Agenda

Town of Fairhaven Broadband Committee

Town Clerk's Office
Wednesday, April 16, 2020
5:30 pm

Date: April 21, 2020, 7:00 p.m. E.T.

Remote Access Information:
Join Zoom Meeting
https://zoom.us/j/894342421?pwd=YjhRRGNvVWNsb0Y0VVNnSXI1TmJNZz09
or call 1-929-205-6099
Meeting ID: 894 342 421
Password: 005150

Committee Members:

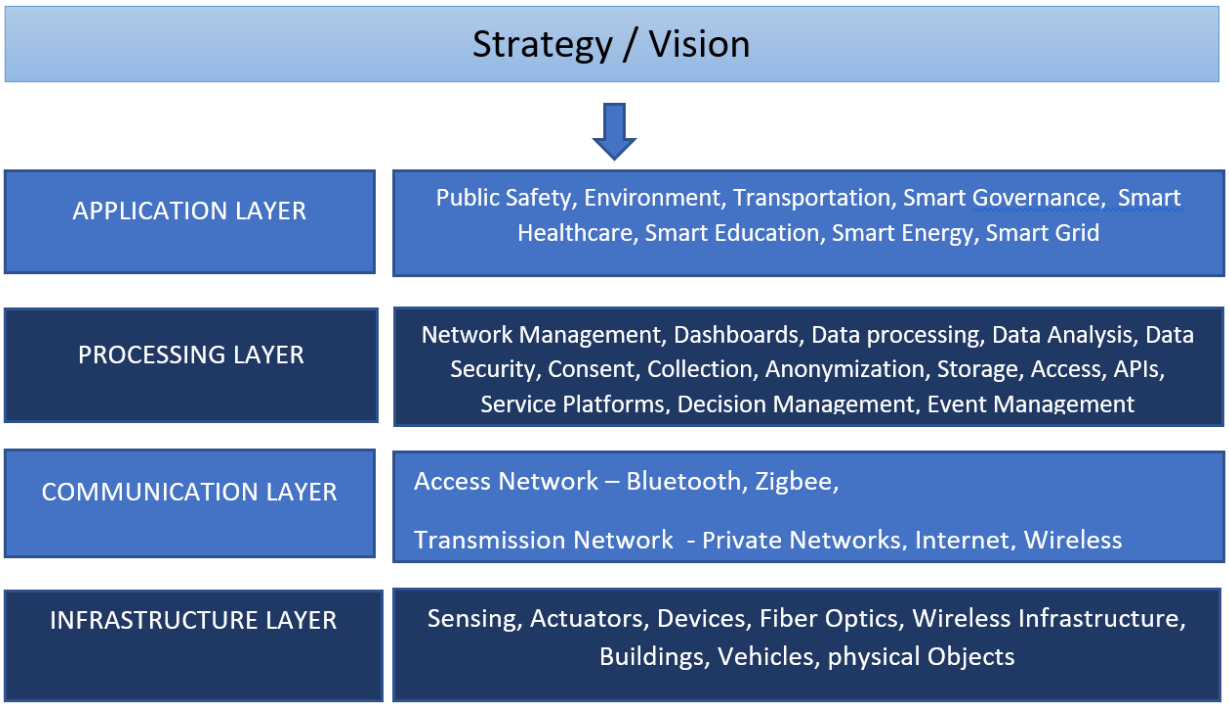
- Bob Espindola
- Derek Frates
- Sean Powers
- John Methia
- Jay Simmons,
- Suzanne Dwyer
- Jeff Christensen, EntryPoint Networks
- Devin Cox, EntryPoint Networks

Agenda Items:

- Review Minutes from March 31, 2020 Meeting
    - Action Items from March
- April Project Milestones
    - Review Comparisons of Different Municipal Broadband Models (See Below)
    - Continue Collecting Invoices
    - Discussion on Strategy - (See Below)
    - Evaluate Middle Mile Options - EntryPoint
    - Evaluate Options for Legal Structure - Review Quincy, MA Document
    - Select Neighborhoods for Cost Modeling - Fairhaven (Complete - See Attached)
    - Continue with Market Analysis – (See Invoice Collection and Pending Survey of Town Members)
    - Assess Existing Infrastructure (Delayed for May Kick-off)
    - Discuss adding Smart City/Smart Town Framework to Scope of Work
- Requests for Committee Members
    - Collect Internet Invoices from 50 – 100 Co-workers, Friends, Family Members
    - Engage City Attorney on Analysis of Legal Structure Options
- Future/next meeting – action items?
    - Review action items for next meeting

- Schedule May, June, and July Meetings (3rd Tuesday of each month - June Conflict - Can we do the 2nd or 4th Tuesday in June?)

