



**CITY OF NOVI CITY COUNCIL  
DECEMBER 20, 2021**

**SUBJECT:** Consideration of the recommendation from the Consultant Review Committee to award the Internet Connectivity and Broadband Study to Foresite Group at a price of \$105,000 for technical consulting services to study and analyze the broadband infrastructure and connectivity landscape within the City of Novi and amend the budget. Subject to final review of the form of agreement by the City Manager's office and City Attorney.

**SUBMITTING DEPARTMENT:** City Manager's Office

<b>EXPENDITURE REQUIRED</b>	<b>\$105,000</b>
<b>AMOUNT BUDGETED</b>	<b>\$0</b>
<b>APPROPRIATION REQUIRED</b>	<b>\$105,000</b>
<b>LINE ITEM NUMBER</b>	<b>101-172.00-816.082</b>

**BACKGROUND INFORMATION:** City Council approved a resolution establishing a Municipal Broadband Committee at the March 22, 2021 City Council meeting. The purpose of this memo is to bring City Council up to speed on the Municipal Broadband Committee's actions.

Per the resolution, the purposes of the Municipal Broadband Committee are studying and reporting to City Council the available broadband options, exploring the possibility of public-private partnerships and interlocal partnerships for the provision of broadband services, and investigating projected costs of a broadband system and services to City sources of funding or financing. The Committee shall have the ability and is encouraged to seek information and input from all possible sources, including members of the public (both residents and businesses within the City of Novi), members of the telecommunications industry, and other technical/subject matter experts.

In order to better understand the broadband landscape and connectivity needs for Novi, the Municipal Broadband Committee advised hiring a consultant with technical expertise in the broadband internet space and the capability to assess the current internet connectivity landscape in Novi.

In a competitive Request for Qualifications (RFQ) process, two bids were received and evaluated by City Staff. A recommendation for Foresite Group, LLC to be awarded was then made to the Consultant Review Committee. This recommendation was also affirmed by the Municipal Broadband Committee.

The scope of work for this project conducted by Foresite Group will include Strategic Planning; Community Engagement; Geodatabase Set Up; Demand Aggregation (understanding market interest in Novi); Initiation of Local Broadband and Telecommunications Market Assessment; Gap Analysis (understanding where internet access gaps exist in Novi); Business Case Needs Assessment; Regulatory Environment Assessment; Presentation of Findings to the City of Novi and Public; Development of Demand Planning Tools.

**RECOMMENDED ACTION:** Approval of the recommendation from the Consultant Review Committee to award the Internet Connectivity and Broadband Study to Foresite Group at a price of \$105,000 for technical consulting services to study and analyze the broadband infrastructure and connectivity landscape within the City of Novi and amend the budget. Subject to final review of the form of agreement by the City Manager's office and City Attorney.

# INTERNET CONNECTIVITY AND BROADBAND STUDY

CITY OF NOVI, MI | 10.15.21



**FORESITE**  
group

Foresite Group, LLC  
Lee Comer  
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## EXECUTIVE SUMMARY



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October 15, 2021

City of Novi  
Finance Department  
45175 Ten Mile Rd.  
Novi, MI 48375-3024  
Attn: Jessica Dorey

RE: City of Novi - Request for Qualifications: Consultant – Internet Connectivity and Broadband Study

Dear Ms. Dorey,

Based on our review of the RFQ, Foresite Group understands that the City of Novi is seeking responses from firms demonstrating their qualifications, experience, and capability to perform an internet connectivity and broadband study. The primary goal of this study is to help the City of Novi to understand the current state of broadband within its community and to explore the best options to expand its access to all members of the community.

Foresite Group is pleased to submit this proposal for an Internet Connectivity and Broadband Study for your community. Our experience in broadband connectivity programs extends from city-wide enterprise fiber optic network design programs with large carriers like Verizon (in Austin and Dallas, TX, Cleveland, OH, and Seattle, WA), AT&T (Midwest and Southeast), and Google Fiber (San Antonio, TX) to municipal fiber programs with cities like Huntsville Utilities (Huntsville, AL) New Orleans, LA, Breckenridge, CO, Tucker and Sugar Hill, GA. Our experience also extends to assessment and planning programs with Lampasas, TX, Broomfield CO, and Medina County, OH, and also with private organizations like Northline PUD (Leander, TX), Tavistock Development Group (Sunbridge, FL), and Beacon Place and Heart of the City (Waukegan, IL).

Compounded by recent social and health events requiring social distancing, remote work, and remote learning requirements and affecting all people at a global scale, there is an even greater appreciation and sense of urgency that without broadband connectivity communities cannot effectively sustain or develop in areas of education, job growth, or commerce. To thrive in a changing socio-economic environment, it is essential that local residents and businesses increase their internet and technology adoption and use, and that hinges on broadband access through infrastructure planning and deployment.

Though broadband connectivity may be derived through a variety of local connections (Wi-Fi, cellular, ethernet, etc.), a network sufficiently robust to support current and future demand load will only be established through a market-wide fiber optic network. Even in well-served areas with incumbent providers, newer technologies such as 5G wireless, IoT, and Smart-City applications will soon exceed the limits of many of today's legacy networks. While other technologies continue to evolve and may bear a slightly lower price for market entry, these alternative



media will never consistently and continuously compare to the sustainability, scalability, and expandability of a ubiquitous fiber optic network.

By collaborating with the City of Novi, we can work with all stakeholders to identify key areas to prioritize and work through a long-term plan to provide broadband connectivity, which will improve access, availability, and adoption throughout the city according to your respective needs.

Our clients, our service, our people, and our culture are Foresite Group's core values that are the guiding principles that dictate our internal and external behaviors and actions. We pride ourselves on being subject matter experts and advocates for our clients. Instead of promoting specific vendor products or material suppliers, we try to find the best solution that fits our clients' needs. Over the years, we have worked with many best-in-class partners to create a fully comprehensive, turn-key process. Foresite Group staff will ensure accountability and availability to project stakeholders. Foresite Group can also assist in staffing and developing a local workforce to maintain the network, design greenfield growth areas and implement new smart community applications over time. We have a strong history of working together on large, market-wide network builds, and have an efficient and established program for collaborating successfully.

As a full-service engineering and consulting company, we have expertise in many different disciplines that allow us to see well beyond "just a fiber network". Foresite Group is uniquely qualified to not only plan for and model broadband connectivity programs, but to also guide our client-partners through this complex process. All elements of your RFQ have been reviewed and understood. Please feel free to contact me with any questions about this proposal. I also encourage you to review additional information about our company at <http://www.foresitegroup.net>.

Sincerely,

**FORESITE GROUP, LLC**

*Lee Comer*

**Lee Comer**

**Broadband Engineering Practice Leader**

## PROJECT UNDERSTANDING

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Foresite Group has reviewed the RFQ and Addendum #1 and understands the primary goals laid out within it. The City of Novi is interested in partnering with an experienced engineering firm that can assist them with preparing an internet connectivity and broadband study for its community.

The study is meant to achieve two primary goals:

**Goal #1** - The first goal is to provide the City of Novi leaders and stakeholders with a general overview of the status of broadband infrastructure deployment, availability and service preferences and desirability within the community. The results of this Goal #1 will be presented and will be used to achieve the second goal outlined in this RFQ.

**Goal #2** - The second goal is to provide the City of Novi with the best options available for expanding broadband network availability and usage within the community, taking into consideration the most timely and economical project models. The plan will be customized to meet the City of Novi's specific needs to fulfill their community's operational and financial goals.

# COMPANY / TEAM QUALIFICATION INFORMATION

**COMPANY NAME** Foresite Group, LLC      **LEGAL FORM** LLC S - Corporation

**COMPANY ADDRESS** 2101 Magnolia Avenue South, Suite 100, Birmingham, AL 35205  
3740 Davinci Court, Suite 100, Peachtree Corners, GA 30092 (HQ)

**PHONE NUMBER** 770.368.1399      **WEBSITE** www.foresitegroup.net

**OWNERS** Erik Johnston, President; 3740 Davinci Court, Suite 100, Peachtree Corners, GA 30092  
Brett Basquin, Vice President; 2128 Moores Mill Road, Suite C, Auburn, Alabama 36830  
John B. Rhodes Jr., Principal; 5049 Edwards Ranch Road, Suite 400, Fort Worth, Texas 76107

**CONTACT INFORMATION** Lee Comer, Broadband Engineering Practice Leader; lcomer@fg-inc.net;  
office: 770.368.1399, fax: 770.368.1944

**FOUNDED** January 24, 2003; Norcross, GA      **PARENT COMPANY** FG Ventures, LLC

**STANDARD SERVICES** Foresite Group has over 155 associates in 15 offices nationwide. We provide civil engineering, landscape architecture, structural engineering, traffic engineering, broadband engineering, and wireless services. Since 2003, we have completed over 8,000 projects for public and private clients throughout the country. Our broadband engineering team focuses on serving local communities by working directly with power and utility providers, city/county/state municipalities, ISP and telecom providers, and private construction contractors. Services include the following:

- Address Verification
- As-Built Updating/Posting
- Civil Engineering
- Concealment Design
- Coordination
- Construction Work Print Generation
- Cost to Build Analysis
- Easement Acquisition
- Environmental Coordination
- Erosion/Sediment/Pollution Control
- Field Verification
- Fiber Network Engineering
- FTTx Turnkey Services
- GIS-Based Design
- Landscape Architecture
- LiDAR Incorporation
- Make Ready Assessment + Engineering
- Market Assessments
- MDU Network Design
- Network Planning
- OSP and ISP Engineering
- Permitting
- Pole Attachment Agreement Negotiations
- Pole Loading Analysis
- Program Management
- Smart City Consulting
- Traffic Control Plans
- Utility Buffer Zone Research
- Utility Record Management
- Zoning & Construction Documents

## FINANCIAL STATUS

Foresite Group has not been involved in a bankruptcy or reorganization proceeding.

## INSURANCE

Foresite Group has not been refused any surety, bond, or liability insurance in the past ten years.

## CONTRACTS

Foresite Group (or any officer or partner of the company) have never failed to complete a contract operating as this organization or any other organization.



