June 19, 2025

Paul Leedham, CIO – IT Director
City of Hudson, OH
1040 Terex Road
Hudson, OH 44236
pleedham@hudson.oh.us

Subject: Fiber Engineering Consulting Services City of Hudson, OH - Velocity Broadband

Mr. Leedham:

The Telecommunication Practice is a cross-functional group focused on supporting telecommunications strategy, design, and engineering from inception through final construction. The team engages with and leverages employees from across TRC's three Sectors: Power, Environmental & Infrastructure, and Integrated Grid Solutions. The Telecommunications Engineering Team sits within the Power Sectors Distribution Engineering Group. Our team is tasked with the high level and detailed design, project management of complex projects, client management, providing expert subject matter guidance, and all tracking and reporting relating to telecommunication fiber and microwave projects. Our qualifications include: regulatory expertise, comprehensive engineering services, telecommunications smart grid, quality and compliance, and risk/change management.

Work for the City of Hudson will be complete out of the following TRC office locations:

- North Canton, OH: 4854 Hossler Drive Northwest Unit A North Canton, OH 44720
    - Aerial engineering, make ready
- Gahanna, OH: 781 Science Boulevard Suite 200 Gahanna, OH 43230
    - Executive leadership, as-built collection
- Cleveland, OH: 1382 West Ninth Street Suite 400/401 Cleveland, OH 44113
    - Environmental permitting, permitting
- Kansas City, MO: 1833 McGee Street Kansas City, MO 64108
    - Design, engineering, construction documentation, probable cost of construction calculation, as-built documentation, project supervision
- Liverpool, NY: 215 Greenfield Parkway Suite 102 Liverpool, NY 13088
    - Consulting, project management, specification development

Should you have any questions concerning this proposal, please contact me at 614.354.8607 or email bsears@trccompanies.com. I will serve as the primary contact for TRC for this proposal.

Sincerely,

Brenda Sears, P.E.

VP Employee Growth & Development

Telecommunications Engineering

Cc: Glenna Colaprete
Daniel Dunn, PMP

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 3/25/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
Edgewood Partners Insurance Agency 3780 Mansell Rd. Suite 370 Alpharetta GA 30022	PHONE (A/C, No, Ext):	FAX (A/C, No):
	E-MAIL ADDRESS:	

INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A :	National Union Fire Ins Co of Pittsburg	19445
INSURER B :	New Hampshire Insurance Company	23841
INSURER C :	AIU Insurance Company	19399
INSURER D :	Allied World Assurance Co (U.S.) Inc.	19489
INSURER E :	Gotham Insurance Company	25569
INSURER F :	Lloyd's of London	85202

INSURED TRCCOMP

TRC Environmental Corporation; TRC Engineers, Inc.;
TRC Engineers, LLC; TRC Pipeline Services, LLC;
TRC Solutions, Inc; TRC Companies, Inc.
21 Griffin Road North, Windsor, CT 06095

COVERAGES **CERTIFICATE NUMBER:** 1387605397 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X **COMMERCIAL GENERAL LIABILITY** [ ] CLAIMS-MADE [X] OCCUR X Contractual Liab GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [X] LOC [ ] OTHER:			GL5341999	4/1/2025	4/1/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG $	$ 2,000,000 $ 500,000 $ 25,000 $ 2,000,000 $ 4,000,000 $ 4,000,000 $
A A	**AUTOMOBILE LIABILITY** X ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS X HIRED AUTOS ONLY X NON-OWNED AUTOS ONLY [ ]			CA4773667 (AOS) CA4773668 (MA)	4/1/2025 4/1/2025	4/1/2026 4/1/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) $	$ 2,000,000 $ $ $ $
D E	X **UMBRELLA LIAB** X OCCUR X **EXCESS LIAB** [ ] CLAIMS-MADE [ ] DED [X] RETENTION $ 10,000			03127873 EX202500003211	4/1/2025 4/1/2025	4/1/2026 4/1/2026	EACH OCCURRENCE AGGREGATE $	$ 1,000,000 $ 1,000,000 $
B C	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N [N] **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		WC013711861 (AOS) WC013711862 (CA)	4/1/2025 4/1/2025	4/1/2026 4/1/2026	X PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 2,000,000 $ 2,000,000 $ 2,000,000
F	Professional Liability incl. Pollution Liability			B0146LDUSA2505304	4/1/2025	4/1/2026	Per Claim Aggregate	$1,000,000 $2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Umbrella Follows Form with respects to General, Automobile & Employers Liability Policies.

Once awarded and a Contract is fully executed, the Certificate Holder will be named as an Additional Insured with respects to General & Automobile Liability where required by written contract.