Smart City / Smart Town

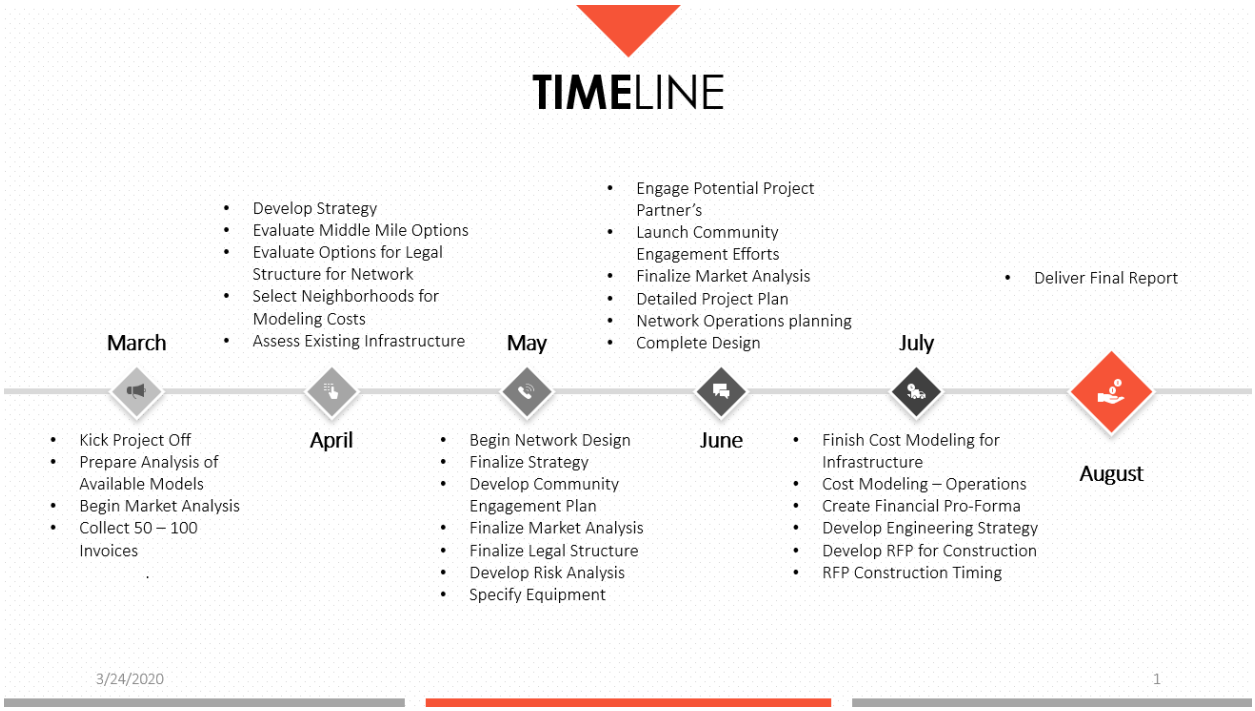


Scope of Work:

EntryPoint's Consulting Services Group, will work with the Broadband Committee to develop a *Broadband Master Plan* and Feasibility Analysis for the Town of Fairhaven. The contemplated Scope of Work will be performed in coordination with Fairhaven's Broadband Committee and includes the following:

- Develop Broadband Strategy
- Conduct SWOT Analysis
- Assess Existing Broadband Infrastructure
- Conduct Market Analysis
- Prepare Community Engagement Plan & Timeline

- Assist with Early Community Engagement Efforts
- Coordinate Broadband Surveys with Residents and Businesses in Wilbraham
- Prepare Comparison of Municipal Broadband Models
- Prepare a High-level Fiber Optic Network Design and Materials Cost Summary
- Prepare Cost Analysis
    - Prepare Projected Capital Expenditures and Funding
    - Prepare Projected Income and Cash Flow
- Coordinate with Potential Project Partners
    - Middle-Mile
    - Internet Service Providers
    - Engineering
    - Construction
- Assist with Introduction of Potential Financial Partners for a Project
- Coordinate Planning for Financing Options
- Assist with Securing Legal Opinions to Establish Authority to Build Broadband Infrastructure
- Conduct Risk Analysis
- Assist with Preparation of RFP for Engineering & Construction
- Prepare Report Summary and Conclusions


TIMELINE
March
Kick Project Off
Prepare Analysis of Available Models
Begin Market Analysis
Collect 50 – 100 Invoices
April
Develop Strategy
Evaluate Middle Mile Options
Evaluate Options for Legal Structure for Network
Select Neighborhoods for Modeling Costs
Assess Existing Infrastructure
May
Begin Network Design
Finalize Strategy
Develop Community Engagement Plan
Finalize Market Analysis
Finalize Legal Structure
Develop Risk Analysis
Specify Equipment
June
Engage Potential Project Partner's
Launch Community Engagement Efforts
Finalize Market Analysis
Detailed Project Plan
Network Operations planning
Complete Design
July
Finish Cost Modeling for Infrastructure
Cost Modeling – Operations
Create Financial Pro-Forma
Develop Engineering Strategy
Develop RFP for Construction
RFP Construction Timing
August
Deliver Final Report
3/24/2020
1

Broadband Planning

Strategy

Deploying a city-wide fiber optic network is a significant public works and information technology project.

Issue	Tactical	Strategic
Focuses On	Immediate Needs	Future
Oriented Towards	Goals & Objectives	Vision
Prefers	Stability	Change
Emphasizes The	Organization	Environment
Looks	Internally	Externally
Gravitates Towards	Reliable Techniques	Innovation & Creativity
Wants To	Improve What Is	Consider What Can Be

Examples of Strategic Ideas guiding this Plan include the following:

Democratize Access
Improve Affordability
Solve Digital Divide
Foster Competition & Choice
Enable Abundant Bandwidth
Foster Innovation & Economic Development
Public Safety
Create Alignment with Subscribers
Participation is Voluntary or Involuntary?
Mitigate Risk for the City
Local Control of Essential Infrastructure
Enable Long Term City Planning & Objectives
Local Resilience

SWOT Analysis

The SWOT Analysis included considers the Strengths, Weaknesses, Opportunities and Threats related to advancing the projects under consideration in this report.

