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Columbia, SC, 29201

October 27, 2025

Village of Sugar Grove

Community Development Department
601 Heartland Drive
Sugar Grove, IL 60554

Subject: Special Use Permit Application – Fiber Optic Inline Amplification Hut

Dear Community Development Department,

On behalf of Middle Mile Infrastructure (MMI), I am submitting this letter along with the required documentation to formally request a Special Use Permit for the installation of a fiber optic inline amplification hut at Route 30, Sugar Grove, IL 60554, within the Village of Sugar Grove. MMI is a private utility company aiming to develop an unmanned In-Line Amplifying (ILA) hut to energize underground fiber optic lines. The buried fiber optic cable is transferred from underground to connect with transceiver devices to boost and enhance data signals. The fiber will be used by private or public network providers at the local and regional scale.

This facility is a critical component of a larger regional fiber optic network designed to enhance broadband infrastructure and connectivity across the region. The proposed hut will be a small, unmanned, prefabricated structure designed to house telecommunications equipment necessary for signal amplification and network reliability. It will operate with minimal noise, require minimal maintenance, and will not generate traffic or emissions.

MMI's fiber hut is part of an extensive network of fiber optic infrastructure. Specifically, the equipment enclosure will include one (1) 24'x36' prefabricated concrete building, approximately 12' tall, equipped with HVAC system and a generator. As part of our phasing plan, we will initially install one hut with concrete foundation, one (1) emergency generator with concrete foundation and the concrete pad foundation for a second hut in the future. As demand increases, there is the potential for an additional five huts to be installed for a maximum final buildout of 6 huts total, each with its own emergency generator. The attached plans show the initial build on Sheet 9 and the maximum future buildout on Sheet 10. The generators will run every three months for about 5 minutes for testing and maintenance, and will also operate during any power outages. The noise generated by the generators and HVAC systems is approximately 55 decibels.

The proposed facility will generate minimal traffic as this is an unmanned facility serviced weekly to monthly for facility maintenance. Water and sewer are not required for these huts.

In terms of impervious surfaces, the initial proposed development will result in an increase in impervious area as follows:

Initial Build:

- Existing Impervious: 271 SF
- Proposed Impervious: 4533 SF
- Net Increase Impervious: 4262 SF

For future buildout, the increase in impervious area will be:

- Existing Impervious: 271
- Proposed Impervious: 9321 SF
- Net Increase Impervious: 9050 SF

Thus, the **total increase in impervious area with full buildout will be 9,050 SF**. Regarding the gravel area, we will be utilizing ASTM #57 crushed aggregate, which is clean aggregate (i.e., no fines) and is considered “free-draining.”

The proposed facility in the Village of Sugar Grove will be similar in appearance to the photo below and will include a Trex privacy fence and landscaping elements to ensure it is well-screened and aesthetically integrated into the surrounding environment. A landscape plan has been included on Sheet 21 of the plans.





We believe this use is consistent with the Village's goals for infrastructure development and technological advancement, and we are committed to ensuring that the installation meets all applicable zoning, safety, and aesthetic standards. This submittal includes all required documentation as outlined in the Special Use Permit Checklist.

Included Documents:

1. Land Development Application
2. Standards for Special Use Form
3. Plat of Survey with Legal Description
4. Site Plan
5. Grading Plan
6. Proof of property ownership
7. Standards for Variation Form
8. Landscaping Plan