## COMPANY / TEAM QUALIFICATION INFORMATION

Foresite Group is uniquely qualified to not only plan for and model broadband connectivity programs, but to also guide our client-partners through this complex process. Not only do we have a rich portfolio supporting large market programs for clients like Verizon, AT&T, and Google Fiber, we also support broadband and technology programs for municipalities, Utility Co-Ops, private developments, and resorts. With our experience as a multi-disciplinary engineering company (serving Civil, Structural, Landscape Architecture, Transportation, Wireless, Mechanical, Electrical), we have a more comprehensive understanding of the needs of a community like yours.

We pride ourselves on being subject matter experts and advocates for our clients. Instead of promoting specific vendor products or material suppliers, we find the best solution that fits our clients' needs. Through this endeavor we have developed a rich network of relationships with world-class leaders in the telecommunications, broadband, and technology industries. This includes partners specializing in areas such as:

- Construction vendors (aerial construction, underground construction, cellular tower and wireless Antennae construction, installers)
- Fiber optic network materials manufacturers and distributors (vaults, conduit, cable, splices)
- Active electronic equipment (cabinets, racks, cards, splitters)
- Network operations and maintenance
- LiDAR collection and extraction
- GIS mapping
- Lighting (POE - power over ethernet, LED, smart lighting)
- Smart poles
- Wireless and cellular antennae (4G LTE, 5G, small cell, DAS, Wi-Fi, point to multi-point)
- Smart Transportation (Advanced radar/vehicle detection, autonomous vehicles, ITS – Intelligent Traffic Systems, smart parking, public transit)
- Digital displays (interactive kiosks, wayfinding, automated signage)
- Environmental Sensors and switches (HVAC, air, wastewater and potable water – level, quality, temperature, flow)
- Utility sensing and switching (indoor/outdoor, energy, facilities, SCADA/AMI)
- Hardware and software Integrators (machine learning, IoT, data analytics, VR/AR/AI)
- ISPs – Internet Service Providers, Managed Wi-Fi, Backhaul and middle mile service providers
- Public safety – fire, security, cameras, gunshot detection, forest fire
- Tourism, geofencing, crowd tracking
- Marketing and Branding

This expertise in many different disciplines allows us to see well beyond “just a fiber network” - we see an entire community. We not only see the unique needs of each discipline we support - we see how they all interact with one another in a truly “connected community”.

# PERSONNEL

## CITY OF NOVI

**LEE COMER**  
Network Design Practice Leader  
+ Point-of-Contact

**THUY LE HO**  
Program Manager

### BROADBAND

**CHRIS OWENS**  
Chief Designer

**PATRICK HUTTO**  
Director of Technology  
Solutions

**ASHLEY BALL**  
Program Manager

**ARNALDO BLANCO, PE**  
Broadband Engineering  
Chief Engineer

**JEFF HINDMAN**  
Broadband Engineering  
Chief Designer

### WIRELESS SERVICES

**DUSTIN BAILEY**  
Wireless Services  
Practice Leader

### GOVERNMENTAL AFFAIRS AND CITY PLANNING

**GARRETT WATES**  
Community Broadband  
Analyst



Lee brings over 20 years of experience as a designer, supervisor, and project manager in the telecommunications industry. A native Alabamian, Lee earned his Bachelors and Masters of Industrial Design from Auburn University. Starting as a services technician, Lee progressed through various roles of responsibility and leadership including OSP Network Designer, Special Services Network Manager, Construction Supervisor, Senior Project Manager (PLS/U-verse), and Senior OSP Design Manager over Google Fiber Project responsible for Austin, Texas. Lee translates his knowledge of design, construction, and installation of communication networks into a comprehensive program.

## **HIGHLIGHTED EXPERIENCE**

- **SUNBRIDGE MASTER DEVELOPMENT COMMUNITY - SUNBRIDGE, FL**  
Consulting for broadband business models, network planning, design, and construction to build a fiber network to serve a new developing community. Worked to identify the goals of the project and create a detailed roadmap and plan to provide the vested parties the necessary information to make an educated decision to complete a network build out.
- **NORTHLINE DEVELOPMENT - LEANDER, TX**  
Fiber consulting and design services for a 115-acre mixed-use development.
- **MASTER FIBER DEVELOPMENT ASSESSMENT - BRECKENRIDGE, CO**  
Worked with the Town of Breckenridge to conduct a Market Assessment to determine construction costs for a city-wide build to all homes, businesses, and town facilities.
- **WAUKEGAN COMMUNITY ASSESSMENT - WAUKEGAN, IL**  
Completed a community assessment for broadband feasibility for the City.
- **HUNTSVILLE UTILITIES - HUNTSVILLE, AL**  
Completing the design, engineering and construction support through the life of the project. This network will be owned and operated by the City and act as another utility revenue stream in conjunction with their city owned electricity, water and gas services.
- **VERIZON ONE FIBER - NASHVILLE, TN AND CLEVELAND, OH**  
Managed city-wide Gigabit-per-second FTTH design project.
- **MASTEC - AUSTIN, TX**  
Managed city-wide Gigabit-per-second FTTH design project, including: client relationship and reporting, subject matter expert, coordination with local engineering and permitting, internal operations/deliverables/quality assurance applicable to Network Planning, Make Ready Engineering, GIS database reconciliation, Construction documentation, and As-built recording.
- **AT&T – PROJECT LIGHTSPEED - SOUTHEAST US**  
Managed final design and data coordination for U-Verse project, covering Southeast District (AL, FL, LA, MS). Included coordination with field resources, managing production through contract services, internal tracking and deliverables.

## **ROLE AND RESPONSIBILITY**

Lee serves as a Relationship Manager, establishing and maintaining communications with personnel of the Client. Lee is a technical liaison between Foresite Group and Client(s) to ensure that needs and requirements are achieved or exceeded, coordinating with all stakeholders through the process of identifying necessary information, resources, and deliverables. Lee manages services from Foresite Group partners including but not limited to: data collection and coordination, market research, economic assessment and guidance, network design, architecture and service provision, integrated systems and technologies, etc., in support of the planning and design effort.



Thuy is a Broadband Engineering Program Manager with Foresite Group. She brings over 14 and a half years of experience in Broadband Network Design and Management. Thuy worked as a Network Designer for four years, providing field and design services to AT&T. Services included routine maintenance of outside plant, service orders, fiber and copper design to new developments and damage work orders. She shifted to management and served as the company liaison to the client, providing weekly reporting and maintaining client satisfaction by consistently meeting the quality and timeliness objectives. Thuy currently serves as a Program Manager and oversees the Design and Permitting teams across multiple projects. She has managed the City of New Orleans’ Institutional Fiber Network project, as well as a fiber densification project for Verizon. As the manager on the City of New Orleans project, Thuy has delivered a GIS based high level design for the City’s institutional fiber network, technical and strategic assessments, and their business and governance plans. Working on the Verizon fiber densification project, Thuy oversaw design and permitting while working closely with the client to meet timeliness and quality requirements.

## ■ HIGHLIGHTED EXPERIENCE

- FOUNDATION FOR LOUISIANA AND CITY OF NEW ORLEANS INSTITUTIONAL FIBER NETWORK - SENIOR PROJECT MANAGER**  
Senior project manager for the initial planning stages to build an institutional fiber network to all City and Government buildings and provide capacity to serve local schools and libraries in the City of New Orleans.
- AT&T NEW ORLEANS, LA - NETWORK DESIGNER**  
Provided network design services to AT&T. Received work order from client, researched records, gathered field measurements, interfaced with AT&T’s customers, and drafted and designed construction drawings.
- AT&T SOUTH LOUISIANA MINI-MASTER CONTRACT - STATE MANAGER**  
Oversaw all South LA wire centers. Services included routine, day to day fiber and copper design as well as large road moves and large fiber to the home overlays. Increased South LA workforce from 4 to 42 employees while developing and promoting employee career growth. Managed client relations and ensured stringent timeliness and quality expectations were met.
- VERIZON ONE FIBER, KNOXVILLE, TN, SENIOR PROJECT MANAGER**  
Senior project manager for the design and permitting of over 450 miles of conduit and fiber, laying the foundation for Verizon’s 5G network in Knoxville, TN. Managed weekly reporting to client while managing timelines and quality control on a large volume project while facilitating and maintaining the relationship between the ISP, construction partner and over 10 permitting entities.

## ■ ROLE AND RESPONSIBILITY

As the Program Manager, she will oversee the project and production staff to ensure and maintain project timelines and deliverables. She will manage the relationships and responsibilities between all parties including any City staff, Foresite Group employees, and Foresite Group partners used for the duration of the project. Thuy will supervise all phases of the project, from the initial strategy session to the final presentation.



**CHRIS OWENS**

Broadband Engineering Chief Designer | Birmingham, AL  
cowens@fg-inc.net

Chris is a Chief Designer of Broadband Engineering, with Foresite Group, Inc. and brings over 20 years of Outside/Inside Plant Design experience. His background in Outside Plant design began with traditional copper service and is currently focused on the fiber networks of tomorrow. He has worked extensively throughout all regions of the United States, coordinating with multiple local and state agencies, utilities, ISPs, and customers.

**HIGHLIGHTED EXPERIENCE**

- **BTR – NASHVILLE, TN – PROJECT MANAGER**  
Served as project manager for permitting activities which included fielding, permit creation, permit submission and approvals. Facilitated and maintained the relationship between the client and multiple permitting entities.
- **WYERD – CLAYTON COUNTY, GA – PROJECT MANAGER**  
Served as project manager for the design and permitting of network extension. Coordinated with client, state and local entities, and the in-house project team. Oversaw QA/QC of the final permits and construction packages.
- **NORTHLINE - LEANDER, TX – CHIEF DESIGNER**  
Leads the design efforts of the fiber conduit layout along with completing QA/QC of the construction packages and final client deliverables. As Chief Designer, provides ongoing support and consulting for project changes and client needs throughout construction of the 115-acre mixed-use development.
- **CUMMING CITY CENTER – CUMMING, GA – CHIEF DESIGNER/BROADBAND CONSULTANT**  
Aides the team by providing ongoing consultation on all aspects of the broadband conduit network.
- **NEXTLINK – DALLAS/FORT WORTH, TX– CHIEF DESIGNER**  
Oversaw the fiber planning, fielding, and design for multiple residential community developments.
- **VERIZON ONE FIBER – CLEVELAND, OH, SEATTLE, WA, & KNOXVILLE, TN – CHIEF DESIGNER**  
Assisted with establishing a database dictionary for LIDAR collection and coordinated the review and approval of LIDAR data for design database creation. Served as subject matter expert for in-house design team for the fielding, design, and make ready aspects of the builds. Completed QA/QC for construction packages and designs prior to delivery to client.
- **GIG CITY – HUNTSVILLE, AL – SENIOR NETWORK DESIGNER**  
Completed full distribution design of multiple serving areas in aerial and buried environments. Served as database QA/QC of distribution design and As-Built database updating.
- **AT&T PROJECT LIGHT GIG SOUTHEAST - SENIOR NETWORK DESIGNER**  
Served as a network designer, an in house subject matter expert, and Quality Assurance for network and structure design.
- **AT&T PROJECT LIGHTSPEED SOUTHEAST - SENIOR NETWORK DESIGNER**  
Design of Outside/Inside Plant U-Verse equipment sites including creation and delivery of construction packages. Coordinated with E911 for site addressing, local power providers for site service, and governmental agencies for permitting.
- **AT&T FIBER TO THE CELL(TOWER) SOUTHEAST - SENIOR NETWORK DESIGNER**  
Design of fiber network routes to the cell tower, ranging from one to 15 miles.
- **NATIONAL AT&T SOUTHEAST - SENIOR NETWORK DESIGNER**  
Served as the single point of contact for multiple wire centers. Daily responsibilities included service order design, greenfield development, customer special requests, joint-use utility coordination and storm damage assessment.