Broadband Planning

STRENGTHS	
WEAKNESSES	
OPPORTUNITIES	
THREATS	

Infrastructure

Comparison of Available Media

The primary media used for internet access today are DSL, Cable, Wireless and Fiber Optic cable.

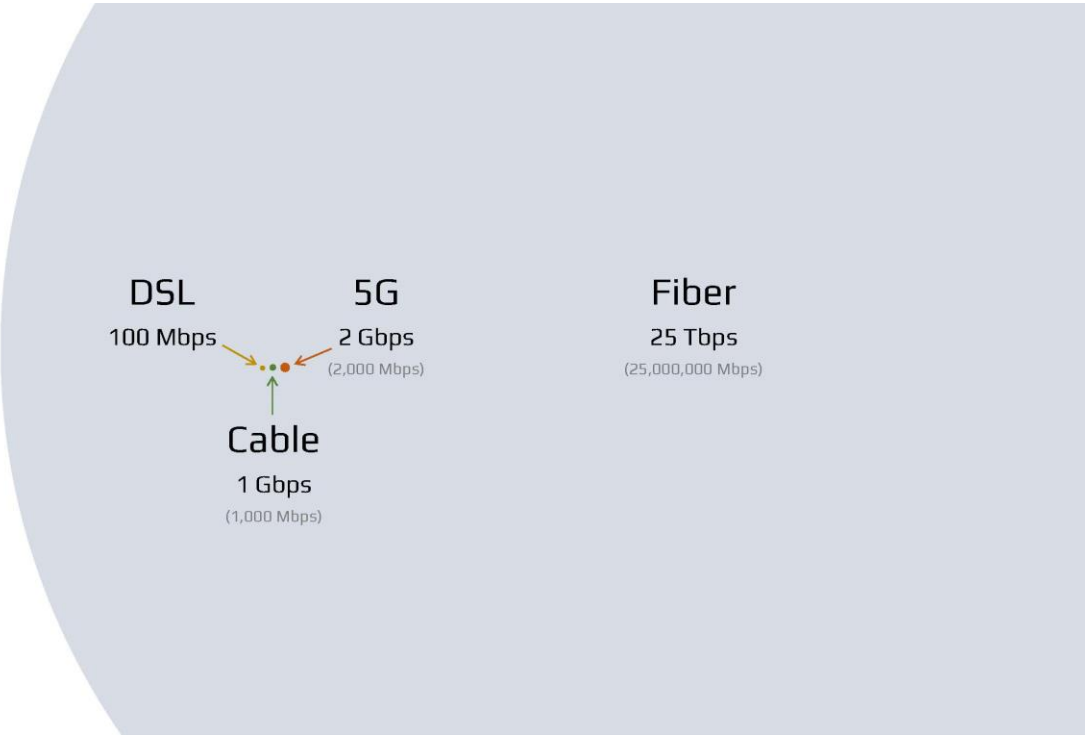
DSL stands for Digital Subscriber Line and it is one of the technologies used to provide Internet connectivity to homes and businesses. DSL uses existing telephone lines and a transceiver to bring a connection into a home or business and allows the household to use the Internet and make telephone calls at the same time. Verizon is the incumbent telephone company in the area using DSL technology. DSL is asymmetrical (The download speed is much faster than the upload speed) and is capable of download speeds up to 100 Mbps.

Coaxial Cable uses copper cable designed with one physical channel that carries the signal surrounded by a layer of insulation and then another physical channel, both running along the same axis – hence the coaxial name. Coaxial cable is primarily used by cable TV companies to connect transmission facilities to customer homes and businesses to deliver cable T.V. and internet access. Comcast/Xfinity is the incumbent cable company in the area. Coaxial Cable is asymmetrical and is capable of download speeds up to 940 Mbps.

Fiber Optic Cable sends information down strands of glass known as optical fibers which are about the size of a human hair. These fiber optic strands are capable of transmitting 25 Tbps today and researchers have successfully demonstrated a transmission experiment over 1045 km with a data-rate of 159 Tbps (https://phys.org/news/2018-04-fiber transmission.html). Fiber-optic cables carry information between two places using optical (light-based) technologies which

convert electrical information from the computer into a series of light pulses. Fiber Optic Cable is capable of symmetrical speeds up to 25 Tbps.

Because the difference in capacity between fiber optics and alternative media is so significant, fiber optics should be the foundational media for any new broadband infrastructure project when financially feasible.



Upload vs Download Speeds

In addition to the difference in bandwidth between DSL, cable and fiber optics, an additional important difference is that only fiber optic cable offers the ability to deliver symmetrical speeds. In an asymmetrical connection, the download speeds are much faster than upload speeds. Upload speed is the amount of data a person can *send* and download speed is the amount of data a person can *receive* in one second. Upload speeds can be very important for businesses, including home-based businesses or people who work from home. Applications that depend on good upload speeds include sending large files, cloud applications like Google Docs and Dropbox, VoIP, FaceTime, Skype, hard drive backups and In-house web hosting.

