and capabilities of a carrier infrastructure, some history of Comcast New England from its pre-acquisition roots (with its focus on customer service), and range of subscriber options for Comcast speeds.
 - Summary messages: coax is not dead; HFC is capable to deliver fast broadband connections on par with fiber AE/GPON. At some point in the distant future cable carriers will use fiber instead of coax, however, these will be short cables from the Neighborhood to the curb-pole and the premise lateral.
- Meeting recess at 8:10PM, resumed at 8:20PM
- **Overview of exempt and non-exempt debt**
- George Handy led a discussion of exempt and non-exempt debt, and how it can effect tax levy and levy limit. (see reference material from Dept of Local Services).
 - For Article 2 for the 9/13/2016 Warrant, the question is whether the \$4.8M debt for a town-built FTTH broadband service be exempt or non-exempt. Typical large infrastructure projects are done as debt excluded, so Tax Ceiling is not permanently raised after a project is paid off. The unique aspect of this project is that revenues will be generated to offset the debt, and if the certainty of the revenue over the life of the loan were known, then debt could be included providing flexibility for levy ceiling.
 - Town Administrator further illustrated the discussion options based upon whether there are adequate funds are in a reserve and the delta of a tax levy ceiling could offset any shortfall in revenues without cutting into town services or raising fees for the broadband services.
 - Specific to the PBMLP, should the warrant be passed, PBMLP will have their own books and debt could be transitioned onto them after a multi-year period of demonstrated revenues. And any revenue shortfalls could be one-year budget funding requests to the BOS/town budget. Alternatively, and ideally, a revolving account would provide town-visibility throughout the year to the health of the FTTH business, though there are restrictions for the size and % of town budget a revolving account could be. FTTH may fall outside what is permissible.
 - Bill Holder, town resident, recapped his recent town long term debt financial modeling, and FTTH may be an unnecessary debt expense for the town to take on if viable commercial offerings were pursued instead.
- **Updates from BOS and PBMLP weekly meetings 8/29 and 8/30**
- BOS approved the 9/13 warrant. The change is the fiscal amount is removed from the language of the article. The \$4.8M is part of the language of the motion and is in the explanation for the article.
 - PBMLP hosted a well-attended town-wide information session for the FTTH town-built proposed solution. Presentation is posted to Connecting Princeton. All AC members should attend the 9/8 session, to listen to the

resident questions, resident opinions. Many town residents praised the volunteers for their countless hours over the past years, the information conveyed, and forthright answers to the many questions.

- **Approve Meeting Minutes**
 - o Meeting minutes from 8/25 approved 5Y/0N/1A. Jimmy O'Coin abstained;

Meeting adjourned 9:05 PM

Useful URLs to Publicly Posted Material for Broadband

- **Connecting Princeton:** <http://www.connectingprinceton.com/>
- **PBMLP Minutes:** <http://www.connectingprinceton.com/project-status-and-news/meeting-minutes/>
- **Comcast Proposal** – Not received yet
- **Matrix Proposal** –
 - o <https://www.dropbox.com/sh/yerpuwg56gx1ykr/AADwJ68YYUfuELyibGIZXNPCa?dl=0>
- **PBMLP Cost/subscriber financial model :**
 - o <http://www.connectingprinceton.com/project-status-and-news/ftth-financials/>
- **PBMLP 2016 Residents Survey** - summary posted to Connecting Princeton
- **PBMLP Information Session Presentations** – 8/30 posted to Connecting Princeton
- **PBMLP Risk Analysis**
 - o <http://www.connectingprinceton.com/wp-content/uploads/2016/06/RISK-REPORT-Final.pdf>

Meetings and Important Dates

- **September 6th, BOS meeting;** 5 PM Princeton Center
- **September 6th, AC prep for Sept 7th town hearing,** 7PM, Princeton Center
- **September 7th, 2016** – Advisory Committee Public Hearing, 7PM, Princeton Center
- **September 8th, 2016** – PBMLP Public Information Session for FTTH , repeat info August 30, Thomas Prince School
- **September 13th, 2016** – Special Town Meeting for Warrant, 7PM Heritage Bible Chapel
- **September 22nd, 2016** – Special Town Election for Ballot, 12N-8PM, Town Annex

Handouts

- o Overview of DOCSIS 3.0/3.1
- o Overview of Hybrid Fiber Cable
- o Overview of Municipal Debt and Tax Levy
- o Final BOS Approved 9/13/2016 Town Warrant