**ROLE AND RESPONSIBILITY**

As Chief Designer, Chris will ensure all engineering is comprehensive to meet the demands of the network and client as well as setting and overseeing the engineering standards that will be maintained throughout the project. Chris will work closely with the client and design teams to solve constructability obstacles and outline design solutions to help facilitate the client’s needs.





**PATRICK HUTTO**

Director of Technology | Birmingham, AL  
phutto@fg-inc.net

Patrick is the Director of Technology for the Network Design team at Foresite Group, Inc. For the past ten years, he has worked on complex network infrastructure projects for clients in the telecom, financial, and technology sectors. Patrick graduated with a Bachelors in Electronics from Jacksonville State University and has since studied Computer Science at Auburn University and Telecommunication Networks at NYU-Polytechnic. He strives to deliver a quality product and utilizes his tech-savvy background to create innovative solutions for design, engineering, and project management. He currently holds his Cisco Certified Design Associate (CCDA) and Certified Associate in Project Management (CAPM) certificates.

**HIGHLIGHTED EXPERIENCE**

- FOUNDATION FOR LOUISIANA AND CITY OF NEW ORLEANS INSTITUTIONAL FIBER NETWORK - DIRECTOR OF TECHNOLOGY**  
Technology Manager for the initial planning stages to build an institutional fiber network to all City and Government buildings and provide capacity to serve local schools and libraries in the City of New Orleans.
- HUNTSVILLE UTILITIES - DIRECTOR OF TECHNOLOGY**  
Completing the design, engineering and construction support through the life of the project. This network will be owned and operated by the City and act as another utility revenue stream in conjunction with their city owned electricity, water and gas services.
- CHARLESTON FEASIBILITY STUDY - DIRECTOR OF TECHNOLOGY AND PROJECT SCHEDULER**
- LAMPASAS, TX MARKET ASSESSMENT - DIRECTOR OF TECHNOLOGY**
- BROOMFIELD, CO BROADBAND MASTER PLAN – DIRECTOR OF TECHNOLOGY**
- BRECKENRIDGE, CO BROADBAND MARKET ASSESSMENT – DIRECTOR OF TECHNOLOGY**
- GOOGLE FIBER – AUSTIN, SAN ANTONIO, AND SALT LAKE CITY BUILDS - PROJECT CONTROLS FOR ENGINEERING**
- AT&T – PROJECT LIGHTSPEED SOUTHEAST - TECHNICAL PROJECT MANAGER**  
Project Management and custom software/system development to support engineering and management team on (5) state FTTN build-out.
- DIRECT EDGE – DISASTER RECOVERY BUILD - PROJECT MANAGER**  
Network and hardware design and PM for geographically diverse co-location data center build for high frequency trading exchange/platform.
- BRIDGEWATER ASSOCIATES – MULTI-SITE IT INFRASTRUCTURE AND DATA CENTER BUILDS - ENGINEER**  
Design and PM for all Client IT infrastructure work including move/add/change work, new site builds, trade floor upgrades, data center builds and technology upgrades to support the highest level network for redundancy, diversity, and scalability.

**ROLE AND RESPONSIBILITY**

Patrick leads the FG technical staff that will establish and maintain the design platform and tools required for project delivery. This includes constant development and innovation for all software, databases, and systems to support production work, tracking, and reporting. Integration between various systems such as GIS, field data, fiber management systems, construction management tools, production schedules, material databases, financial systems, etc. and visualizing relevant data will be critical to effectively managing project of all sizes. Foresite Group monitors and controls all aspects of the project to keep track of cost, schedule and quality and deliver detailed information and reporting on performance.



**ASHLEY BALL**

PMO Program Manager | Birmingham, AL  
aball@fg-inc.net

Ashley is the Broadband Engineering PMO Program Manager with Foresite Group. She brings over 9 years of experience in design, construction, and management. Ashley worked as a Lead Designer with a residential developer where she learned to bridge the gap between design and construction and was exposed to project and construction management. She then migrated to the Telecom industry where she learned outside plant and pursued project management roles on a wide variety of Telecom buildouts. Ashley enjoys the planning and tracking of projects and strives to ensure projects are on time, on budget, and most importantly accomplish the client’s desired goal.

**HIGHLIGHTED EXPERIENCE**

- **HUNTSVILLE UTILITIES - HUNTSVILLE, AL - PROJECT COORDINATOR**  
Served as project coordinator and supported the team in change management, project tracking, scheduling, and ensured active team communication.
- **UTOPIA FIBER, GREATER SALT LAKE CITY, UTAH – PROJECT MANAGER**  
As project manager, develops the project schedule, identifies any risks to the client, and supports the project team in completing the design for the FTTX open access network deployment on multiple city footprints
- **VERIZON ONE FIBER – SR PROJECT COORDINATOR**  
Oversaw a team of project coordinators and supported the teams by developing financial tools utilized on the projects. Managed the tracking, change management, and scheduling tools and aspects of the projects. Cities for Verizon One Fiber include Nashville, TN; Knoxville, TN; Cleveland, OH; Seattle, WA; San Francisco, CA
- **NEXTLINK – DALLAS/FORT WORTH, TX – PROJECT MANAGER**  
Served as project manager for all activities including fielding, design, construction drawings, and as-builts for multiple residential community developments.
- **AT&T PROJECT LIGHT GIG SOUTHEAST– NETWORK DESIGNER**
- **GOOGLE PROJECT -SAN ANTONIO, TX – NETWORK DESIGNER**

**ROLE AND RESPONSIBILITY**

Ashley serves as PMO Program Manager and will oversee the project management team. She will help establish tracking tools to help ensure the Client’s timeline is reached and the team adheres to the agreed upon budget and deliverables.



**ARNALDO BLANCO**

Broadband Engineering Chief Engineer | Austin, TX  
 ablanco@fg-inc.net

Arnaldo is Chief Engineer for Foresite Group’s Broadband Engineering Division. He brings 9 years of professional experience in Telecommunication Engineering & Civil Engineering and is well versed in outside plant design and utility permitting work. Originally from Guaynabo, Puerto Rico, Arnaldo has a Bachelor of Science in Civil Engineering from the Polytechnic University of Puerto Rico and is licensed Professional Engineer with the States of Texas & Washington. Before joining Foresite Group Arnaldo was a Project Manager working on utility permitting projects for telecom and gas companies with ENCO Consulting. He’s also been a Design Manager for Google Fiber’s Austin project and an Outside Plant Engineer for multiple projects in his native Puerto Rico.

**HIGHLIGHTED EXPERIENCE**

- **VERIZON ONE FIBER – DALLAS, TX & AUSTIN TX – CHIEF ENGINEER**  
 Provides support and guidance for all underground utility construction efforts for multiple markets in the continental United States. Supervises the design and production of all permit drawings and temporary traffic control plans and provides final approval and certification that plans comply with all jurisdictional regulations and guidelines.
- **VERIZON ONE FIBER – SEATTLE, WA, KNOXVILLE, TN & CLEVELAND, OH – PERMITTING PROGRAM MANAGER**  
 Manages the permitting effort for all underground utility construction efforts for multiple markets in the continental United States. Tasks include the supervising and scheduling of all permit site plan creation, consultation with clients and communication with private and public permitting entity staff.
- **AT&T – MULTIPLE PERMITTING PROJECTS IN CITY OF AUSTIN, TX – PROJECT MANAGER**  
 Managed the fielding, site plan & traffic control plan production for several AT&T underground fiber installation projects in the cities of Austin, Round Rock, Pflugerville, Cedar Park & Leander. Was responsible of coordinating with all permitting staff at all cities.
- **TEXAS GAS – MULTIPLE PERMITTING PROJECTS IN CITY OF AUSTIN, TX – PROJECT MANAGER**  
 Managed the fielding, site plan & traffic control plan production for several Texas Gas installation projects in the cities of Austin, Round Rock, Pflugerville, Cedar Park & Leander. Was responsible of coordinating with all permitting staff at all cities.
- **GOOGLE FIBER – AUSTIN, TX – OSP DESIGN MANAGER**  
 Managed the outside plant engineering design effort for the Google Fiber FTTH effort in the city of Austin. Oversaw the design of the fiber-optic network, creation of construction and permit drawings and coordination with client, construction contractor and city and state entities.

**ROLE AND RESPONSIBILITY**

Arnaldo serves as Chief Engineer and supports all project managers in all markets. He provides support and oversight for all civil design activities and permit drawing production. He is responsible for creating and maintaining construction design guidelines and supervising, approving, and certifying or civil engineering designs related to utility permitting. He will be the point of contact for all utility permitting consultations and oversees a full team of designers and managers tasked with the creation and management of utility permits for all cities, state, and private agencies. He will supervise all aspects of the permitting process, from inception to final permit approval.



