

Heard Road Extension

Bluffs Parkway to Cherokee County Airport

PREPARED FOR



Cherokee County Government
Public Works
1130 Bluffs Parkway
Canton, GA 30114

PREPARED BY



1355 Peachtree St NE
Suite 100
Atlanta, GA 30309

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1 Project Description

The intent of the project is to develop a roadway alignment, identify key issues, and prepare a total estimated probable project cost estimate for the Heard Road extension linking Bluffs Parkway to the Cherokee County Airport. This includes identifying physical constraints, developing a typical section, and identifying environmental, utility, and property impacts.

The project is tied very closely to both the Airport Master Plan and the Technology Ridge Opportunity Zone. There is a clear need to ultimately link the Airport to Riverstone Parkway, and the potential interchange at Fate-Conn and I-575. The project is driven by the following key factors:

- Increase connectivity and enhanced street network as development occurs
- Increase roadway capacity to accommodate the anticipated needs as Technology Ridge develops
- Future Fate Conn Road/I-575 interchange

The results of this concept study will be used to program funds into the Roadway Capital Improvement Program using the 1% Special Purpose Local Option Sales Tax (SPLOST Tax).

Since the initial study has been completed the City of Canton has approved the developer of the Bluffs Technology Park to alter the master plan from the original office center to a 700-single family home subdivision. Because of this and the projected right-of-way and construction costs associated with constructing the access road are higher than anticipated, the County has requested evaluation of a new typical section along the recommended Alternative Alignment No. 1 as outlined in the Technical Memorandum to the County dated August 2, 2017.

2 Summary of Updated Analysis

A new typical section within a 60-foot right-of-way was evaluated. The typical section will be a two-lane undivided roadway consisting of two 12-foot travel lanes (24' paved road), a 6-foot sidewalk on the north side and a 10-foot multi-use path on the south side with curb and gutter and a 2' utility strip.

In an effort to minimize right-of-way acquisition costs along the Airport Spur Road, the spur road alignment was revised to intersect the Heard Road connector at or about Station 1115 of the Heard Road connector.

Using Alignment No. 1, a new profile and cross sections was developed to maximize balancing earthwork quantities. The right-of-way needs were updated based on the acquisition and easements needed for construction.

Regarding the stormwater needs, we will make an assumption on the reduction in pond sizes required based on the updated impervious areas resulting from the revised typical section. The stormwater calculations have not been updated.

In addition to the revised typical, the opinion of probable construction cost was revised based on the project being constructed in five (5) phases as follows:

- Phase I – Bluffs Parkway to Fate Conn Road/Heard Road, including roundabouts (single lane);
- Phase II – Fate Conn Road to Lower Bethany Road, including roundabout (single lane);
- Phase III – Lower Bethany Road to Cherokee County Government parcel at airport;
- Phase IV – Spur to Airport Road through County owned parcel;
- Phase V – Airport spur road around west and south side of runway.

Based on the above phasing, the right-of-way needs spreadsheet (area and costs) were updated to reflect the acquisition and easements needed for each phase of construction.

3 Right-of-Way Requirements

The right-of-Way needs were calculated as follows:

- Acquisitions - The area calculations were based on the GIS parcel information and 60-foot proposed roadway right-of-way.
- Temporary Construction Easements – The limits of construction were plotted based on the cross sections developed using a 2:1 embankment slope.
- Pond Easements – Permanent easements were developed based on the stormwater pond needs. This exercise was only completed for the preferred alignment, Alternative No. 1. The proposed acquisition and easements are shown on the alignment plans.
- Temporary drainage easements may be needed along the back of sidewalk to convey off site flow to the designated stream. This is to avoid over designing the roadway stormwater system. The easements can be abandoned when the sites are developed.

See Appendix C for further parcel details regarding easements.

Following is a summary of each alternative.

Table 1 Right-of-Way Needs Alternative No. 1

| Description | Area (Acres) |
|-----------------------------|--------------|
| Acquisition | 25 |
| Pond Easement | 9 |
| Temporary Easement | 29 |
| Temporary Drainage Easement | 3 |

4 Estimated Project Costs

The estimated construction costs were developed using the most recent GDOT weighted average unit prices for road construction. The following table summarizes estimated probable construction costs.

Table 2 Estimate of Probable Construction Costs

| Segment | Cost |
|----------------|---------------------|
| Phase I | \$3,950,000 |
| Phase II | \$6,490,000 |
| Phase III | \$5,430,000 |
| Phase IV | \$2,300,000 |
| Phase V | \$3,350,000 |
| Total | \$21,520,000 |

Table 3 summarizes the estimated overall project costs including design, construction, right-of-way, utilities, mitigation, and construction engineering & inspection (CEI). See Appendix E for further detail on cost breakdown.

Table 3 Estimate of Probable Project Costs

| Segment | Cost |
|----------------|---------------------|
| Phase I | \$5,578,500 |
| Phase II | \$9,546,700 |
| Phase III | \$7,914,100 |
| Phase IV | \$2,802,700 |
| Phase V | \$3,910,000 |
| Total | \$29,752,000 |

Appendices (Under Separate Cover)

Appendix A – Concept Plan and Profile

Appendix B – Typical Section

Appendix C – Right-of-Way Requirements

Appendix D – Cross Sections

Appendix E – Estimate of Probable Project Costs