MBI
MASSACHUSETTS BROADBAND INSTITUTE
at the MassTech Collaborative

Operation of the *MassBroadband 123* Middle Mile Network

April 12, 2017

Administrative Notes

MBI MASSACHUSETTS BROADBAND INSTITUTE at the MassTech Collaborative

- Bidder's conference is being recorded
- Identify yourself and company name when asking questions
- Questions are to be asked at the end of the presentation; offsite participants will be muted during presentation
- Questions posed during the conference will be recorded. Questions will be answered along with any written questions and posted on 4/20/2017
- In-person attendees are asked to utilize microphones located on tables when asking questions
- Written questions can be submitted at any time up until 4/14/2017 @ 5:00 P.M. and must be submitted by electronic mail to:
  - proposals@masstech.org,
  - With the subject line, "Questions – RFP No. 2017-MBI-03"

Agenda

MBI
MASSACHUSETTS BROADBAND INSTITUTE
at the MassTech Collaborative

Agenda	
1	Participant Roll Call
2	MTC/MBI Introductions
3	Procurement Schedule
4	Introduction to the RFP
5	Network Footprint
6	Network Architecture
7	POI
8	CAI
9	Scope of Services
10	MB123 Network Operator Fees
11	Current Revenue
12	Spotlight Items on Response Requirements
13	Response Requirements
14	Questions

Procurement Schedule

MBI MASSACHUSETTS BROADBAND INSTITUTE at the MassTech Collaborative

Task	Date
Issue Date	3/31/17
Mandatory Bidder's Conference	4/12/17
Question Deadline	4/14/17
Answers Posted	4/20/17
Responses Due	5/1/17

- Respondents are strongly encouraged to follow the instructions for submission of proposals listed in Section 4.4 of the RFP.

Introduction to the RFP

MBI
MASSACHUSETTS BROADBAND INSTITUTE
at the MassTech Collaborative

- Massachusetts Technology Collaborative on behalf of Massachusetts Broadband Institute has issued this RFP for an operator of the *MassBroadband 123 (MB123)* network

- Objective is to obtain responses from qualified firms interested in taking over responsibility for operating the approximately 1,200 mile fiber optic MB123 network

- Network will be operated to serve the following goals:
  - Provide reliable broadband internet access to critical community anchor institutions
  - Serve as a platform to promote economic growth
  - Facilitate solutions for municipalities without broadband internet access

- Incumbent operator generates, collects, and accounts for all network revenue and pays MBI annual platform access charges and a percentage of annual Network revenue when specific thresholds are met.

- Agreement with the selected operator will be structured differently in regards to the financial model.