Jeff Hindman is a Chief Designer with the Broadband Engineering division at Foresite Group. Jeff brings over 7 years of experience in the telecom industry where he has worked on projects ranging from Business-As-Usual network maintenance to city-wide deployments of FTTX projects. Prior to telecom, Jeff had 20 years of experience in signal transport related

## HIGHLIGHTED EXPERIENCE

- **GIG CITY - HUNTSVILLE, AL - SENIOR PROJECT MANAGER OF ENGINEERING**  
The Huntsville Utilities project involves all aspects from delivering a constructible design to posting AsBuilts to a database. I am also responsible for providing consulting services to the client in the areas of constructability, network deployment, GIS and PMO services. I was also responsible for managing the billing and budgets for the project.
- **GIG CITY CONSULTING SERVICES - HUNTSVILLE, AL – CHIEF DESIGNER**  
Provides consulting services in the areas of constructability, network deployment, database selection/migration, GIS, future build planning, and PMO services.
- **NORTHLINE - LEANDER, TX – CHIEF DESIGNER**  
Assists in selection and coordination of technologies and technology suppliers for the 115-acre mixed-use development. Provides ongoing support and integration planning for all services of the development.
- **VERIZON ONE FIBER – NASHVILLE, TN - SENIOR PROJECT MANAGER OF ENGINEERING**  
The Verizon One Fiber Project was a multiphase fiber build. We were involved in the design of the Core network, 5G deployment and the FTTB initiative for Verizon. My role was to lead a team to create a cohesive design that incorporated all of the needs Verizon required. I also managed all of the PMO needs including billing and budgetary responsibilities.
- **UTOPIA – SALT LAKE CITY, UT - CHIEF DESIGNER**  
The Utopia project is an FTTH open access network deployment. My responsibilities include serving as the SME for the design team. This requires a comprehensive knowledge of the design architecture and construction methods. My role is to ensure the efficiency and constructability of the design.
- **PROJECT LIGHT SPEED - LOUISIANA ASBUILT LEAD**  
Project Light Speed(PLS) was the AT&T role out of U-Verse. The deployment for the Southeast was done from a design center in Birmingham, Alabama. My responsibilities included leading a team of AsBuilt posters and coordinating with local AT&T resources to ensure accurate network function.
- **GOOGLE PROJECT – AUSTIN, TX - DESIGN LEAD**  
The Google Austin project involved the design, permitting, and deployment of the Fiber network for Google Fiber Inc. The design and permitting was done out of a Birmingham, AL design office. My responsibilities included leading a team of designers and permit personnel to ensure Google Fiber Inc. FTTH design was efficient and on time.
- **GOOGLE PROJECT – SALT LAKE CITY, UT - CRO LEAD**  
The Google Salt Lake City project was centered around a desktop Construction Ride-Out(CRO) of an auto designed fiber network for Google Fiber Inc. My role in the project was to ensure the auto design had provided a constructible route. Coordination with a local field team was done to verify locations that could not be determined from a remote location. I also coordinated with offshore resources to provide training.

## ROLE AND RESPONSIBILITY

As Chief Designer, Jeff will ensure all engineering is comprehensive to meet the demands of the network and client as well as setting and overseeing the engineering standards that will be maintained throughout the project. Jeff will work closely with the client and design teams to provide efficient and cost effective designs and outline technology solutions to help facilitate the client’s needs.



**DUSTIN BAILEY**

Wireless Service Practice Leader  
dbailey@fg-inc.net

Dustin offers over 17 years of experience in concept planning, production management, and construction phase services within Land Development and Telecommunications. He helped develop Foresite Group’s firm-wide CAD Standards and Design Handbook and has been the project manager/design lead for CVS/pharmacy, Family Dollar, Chase Bank, Target, Publix, Verizon Wireless, ITT Corporation, and SouthernLINC regional development programs. Dustin’s excellent communication skills and business development experience ensure projects flow smoothly from start to completion and opportunities are never missed.

**QUALIFICATIONS**

**AFFILIATIONS + ORGANIZATIONS**

- Georgia Wireless Association
- Florida Wireless Association

**HIGHLIGHTED EXPERIENCE**

**NORTHLINE 115-ACRE MIXED USE DEVELOPMENT WIRELESS ASSET MARKEING AND MANAGEMENT**  
Leander, TX  
Project Manager

**CUMMING CITY CENTER DEVELOPMENT WIRELESS ASSET MARKEING AND MANAGEMENT**  
Cumming, GA  
Project Manager

**FLORAL PARK WIRELESS ASSET MARKEING AND MANAGEMENT**  
Opelika, AL  
Project Manager

**1100 WHITE STREET TELECOM DATA CENTER TENANT IMPROVEMENTS**  
Atlanta, GA  
Project Manager

**ITT CORPORATION STANDARDS UPDATE & MAINTENANCE**  
Nationwide  
Project Manager

**ITT CORPORATION ADS-B SEGMENT 1 & 2 SITES**  
AL, AZ, CA, FL, GA, SC, NC, TN, TX  
Project Manager

**AT&T AND VERIZON WIRELESS TOWER RELOCATION**  
AL, BAWA, FL, GA, NC, SC  
Project Manager

**AT&T GENERATOR PROJECT**  
Baltimore/Washington (BAWA)  
Market  
Project Manager

**ERICSSON/FMHC-SPRINT NEXT GENERATION**  
FL, GA, MI, KY, LA, MS  
Project Manager

**VERIZON WIRELESS**  
BAWA, FL, TN  
Project Manager

**SOUTHERNLINC**  
AL, GA  
Project Manager

**AMERICAN TOWER SITE AUDITS**  
Nationwide  
Project Manager

**ACTION OUTDOORS BILLBOARDS/ NEW SITE BUILDS**  
GA  
Project Manager

**MADISON COMMUNICATIONS/LEVEL 3 DATA CENTER UPGRADES + AS-BUILTS**  
Nationwide  
Project Manager

**T-MOBILE**  
Chicago, IL  
Project Manager

**CVS/PHARMACY 200+ SITES**  
AL, GA, FL  
Project Manager

**CLARK ATLANTA UNIVERISTY WRIGHT YOUNG HALL RENOVATIONS**  
Atlanta, GA  
Lead Designer

**PUBLIX SUPERMARKETS AND SHOPPING CENTERS**  
AL, FL, GA  
Lead Designer

**RHODES JORDAN PARK EXPANSION**  
Lawrenceville, GA  
Lead Designer





## GARRETT WATES

Community Broadband Analyst | Birmingham, AL  
gwates@fg-inc.net

Garrett has been with Foresite Group since May 2020. He earned his Bachelor of Engineering in Biosystems Engineering from Auburn University, then went on to earn a Master of Community Planning degree and a Graduate Certificate in Geospatial Information Systems Science also from Auburn University. He has experience working with the City of Auburn's GIS department and graduate-level academic research roles at Auburn University. His broad academic background provides a unique perspective for helping communities address their broadband needs and opportunities.

## HIGHLIGHTED EXPERIENCE

- **COMMUNITY ASSESSMENT, SUGAR HILL, GEORGIA - COMMUNITY BROADBAND PLANNER**  
Conducted community research, evaluated current broadband opportunities, and developed a final assessment for the City of Sugar Hill, GA to identify community needs and economic opportunities presented by implementing broadband infrastructure.
- **COMMUNITY ASSESSMENT, WAUKEGAN, ILLINOIS - COMMUNITY BROADBAND ANALYST**  
Completed data collection and analysis for the City of Waukegan, IL to identify community needs and next steps for equitable broadband infrastructure, and developed web applications for interactive data visualization.
- **COMMUNITY ASSESSMENT, STONECREST, GEORGIA - COMMUNITY BROADBAND ANALYST**  
Completed data collection and analysis for the City of Stonecrest, GA to identify community needs and economic opportunities presented by implementing broadband infrastructure.
- **COMMUNITY ASSESSMENT, TUCKER, GEORGIA - COMMUNITY BROADBAND ANALYST**  
Completed data collection and analysis for the City of Tucker, GA to identify community needs and economic opportunities presented by implementing broadband infrastructure.
- **VERIZON ONE FIBER – SEATTLE, WA - COMMUNITY BROADBAND ANALYST**  
The Verizon One Fiber Project was a multiphase fiber build. We were involved in the design of the Core network, 5G deployment and the FTTB initiative for Verizon. My role was to provide GIS data to create a cohesive design that incorporated all of the needs Verizon required.

## ROLE AND RESPONSIBILITY

Garrett brings a unique mix of both technical background and community-driven thought to Broadband Assessment projects. He utilizes both social and economic data to identify strengths and weaknesses within communities in order to provide the necessary information for a well-informed client. Then, in collaboration with the community assessment team, helps develop solutions that are relevant and applicable to their specific community situation and provides the resources they need to take thoughtful steps forward.

# RELEVANT EXPERIENCE

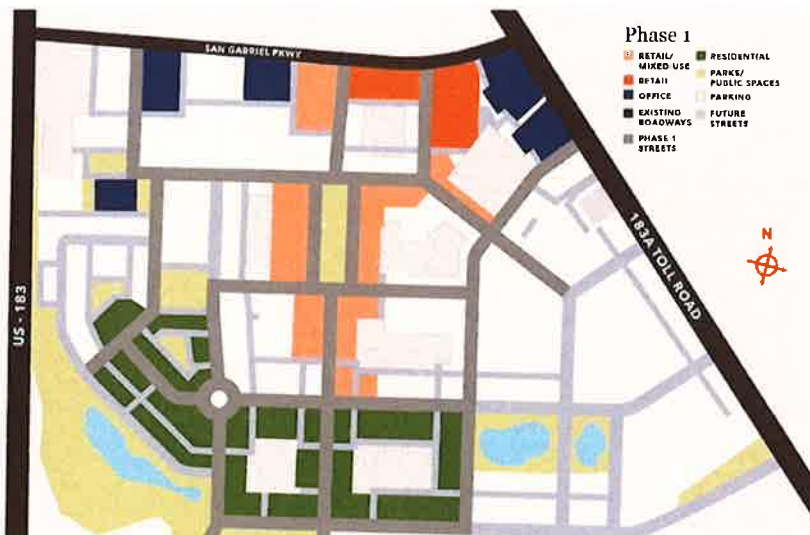
## NORTHLINE LEANDER

### PROJECT DESCRIPTION

Foresite Group and Level-Up Companies, an affiliate company, are currently working with Northline Leander Development Company (NLDC) on their new 45-acre mixed-use development. Foresite Group is providing fiber conduit consulting and design services as well as project management services. Our team worked on placing double the number of conduits that we would normally recommend, in a confined space, as well as providing splice vaults for each conduit through the entire development which also had to be placed in an aesthetic manner so as not to be visible. Our Land Development and Broadband Engineering Practice Areas have been able to work and collaborate more closely than before, and the result is a much more cohesive set of Construction Documents and a much more connected Team.