Municipal Broadband Models Comparison

The Institute for Local Self Reliance has mapped municipal networks throughout the United States using an interactive map that can be found at the following link:

https://muninetworks.org/communitymap

To compare the various models that exist in the United States today, a mix of prominent municipal fiber optic projects were selected to illustrate the types of models that have been deployed. The following comparison summarizes different approaches to funding and operating

municipal broadband infrastructure and services followed by a description of the advantages & disadvantages of each:

Municipality	Population	Model Type	Electric Utility	Take-Rate	Cost of 1 Gig
Chattanooga, TN	179,139	Electrical Utility ISP	Yes	60%	$68.00
Lafayette, LA	126,000	Electrical Utility ISP	Yes	40%	$99.95
Westminster, MD	19,000	City Fiber, Private ISP	No	20%	$89.99
Huntsville, AL	194,585	Dark Fiber Open Access	Yes	Not Published	$70.00
Sandy, OR	10,000	Municipal ISP	No	60%	$59.95
Longmont, CO	86,000	Electrical Utility ISP	Yes	55%	$69.95
Ammon, ID	17,000	Automated Open Access	No	65%	$46.50
Monmouth, OR	15,083	Municipal ISP	No	80%	$129.65
Lexington, KY	321,959	Private Partner Owned	No	Not Published	$59.95
Santa Monica, CA	110,000	Dark Fiber Business Only	No	N/A	N/A
Fort Collins, CO	165,000	Electrical Utility ISP	Yes	Early Stage	$59.95
UTOPIA	150,000+	Manual Open Access	No	15%	$70.00

Municipal Broadband Models Defined – Summary | Pros | Cons

City Owned & Operated, Single ISP

Summary: The city owns and operates the network and is also the sole service provider on the network.

Pros: This model can be successful when incumbent operators have some combination of the following: monopoly or near monopoly status, high prices, a poor reputation and widespread customer resentment.

Cons: A single ISP does not significantly expand choice or competition. There have been very few *City Owned & Operated, Single ISP* deployments that have been successful and those that have been successful are much smaller than . The city is essentially replicating the incumbent model and competing against the incumbent head-to-head. This model leaves the city vulnerable to the incumbent dropping their price to influence the municipal take-rate and destabilize the municipal network.

Examples of this model include Sandy, OR and Monmouth, OR.

Municipal Electrical Utility Owned & Operated, Single ISP

Summary: The Municipal Electrical Utility owns and operates the network and is also the sole service provider on the network.

Pros: Most successful Single ISP municipal networks for cities the size of have adopted the Electrical Utility model. The Electrical Utility has the advantage of having an established reputation in the community. Electrical Utilities often have financial, customer service, and engineering expertise that may be beneficial to the network. The skill-set for Outside Plant personnel for a municipal network is similar in kind to the existing range of skills in an Electrical Utility. The likelihood of success increases in instances where the incumbent operator has monopoly or near monopoly status, higher than average prices, a poor reputation and/or widespread customer resentment.

Cons: A single ISP does not significantly expand choice. Expertise in network operations will need to be enhanced or developed. This model is essentially replicating the incumbent model and involves competing against the incumbent head-to-head. This model leaves the city / Electrical Utility vulnerable to the incumbent dropping their price to impact the take-rate and destabilize the network.

Examples of this model include Chattanooga, TN and Longmont, CO. Fort Collins, CO. is in the early stages of deployment and is replicating this model.

Dark Fiber, Open Access

Summary: Dark Fiber Open Access is a model where the city builds infrastructure to the curb and the subscriber then selects an ISP as its provider and the ISP finishes the connection to the home with its own infrastructure and electronics.

Pros: Open Access increases choice for consumers. Operating a dark fiber network is less complicated than operating a lit network. The Dark Fiber model enables Public ownership of infrastructure.

Cons: The Dark Fiber model gives up control over last mile infrastructure, i.e., the drop from the curb to the premise. The Dark Fiber model therefore limits the usability of each strand of fiber. With an isolated dark fiber connection, it is impossible to connect to other services that may not be available through the ISP that controls the drop to the customer premise. The Dark Fiber Model may not scale easily due to difficulty in anticipating the required fiber count to meet the demand. This can create significant complications for the network operator.

An example of this model is Huntsville, AL.

Manual Open Access

Summary: Manual Open Access is a model where the network is lit end to end. This means that the network operator places and controls the electronics at both ends of the network. In this model, switching service providers can be requested from a web portal and may appear to be automated but the network provisioning is not automated.

Pros: A manual Open Access network increases choice for consumers.

Cons: Operating a Manual Open Access network is more complex than operating a Single ISP network because of the requirement for human management of network tasks. Any increase in the number of service providers operating on the network adds to network complexity.

An example of this model is the UTOPIA Network. UTOPIA is the largest manual open access network in the United States with just over 20,000 premises connected. UTOPIA struggled under heavy debt obligations for 15 years but is now operating on a sustainable trajectory. In addition to UTOPIA, there are a number of Manual Open Access networks in Europe.

Automated Open Access

Summary: Automated Open Access is a model where the network operator places electronics at both ends of the network and subscribers can dynamically select service providers in real-time. Software Defined Networking is used to automate various network management tasks.