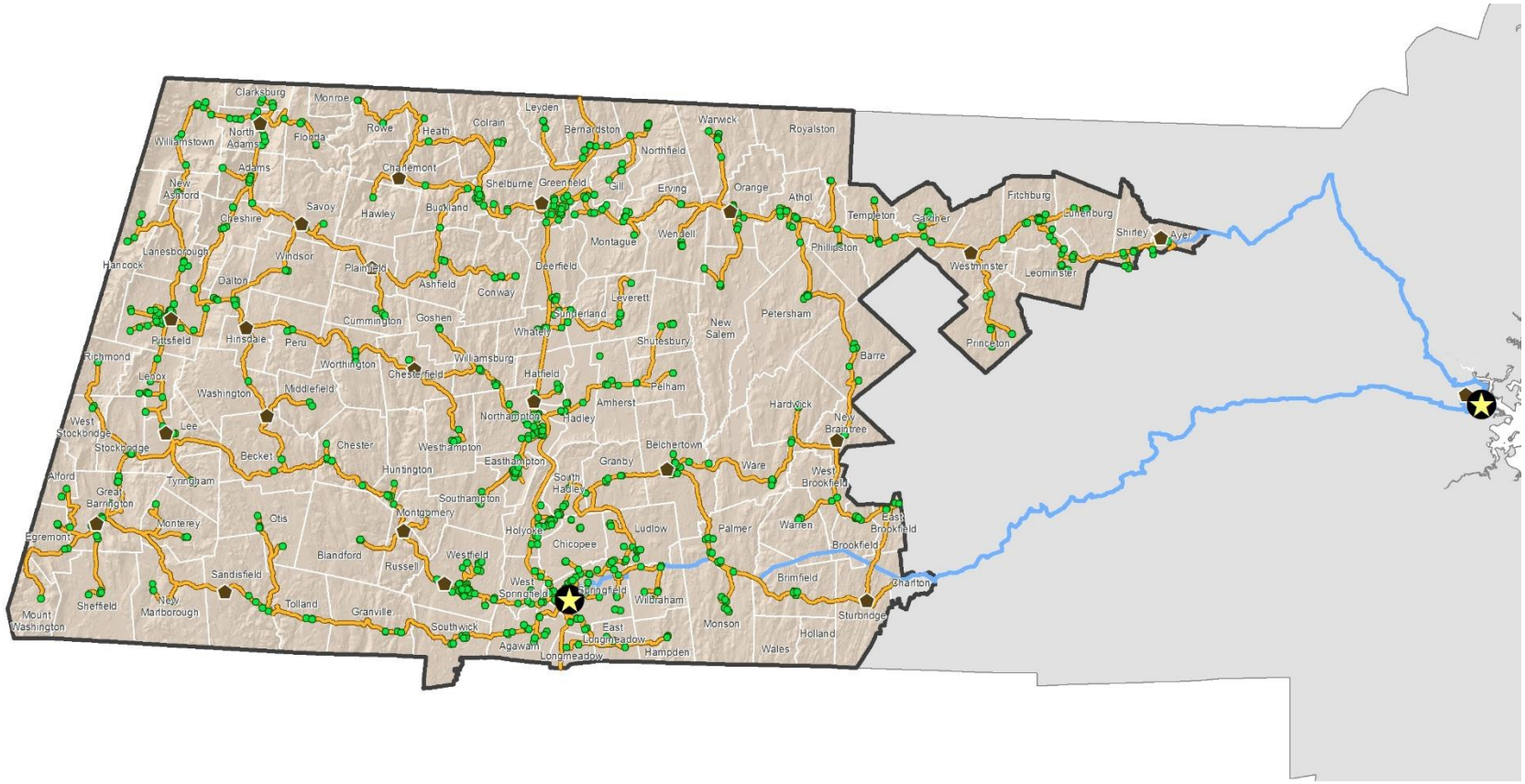
Introduction to the RFP (cont.)

MBI MASSACHUSETTS BROADBAND INSTITUTE at the MassTech Collaborative

- Respondent will operate the Network for a minimum initial term of three years, with provisions for additional renewal terms and extensions
- The transition of operational responsibility will preserve the integrity of the network and provide continuity of service for existing network customers
- The transition may occur under exigent circumstances due to the recent bankruptcy filing by the incumbent network operator
- Negotiating timetable will depend on the period of time provided to the incumbent operator in its bankruptcy proceedings. The process will run concurrently with MBI's decision making process under this RFP. MBI will endeavor to provide appropriate notice to qualified Respondents, to the extent practicable, of its consideration of material changes in direction or approach based on proposals advanced by respondents to the RFP or other factors

Network Footprint

MBI
MASSACHUSETTS BROADBAND INSTITUTE
at the MassTech Collaborative



- ***MassBroadband 123*** Service Area
- Internet Point of Presence
- Network Points of Interconnection
- Fiber-Optic Network
- Existing Third Party Fiber, Lightower
- Connected Community Anchor Institution