Level-Up Companies manages and develops all aspects required to develop a wireless facility for a single carrier or multiple carriers. By consolidating Telecom Infrastructure management with the layout and engineering of the facility, Foresite Group / Level Up provides NLDC the ability to recognize a revenue stream without having to devote the time or resources typically required to maintain the revenue stream, while protecting the long-term value of the property. We will provide passive and active marketing to carriers along with drafting and processing all contracts and track financials.

We will coordinate with NLDC to establish predetermined design standards to which each carrier’s equipment installation must comply. By properly evaluating the full potential from the beginning, LU can maximize the number of carriers that can install at the facility while maintaining the visual aesthetics of the property. We will ensure best practices are implemented to protect the NLDC’s interests. We provide NLDC the convenience of eliminating the need for resources to guarantee the level of access required by carriers. We help ensure that liability exposure to all parties is minimized through proper planning, engineering and mutually beneficial legal agreements.



**LOCATION**  
Leander, TX

**SIZE**  
45-acres

**TECHNOLOGIES USED**  
Automated Design

**MAX AND TYPICAL BANDWIDTH**  
1 GBPS

**USERS**  
Single Family Units, Duplexes, Triplexes, Quadraplexes, Multi-Dwelling Units, Small and Large Business Units

**DATES OF SERVICES**  
2021 to present

**TOTAL VALUE**  
Confidential

**KEY STAFF**  
Lee Comer - Division Director  
Patrick Hutto – Technology Director

**CLIENT NAME**  
Northline Leander Development Company

**REFERENCE**  
Alex Tynberg  
Northline Leander Development Company  
2501 Tarryhill Place  
Austin, TX 78703  
atynberg@tymberg.com



## HUNTSVILLE UTILITIES

### PROJECT DESCRIPTION

Huntsville Utilities is building out a fiber infrastructure network to all properties within the City limits of Huntsville, AL. Huntsville Utilities has designated fibers for their own use and “smart city” applications while leasing a portion to Google Fiber. Google will be providing the data content for all residents and businesses as a service provider. This network will be owned and operated by the City and act as another utility revenue stream in conjunction with their city owned electricity, water and gas services. This model of fiber network deployment allows for the local residents to obtain gigabyte connectivity in areas not otherwise provided at a faster rate due to the City utility building the infrastructure and an anchor tenant providing service. Our team worked with The Broadband Group, who managed the construction and operation of the network.

### FIRM INVOLVEMENT

Foresite Group is working with Huntsville Utilities to complete the design, engineering and construction support through the life of the project. Our design team is working with partners through the entire work flow including: Preliminary (Indicative Design), Construction Ride Out (CRO), Detailed Design, Construction Package Creation, Construction Support, As-Built Posting and Network Turnover. Foresite Group is also consulting with Huntsville Utilities and other stakeholders on the implementation of “smart city” applications and other innovative use cases.

### UNIQUE CAPABILITIES

Foresite Group is working with our partners to implement automated design software throughout the design process. This will allow for better upfront costs and return on investment planning while also expediting the design process with work flow efficiencies. Our team is also working with Google Fiber to establish and define the data dictionary requirements for proper network database turnover.



### LOCATION

Huntsville, Alabama

### SIZE (SQ MILES)

~214.52 sq mi

7.1 Million ft of Cable Design

### TECHNOLOGIES USED

Automated Design, GIS Database Design, Field Tablet Collection

### MAX AND TYPICAL BANDWIDTH

1 GBPS

### USERS

Single Family Units, Duplexes, Triplexes, Quadraplexes, Multi-Dwelling Units, Small and large Business Units, Government Buildings, and Churches.

### DATES OF SERVICES

January 2017 to present

### TOTAL VALUE

Confidential

### KEY STAFF

Lee Comer - Division Director

Patrick Hutto – Technology Director

Jeff Hindman – Senior PM

### CLIENT NAME

Huntsville Utilities

### REFERENCE

Stacy Cantrell

Vice President of Engineering

256-535-1312

stacy.cantrell@hsvutil.org

*“We set an aggressive schedule for both the design and construction of our city wide fiber network. Auto-design was necessary to get this underway quickly, but resulted in an often inefficient design with missing details. Foresite Group has been able to value engineer that design, resulting in significant savings in construction labor and materials. The quality of the construction prints has also made the construction process much smoother.” - Stacy Cantrell*

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# BROADBAND COMMUNITY ASSESSMENTS AND MASTER PLANS

## PROJECT DESCRIPTION

When deciding if broadband connectivity is right for your community, it's essential to consider the full story of your city's economic, demographic, and technological landscape. Understanding where you are is the first step in creating a plan to get where you want to be. Foresite Group's in-depth Community Assessment provides this vital information and lays the foundation for discussions surrounding broadband connectivity. The value of this service lies in the comprehensive profile developed from the diverse data gathered, concluding with a list of gaps, opportunities, and recommendations. Our team is currently working with several municipalities including the City of Stonecrest and City of Sugar Hill in Georgia and the City of Waukegan in Illinois to provide a Community Assessment that will be a guide for when the community is ready for a Broadband Master Plan.

- City and County of Broomfield, Colorado - Broadband Feasibility Study and Master Plan
  - Foresite Group worked with the City and County of Broomfield to conduct a Market Assessment to determine construction costs for an institutional network and for a city-wide build. They are utilizing automated design software to derive these costs at a 95% accuracy. We also helped the City and County of Broomfield create a Dig Once Ordinance. Our team created multiple business plans to provide to the City options for a broadband strategic plan from which they can decide their right path forward.
- City of Stonecrest, GA; City of Sugar Hill, GA; Waukegan, IL - Broadband Market Assessment
  - Foresite Group worked with these three communities to create a Broadband Market Assessment who are interested in starting their broadband journey. Our team completed an assessment report that analyzed and included:
    - Demographic Review
    - Gap Analysis
    - Municipal Infrastructure
    - Financial Overview
    - Legislative & Political Environment Review



## LOCATION

Nationwide

## PROJECT COMPLETION

City of Breckenridge, CO - 2018  
City and County of Broomfield, CO - 2018  
Waukegan, IL - 2020  
City of Stonecrest, GA - 2020  
City of Sugar Hill, GA - 2021

## PROJECT OWNER

Municipalities

## SCOPE OF SERVICES

Broadband Market Assessment  
Broadband Master Plan  
Data Collection  
Regulatory Matrix Creation  
Research and Documentation  
Construction Practices  
Directional Boring  
Micro-trenching  
Greenfield Opportunities  
Local Third Party Service Providers  
Municipality 5-10 Year Expansion Plans  
Permitting Agencies  
Army Corps of Engineers  
Historical  
Municipalities  
Railroad  
Tree Ordinances  
Utility Pole Attachment Guidelines

## REFERENCE

Mandy Walsh  
Director of Economic Development  
City of Lampasas  
312 E 3rd Street  
Lampasas, TX 76550  
p | 972.983.1411  
e | [mandy@cityoflampasas.com](mailto:mandy@cityoflampasas.com)

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# FOUNDATION FOR LOUISIANA AND CITY OF NEW ORLEANS INSTITUTIONAL FIBER NETWORK

## PROJECT DESCRIPTION

Foresite Group has begun the initial planning stages to build an institutional fiber network to all City and Government buildings and provide capacity to serve local schools and libraries. Foresite Group is also working with the Department of Public Works and the Sewerage and Water Board to place a fiber network to create wireless access points for smart meter data collection. The overall network for the City initiative will be roughly 3-5 miles of fiber and conduit placement, while the SWB and DPW will be reconstructing almost every road and sewer line. During the reconstruction and while the roads and sub-surface are opened, Foresite Group will be planning the placement of both conduit and fiber. The intent is to serve the municipality buildings, but we will be sizing the fiber cables to serve all households for a possible future fiber to the home (FTTH) project.

Our overall team is also coordinating with all project stakeholders to work on creating Work Force Development programs and economic development opportunities. Foresite Group will be working to implement a "Utility Academy" that will create local technical training while also building a local work force to participate in the multiple infrastructure projects that will be occurring in New Orleans over the next 10 years.



**Foundation  
for Louisiana**

*At work for resilient communities.*



## LOCATION

New Orleans, Louisiana

## PROJECT COMPLETION

March 2017 - 2019

## PROJECT OWNER

Foundation for Louisiana

## SCOPE OF SERVICES

Business Model Options  
Fiber Design  
Fiber Planning  
Geodatabase Collection and Analysis  
Municipal Coordination  
Strategy Session Facilitation  
Utility Academy Implementation

## REFERENCE

Tanya Gulliver-Garcia  
Associate Director of Programs  
and Planning  
4354 S. Sherwood Forest Blvd.  
Suite 100  
Baton Rouge, Louisiana 70816  
p | 225-964-0049  
e | [tgarcia@foundationforlouisiana.org](mailto:tgarcia@foundationforlouisiana.org)

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## TOWN OF BRECKENRIDGE

### PROJECT DESCRIPTION

The Town of Breckenridge is looking to build a fiber network to connect all their homes, businesses, and Town facilities to provide high-speed connectivity to its citizens and visitors alike. The Town wants an Open Access Network to allow any number of service providers to offer Internet, VoIP, TV, and other services across their network encouraging healthy competition for all.

Foresite Group worked with the Town of Breckenridge to conduct a Market Assessment to determine construction costs for a city-wide build to all homes, businesses, and town facilities. They utilized automated design software combined with LiDAR Collection to derive these costs at a 95% accuracy. To help derive these costs they partnered with COS Systems to launch a demand aggregation study which will determine the take rates of the citizens and businesses. The construction costs plus the take rates will give the Town a predetermined ROI spanning over a number of years. We created multiple business plans to provide to the Town options for a broadband strategic plan which they can then decide which direction they would like to go.

Foresite Group utilized automated design software and LiDAR Collection and Extraction to derive construction cost estimates. This allowed for better upfront costs and return on investment planning while also expediting the design process with work flow efficiencies.

