



CITY COUNCIL SPECIAL SESSION

City Council Chambers

Thursday, May 12, 2022 at 3:00 PM

AGENDA

Call to Order

City Manager's Report

- 1. Sunset Drive Improvements:** McGill Associates will address Council regarding improvements to Sunset Drive.
- 2. FY 2022- 2023 Proposed Budget Review:** City Manager, James Inman will review the proposed 2022-2023 budget with Mayor and Council.

Council General Discussion

Adjourn

Individuals requiring special accommodations at this public meeting should contact ADA Coordinator, Hydeia Hayes, at (704) 729-6509 or Countrywide at (704) 866-3300 or State Relay Service at 1-800-375-8662.

TECHNICAL MEMORANDUM

To: James Inman, City Manager
Jamie Ramsey, Asst. City Manager

From: McGill Associates
Douglas Chapman, PE

Date: May 10, 2022

Subject: Sunset Drive Improvements

Bessemer City owns and maintains its own street network, with most of those streets being paved with asphalt. Sunset Drive (on the northwest side of the City) is asphalt on the western end beginning at 14th Street, however it has a gravel surface from west of Logan Street to Ramseur Road. The maintenance needs of this gravel road are regular and on-going, with repeated stone erosion and movement, along with ditch line migration. Further, gravel roads are dusty and often develop ripples in the surface along inclines.

As an alternative to gravel maintenance, City staff has asked McGill to evaluate alternatives for long-term management and maintenance of this section of Sunset Drive. This analysis includes developing alternatives, costs, and a pro/con evaluation. Of the entire length of Sunset Drive, approximately 2,550 feet is gravel and needs attention. A map showing the gravel section of Sunset Drive can be found below.



In our evaluation of the roadway, we have found the stone to be insufficient in some areas, particularly along the road edges. Further, many of the ditch lines have been filled with silt and fines, and thus should be reshaped. These items must be addressed along with the final surface to be placed on the roadway. The following three (3) alternatives have been developed for the project.

Alternative 1

This alternative includes simply adding 2-inches of stone base and reshaping the ditches on both sides. Existing stormwater patterns would remain, and the final surface would continue to be gravel. This option would have to be repeated every 6-8 years. The estimated cost for this effort is \$99,000.

Alternative 2

The second alternative includes the same work as listed for Alternative 1, adding stone and ditch work. However, this option will include adding a tar and gravel treatment for the final road surface. The first two layers would utilize #78 stone (larger gradation) with a finer #14 stone in the top layer. This alternative will provide the City with a stable and solid surface for the roadway, with a significant savings over standard asphalt. The overall thickness of ¾ to 1-inch will not have the strength and longevity of standard asphalt and will likely need repairs in 12-15 years. The estimated cost for this option is \$170,000.

Alternative 3

The final alternative includes the same addition of 2-inches of stone base and ditch line work as the first two alternatives. However, this option includes a final road surface that consists of 3-inches of I19.0C asphalt binder course and 1.5-inches of S9.5B surface asphalt course. This alternative will provide a solid roadway that will last many years to come. While it may need resurfacing in 20-25 years, that will be only the addition of another layer of 1.5-inches of surface asphalt only. The disadvantage of this option is the increased costs, estimated at \$300,000.

Each of these alternatives has advantages and disadvantages, which typically offset and revolve around cost and longevity. Further, each alternative 1 to 3, has an improved ride quality with each “step up”. A final consideration is the increased speeds that could be expected upon improving the roadway surface as drivers use this as a cut through.

Should you have any questions or need additional information, please let us know.

Bessemer City Sunset Drive Improvements

Sunset Drive

- East end to N 14th – Paved
- West end to Ramseur - Gravel

Item 1.





Existing Conditions



Item 1.



Existing Conditions



Item 1.

Alternative 1

Improve Gravel - \$90,000

- Simply adding stone and reshaping ditches

Pros

- Lower Cost
- Faster Implementation
- Will Slow Traffic

Cons

- Will Need to Be Repaired Sooner
- Worst Travel Condition

Alternative 2

Tar and Gravel Surface - \$170,000

- Adding stone and reshaping ditches
- Triple layer of tar and gravel placement
- Approximately 1-inch thick – larger stone in first layers

Pros

- Modest Cost
- Longer Lifespan than Gravel
- Modest Traffic Speeds

Cons

- Less Life than Asphalt
- Less Structure than Asphalt

Alternative 3

Asphalt Surface - \$300,000

- Adding stone and reshaping ditches
- 3-inches asphalt base binder
- 1-1/2-inches asphalt surface

Pros

- Longest Life
- Best Traveling Condition

Cons

- Highest Cost
- Promotes Higher Traffic Speeds
- Longer Implementation

Summary

- Everyone wants a nice paved road
- Cost is a significant factor
- Longevity impacts long term cost
- Improved roads will increase the amount and speed of traffic
- A hard surface will be much cleaner

Alternatives

1 - Gravel - \$90,000

2 - Tar and Gravel - \$170,000

3 - Asphalt - \$300,000