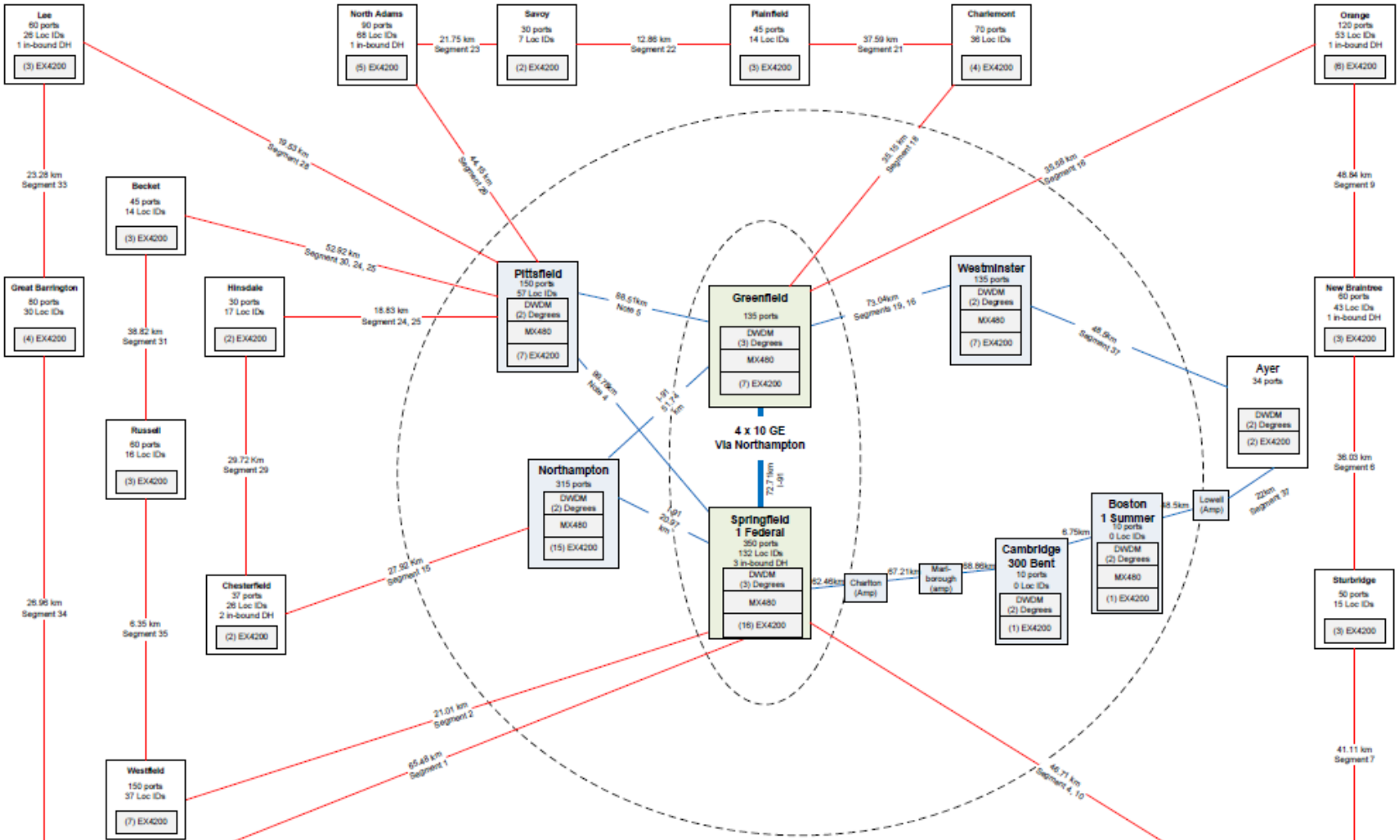
0 2.5 5 10 15 Miles

Map Date: 22 January 2014

ARRA Funded Project

Network Architecture

MBI
MASSACHUSETTS BROADBAND INSTITUTE
at the MassTech Collaborative

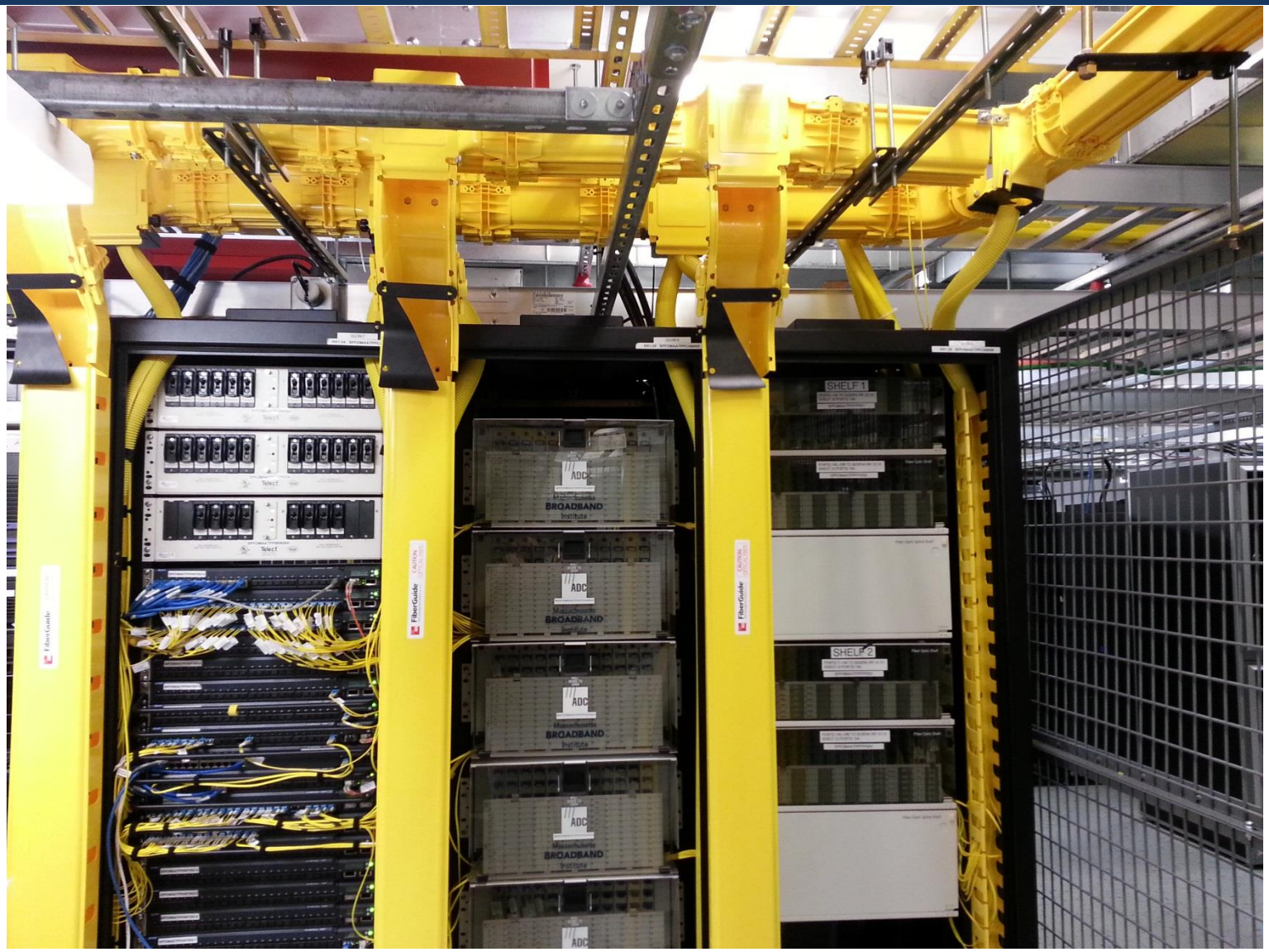


General Notes:

1) All links are **2 x 10 GE** unless otherwise indicated.
2) EX4200 Quantities are based on a 24-port box
3) The link from Springfield to Boston is Segment 36
4) The link from Springfield to Pittsfield uses Segments 2, 35, 31, 32, 33, and 28
5) The link from Pittsfield to Greenfield uses Segments 25, 22, 21, and 18

