



Proposal For Spring Grove Area School District

Private LTE Feasibility Study
January 31 , 2021



AdvancedNetworkServices

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Introduction

ANS Advanced Network Services, LLC (ANS) is pleased to present the Spring Grove Area School District with the following proposal for a feasibility study looking at the viability, use cases, and costs of a private LTE system. This will be focused on a proof of concept at Paradise Elementary being the first step towards a scalable solution for the school district or region.

This study will review the use cases and deployment scenarios for a private LTE system that will support student connectivity, as well as investigate the other use cases that could be used by the school district, government entities, or community at large. The feasibility study will establish a system design for a proof of concept deployment, estimated costs of that POC, a testing plan to validate the POC, and the steps to be accomplished to scale the system to a school district wide solution or beyond.

ANS Advanced Network Services, LLC is a company that is focused on communications network design and construction, with a history of supporting clients that goes back to 1991. Our team has provided solutions addressing the wireless network needs of enterprises and the wireless carriers for the past 16 years.

Project Overview

The Spring Grove Area School District has, like many other school districts, experienced challenges shifting to a remote learning approach during the pandemic due to home internet connectivity for some student populations. As a result of this the school district is investigating solutions to fix the immediate challenge, but also scale to provide value in the future. Private LTE utilizing the CBRS band has been identified to be the focus of this feasibility study and the targeted proof of concept.

The proof of concept would be located at the Paradise Elementary School which has two (2) areas nearby with student internet access challenges. These areas are different distances and directions from the school offering diverse RF propagation and use case scenarios to test.

The feasibility study will begin with an remote kickoff meeting with stakeholders to review of the existing network assets and configuration, an onsite survey of Paradise Elementary to solidify the installation scope for the site, RF propagation analysis for radio and user equipment planning, budgetary design generation, and report generation culminating with a presentation of our findings and an opportunity for stakeholder Q&A.

Project Kickoff and Stakeholder Review

ANS will coordinate with the designated school district personnel to schedule an kickoff video conference between the project team and township stakeholders. This meeting will include team introductions, scope review for day one and future network goals/options, stakeholder concerns and goals, timeline review, and a review of the deliverables to be provided at completion of the feasibility study.

Review and Analysis of Current Network Infrastructure

The site survey of Paradise Elementary will be completed in order to determine equipment mounting options, heights, available power, cable pathways, route to building MDF, and equipment mounting locations. This information will be utilized for the RF propagation analysis, network design planning, POC budget estimation, and planning of the expanded system.

Review and Analysis of Current Network Infrastructure

ANS personnel will work with school district personnel to identify the existing school district network connectivity and architecture. The contracts and funding sources supporting this connectivity is also important for future shared use case planning. This information will be aggregated to provide a single view of what is can be done with the current infrastructure, as well as what would need to be changed to support expanded users or use cases.

RF Propagation Analysis

Based on the outcome of the kickoff meeting and findings of the site survey at Paradise Elementary the RF propagation analysis will be completed. This consists of loading the equipment heights, configurations, and antenna azimuths into the design tool. The outputs provide expected receive power levels at the coverage areas so informed decisions can be made about equipment selected and what use cases to support.

Use Case Review and Assessment

From the insights collected to this point, ANS will align the anticipated coverage needs against available equipment and solutions, as well as roadmap information. The pros and cons of the solutions and the roadmap considerations will be presented for future use in the school district's decision-making process.

System Designs

To determine budgetary numbers and potential returns on investment ANS will be assembling design options that are intended to address the needs based on the findings of the analyses above. The designs will be rough orders of magnitude and complete designs will need to be completed in order to finalize costs.

Cap Ex and Op Ex Analysis

The budgetary designs will be broken down by the capital costs, operating expenses, and any potential revenue that can be garnered from the systems depending on the type of business model the design is based on. This will give a comparative basis for the budgetary system designs presented above.

Report Generation and Presentation

The data gathered, analysis performed, use cases and designs presented, as well as the financial analysis will be compiled into a cohesive document that can be utilized by the township stakeholders to determine how to proceed with network decisions. ANS will also present these findings to the stakeholders and be available to answer questions and provide clarifications.