CERTIFICATE HOLDER

Evidence of Insurance -
For Proposal Only

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Related Project Experience

Client Project Location Duration	Scope of Services	Client Reference
Guadalupe Valley Electric Coop (GVEC) FTTH Design Seguin, TX 2015 – Present	TRC has continued to support the gvec.net network growth through high level design, low level design, construction documentation, material ordering, splicing, and civil planning for their FTTH network offered to member customers. TRC has designed within GIS environments and provided splicing design for installation of the FTTH network. TRC's team worked with GVEC's team to develop a stand alone conduit design process for network expansion to new subdivisions to mitigate future cost by installing communications conduit in joint trenches with GVEC's electrical conduit. This innovation reduced costs for the network owner and significantly reduced time to market when new subdivisions were passed.	**Robert Russell** Executive Engineer Communication Technologies (830) 386-4400
Nashville Electric Service (NES) Joint Use Services Nashville, TN 2014 - Present	TRC provides a number of Joint Use Attachment Services for NES; Make-Ready Engineering, Joint Use proposals, Small Cells, Comcast Power Supply Audit, Unauthorized attachments, etc. In addition, TRC supports engineering for Pole Reject and ATT Asset Programs, Distribution Design, Underground Subdivision Design, Lighting Department, and Emergency Pole Replacement Programs.	**Jeremy Hitchcock** Supervisor Attachments Group (615) 390-4468
Google Fiber* FTTH Design Multiple Markets 2013 - 2019	TRC's project team has years of experience supporting multiple markets of Google Fiber's FTTH design, construction documentation, permitting, construction methodology development, and as-built collection and documentation. High level design, low level design, permitting, and as-buitls were provided for the Kansas City, MO; Atlanta, GA; Austin, TX; and satellite markets. Design was completed in GIS format, construction documentation plotted from GIS and CAD formats. Permitting was performed for multiple jurisdictions. TRC's fiber engineering team has experience in all aspects of FTTH project planning, design, and management for tens of thousands of homes passed in multiple metro markets for GFiber.	**Jayson DeMar** Regional Operations Manager (816) 206-0593

Understanding of the Project
City of Hudson, OH FTTH

Approach

City of Hudson (COH) is deploying a fiber to the home (FTTH) network to customers within its service territory. TRC understands that City of Hudson has plans to build approximately 140 miles of fiber plant in the next three to four years. TRC's approach and scope description is based on experience with projects of similar scope and scale.

TRC understand the total volume will be engineered by COH and the engineering consultant. Unknown at time of bid, TRC assumes the project will use aerial and underground deployment.

Working with COH TRC will use existing city data for power routing, pole, electrical plant, address, and network data. In a GIS map service, TRC will develop circuit designs based on the provided network architecture. Fiber optic cables, fiber equipment, aerial to underground transitions, underground spans and infrastructure, and network terminals will be designed on network architecture standards. Based on provided examples, GIS design will include drop fiber and network terminal placement at the provided access point. TRC will add network boundaries at the required network levels/categories as required by City of Hudson. Based on field collected data from TRC's engineering team performing make ready engineering, TRC will incorporate available data to develop final design.

TRC will work with City of Hudson to develop data requirements, network design parameters based on address data provided by City of Hudson. TRC assumes City of Hudson will provide a data dictionary or data requirements for each required GIS layer. TRC assumes design kick off meetings, regular project meetings, and submittal updates will be determined upon award. TRC assumes one round of design review prior to work print and splice sheet delivery. This review is expected to be completed through a GIS platform or GIS based deliverable.

Scope

TRC assumes the following scope based on the approach above, detailed in the steps and deliverables below, and reflected in the unit price below:

High Level Design will be completed at the desktop (office work) on the data provided by City of Hudson and the application of network requirements. Design will be organized by network distribution areas (HUT, Hub, Node, OLT, etc.). The HLD will be delivered to City of Hudson for review, upon approval the HLD will be used by TRC's distribution engineering team to perform the field investigation and make ready engineering. HLD deliverables are listed below.

Low Level Design (LLD) will begin with make ready value engineering upon completion of the make ready engineering. Design development and details will be added to prepare the design for work prints. Material lists will be developed for the work print packages. TRC's FTTH design team will work with City of Hudson's project team to develop packages in the size suitable for fiber construction. Post construction inspection of the power make ready may require revisions to the work prints. If this is the case, TRC will incorporate those revisions prior to issuing the work prints. LLD deliverables are listed below.

For both major processes defined above include TRC's quality control processes. TRC's FTTH design team operates on an iterative design methodology. Our designers submit working designs to QA/QC designers for review prior to delivery to City of Hudson. If City of Hudson's team would like more information on TRC's quality management program (QMP), we would be happy to provide it.

Exclusions:

TRC is not proposing to submit, manage, or pay for ROW permitting that may be required for the execution of the project.

TRC is not proposing to manage the construction of the design fiber network nor is TRC proposing to procure, store, or manage material allocation.

TRC assumes that central office design, new point of presence locations (Huts, Cabinets, etc.) will be bid on a separate unit rate. These location specific designs can be priced as fixed fee projects but are not best assumed in per foot pricing for network design and engineering.