Point of Interconnection (POI) 1 of 2

MBI
MASSACHUSETTS
BROADBAND INSTITUTE
at the MassTech
Collaborative



Point of Interconnection (POI) 2 of 2

MBI
MASSACHUSETTS
BROADBAND INSTITUTE

at the MassTech
Collaborative

Community Anchor Institution (CAI) 1 of 2

MBI MASSACHUSETTS BROADBAND INSTITUTE at the MassTech Collaborative

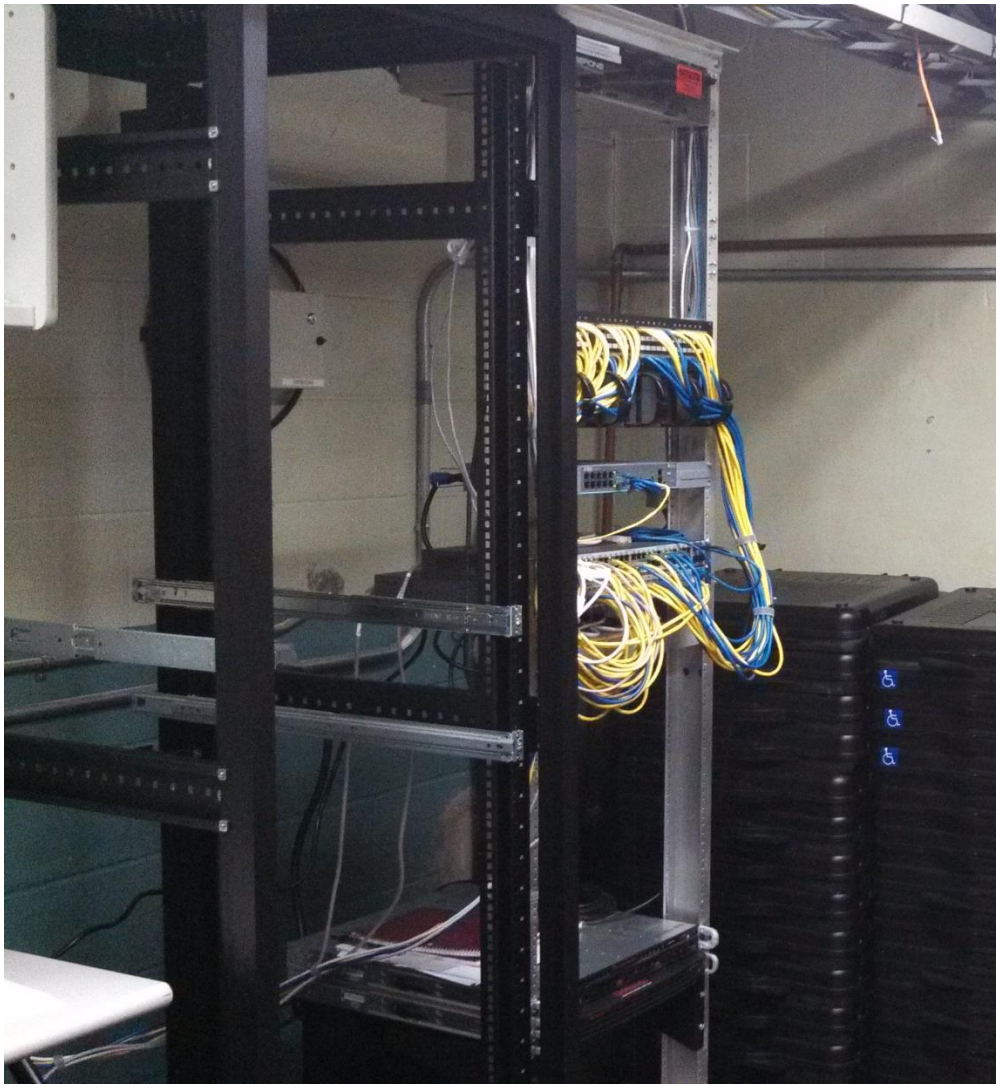
- A typical CAI consist of the following pieces of equipment being installed on a plywood backer board in a telecommunications room at each site.
  - Juniper Network Interface Device
  - Fiber Termination Panel
  - Power strip

Community Anchor Institution (CAI) 2 of 2

MBI MASSACHUSETTS BROADBAND INSTITUTE at the MassTech Collaborative

- If there was an existing equipment rack already on site at a CAI with available space, the MB123 equipment was installed inside the equipment rack, if possible.

