**Narrative Benefits**

The following description provides information related to the various sections of Benefit Cost Analysis (BCA) for the Landing Boulevard Extension and NASA 1 Extension project. These benefits are projected to be realized over the lifetime of the project beginning with the proposed opening in 2020.

Several project benefits including short term job creation, improved travel time, congestion reduction, safety improvement and creation of developable land are presented.

The Benefit Cost Analysis Guidance for TIGER Grant Applicants, the TIGER Benefit-Cost Analysis (BCA) Resource Guide and other similar successful TIGER Grant Application Examples were used for reference in developing the estimated benefits of this project as presented in this section.

**Project Cost**

Proposed construction costs were developed from project study estimates provided by the sponsoring municipalities of League City and Webster, Texas. Total construction costs for the project are estimated to be approximately $25.3 million over a period of three fiscal years from FY 2018 through FY 2020. Overall project costs are estimated to be approximately $31.7 million, including nearly $5 million for right-of-way acquisition and other costs for project development.

**Short Term Jobs Benefit**

The TIGER 3 FAQ’s page of the USDOT Application Resources website states that “The USDOT estimates that there are 13,000 jobs created per $1 billion dollars of government investment (or $76,900 per job year).” Therefore, it is estimated for this project that every $76,900 of project construction value will create one job for on year.

Using this method, the Landing Boulevard Extension and NASA 1 Extension project is estimated to create approximately 109 short term jobs. To calculate this estimate, the proposed construction cost of $25,333,202 is divided by the $76,900 as defined above and then divided by three to account for the three year period for proposed construction expenditures.

**Developable Land Benefit (Economic Competitiveness)**

On the southern portion of this project, most of the adjacent land uses are either currently developed or will not likely change as a result of this project. These land uses include Challenger Seven Memorial Park and the Forest Park East Cemetery as well as existing commercial and mixed use developments on West NASA Boulevard and closer to FM 518 (West Main Street).

The northern portion of the project area contains a higher potential for economic development. According to the HGAC Regional Land Use Information System (http://arcgis02.h-gac.com/RLUIS/), a large tract of vacant developable land is located west of I-45, south of FM 528 and east of West NASA Road. Based on year 2014 parcel data from the Harris County Appraisal District, there are seven developable parcels totaling 130.7622 acres in the project area.

These developable parcels are identified as follows:

|  |  |
| --- | --- |
| **Parcel ID** | **Acreage** |
| 036-164-000-0010 | 11.938 |
| 036-169-000-0003 | 19.75 |
| 036-169-000-0004 | 34.9233 |
| 036-169-000-0006 | 54.6609 |
| 036-169-000-0017 | 5.49 |
| 036-169-000-0020 | 4.00 |
| **Total** | **130.7622** |

Because a portion of this developable land will be utilized for the project right-of-way, and in consultation with the City of Webster’s Economic Development Department, the estimated developable land benefit will be calculated based on a total of 128 acres.

Several adjacent developed land parcels were surveyed for the purposes of providing a representative value for properties near the study area. According to the Harris County Appraisal District Website (<http://www.hcad.org/default.asp>), assessed land values in the area vary widely from more than $1.5 million per acre to approximately $8,700 per acre based on specific location, access and freeway frontage. In consultation with the City of Webster’s Economic Development Department, a conservative average of $871,200 per acre ($20/square foot) is used to calculate existing land values.

The existing land parcels surveyed to calculate this present value estimate are as follows

|  |  |  |
| --- | --- | --- |
| **Parcel ID** | **Acreage** | **Assessed Value/Acre\*** |
| 116-690-000-0001 | 4.3483 | $1,877,280 |
| 131-226-001-0002 | 1.1551 | $1.539,000 |
| 129-910-003-0001 | 1.0304 | $1,017,770 |
| 129-237-001-0001 | 2.3072 | $998,800 |
| 131-226-001-0004 | 8.0224 | $877,230 |
| 129-910-002-0001 | 1.3364 | $563,380 |
| 129-237-001-0002 | 2.5074 | $209,071 |
| 036-170-000-0005 | 2.0504 | $8712 |

\*Approximate per acre values

Based on these factors, it is estimated that the lifetime benefit for creating of developable land would be more than $111.5 million for this project. This number is calculated by multiplying the 128 total acres of new developable land proposed to be created by this project and the estimated average per acre value of $871,200.