



AGENDA ITEM SUMMARY FORM

MEETING DATE: August 13, 2024
PREPARED BY: Chris Whittaker
AGENDA CONTENT: Henderson Roadway BCA

AGENDA ITEM SECTION: Regular Agenda

BUDGETED AMOUNT: **FUNDS REQUESTED:** \$28,600

FUND:

EXECUTIVE SUMMARY:

The City has received the Henderson Roadway score from HGAC TIP application recently submitted. The minimum score is 50 and the Henderson Roadway Project scored 76. HGAC as requested the City create and submit a Benefit Cost Analysis (BCA) for this project. The BCA is due August 23rd.

HDR has prepared a proposal for this effort (see attached)

RECOMMENDATION: Approve HDR for the amount of \$28,600 to prepare and submit the HGAC's BCA on the Henderson Roadway TIP application.

August 6, 2024

City Manager
City of Angleton
121 S. Velasco
Angleton, Texas 77515

Re: Proposal for a benefit-cost analysis for Henderson Road corridor between SH 35 (Mulberry Street) and SH 288B (N Velasco Street).

Dear Mr. Whittaker:

HDR Engineering, Inc. (HDR) is pleased to submit this proposal for conducting a benefit-cost analysis mentioned in the reference above. The following is the proposed scope of services and fee estimate.

Task 1. Data Collection

HDR will gather data required for the benefit-cost analysis. Historical crash data from Texas Department of Transportation (TxDOT)'s Crash Record Information System (CRIS) and pedestrian/bike activity data from H-GAC's Interactive web applications will be obtained. HDR will then review previous traffic study to extract other information such as geometrics under the existing and improved conditions, traffic demand, and simulation results for operation evaluation. HDR will also gather the cost data including unit costs of travel time and emissions and total costs for the proposed improvement project.

Task 2. Safety Benefit Analysis

The H-GAC's "Roadway Crash Benefits Template" will be utilized to conduct the safety benefit analysis. HDR will review the procedure for using the template, examine existing and proposed build conditions, and apply effective improvements to prevent vehicular and pedestrian/bike crashes. The analysis will estimate annual savings from reduced crash costs.

Task 3. Mobility and Emission Benefits Analysis

HDR will use simulation results from the 2021 study to estimate the benefits in operational improvement of the Henderson Road corridor. This will include estimating daily reductions in travel times, fuel consumption, and emissions. These daily estimates will then be converted into annual savings from reduced road user and environmental costs.

Task 4. Benefit-cost Analysis

Combining the gathered cost data and estimated benefit results for the year the project opens to the public (estimated 2030), HDR will assess the costs and benefits of the completed project throughout its life cycle. The results will include the total net savings and the benefit-cost ratio of the project by 2050.

DELIVERABLES

- Spreadsheet Summary for Benefit-cost Analysis

**PROJECT FEE**

HDR proposes to complete this analysis on a lump sum basis for a fee not to exceed \$28,600. The attachment provides detailed estimates of the hours and fees required for the analysis.

TERMS AND CONDITIONS:

This project will be performed under the current Master Agreement contract with the City, and its terms and conditions will apply.

Invoices will be submitted on a monthly basis, reflecting charges to date on the basis specified in this proposal. Lump sum project tasks will be billed as a percentage of completion, based on the estimated progress of the work to date.

For all services billed on an hourly basis, the fee includes hourly costs for all personnel based on actual raw labor rates times a multiplier of 3.18 (covering burden, overhead and profit) for all employees. Hourly rates are subject to revision on an annual basis due to raises and personnel changes; however, the multiplier will not change without authorization from the City.

Mileage will be charged at the prevailing Federal rate.

SCHEDULE:

The Tasks listed in the scope are expected to start after receiving a signed proposal from the City by August 7, 2024. The benefit-cost analysis will be completed by H-GAC's deadline of August 23, 2024.

We appreciate the opportunity to be of service on this project. If you have any questions, please do not hesitate to contact me at (713)-622-9264.

Sincerely,

HDR Engineering, Inc.

A handwritten signature in blue ink, appearing to read 'David C. Weston'.

David C. Weston

Vice President/Area Manager

Acceptance: HDR's services will be available upon the acceptance of this proposed letter agreement by all applicable parties as listed below. Please indicate acceptance of this letter agreement by affixing your signature or that of your authorized representative in the space below.

City of Angleton, Texas

By: Chris Whittaker – City Manager

Date:

Henderson Rd - Benefit Cost Analysis - Level of Effort Estimate
City of Angleton

| | | Reddy/PM | Tracy/PE | Suman/EIT | QC/Economist |
|--------------------|-------------------------------|----------|----------|-----------|--------------|
| Safety | Study crash benefit template | 2 | 8 | 8 | |
| | Download crash data | | 2 | 4 | |
| | Existing condition study data | | 4 | 8 | |
| | Improvement condition study | | 4 | 8 | |
| | Data input into template | | 4 | 8 | |
| | QC | | | | 2 |
| Mobility | Delay calculation | | 4 | 6 | |
| | Delay cost calculation | 2 | 2 | 6 | |
| | QC | | | | 2 |
| Emissions | ID unit emission cost | | 2 | 6 | |
| | Emission cost calculation | 2 | 2 | 6 | |
| | QC | | | | 2 |
| BCA | Total cost | 2 | 4 | 2 | |
| | Daily & total benefit | | 2 | 4 | |
| | B-C ratio & net savings | | 2 | 4 | |
| | QC | | | | 2 |
| Deliverable | Tables & Figures | 1 | 4 | 12 | |
| | QC | | | | 2 |
| Others | Meetings & Discussions | 2 | 8 | 4 | |
| | | 11 | 52 | 86 | 10 |

| | Hours | Rates | Total |
|-------------------|-------|-----------|---------------------|
| PM/Reddy | 11 | \$ 323.15 | \$ 3,554.67 |
| PE/Tracy | 52 | \$ 236.97 | \$ 12,322.63 |
| EIT/Suman | 86 | \$ 114.67 | \$ 9,861.69 |
| QC | 10 | \$ 286.20 | \$ 2,862.00 |
| Total Cost | | | \$ 28,600.98 |