Pros: Multiple service providers can deliver services simultaneously and independently across a single wire. When a subscriber selects a new service provider, the provisioning is done using automation and therefore happens on-demand. The automated provisioning creates a marketplace for services which includes ISP's and private networks for other services. The ability to switch service providers on demand increases choice and competition.

Cons: The model was first implemented in late 2016. Ammon, ID is the only city that has a full implementation operating. Scalability has been demonstrated in a lab environment but not in a city the size of .

Examples of this model include Ammon, ID, McCall, ID and Mountain Home, ID.

Disclosure: EntryPoint Networks owns and operates a SaaS model Automated Open Access solution and is the technology solution provider in these networks.

Private Sector Owner & Operator, Single ISP

Summary: A private builder designs, builds and operates a network. The private entity is also the sole ISP on the network – replicating the incumbent model.

Pros: A private builder and operator assumes all the risk and does the work of overseeing design, project management, construction, customer acquisition and operations. This model increases the choices available to consumers with minimal obligation or burden for the city.

Cons: The new operator is replicating the incumbent model. There is no local control over infrastructure and the choices increase by just one new provider. There is no guarantee that the operator will address the digital divide. The network can be sold to another operator.
There are many examples of over-builders but Lexington, Kentucky is a recent example.

An example of this model is Lexington, KY.

Private Sector Owner & Operator, Open Access

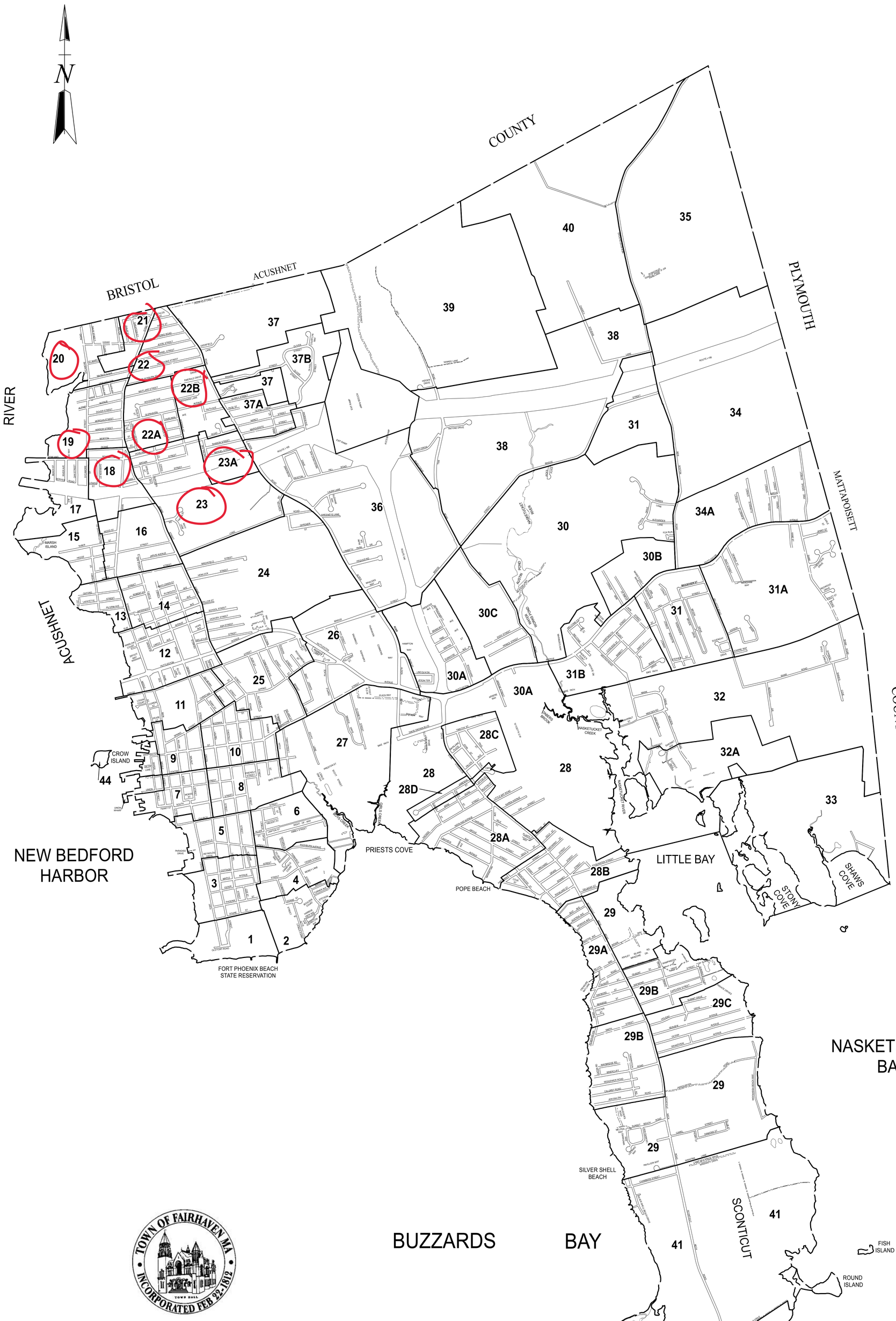
Summary: A private builder designs, builds and operates a network. The private entity uses an Open Access model rather than the incumbent model for service delivery.