- The fiber termination panel oftentimes was mounted on the wall nearby the rack rather than inside the rack



Scope of Services

MBI MASSACHUSETTS BROADBAND INSTITUTE at the MassTech Collaborative

- ✓ **Sales and Marketing of Wholesale Network Services**
  - All wholesale services to current and future wholesale customers
  - All marketing of the network and services provided by the operator to wholesale customers
  - Adopt an open access network policy that guarantees wholesale bandwidth services to any qualified service provider at published rates

- ✓ **Billing and Account Management**
  - Operational responsibility for managing network revenue from wholesale customers
  - Billing and collections for the network; may involve implementation and integration of new or existing OSS and BSS systems
  - Operator is the wholesale operator and is not in the ordinary course responsible for retail billing

- ✓ **Service Fulfillment and Provisioning**
  - Required to fulfill all new service orders
  - Provision all services
  - Perform (when necessary) adds, moves and changes to the network infrastructure

- ✓ **Network Management and Monitoring**
  - 24/7 network monitoring
  - Change management (e.g. change states, change control)

- ✓ **Customer Care**
  - Provide customer service for wholesale customers using a level of care and service that is consistent with industry-accepted standards

Scope of Services (cont.)

MBI MASSACHUSETTS BROADBAND INSTITUTE at the MassTech Collaborative

- ✓ **Advanced Support**
  - Provide advanced support staff (or obtain qualified subcontractors) to maintain and monitor the integrity of the network and its services
- ✓ **Field Operations**
  - Responsible for all maintenance and repairs to the network
  - Network relocations will be the sole responsibility of the operator
- ✓ **Back Office Support Systems**
  - Maintain up-to-date maps, configurations, and network diagrams for the network in an OSS to support field technicians, technical support technicians and engineers
  - Responsible for maintaining accurate inventory and up-to-date documentation for the configuration of all network nodes, devices and services
  - Furnish and maintain all systems or applications on the network and all applicable licenses to support these responsibilities

Current Revenue

MBI MASSACHUSETTS BROADBAND INSTITUTE at the MassTech Collaborative

Current Run-rate Network Revenue (annualized based on last 2 quarters):

Description	Revenue
Service Provider Revenue	$1,912,210
Commonwealth Customer Revenue	$698,480
Dark Fiber Revenue	$572,910
Annual Revenue	**$3,183,600**

Revenue is derived from the following sources:

- Currently approximately 18 wholesale customers
- Approximately 533 CAI end users
- Approximately 119 non-CAI end users taking service that collectively have approximately 1,158 active services
- Dark Fiber

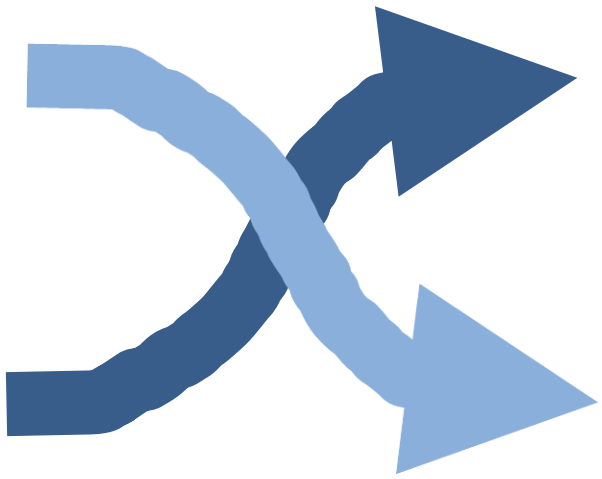
Dark Fiber Customers
186 Communications
Charter Communications
CornerStone
Crocker Communications Inc.
Information Technology Division (ITD)
PEG Bandwidth
University of Massachusetts

Spotlight: Transitional Strategy

MBI MASSACHUSETTS BROADBAND INSTITUTE at the MassTech Collaborative

Current Operator

Function	Application(s)	Description
BSS	Sales Force	Customer relationship management platform used for pre-sales and marketing activities
OSS	NetCracker	Software platform which includes network inventory, provisioning records
OSS	CADWeb	Intranet web server that hosts CAD based as-builts and other technical drawings and configuration files
Portal	SevOne	Web based portal for wholesale customers to track services orders and network utilization
NMS	HPOpen View	SNMP-based network management system
EMS	Junos Space OneControl	Manufacturer specific network management tools
Auth & Logging	TACACS, Syslog	Authentication management systems and centralized log servers



New Operator

Function
BSS
OSS
Portal
NMS
EMS
Auth & Logging

QUESTIONS

MBI
MASSACHUSETTS
BROADBAND INSTITUTE
at the MassTech
Collaborative