ANS Proposal Pricing Document

Client: Spring Grove Area School District

Project Location: Private LTE Feasibility Study

Date: January 31, 2021

Pricing

The pricing below is to accomplish the feasibility study based on the scope of work above.

Feasibility Study

Description	Price
Per SOW above.	\$12,000.00
Total	\$12,000.00

Pricing does not include any applicable taxes

Total

Name	Price
Feasibility Study	\$12,000.00
Total	\$12,000.00

Assumptions/Exclusions

The ANS pricing presented above includes the following assumptions and exclusions:

- Assumes that the purchase order will be provided within 90 days and study activities will be complete within 60days from issuance of purchase order
- Assumes that ANS will have access to the required network information in order to make informed recommendations
- Assumes ANS can work unimpeded for at least an 8 hour shift for any onsite activities
- Assumes that the scope above is acceptable and any out of scope studies or analysis will be handled via mutually agreed upon change order
- Assumes ANS can bill for 50% on receipt of purchase order, with the remaining 50% billable upon delivery of report

ANS, Advanced Network Services, LLC
Work Agreement
Terms and Conditions

This Terms and Conditions Agreement (hereinafter, the "Agreement") shall constitute a legally binding agreement between _____ (hereinafter, "OWNER/CONTRACTOR") and **ANS, Advanced Network Services, LLC** (hereinafter known as "ANS"). OWNER/CONTRACTOR agrees to be bound by the terms set forth in this Agreement and the terms set forth in the "Scope of Work" agreement annexed hereto as "Schedule A". The "Scope of Work" shall be deemed incorporated by reference into this Agreement. The "Scope of Work" may be supplemented, amended or otherwise changed by mutual agreement of OWNER/CONTRACTOR and ANS. In consideration of the benefits set forth herein and the "Scope of Work", OWNER/CONTRACTOR hereby agrees as follows:

- 1. Payment Terms:** A fifty percent (50%) payment is required from OWNER/CONTRACTOR prior to the commencement of services, with the remaining balance payable upon completion. All invoices not paid within thirty (30) days will incur a service charge of 1.5% per month until the invoice is fully satisfied.
- 2. Termination:** Either party may terminate this Agreement with cause if the other party materially defaults under this Agreement, upon providing written notice of termination to the other party and a thirty (30) day period to cure such default. OWNER/CONTRACTOR shall provide payment for fees and expenses incurred by ANS through the date of termination in accordance with the provisions of Paragraph 1 but shall have no obligation to compensate or reimburse ANS for any fees or expenses incurred after the effective date of termination. ANS shall reimburse OWNER/CONTRACTOR for any payments made for services not rendered.
- 3. Indemnity by OWNER/CONTRACTOR:** OWNER/CONTRACTOR agrees to indemnify, defend and hold ANS harmless by and against any and all third-party claims, liabilities, damages and costs, including reasonable attorneys' fees, arising from or related to: (a) the work of the OWNER/CONTRACTOR on the project or any negligence of the OWNER/CONTRACTOR under this Agreement and (b) any losses or damages sustained to any type of equipment, tool, or vehicle owned by ANS due to OWNER/CONTRACTOR negligence.
- 4. Indemnity by ANS:** ANS agrees to indemnify, defend and hold OWNER/CONTRACTOR harmless by and against any and all third-party claims, liabilities, damages and costs, including reasonable attorneys' fees, arising from or related to: (a) the work of the ANS on the project or any negligence of the ANS under this Agreement and (b) any losses or damages sustained to any type of real property or personal property owned by OWNER/CONTRACTOR or a third-party due to ANS negligence.
- 5. Other Services:** Nothing in this Agreement precludes ANS from utilizing Lower Tier Subcontractors to complete work. ANS shall submit the names of any proposed subcontractors who will perform a portion of the services (Lower Tier Subcontractors) to OWNER/CONTRACTOR for written approval, which approval shall not be unreasonably withheld or delayed.
- 6. Covenant Not To Solicit.** OWNER/CONTRACTOR agrees that for so long as it is engaged with ANS and for six months thereafter, it shall not in any manner offer to employ or provide work directly or indirectly to any employee, agent or subcontractor of ANS.
- 7. Mediation and Dispute Resolution:** The parties of this agreement will encourage the prompt and equitable settlement of all controversies or claims between the parties. The parties agree that executives from both parties will meet to negotiate their differences directly and in good faith for a period of no less than thirty (30) days after receiving written notification of the existence of a dispute. If the dispute is not resolved within thirty (30) days after such notification, the parties agree to submit their dispute to a mutually agreed upon licensed attorney, for whom approval shall not be unreasonably withheld, who is an experienced and impartial mediator and is located in York County, PA, to work with them to resolve their differences utilizing non-binding mediation. If the parties are not able to resolve their dispute during such mediation, they are free to exercise all other legal and equitable rights.
- 8. Ownership of Materials:** All data, maps, plans, specifications, drawings or other ANS-furnished property shall remain the exclusive property of ANS. OWNER/CONTRACTOR agrees that such property will be used for no purpose other than for work for ANS under this Agreement.
- 9. Confidentiality:** OWNER/CONTRACTOR and ANS shall, for a period of two years beyond completion of this Agreement, treat as confidential all information that is proprietary or confidential in nature. Confidential information shall not include information which (a) was already known to the other party prior to its disclosure by a party hereto, or (b) was publicly available at the time of its disclosure, or (c) subsequently becomes so without violation by either party or its obligations hereunder; or (d) is rightfully received from third parties without obligation of confidentiality to the other party; or (e) is independently developed by the party in receipt of such information; or (f) is required to be disclosed under law. All written data shall be and remain the property of disclosing party, and all such written data, and all copies thereof, shall be promptly returned to the disclosing party upon written request, or destroyed at the disclosing party's option.
- 10. Controlling Law:** This Agreement shall be governed for all purposes by the laws of the Commonwealth of Pennsylvania. All litigation to enforce this agreement will be venued in York County, Pennsylvania.
- 11. Severability:** If any provision of this Agreement is void or is so declared, such provision shall be severed from this Agreement, which shall otherwise remain in full force and effect.
- 12. Entire Agreement:** With the exception of the documents referred to herein as constituting the Scope of Work, this Agreement sets forth the entire agreement of the parties as to the subjects covered under this Agreement and any representations, promises or conditions in connection therewith not in writing and signed by both parties shall not be binding upon either party.
- 13. Miscellaneous Terms:** a) *Waiver:* no waiver of any breach of any provision of this Agreement shall constitute a waiver of any prior, concurrent or subsequent breach of the same or any other provisions hereof, and no waiver shall be effective unless made in writing and signed by an authorized representative of the waiving party. b) *Amendment:* no amendment to this Agreement shall be valid unless the same is in writing and signed by all of the parties hereto. c) *Notice:* all notices required or permitted under this Agreement shall be in writing and shall be deemed to be delivered when delivered in person to the individual who is to receive the notice or when deposited in the United States mail, first class certified postage pre-paid. d) *Attorney's Fees:* if either party is forced to enforce any terms of this Agreement, the other party agrees to pay an award of reasonable attorneys' fees and costs for such litigation. e) *Assignment:* Either party may not assign or convey any of the rights, duties, or obligation of this Agreement without the prior written consent of ANS. f) *Binding:* this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective officers, directors, agents, employees, heirs and legal representatives. g) *Section Headings:* the section headings used in this Agreement are intended for convenience of reference only and shall not be deemed to supersede or modify any of the provisions hereof.
- 14. FORCE MAJEURE:** Either party shall not be liable for delays in performing, or failure to perform, under this Agreement or any obligations hereunder, which are directly attributable to causes beyond the reasonable control of such party. Such causes of delay or failing to perform, include but are not limited to, acts of God, pandemic/COVID- 19, fires, strikes, war, failure of a common carrier, equipment or supplies or acts or intervention by any governmental authority. However, such party shall use good faith efforts to minimize the effects of such delay.

IN WITNESS WHEREOF, OWNER/CONTRACTOR agrees to the terms of this Agreement as of the day written below:

_____ (OWNER/CONTRACTOR)

Signature: _____

Name: _____

Title: _____

Date: _____

ANS Advanced Network Services, LLC

Signature:

Name: Paul Fettuccia

Title: President

Date: _____

CLIENTPOINT DOWNLOAD RECEIPT

DOWNLOADED: 02-01-2021

CLIENTPOINT ID: 496142