Pros: A private builder and operator assumes all of the risk and does the work of overseeing design, project management, construction, customer acquisition and operations. This model provides an increase in the choices available to consumers at almost no cost to the city. Risk

exposure to the city is very low. The private builder/operator builds and stabilizes the network and may give the city the option to acquire the network after an agreed upon number of years for a premium price above the actual cost to develop.

Cons: There is no local control over infrastructure. There is no guarantee that the operator will address digital divide issues. A private owner will be free to sell the network to a new operator that may or may not be aligned with community objectives for the network.

An example of this model is Fullerton, CA (SiFi).



ROAD NAME	MAP
ABBEY ST	6
ACADEMY AVE	12, 14
ADAMS ST	8, 10, 12, 14, 16, 18, 23
	24, 25
AKIN ST	30B, 31B
ALDEN ROAD	22, 22B, 23, 23A, 24, 26, 30A
	36, 37, 37A
ALDER ST	43A
ALLEN ST	6
ALMOND ST	43B
ALMY ST	25
ALPINE AVE	19
ANDREW AVE	36
ANGIE'S WAY	32
ARSENE ST	30A
ARSENE WAY	30A
ASH ST	24
ASHLEY ISLAND RD	29
ASSOCIATION RD	29
ATLAS ST	6
AUSTRIA AVE	29A
AUTUMN ST	25
BABBITT ST	31, 31B
BAKER AVE	2, 4
BALSM ST	43A, 43B, 43C
BASS CREEK RD	43C
BATES ST	31A
BAXTER AVE	29A
BAY ST	28A, 38B
BAYBERRY ST	42
BAYSIDE ST	42
BAYVIEW AVE	28A
BEACH ST	17
BEACHWOOD ST	28B
BELLA VISTA ISLAND	43B
BELLEVUE ST	12, 24
BERDON WAY	27
BERKLEY DR	32
BERNESE ST	29A
BILLY'S WAY	29A
BIRCH ST	34A
BIRCHFIELD ST	24
BLACKBURN ST	22, 22A, 22B
BLOSSOM ST	31, 31A
BLOSSOM WAY	31
BLUE POINT ROAD	43B
BRIARCLIFFE RD	29B
BROOK DRIVE	31
BROOKVIEW ST	31
BROWN ST	23
BROWNELL AVE	43, 31B
BRYANT LANE	25, 26
BUIST AVE	29A
BURGESS AVE	23
BUTTONWOOD ST	15, 16
BUXTON ST	28A
CALUMET RD	29B
CARMEL ST	29
CAMP SEA SPACE DR	41
CAPEVIEW ST	29D
CARLETON AVE	2
CASCO ST	28A
CASTLE AVE	12, 14, 16
CAUSEWAY RD	43A, 43B
CEDAR ST	3, 4
CENTRE ST	7, 8, 9, 10, 27
CENTRAL AVE	22, 22B, 23A
CENTURY DR	23
CHAMBERS ST	41
CHANEY AVE	28A
CHARITY STEVENS LANE	31, 38, 40
CHASE RD	29D
CHERRY ST	13, 15
CHERRYSTONE RD	43B
CHESTNUT ST	3, 5, 8, 10
CHRISTIAN ST	11, 25
CHURCH ST	5, 6, 7, 8
CLARK ST	20
CLIFFE AVE	19
CLUB ST	29
COE ST	3
COOKE ST	15, 16
COOLIDGE ST	31B
COPICUT PATH	32A
COTTAGE ST	3, 4
COTTONWOOD ST	43A, 43B, 43C
COVE ST	28B
COWEN ST	11
CRESCENT DR	29D
CROSS ST	25
CROW ISLAND	44
CUSHMAN AVE	43
DANIEL ST	22
DARTMOUTH ST	31B
DAVID BROWN BLVD	28
DAVIS ST	20
DAY ST	28
DEACON'S DR	41
DEANE ST	18, 19, 22A, 22B, 37A
DELANO ST	25
DELMONT ST	28B
DIAMOND ST	29
DOANE ST	1, 2, 3
DOGWOOD ST	43A, 43B, 43C
DOUGLASS DR	42
DOVER ST	19
DUDLEY ST	22A
EATON RD	29B
EBONY ST	43A, 43B, 43C
EDDY ST	30C
EDGEWATER ST	28B
EGYPT LANE	27
ELIZABETH ST	27
ELLIOT LANE	12
ELLIS AVE	2
ELM AVE	12, 13, 14
ELMWOOD AVE	30A
EMERSON AVE	29A
EVERGREEN ST	31
FAIRHAVEN COMMON WY	26
FAIRLAWN AVE	22A
FAITH AVE	22B
FARMFIELD COURT	4
FARMFIELD ST	2, 4, 5, 6
FELLSWAY ST	26
FERRY ST	7
FIR ST	43A, 43B, 43C
FISHERMAN'S RD	43A
FLORAL DR	32
FLORENCE ST	34A
FORT ST	1, 3, 5, 7
FOSTER ST	29A
FRANCIS ST	12, 14
FREDERICK AVE	29A
FRIENDLY ST	8
FRUIT ST	31A
GARDNER ST	24
GARRISON ST	18
GELLETTE RD	31, 31A, 32
GIFFORD ST	6
GILBERT ST	29A, 29D
GLENHAVEN AVE	22A, 22B
GOLF ST	28A, 28B
GOULART MEMORIAL DR	42
GRANDVIEW AVE	29C
GRAPE ST	28B
GREEN ST	1, 3, 5, 7, 8, 9, 10
	11, 12, 14
GRINNELL ST	31A
GROVE ST	28A
GULL ISLAND RD	43A, 43C
HACKER ST	28A
HAMLET ST	31
HAMPTON WAY	30A
HARBORVIEW AVE	2
HARDING RD	20, 21, 22
HARVARD ST	28A
HASTE ST	22
HATHAWAY ST	28
HAWTHORNE ST	22
HEDGE ST	15, 16
HENRY ST	29
HICKORY ST	24
HICKS ST	24
HIDDEN DR	39
HIGHLAND AVE	28A
HILL ST	31
HILLER AVE	28C
HITCH ST	8, 10, 27
HOLCOMB ST	25
HOLIDAY DR	29C
HOMESTEAD AVE	25
HOPE AVE	12
HOPKINS ST	22A, 22B, 23