### LOCATION

Breckenridge, CO

### DATES OF SERVICES

2018

### SCOPE OF SERVICES

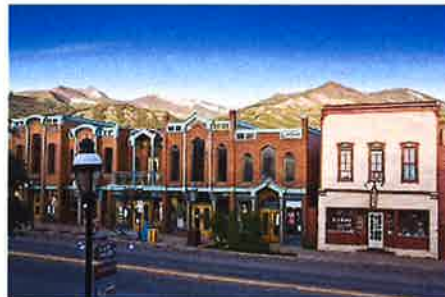
On-Site Strategy Session  
Preliminary Design & Capital Cost Analysis  
Demand Aggregation Study (COS Systems)  
LiDAR Collection & Extraction  
Market Assessment Business Plan

### CLIENT NAME

Town of Breckenridge

### REFERENCE

Brian Waldes  
Director of Finance  
p | (970) 453-3382  
e | [brianw@townofbreckenridge.com](mailto:brianw@townofbreckenridge.com)



**FORESITE**  
group

## ABILITY TO MEET SCHEDULES & DEADLINES

Foresite Group has over 155 associates in 15 offices nationwide. We provide civil engineering, landscape architecture, structural engineering, traffic engineering, broadband engineering, and wireless services. A breakdown of our staffing is below:

- 42 Professional Engineers [PE]
- 15 Engineers-in-Training [EI/EIT]
- 20 CAD Drafters/Designers
- 10 GIS Database Engineering Analysts
- 11 Admin Professionals [IT, HR, Acct]
- 2 LEED AP/LEED GA
- 4 Landscape Architects
- 3 Traffic/Transportation Engineers
- 5 Structural Engineers

The Broadband Engineering team at Foresite Group was formed with a goal to “connect people – to information, to ideas, and to each other”. We established this team with years of outside plant design knowledge gleaned from our experiences designing city- and state-wide networks for large private telecommunications companies to focus on our passion for working with communities (cities, counties, and community-owned utilities) to develop municipal broadband networks

While our focus has been to primarily support community broadband through programs serving municipalities and utility cooperatives, we leverage our individual skillsets in the OSP (outside plant) design and engineering to augment our employees’ utilization. Because we do not typically compete with our industry peers seeking large scale projects with private telcos, we are positioned to select the clients we believe that share in our vision for connecting communities. Novi is the ideal type of community that we set out to support, and if we were awarded the opportunity, would be a highly valued client.

As referenced by the following schedule, our approach to this program will consist of both concentrated periods of production work that can be directly controlled (such as field data collection or high-level designs) as well as intermittent periods of research and coordination relying on responses from local constituents and other candidate partners (such as demand aggregation, vendor assessments, and 3rd party investigations). Specific to the Broadband Engineering Practice Area, based on our projected timeline our current in-house resources far exceed the program needs. While Foresite Group is currently staffed to dedicate the qualified staff required to adequately support this project and meet projected timelines, we could streamline the tasks we have included in the scope if needed by the Client.

In addition to Foresite Group’s 155 associates, we have many additional industry partner resources that can be utilized for this project if needed. This option further ensures keeping the project on schedule and within projected costs.

While the management tools and processes we have developed were created to more efficiently prevent waste and slippage, they also act as a standard by which we can more effectively identify natural scope change in the project and apply preventative measures or predict impacts throughout the lifetime of the program.

## FINANCIAL STABILITY

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Foresite Group is financially sound and stable. Our financials are reviewed annually by a third-party CPA. An audited financial statement for FG Ventures (Parent Company) and subsidiaries as well as a commitment letter from our bank can be made available upon request.

## LITIGATION

In the normal course of its business, Foresite Group occasionally becomes involved in claims arising out of design and construction problems on various projects. Foresite Group was named as a defendant in two separate lawsuits, both of which were filed in 2020, within the past 5 years. Foresite Group is vigorously defending against these claims, and both Foresite Group and its Insurance Carrier believe the Company has meritorious defenses in both claims and they are defending the claims through legal counsel.

- 1 of 3 defendants related to a storm water runoff claim filed in the State of Alabama.
- 1 of 4 defendants related to a failed culvert claim filed in the State of Arkansas

Over the last 5 years, Foresite Group has not terminated any contracts due to non-performance and there have been no adverse actions against the firm sanctioned by any regulatory authorities.

# METHODOLOGY / PROPOSED APPROACH

## OUR STRATEGIC APPROACH

Our proposed methodology, elaborated below, covers all goals outlined in the RFQ and the tasks are listed in chronological order. It includes a number of steps that do not coincide with the RFQ Goals but are none the less essential steps in linking together the overall process. The process below outlines which elements are related to each Goal. As part of our project start-up, Foresite Group will forecast possible risks, vulnerabilities, and obstacles that could be faced throughout the duration of the project along with possible solutions and mitigation strategies.

## GOAL #1

### PHASE 1 - STRATEGY SESSION

#### STRATEGY SESSION

The success of the program largely depends on efficient and effective communication. As the consultant for this program, Foresite Group will coordinate with the City of Novi and invite potential stakeholders to an initial kick-off Strategy Session. The Strategy Session is the foundation for establishing relationships between key stakeholders and gathering critical data that sets the entire process's scope and tempo and should be structured as an interactive, in-person working time to communicate opinions, ask questions, and share knowledge from all involved parties. During the meeting, participants shall review project goals and guidelines for communications, tracking, and deliverables. A tremendous amount of coordination and data gathering is required. Outcomes from this session and subsequent decisions are critical to determine logistics for the project.

Strategic planning and coordination will continue throughout the lifetime of the program as decisions are made, new goals are identified, technology and competitive environments evolve, and new challenges are faced. A program of this scale and scope will cover years and decades of planning and deployment. Foresite Group shall set the parameters and coordinate weekly status report meetings between project managers for planning, engineering, and collaboration as needed. These meetings shall ensure that all stakeholders are aware of how the project is progressing. Meeting consistently shall enable all parties to stay abreast of any changing conditions that may impact timelines so that mitigating measures may be taken swiftly to ensure the project stays on schedule and within budget.

#### A. ROLES AND RESPONSIBILITIES

Foresite Group shall develop a comprehensive list of all current and proposed stakeholders, identifying each role and responsibility. The collaboration shall include a matrix to determine areas of accountability for prerequisite and subsequent phases, tasks, and steps of the project, with a perspective on the impacts each contributor shall have on the project. Foresite Group shall function in both advisory and educational roles for the duration of this project. Project stakeholders should take full advantage of Foresite Group resources to pose questions and gain insight into telecommunications processes and technologies.

As our partner, the City can help facilitate access to municipal information related to existing and proposed facilities and infrastructure. This may include access to employees of the City who can assist with data collection and access to GIS data or shapefiles containing infrastructure details. This gathered information along with collected field data will allow Foresite Group to provide an assessment and map of the current infrastructure to include broadband, wireless, and fiber optic infrastructure. Foresite Group shall rely on the City of Novi to foster communication between other beneficial parties that can



contribute to the project's success. This information will be incorporated into our preliminary design as detailed in Phase 4-A.

#### B. GOALS AND MILESTONES

Based on feedback and any direction gleaned from the Strategy Session, Foresite Group shall work to revise or augment target days for project milestones. While our project team has an extensive amount of broadband and network planning experience and can calculate project durations with a high degree of certainty, Foresite Group shall consider the region as a whole, meaning events outside our control or other influences or opportunities may impact initially projected timelines. We understand that the City expects Foresite Group to identify risks and vulnerabilities for the duration of the project, along with alerting stakeholders and providing possible solutions.

#### C. SYSTEM OF RECORD

Community engagement will be an ongoing process throughout the life of the project. Foresite Group shall implement an overall project management system of record and ingest updates from the tracking sheets for near real-time updates to the master schedule based on an actual day-to-day performance. Foresite Group uses a tiered, color-coded system to communicate the severity of need represented by different categories of Request for Information (RFI) and Change Order requests. This approach allows managers from each stakeholder group to triage urgent requests, ensuring a smooth flow of information and progress on the project. A "Risk Log" will be created and shared among all parties that will document these possible roadblocks along with solutions that are updated as the project progresses.

#### D. COMMUNITY COORDINATION SESSIONS

Foresite Group recognizes the importance of maintaining a consistent and direct line of communication with all stakeholders involved with this project, which includes members of the City government, private parties of interest and the greater community at large. Maintaining a regular line of communication allows for all stakeholders to remain up-to-date on the needs and preferences of the community and to allow time to provide regular updates on the progress of the study. Foresite Group will hold dedicated info sessions with all stakeholders and members of the community throughout the duration of the study. The information collected during these meetings will in turn allow for the process to be further fine-tuned in order to better meet the requirements and preferences of the community. The tasks outlined in this step shall meet the requirements of Goals #1G, #1L and #2G.

### PHASE 2 - COMMUNITY AND PARTNER ENGAGEMENT

#### A. SET UP GEODATABASE

Foresite Group shall use different software solutions and processes throughout the lifetime of the program. Because of its versatility and functionality for gathering, managing, and analyzing information represented in a geospatially accurate graphic interface, we begin by creating and populating a Geographic Information Systems (GIS) database for our utilization.

Foresite Group shall develop a schema and data dictionary of the specific features incorporated into the GIS database. This database includes any objects of interest and any additional "attribute" data for those specific objects. Features with attributes shall be used throughout the process. With features added through the preliminary and detailed design process, this information can be stored and delivered in KMZ, SHP, or GDB formats and geo-referenced to use along with any private or public GIS data.

Based on the City's and project stakeholders' specific needs, upon request Foresite Group shall either select or create the best GIS database suited to the City's usage for this unique broadband program. The implementation may include an industry-standard commercial product, a custom-designed platform



developed with a software partner, or a combination of the two, as best suited to the project's needs.

Based on directives provided in the original RFQ and expanded in Addendum #1, Foresite Group will perform the following tasks in order to create a detailed map of current services, and model gaps in opportunities within the community based on the findings.

## **B. DEMAND AGGREGATION**

While our goal at Foresite Group is to deploy ubiquitous broadband connectivity across the entire market area, it is imperative to create the most promising business model to secure financial interest and ensure sustained viability of the program. In order to better project revenues for the network deployment, Foresite Group shall perform additional demographic research and assessment. Through intentional marketing activities we shall establish a connection and ongoing communication with the constituents in the community. Compiling this information into our database and systems, we can better capture and utilize real "take rate" data.

An assessment for the inclusion of other tenants on the network is also recommended. This may apply to dark fiber or lit service leases for wireless carriers through macro cell towers, small cell antennae, and the upcoming deployment of 5G; and a host of other IoT applications (an array of sensors, security, traffic systems, community Wi-Fi, in building systems, etc.) that could be supported throughout the network – constituting additional revenue sources for the network owner.

