

RFP No. 2023-5



Frankfort Plant Board

Request for Proposal
FTTP Network Design

11/17/2023

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Attachments:

Exhibit C: Contract Agreement

Exhibit D: Construction Print Example

Statement of Confidentiality

Participants in this RFP must treat this Request for Proposal (RFP) as confidential and must not disclose it to any party other than the Participant's employees with a need to know. If the Participant does not agree with these provisions, the Participant must immediately return this RFP to the Frankfort Plant Board Telecom Department.

1. Introduction

The Frankfort Plant Board (FPB) Telecommunication department is seeking responses to a Request for Proposals (RFP) from qualified engineering/design firms (referred to hereafter as "Bidder") to complete the design of a Fiber-to-the-Premises (FTTP) network that will replace the current Hybrid Fiber Coaxial (HFC) cable plant and extend into unserved areas of Franklin County. FPB's current HFC system consists of 71 nodes that pass approximately 26,000 homes and businesses with around 520 miles of plant. The majority of the service territory is within Franklin County but does extend into portions of Shelby and Woodford County. It is FPB's intention to keep the HFC plant operational throughout construction and for a period of time following the completion of the FTTP network. To date, 70% of the current service area and 80% of the Franklin County expansion has been designed and FPB is seeking a qualified engineering/design firm to complete the remainder within a 12-month period.

2. Scope of Work

To complete the project, 140 miles remain to be designed in our current service area consisting of 27 PON areas and 40 miles of greenfield expansion within 5 PON areas remain. The walkout for all areas has been completed with the data in Katapult pro, but there may be situations that arise requiring additional walkout data to be collected and photos annotated. In the current service areas, the new fiber is to be over-lashed to the existing support strand and the greenfield will require new strand built on the existing utility route. In all design areas, it will be the Bidder's responsibility to obtain all necessary permits for State/Federal Highway Encroachments, City/County roads, and Railroad crossings. FPB will pay all required permit fees.

2.1 Master Design Plan

The master design plan has been proposed with backbone fiber sizing and routes designed. The Outside Plant Fiber network is designed as a Passive Optical Network (PON), utilizing XGS-PON technology. All projected PON boundaries and cabinet locations have been determined as well. FPB will share this data with the selected bidder along with the projected design/construction schedule.

2.2 Design Specifications

The FTTP distribution network is a centralized split design utilizing strategically placed Fiber Distribution Hub (FDH) cabinets with a 1:32 split ratio. The FDH cabinets will be either pole or pad mounted and fed with a minimum of 12 fibers from the OLT. The distribution fiber from the FDH will extend to splice cases that are placed in easily accessible areas (when possible) to feed Multipoint Service Terminals (MST) that will provide a pre-connectorized drop interface for simplified service activation. The design specifications shall include but are not limited to the following:

- Centralized split design
- 1:32 splitter ratio
- 288 and 144 count PON cabinets.
 - Cabinet locations will need to be pre-approved by FPB engineering staff.
- Cabinet density not to exceed 85%.
- Each PON cabinet shall be fed with a minimum of 12 fibers from the OLT.
- Design for a 100% take rate.
 - Each address point receives a fiber.
- Splice enclosures should be located close to roadways when possible for easy access.
- Drop layer in drawing, delivered as a polygon boundary surrounding the MST.
 - Drops should follow the electric service route and terminate in the same general vicinity of all other utilities. We do have access to FPB's electric service secondary drop layer.
- MST port sizes in 2,4,6,8,12
 - Stock fiber tail lengths are 250', 500', 750', 1000', 1500'
- MST tail max stock length is 1,500'.
 - Total span length + splice tail < 1,500'.
- Armored loose tube fiber in 12, 24, 48, 72, 96, 144, 192, 288 counts.
- We ask for 100' splice tails for OVH and 50' for URD splice locations.
- 200' storage loop per 2,000' of fiber cable.
- Drops shall be less than 700' (MST to D-mark), maximum stock length is 750'.
- No more than three drops to parallel the strand.
- Try to keep drops no more than three poles (2 spans) max before reaching the house.
 - (MST pole 1) span (pole 2) span (pole 3) span to house.
- Keep drops separate from distribution fiber in underground conduits.
 - This usually requires a MST at each pedestal location.
- MDUs consisting of five units or more will receive a 12 or 24 count flat fiber and equivalent MDU termination panel. MST ports with drops will serve each unit of MDUs with four or less units.