NEW STREET LISTINGS (1996---)

DEERFIELD LANE	37
PARADISE DRIVE	5
WAPATMA LANE	29
TREASURE BAY LANE	29A
JACK'S PLACE	30
KAYLA DRIVE	22B
FOREST VIEW DRIVE	31A
TANNER LANE	30
COSTA DRIVE	30
ALEXANDER LANE	30
EMERALD DRIVE	22B
ROBICHAUD FARM LANE	35
KALIFE DRIVE	42A
SMUGGLER'S ROAD	29
MELPEN DRIVE	29
TYLER'S WAY	4
ALCOBIA DRIVE	42
PLANTE WAY	28A
COURTLYN WAY	37B
McKENSIE LANE	22B
ACORN STREET	31B
EARLE STREET	31A
HEMLOCK STREET	24
FOX RUN LANE	30
BOULDER COURT	2
ERIN STREET	31B
ANTONE DRIVE	38
HARBOR MIST DRIVE	28
SANDRA LANE	37

ROAD NAME	MAP
HOULE ST	23
HOWLAND RD	17, 18, 19, 23, 23A
HUTTLESTON AVE	12, 24, 25, 26, 27, 28, 30, 30A
	30B, 30C, 31, 31A, 31B, 34A
HYLAND ST	27
INDIAN WAY	29
ISLAND VIEW RD	43
IVY LANE	3
JAMES ST	2
JAMESON ST	28D
JARVIS AVE	16
JASON TERRACE	30A
JEANETTE ST	34A
JEFFERSON ST	11, 25
JENNA DR	31B
JENNY ST	31A
JERUSALEM RD	29B
JESSE ST	22
JESSICA ST	36, 37A
JOANNE'S WAY	31A
JOHN ST	28C
JUDD ST	10, 25
JUDSON DR	31A
KACY LANE	23
KANE ST	31A
KAREN AVE	28
KELLY LANE	9
KENNEDY CIRCLE	32A
LAFAYETTE ST	13
LAMBETH PARK DRIVE	36
LARCH AVE	12
LAURA LANE	36
LAUREL ST	3, 5, 8, 10
LAWTON ST	6
LEEWARD WAY	29
LEMERY ST	16
LINCOLN DR	30A
LINDEN AVE	12
LITTLE BAY RD	28
LITTLE NECK RD	43A
LIVESEY PARKWAY	22A
LLOYD FARM LANE	37
LOGAN COURT	11
LONG RD	23, 24
MANGOLIA AVE	20
MAIN ST	5, 7, 9, 11, 12, 13, 14
	16, 18, 19, 20, 21, 22, 22A
	22A, 22B
HAITLAND ST	31A
HANGHAM WAY	28A
MANHATTAN AVE	43
MANOMET ST	27
MANOR DR	23A
MANZONE DR	29
MAPLE AVE	3
MARGUERITE ST	28C
MARILAINE PLACE	30B
MARINER'S WAY	32
MARK DR	15
MARSH ISLAND	14
MASSASOIT AVE	14
MAYFLOWER ST	25
MCGANN TERRACE	30
MEADOW LANE	3, 4
MIDDLE ST	7, 9, 11, 12
MILL RD	30, 30C, 36, 38, 39
MILTON ST	20
MINA ST	37, 37A
MISTY BAY RD	43C
MONONDACH AVE	42A
MORAVIA AVE	29A
MOREY LANE	4
MORGAN ST	19, 22B
MORSE ST	7
MORTON ST	19, 22B
MOZART AVE	19
MULBERRY ST	11, 25
NAKATA AVE	43
NANCY ST	36, 37A
NARRAGANSETT BLVD	30A
NASKETUCKET WAY	30B
NAUSHON AVE	43
NELSON AVE	43
NEW BOSTON RD	30, 30B, 31, 34, 34A
	35, 38, 40
NEWBURY AVE	19
NEWTON ST	22B
NICHOLAS ST	22
NOBSKA AVE	43
NONQUITT AVE	32A
NORTH ST	13, 14, 15, 16
OAK ST	17
OCEAN AVE	29C
OCEAN MEADOWS	30
OLD FORT RD	1
OLIVER ST	37A, 37B
OXFORD ST	13, 14
PAGE ST	37A
PALMER ST	43
PARK AVE	12
PARKER ST	22A, 23
PAUL ST	28C
PAVILLION WAY	29
PEASE ST	11
PEIRCE'S POINT	31B
PEOPLE'S WAY	26
PEQUOD RD	36
PERRY ST	34A
PHILLIP ST	21
PHOENIX ST	3, 4
PILGRAM AVE	13
PINE AVE	30A
PINE GROVE ST	34A
PLAZA WAY	27
PLEASANT ST	3, 4, 5, 6, 8, 10, 25
PLYMOUTH AVE	14
POINT ST	28B