Combining this information identifying areas of greatest market interest, a comprehensive understanding of the technical needs and social challenges within the community, and project goals identified during the Strategy Session and planning phase, we can establish priority zones of service – commonly called "Fiberhoods". This methodology is applied to model revenue projections, return on investment, market penetration, and overall profitability to effectively develop the long-term build plan. The tasks outlined in this step shall meet the requirements of Goals #1F and #1I.

## **C. CONDUCT LOCAL BROADBAND AND TELECOMMUNICATIONS MARKET ASSESSMENT**

Foresite Group's network designers, engineers, and management team shall evaluate current broadband infrastructure and services available from incumbent competitive telecommunications service providers in the market, including wireline, wireless, and local and regional middle-mile telecommunications infrastructure and services. This shall also include a survey and assessment of technology applications being utilized by the community, local businesses, and residents including non-profit agencies, schools, churches, and other groups to identify the technical and functional objectives of the project and develop suggestions that shall support and complement any existing municipal plans.

### **RESEARCH PERMIT AND POLE DATA**

Foresite Group, in conjunction with the City and stakeholders, shall review and evaluate existing infrastructure. This shall include municipal infrastructures such as buildings, streets, sidewalks, bridges and overpasses, conduit systems, stormwater systems, sewer and septic systems, public transportation systems, and other public systems. The evaluation shall include non-city owned public utility infrastructures such as electrical utility poles, telecom utility poles, gas infrastructure, water infrastructure, and other utility services both above ground and underground.

### **AERIAL AND UNDERGROUND DATA COLLECTION**

In order to complete an inventory of existing broadband infrastructure within city limits to determine percentage of aerial vs. buried infrastructure by provider operating within Novi, a full-market data collection ride-out will need to be performed. Though the level of detail requested in the Addendum about specific environment, material, and owner of existing telecommunications infrastructure is

extensive, and some proprietary or confidential information may not be accessible, Foresite Group has adequate industry experience and knowledge to make this meaningful.

This will require a significantly greater level of investment than most communities pursue. In order to keep costs as manageable as possible, this will be accomplished through a traditional “Boots on the Ground” (BoG) exercise, where each accessible route in the market will be visited in person and available data will be collected about the existing telecommunications infrastructure.

We do, however have extensive experience in utilizing LiDAR collected data for telecommunication planning and detail design. While this data is considerably higher quality and may be useful for other applications the City may have interest in, it does come at a significantly higher price. We are not including LiDAR collection and extraction as part of our proposal, but would certainly entertain the conversation if the City expressed an interest.

#### RF MAPPING

Radio Frequency (RF) Mapping will be deployed to identify available wireless and/or cellular frequencies, service levels (typically download speed metrics), current vendor equipment, target locations, available towers, and coverage objectives. This information could be used to model a possible wireless solutions strategy.

#### REFINE DATABASE

Data collected during Local Broadband and Telecommunications Market Assessment will be captured and organized in a GIS database. The tasks outline in this section shall meet the requirements of Goals #1B, #1C, #1D & #1E, as well as partial requirements of Goal #1A, and addressing the expanded definition included in Addendum #1.

### D. PERFORM A GAP ANALYSIS OF THE CURRENT BROADBAND ENVIRONMENT

Foresite Group believes that access to fast reliable internet service has become a necessity. It must be integrated into the community’s expectations for future planning activities. Broadband-based services are key components to not only improving the tax base and revenue of a City, but also promote stability through growth and quality of living for the residents.

Foresite Group shall provide observations related to the community as viewed through the lens of broadband, limited to challenges that can be improved through better broadband solutions. With each challenge or gap, Foresite Group shall recommend actionable solutions that can reduce the impact of the problem or resolve the challenge. With each recommendation, Foresite Group shall provide some insight into the complexity of the issue in feasibility of the solution.

After reviewing demographics, economics, policy, and budget, Foresite Group will identify gaps in the community that can be improved through broadband solutions. The gap analysis and recommendation section of the report will address each deficiency and offer possible solutions that can be implemented. The tasks outlined both here and in Phase 2-C above will meet the requirements of Goals #1D & #1E, as well as Goal #1J.

### E. CONDUCT BUSINESS CASE NEED ASSESSMENT

Foresite will conduct a Business Case Needs Assessment including a detailed review, profile or summary analysis of the following topics:

- County population, demographics, and related socio-economic criterion
- Readily available City information including, but not limited to: community master plans, local economic

- development information, tourism statistics and forecasts, community development initiatives, business district plans, utility or water works projects, and parks and recreation planning
- Proposed deployments by other private technology and services providers
- Projections for growth from new commercial, retail, industrial, educational, and professional organizations
- Government and emergency service providers that would benefit from broadband access/connectivity

Through a strategic process of investigation and assessment with all stakeholders, Foresite Group shall leverage our cross-discipline expertise and partnerships with smart technology vendors to identify areas of need and opportunities for services throughout the market area and establish a map of critical demand points. The tasks outlined here will meet the requirements of Goal #1G and #1H.

#### F. ASSESS REGULATORY ENVIRONMENT

Foresite Group shall perform a review and assessment of Local, State, and Federal legislation affecting broadband services and potential regulatory requirements or restrictions that may become applicable to accomplish any desired objectives as a result of the Strategy Session. This may include:

- Current and anticipated federal and state legislative actions or legal requirements that may impact decisions
- Application and certification requirements through the Federal Communications Commission (FCC) necessary to create an FCC Registration Number (FRN) if the City determines an interest in attaining Tier 1, Tier 2, or Tier 3 service provider status.
- Utility registrations with Federal, State, County, and City agencies for placement of infrastructure encroaching the public Right of Way or access to other utility infrastructure including joint-use agreements with the pole owner (or owners), which can be a power provider, electrical cooperative, telecommunications company, or municipality.

The tasks outlined both here will meet the requirements of Goal #1K.

#### G. DEVELOPMENT OF MARKET-DRIVEN DEMAND PLANNING TOOLS

Foresite Group will incorporate data collected during the Demand Aggregation phase into the GIS map to create planning tools based on market-driven demand. We will use this information to identify areas of greatest market interest, gain a comprehensive understanding of the technical needs and social challenges within the community, and project goals identified during the Strategy Session and planning phase. We can then establish priority zones of service – commonly called “Fiberhoods.” This methodology is applied to model revenue projections, return on investment, market penetration, and overall profitability to effectively develop the long-term build plan.

#### H. SUMMARY OF FINDINGS

At the conclusion of Phase 2, Foresite Group will present our findings to the City and primary stakeholders. This will give all parties involved a chance to provide feedback on the data collected before it is utilized as part of the roadmap phases in the second half of the study. The task outlined during this phase will meet the requirements of Goal #1M.

## GOAL #2

### PHASE 3 - PRELIMINARY PLANNING

#### A. DATA COLLECTION

##### I. COLLECT AND INCORPORATE LOCAL DATA

Data from utility companies (power, water, gas, sewer), public entities (City, County, State, or Federal),

or other open sources shall be combined into the GIS platform. This data incorporation may include a geospatial realignment process for inaccurate data. The time to complete this task is dependent on how accurate the current data is and the amount of readily accessible data. The City shall need to provide available utility data such as ROW, streets, gas, water, sewer, etc. The City should also provide additional GIS data to help the project, such as census information, parcel data, municipal buildings, county-owned real estate, etc.

## II. ADDRESS VERIFICATION

Because serviceable locations account for the value of the network and generating revenues, a thorough address verification process is one of the most critical imperatives of the project's success. Even with support from public entities (such as City parcel data), utility billing information, and other 3rd party sources, existing address data is typically inaccurate and incomplete. This is an essential aspect of creating an expandable, sustainable long-term plan as it directly influences the adoption rate and suggested business model.

## III. REAL ESTATE REVIEW

Whether applicable to the placement of a large data center, a small cabinet to support the network, or properties that may be used for wireless equipment, the site location and acquisition of private or public property is a commonly overlooked aspect. The evaluation should include existing telecommunications facilities such as data centers, EMA facilities, server rooms, electrical room facilities, and other locations suitable for sensitive telecommunications components. Addressing and assessing real estate needs and options at the forefront of the project is a key component of the project's overall success.

## B. DETERMINE NETWORK ARCHITECTURE AND TECHNICAL REQUIREMENTS

Using our experience working with the Incumbent Local Exchange Carriers (ILECs) and partnering with telecommunications equipment and technology vendors, Foresite Group and our partners have a thorough understanding of the evolution of different network architectures (point-to-point, active ethernet, GPON, NGPON2, XGPON, etc.) and insight in the latest products and processes available. Foresite Group shall collaborate with the City of Novi to define the preferred network architecture, minimum service thresholds, and fiber testing and network validation standards.

## C. CREATE SCHEMA

Foresite Group shall further develop the schema and data dictionary for new features that shall be incorporated into the GIS database. This includes any objects of interest and any additional "attribute" data for those specific objects. Features with attributes shall be incorporated throughout both LiDAR collection and extraction and also through our software-supported "Boots on the Ground" (BOG) process. With features added through the preliminary and detailed design process, this information can be stored and delivered in KMZ, SHP, or GDB formats and would be geo-referenced to use along any private or public GIS data.

## PHASE 4 - PRELIMINARY DESIGN

### A. PRELIMINARY DESIGN

As part of our value engineering process, Foresite Group's preliminary design is used to best enable a data driven analysis of the costs and major impacts of various deployment strategies, including:

- Route planning for network architecture and constructible path
- The amount of fiber, material, and equipment needed
- Optimal construction methods to maximize deployment speed and savings
- Active electronic equipment and sites
- Long lead permit avoidance
- Minimization of necessary traffic control



- Ease of maintenance
- Minimization of utility strikes

The preliminary design shall reside in the GIS database, where it can be both desktop- and field-assessed. Foresite Group will incorporate all collected data, including planned or existing municipal infrastructure projects and existing facilities and networks, to decrease cost and increase speed to network infrastructure deployment. It shall be revised as needed throughout the duration of the preliminary planning, serving as the foundation for the execution of potential subsequent detailed design, construction packages, and permit and make ready engineering documents. The tasks outlined here will meet the requirements of Goals #1B & #1C, as well as Goal #2B.

#### B. PRE-CONSTRUCTION RIDE OUT (PRE-CRO)

Based on initial preliminary design output, Foresite Group shall perform a Pre-Construction Ride Out (Pre-CRO) to analyze outside plant, including aerial and underground infrastructure placement for constructability, cost, and schedule efficiency. To maintain speed, accuracy, and uniformity in our comprehensive field data collection, we use a variety of tools and processes during fielding activities (such as field-noting editable features and attributes in a tablet-based remote-access GIS application) so that our final data is consistent in content and format in the GIS database.