3. Deliverables

FPB maintains a GIS/ESRI database of the existing coax and fiber facilities as well as individual HFC node maps in AutoCAD (DWG) format that will be shared with the selected Bidder. FPB will require that all fiber designs be done in ESRI or AutoCAD format, but must integrate into the existing FPB ArcGIS software. FPB will also provide all base maps, templates, address data, design standards, existing stand, fiber, and cable infrastructure to assist the successful bidder. Included with this RFP is a sample construction print, **Exhibit D**, in PDF format to provide bidders with an example of how FPB expects the FTTP design to be laid out. FPB will supply templates, symbols, and title blocks to be used on all projects. Permits are to be delivered to FPB in the format that is required to be submitted.

3.1 Overbuild Design

The overbuild design consists of a FTTH design based on the existing footprint of FPB's HFC plant and over-lashed on the existing strand and anchors. Along with the construction drawing (PDF), each PON area should also include a fiber splice sheet (excel), PON cabinet assignment sheet (excel), Bill of Materials (BOM) in excel, and shapefiles to integrate into FPB's existing ArcGIS database.

3.2 Greenfield Design

The greenfield design is based on the walkout data (Katapult) where a new strand route is required. In addition to the overbuild design standards, new strand and anchors will need to be shown on the construction print. The same deliverables listed in [3.1](#) above are also required.

4. RFP Instructions

The Bidder will be required to provide FPB with three separate submittals for this RFP. The first submittal will be the Intent to Respond as outlined in Section [4.2](#). The second and third submittal will include the Proposal Response as outlined in Section [4.4](#) and the Proposal Fee as outlined in Section [4.5](#). The second submittal will include two separately sealed envelopes. Clearly mark any confidential or proprietary information as such. All attempts will be made by FPB to keep information confidential.

4.1 Bid Schedule

Due Date	Description
11/16/2023	RFP Release Date
11/27/2023 5:00 PM EST	Intent to Respond: Each Participant must confirm their intent to respond to this RFP by emailing the contacts listed.
12/1/2023 5:00 PM EST	Questions: Questions may be submitted by Participants to the contacts listed in this RFP. All questions will be shared with all Participants Via email.
12/11/2023 5:00 PM EST	Response to Questions
12/29/2023 2:00 PM EST	RFP Responses: Participants must submit their complete response to this RFP to the contacts listed by the date and time listed.
1/5/2024	RFP Evaluations Completed
1/16/2024	FPB Board of Directors approval

4.2 Intent to Respond

Bidders interested in submitting a response to this RFP should complete the non-binding Intent to Respond Form in **Exhibit A** and return to JHellard@FEWPB.com by email no later than 5:00 PM EST on Monday, November 27, 2023. **Receipt of this Intent Form is mandatory to participate in the RFP process.**

4.3 Proposal Questions

Questions regarding the proposal's content or requirements should also be submitted to MikeHarrod@FEWPB.com by email no later than 5:00 PM EST on Friday, December 1, 2023. All Bidders participating in this RFP will receive a copy of FPB responses to the questions submitted via email no later than 5:00 PM EST on Monday, December 11, 2023.

4.4 The Proposal Response

The Proposal Response should be written in a clear and concise manner, providing straightforward descriptions of the Bidder's capabilities to satisfy the requirements detailed in sections 5.1 through 5.3. **The Proposal Response must be received no later than 2:00 PM EST on Friday, December 29, 2023, in a sealed envelope clearly marked FPB FTTP Network Design Proposal Response.** Included in the sealed envelope, each respondent must submit one (1) original proposal, one (1) additional proposal copy, and one (1) digital copy of the proposal on a portable flash drive in Adobe Portable Document Format (PDF).

Deliver to:
Frankfort Plant Board
Attn: Jennifer Hellard
305 Hickory Dr.
Frankfort KY 40601

4.5 Fee Proposal

Refer to **Exhibit B** for the Fee Proposal. The Fee Proposal must be completed and signed by Bidder's authorized officer and must be received no later than 2:00 PM EST on Friday, December 29, 2023, in a sealed envelope clearly marked FPB FTTP Network Design Pricing Proposal inside the Design Proposal Response envelope. Any additional fees not listed on the **Exhibit B** can be listed on a separate sheet, signed by the Bidder's authorized officer, and included in the sealed envelope with the **Exhibit B**.

4.6 Cost associated to RFP

Each Participant is solely responsible for any costs incurred in the preparation and submission of a proposal in response to this RFP. Frankfort Plant Board Telecom Department has no obligation and shall not pay any sums whatsoever to any recipient of this RFP, for any matter whatsoever regarding the subject of this RFP.

Likewise, nothing in this RFP obligates FPB to award a contract and FPB reserves the right to reject any or all responses.

5. Selection Criteria

Responses to this RFP will be evaluated using a point system as shown in this section with a total score of 20 points. A selection committee comprised of staff from FPB will complete the evaluation. The fee proposals will not be reviewed at the initial evaluation. After initial evaluation, FPB will open the fee proposals for review and scoring.