POTTER ST	43
PRESTON ST	27
PRINCE ST	30C
QUINCY ST	37A
RAYMOND ST	29A, 29D
REDWOOD DR	31A
RESERVATION LANE	29A
RESERVATION RD	29A, 29B
REYNOLDS DR	3, 5
RIDGECREST AVE	36
RIO WAY	19
RIVARD ST	37
RIVER AVE	17
RIVET ST	31A
ROBERT ST	14
ROCHAMBEAU ST	25
ROCKLAND ST	28B
ROCKY POINT ROAD	43C
RODMAN ST	10
ROGERS ST	25
ROSEANNE DR	36
ROY ST	26
RUSTIC WAY	43
RUTH ST	43
RYLE ST	22A
SAKONET AVE	32A
SALTMARSH RD	43
SAMOSET CIRCLE	32A
SARAH'S WAY	24
SARATOGA ST	21
SCHOOL ST	24
SCONTICUT NECK ROAD	28, 28A, 28B, 28C, 28D, 29, 29A
	29C, 29D, 41, 42, 42A, 43
SCOTT ST	27
SEABREEZE AVE	43
SEAVIEW AVE	29C
SEBEC ST	28A
SEDGEWICK RD	29B
SERVICE RD	17
SHADY DR	38
SHARON ST	23A
SHAW RD	31A, 32
SHAW'S COVE	32, 33
SHAWMUT ST	32
SHIRLEY ST	26, 30A
SHORE DR	29C, 42A
SILVER SHELL BEACH DR	41
SOUTH ST	7, 8
SPRING ST	9, 10, 11, 25, 26
SPRINGHILL ST	21
SPRUCE ST	23
ST MARY ST	20
STAFFON RD	23, 24
STARBOARD DR	42
STATE ST	28B
STEPHEN ST	31
STETSON AVE	2
STONE ST	30B
STONEY COVE TER	32
STUDLEY ST	31B
SUMMER ST	8, 10
SUMMER DR	29C
SUNRISE COURT	29D
SUNSET BEACH RD	29
SUNSET LANE	26
SUVENCHOR DR	31
SUZANNE WAY	36
SWEENEY'S LANE	36
SWIFT ST	31B
SYCAMORE ST	17, 18, 19, 20
SYLVIA ST	34A
TABER ST	15, 16
TEAL CIRCLE	28
TECUMSEH AVE	42A
TEMPLE PLACE	26
TERRY ST	11
THOMPSON ST	2, 4
TIMOTHY ST	28C
TOOTLE LANE	37
TORRINGTON RD	29B
TRIPP ST	27
TURNER AVE	2
UNION ST	7, 8
UNION WHARF	7
UPTON ST	28A
VERANDA AVE	19, 20
VINCENT ST	6
WALNUT ST	7, 9
WAMPANOAG DR	29
WAMSUTTA ST	42A
WASHBURN AVE	4, 6
WASHINGTON ST	9, 20, 25, 26, 27
WATER ST	7, 9
WAWINETT AVE	42A
WAYBRIDGE RD	29
WAYNE ST	28, 28B
WEBSTER AVE	30A
WEEDEN PLACE	32
WEEDEN RD	31B, 32, 32A
WELCOME ST	31B
WEST ST	13
WHALER'S WAY	36
WHISPER LANE	42A
WIDEMARSH BEACH WAY	29
WIGWAM BEACH RD	29D
WILBUR'S POINT DR	43
WILDING ST	18, 23, 23A
WILLIAM ST	7, 9
WILLOW ST	24
WINDSWEPT DR	41
WINONA AVE	42A
WINSEGANSETT AVE	42A
WINSLOW COURT	12
WINDSOR ST	19
WOODSIDE AVE	22A
WRIGHT ST	6
YALE ST	28A
YANKEE LANE	39

TOWN OF FAIRHAVEN MA • INCORPORATED FEB 22, 1812 • TOWN HALL

SCALE: 1" = 900'

FEET
900 450 0 900 1,800 2,700

SCALE IN FEET

TOWN OF FAIRHAVEN KEY MAP

MAP DATE: JANUARY 18, 1996

REVISED: JUNE 3, 1996
REVISED: JUNE 25, 1997
REVISED: JUNE 1, 2002
REVISED: JUNE 1, 2004
REVISED: JUNE 1, 2008
REVISED: JUNE 14, 2011
REVISED: JUNE 18, 2012

NOTE: KEY MAP PRODUCED BY THOMPSON SURVEYING & ENGINEERING, INC. DERIVED FROM TOWN MAP BY THE GRAPHICS LAB AT THE UNIVERSITY OF MASSACHUSETTS, BOSTON

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