Deliverables

TRC assumes the following deliverables to be the product of the approach above and included in the price below:

High Level Design (HLD):

- GIS based design in File GDB, JSON, or KMZ format, digital delivery; data set to include layers:
  - Fiber Optic Cable route
  - Riser poles
  - Conduit route
  - Undergroud structures, above grade structures
  - Address data provided by City of Hudson, updated through design
  - Splice points
  - Network boundaries as defined by City of Hudson
- Bills of Material (BOM) will be included in the HLD prepared in Excel workbooks as required by City of Hudson to include primary network materials

Low Level Design (LLD):

- GIS based design in File GDB, JSON, or KMZ format, digital delivery; data set to include layers:
  - Fiber Optic Cable route
  - Riser poles
  - Conduit route
  - Undergroud structures, above grade structures
  - Address data provided by City of Hudson, updated through design
  - Splice points
  - Network boundaries as defined by City of Hudson
  - Planemetric data created for the design, not provided by City of Hudson

Permit Submittal:

- TRC proposes to perform the permitting support on a permit by permit bases utilizing agreed upon hourly rates. Assuming the majority of FTTH outside plant will be permitting by COH as the authority holding jurisdiction, the level of effort is predictable. Also assuming rail road jurisdiction, county, state, and federal permits may be required, developing a blended unit rate may be cost prohibitive to COH
- TRC has professional surveyors, professional engineers, environmental permitting, and regulatory experts in house

Construction Prints:

- Workprints to include plan and profile drawings of the fiber and conduit networks
  - Scale to be deterimined upon award
  - TRC assumes construction packages will be 11x17 pdfs of the network design
  - TRC will work with COH's team to develop construction sequencing, cable category, or geo-network boundary organization of construction packages
- Splice sheets prepared in Excel workbooks
- TRC approaches FTTH construction packages to provide discipline specific information for the installation of the network and sufficient environmental, geo-political data for permitting requirements
- Bills of Material (BOM) will be included in the workprints in the form of rake off sheets/tables and as stand alone deliverables prepared in Excel workbooks as required by City of Hudson

As-built Collection:

- As-built collection will be a collaboration between COH's installation team or COH's installation contractor and TRC's field engineering team

- As-built collection will be focused on GIS based collection methods to update COH's GIS database for network management

As-built Documentation:

- As-built updates to GIS data set based on installation contractor redlines and field collected data

Project Consulting Services:

- TRC has a wide range of consulting services that can be called upon to support the telecommunications efforts primarily required for FTTH projects

Fee

High Level Design - $0.17/ft

Low Level Design - $0.65/ft

Permit Submittal – TRC will propose an hourly rate per permit

Construction Prints - $0.34/ft

As-built Collection - $0.07/ft

As-built Documentation - $0.08/ft

Project Consulting Services - $165.00/hr

TRC assumes the cost of pole data collection and make ready engineering in the unit rate for low level design.

The pricing provided in this proposal is valid for twelve (12) months from the date submitted.

TRC proposes to self perform all units included in the RFP. No sub-consultants are planned for the successful completion of the scope.

At time of proposal submittal, TRC has not received the City of Hudson's standard agreement as listed in RFP. If proposal is successful, TRC reserves the right to review the terms and conditions of the agreement.

Management Summary

2.1. Project Management

TRC has extensive experience in project management across various industries, including telecommunications. The TRC Telecom group specializes in providing innovative solutions for fiber, microwave, and radio projects, leveraging expertise in engineering, design, and project management to deliver high-quality results. TRC's project management organization focuses on ensuring projects are completed on time, within budget, and meet client expectations.

Their experience includes managing complex telecom infrastructure projects, network upgrades, fiber optic installations, and wireless communication systems. TRC's project management approach typically involves detailed planning, risk assessment, resource allocation, and stakeholder communication to ensure seamless execution.

2.2. Quality Management Program

TRC believes that quality must be thoughtfully and strategically planned and managed from the start of a project, and that its employees and our suppliers must be held individually accountable for the quality of their work. Our Quality Management Program is based on the International Organization for Standardization (ISO) 9001:2015 set of standards and its seven management principles.

Quality Components

We understand that delivering high-quality work is what makes our customers return. TRC is committed to monitoring, controlling, and continually improving the quality of our work products. Key components of our Quality Management Program include:

- Quality Assurance using preventive measures such as regular updates to Standard Operating Procedures (SOPs), employee training, and statistical data analysis of predictive triggers of quality deficiencies.
- Quality Control measures that include multiple approvals, mandatory peer reviews, rigid versioning controls on all deliverables, and a program of regular audits for compliance to established processes.
- Ongoing process improvement to continually improve efficiency and effectiveness of our work. TRC developed a strategic approach to process improvement that includes alignment to customer requirements, business risk, and our quality goals.