5.1 Professional Qualifications – 5 points

State the full name and address of your organization and, if applicable, the branch office or other subsidiary element that will perform, or assist in the performing, the work hereunder. Indicate whether it operates as an individual, partnership, or corporation. Include the name of executive and professional personnel by skill and qualification that will be employed in the work. Show where these personnel will be physically located during the time they are engaged in the work. Indicate which of these individuals you consider key to the successful completion of the project. Identify only individuals who will do the work on this project by name and title. Qualifications are required for all proposed project personnel, including all subcontractors. Qualifications and capabilities of any subcontractors must also be included.

5.2 Quality of Work – 5 points

Provide examples of previously designed FTTP networks that are currently operational today. These examples should include situations where your organization provided unique solutions to design obstacles as well as final as-built drawings and permitting submittals for similar projects. References for these projects should also be included.

5.3 Project Approach – 5 points

A detailed and comprehensive description of how your organization intends to provide the services requested in this RFP. This discussion shall include, but not limited to: how the project will be managed and scheduled, how and when data will be delivered to FPB, communication and coordination, the working relationship between your staff and FPB staff, and the company's general philosophy in regards to providing the requested services.

5.4 Fee Proposal – 5 points

The fee proposal shall be submitted in a separate, sealed envelope as part of this proposal. Refer to **Exhibit B** for the Fee Proposal Form.

6. Addenda

If it becomes necessary to revise any part of the RFP, notice of the addendum will be sent via email to each Bidder. Each Bidder must acknowledge in its proposal all addenda it has received. The failure of a Bidder to receive or acknowledge receipt of any addenda shall not relieve the Bidder of the responsibility for complying with the terms thereof. FPB will not be bound by oral responses to inquire or written responses other than official written addenda.

7. Insurance Requirements

The successful Bidder shall be required to take out and maintain insurance for the life of the contract. Insurance requirements are outlined in **Section 24** of the attached **Exhibit C, Professional Services Contract**.

8. Performance, Payment, and Bid Bonds

Bidder security shall be required if the total estimated Bid price exceeds one hundred thousand dollars (\$100,000). The Bid Bond shall be in the amount of equal to or at least five percent (5%) of the bid amount.

Separate Performance and Payment Bonds shall be required when the total estimated bid price exceeds one hundred thousand dollars (\$100,000). Each bond amount shall be equal to 100% of the estimated bid amount. The performance and payment bonds shall be executed by a surety company authorized to do business in this Commonwealth, and the contract instrument of bonds must be countersigned by a duly appointed and licensed resident agent.

In the event the Contract Sum is adjusted by Change Order executed by the Contractor, the penal sum of both the performance bond and the payment bond shall be deemed increased by like amount.

9. Contract Agreement

The contract agreement between FPB and the successful bidder is attached as **Exhibit C, Professional Services Contract for FTTP Design Services**.

Exhibit A – Intent to Respond

Acknowledgment of RFP and Intent to Respond

Please complete this page and return to FPB, Attn: Jennifer Hellard by 5:00 PM EST, Friday, December 1, 2023 via email: JHellard@FEWPB.com.

I, _____

(Authorized Individual)

Representing _____

(Company Name)

Have received the FPB FTTP Network Design request for proposal for Frankfort Plant Board in Frankfort, KY. I have received the following documents:

RFP document file Yes ___ No ___

Exhibit D, sample construction print Yes ___ No ___

And do ___ do not ___ intend to submit a proposal.

(Mark one with an X)

Exhibit B – Fee Proposal

Item #	Line Item	Unit	Estimated Quantity	Rate
1	Design Overbuild	Per strand Ft.	740,000 ft	\$
2	Design Greenfield	Per Strand Ft.	225,000 ft	\$
3	Redesign	Per strand Ft.	30,000 ft	\$
4	Walkout	Per strand Ft.	30,000 ft	\$
5	Railroad Permit	Each	4	\$
6	State Permit w/ Standard TC	Each	30	\$
7	State Permit w/ Site Specific Traffic Control Plan	Each	15	\$
8	Federal Highway Permit	Each	4	\$
9	Bore Profile	Each	3	\$
10	Pole Data Collection	Each pole/midspan	250	\$
11	Pole Annotation w/ Make-Ready	Each pole/midspan	2000	\$
12	Pole Loading Analysis w/PE stamp	Each	250	\$
13	Joint Use Pole Application Submittal and attaining (AT&T, KU, BGE)	Per Application	40	\$
Total				\$

(Authorized Individual)

(Company Name)