#### C. MAKE-READY ASSESSMENT (MRA)

The Pre-CRO may also include Make Ready Assessment (MRA), a high-level visual check of poles for proposed strand attachment or overlash. This process shall classify poles into a category to best determine total make ready effort and costs. Make Ready classification can be adjusted based upon information from the local market during Strategy Session. Classification of poles could fall into the following categories:

- Green – No moves required, ready for attachment
- Yellow – Communication moves required
- Blue – Power violations, multiple communication moves and possible power rearrangement
- Red – complete pole change-out, possibly including major power equipment reconfiguration.
- Black – High cost / prohibitively problematic

This analysis will aid in determining the economical viability of proposing an aerial route.

#### D. PERMIT REVIEW

Throughout the route planning and preliminary design process, Foresite Group shall take note of any roadblocks or opportunities as a result of needing access to public Right of Way (RoW), areas that require special application or abnormally long durations, or private easement avoidance.

- Standard Right of Way (RoW) - This may be applicable to encroachment permits for underground construction and installation or for temporary use of the Right of Way for aerial construction and installation. With the dedicated support of our permit designers and certified Professional Engineers, Foresite Group shall research the requirements of the approving agency. We shall perform an initial desktop route review, incorporating all utility data, planimetric data, and parcels into the detailed GIS design database.
- Long Lead - This may be applicable to work areas for entities requiring specialty or long lead approval permits, including agencies such as the Department of Transportation (DOT), Railways, Bridge or Water crossings, Centralized Business District (CBD), or protected environmental habitats. Though Foresite Group uses due diligence and value engineering during the preliminary design phase to avoid these areas if possible, by selecting an alternative construction path, long lead or special permits are typically unavoidable throughout an entire market area.

Information obtained through the Pre-CRO, MRA, and Permit review processes shall be used to enhance and improve the Preliminary Design. The tasks outlined on this step will meet the requirements of Goal #2F and partially validate Goal #1A.

## PHASE 5 - BUSINESS PLAN

### A. MATERIALS AND LABOR

Foresite Group shall use the preliminary modeling of the proposed conceptual network to calculate required material units and provide general information regarding projected capital requirements as applied to current unit costs and pricing for optical cable, conduit, active electronics, and all other associated structures and hardware.

Cost of construction and engineering labor for various build methods (aerial construction, directional bore, open trench, micro trench, etc.) shall also be factored into the cost analysis for various potential routes to maximize value engineering throughout the network.

This information shall be incorporated into a Preliminary Bill of Materials (Pre-BoM) for use in assessing projected values and duration for mobilization and procurement. The tasks outlined on this step shall meet the requirements of Goal #2H.

### B. SCHEDULE CREATION

Foresite Group shall create a master project schedule to establish projected durations for critical milestones required to support the project goals, predicated on application pre-requisite and subsequent phases, steps and tasks including, but not limited to:

- Licensing and certifications
- Detailed design activities
- Permitting creation, submission, and approval
- Make ready engineering, submission, approval, and construction
- Concurrent and scheduled projects being deployed through utility infrastructure projects
- Construction packages
- RFPs, vendor assessment, and contract development
- Material procurement
- Network infrastructure Construction
- Hub site engineering, site development and construction
- Final documentation
- Service Activation

The master project schedule shall be used throughout the lifetime of the project to guide, forecast, and evaluate progress and completion. The tasks outlined on this step shall meet the requirements of Goal #2I.

### C. DETERMINE SERVICE MODEL

#### I. VENDOR ASSESSMENT

Most municipalities entering the broadband industry have little or no experience related to the standards and practices of the material and equipment vendors and service providers. As a defining principle, Foresite Group is vendor agnostic. We simply seek out the highest quality products and services appropriate for a unique deployment. In order to support our partners and stakeholders through this decision-making process, Foresite Group shall curate a list of qualified vendors, initiate contacts and provide a forum where they can showcase their products and solutions.

## II. GOVERNANCE AND OWNERSHIP STRATEGY

The telecommunications industry is migrating away from the traditional model where a Tier 1 ILEC dictates all aspects of broadband network planning, design, construction, deployment, utilization, service offering and billing with a pure focus on short-term return on investment to municipal-based programs with a focus on long-term investment to support the changing needs of the community they serve. Foresite Group can explain the different roles and models for:

- Network ownership
- Operation
- Service provisioning

Foresite Group shall detail the different impacts and benefits of each aspect to create a comprehensive connectivity solution. Upon completing the previous tasks, Foresite Group's network analysts and management team shall collaborate with the City of Novi and any other stakeholders to determine who the network owner, operator, and service providers shall be. Each role is a critical component that impacts the final Business Plan and Proforma.

## III. GRANT RESEARCH

As a partner with the City of Novi, Foresite Group's diverse team of experienced professionals and partners shall research and analyze available and applicable public and private sector grant opportunities. Foresite Group shall consider possible funding sources for the project, including Federal resources, State and Local programs, municipal bond opportunities, grant money, philanthropic sources, private equity investors, and other sources. There are many avenues to consider funding the different aspects of a program of this scope, and the exact blend of financial resources can only be determined once the data is compiled. A grant strategy shall be customized to specifically identify grant opportunities which best supports the needs of community.

## IV. THIRD PARTY INVESTIGATION

Foresite Group shall investigate and present strategies and incentives for private sector or 3rd-party participation while ensuring the interests and needs of the community are well presented and protected throughout the lifetime of the network. This may include Public-Private Partnerships (P3s), joint ventures with other utilities, collaboration with Incumbent Local Exchange Carriers (ILECs) or Competitive Local Exchange Carriers (CLECs), wireless or cellular service providers, etc.

## V. MARKETING STRATEGY

With the proliferation of various network ownership and service models, it is increasingly important to establish and maintain a focus for the desired consumer experience. This can apply to initial service order activation, drop installation, customer premise equipment, consumer billing, customer service contacts, repair, disconnects, etc. Foresite Group can work with all stakeholders and contributors to develop and document the content and terms of this relationship.

The tasks outlined here will meet the requirements of Goal #2C.

## D. PROFORMA

Foresite Group shall utilize the information collected throughout the Strategy Session and Preliminary Planning Phase to establish a cost analysis for required investment, including capital expenses, operational expenses, and projected revenues. Working with all stakeholders, we shall develop a market proforma to establish a projected model for return on investment that adjusts for "take-rate" levels, forecasted profit generation, as well as estimated annual costs to cover ongoing network maintenance and operation.

## PHASE 6 - RECOMMEDATION ON BROADBAND STRATEGY

With a focus on exceeding all of the City of Novi's goals, as well as meeting all Local, State and Federal requirements to establish broadband services, Foresite Group shall customize a broadband network for the region as well as provide dashboards for timely and accurate monitoring and maintenance. Foresite Group shall create a broadband plan with defined objectives for technology solutions and a variety of funding options as well as our recommendations for a business plan with financial models incorporating multiple sources of revenue. As an additional point of focus, our initial infrastructure deployment can be utilized to expedite coverage for members of the community with the greatest immediate need for relief, such as students learning from home or employees working from home. Foresite Group's recommendations shall facilitate broadband policy and infrastructure additions to enable future technology deployment into the area. The tasks outlined here will meet the requirements of Goals #2A & #2D.

### A. FINAL PRESENTATION

Foresite Group shall present a final Broadband Master Plan with defined objectives for technology solutions and a variety of funding options along with our recommendations for a Business Plan with financial models based on a Cost-Benefit Analysis. The tasks outlined on this step shall meet the requirements of Goal #2J.



# PROPOSED PROJECT SCHEDULE

(IN WEEKS)

INTERNET CONNECTIVITY BROADBAND STUDY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
<b>GOAL #1</b>																									
PHASE 1 - STRATEGY SESSION																									
STRATEGY SESSION																									
PHASE 2 - COMMUNITY ENGAGEMENT																									
SET UP GEODATABASE																									
DEFINE BROADBAND OBJECTIVES																									
DEMAND AGGREGATION																									
CONDUCT LOCAL BROADBAND ASSESSMENT																									
GAP ANALYSIS																									
NEEDS CASE ASSESSMENT																									
REGULATORY REVIEW																									
PLANNING TOOLS																									
GOAL #1 SYNOPSIS																									
<b>GOAL #2</b>																									
PHASE 3 - PRELIMINARY PLANNING																									
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COLLECT/INCORPORATE LOCAL DATA																									
ADDRESS VERIFICATION																									
REAL ESTATE REVIEW																									
RF MAPPING																									
DETERMINE NTWK ARCH & TECHNICAL REQ'S																									
CREATE SCHEMA																									
PHASE 4 - PRELIMINARY DESIGN																									
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GRANT RESEARCH																									
3RD PARTY INVESTIGATION																									
MARKETING STRATEGY																									
PROFORMA																									
PHASE 6 - FINAL PRESENTATION																									
RECOMMENDATIONS																									

**City of Novi**  
**Finance Department**  
45175 Ten Mile Rd.  
Novi, MI 48375-3024

Request for Qualifications

## **RFQ – INTERNET CONNECTIVITY AND BROADBAND STUDY CONSULTANT**

Due Date: October 15, 2021

Rec'd 10-14-21  
10:10 AM  
T. Marzoni

**FORESITE GROUP, LLC**  
2101 Magnolia Avenue South, Suite 100  
Birmingham, AL 35205  
e | [lcomer@fg-inc.net](mailto:lcomer@fg-inc.net)  
o | 205.397.0370

**RESOLUTION**

NOW, THEREFORE BE IT RESOLVED that the following Budget Amendment for an Internet Connectivity and Broadband Study is authorized:

	<b>INCREASE (DECREASE)</b>
<b>General Fund</b>	
<b>APPROPRIATIONS</b>	
<b>City Manager's Office</b>	
Other Services and Charges	105,000
<b>TOTAL APPROPRIATIONS</b>	<u><b>\$ 105,000</b></u>
<b>Net Increase (Decrease) to Fund Balance</b>	<u><u><b>\$ (105,000)</b></u></u>

I hereby certify that the foregoing is a true and complete copy of a resolution adopted by the City Council of the City of Novi at a regular meeting held on December 20, 2021

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Cortney Hanson  
City Clerk