

Carbon Reduction Program - Waco MPO Project Submission

Submission date: **18 April 2023, 10:00AM**
Receipt number: **8**
Related form version: **7**

Introduction

Proposed Project Details

City Name:	City of Waco
Contact Name, Title:	Jim Reed, Streets Division Manager
Email:	jimr@wacotx.gov
Phone Number:	2542305780
Project Title:	Negative Emission Tree Planting (Mars Drive Revitalization)
Project Location:	Mars Drive from Hewitt Drive (FM 1695) to Texas Central Parkway
Project Location	Mars Dr, Waco, TX 76712, USA Map (31.4871927, -97.1971634)

Project Description:

Our community continues to strive for healthy neighborhoods and economic vibrancy. Both are easily satisfied with the numerous positive values associated with the urban landscaping and planning, including street tree effects. The integration of street trees into the urban roadside system offers many advantages to the surrounding area including enhanced property value, environmental benefits, and the well recognized aesthetic enhancements.

This project application consists of the installation of street trees along an active construction project that supports various alternative mobility options. The active construction project is scheduled to be complete no later than September 2023. The work identified in this application shall be separate and apart from the active construction project.

Street trees are essential for life. They not only introduce inviting place making but help filter the water we drink, clean the air we breathe, shade our mobility options on sunny days, and provide habitat to over 80% of the world's terrestrial biodiversity.

Street trees, especially their contribution to negative emission, play a crucial role in alleviating the devastating impact of climate change.

Alignment with Prioritization Criteria:

1. Is your project a listed, eligible activity? **Yes**

If yes, which eligible category does your project fall under? If no, how and to what degree would your project measurably reduce transportation emissions?

2.

Does your proposed project reduce transportation emissions? In what ways?

When trees are planted and begin to grow, they start absorbing carbon dioxide emissions, which they then store and carry out photosynthesis with. Researchers at University College London, University of Oxford, and ETH Zurich found that if people work together worldwide to plant trees, two-thirds of the total carbon emissions (~three hundred tons) put into the atmosphere due to human activity can be removed. One tree can mature and consume 48 pounds of carbon dioxide per year to allow a human to breathe for two years. Professor Tom Crowther from ETH Zurich conducted 49 experiments and saw how a 1°C rise in global temperature would cause microorganisms to release about 55 billion tons of soil carbon by 2050. The detrimental aftermath is preventable because while carbon is present with warming soils, trees could absorb them when growing.

3.

Does your proposed project address racial equity, workforce and economic development, remove barriers to opportunity in both rural and urban communities, or which redress prior inequities and barriers to opportunity? How? (Project prioritization considers both AOPP and overall mobility needs.)

Whether walking, biking, riding, or driving, the length of one's commute is an important factor for one's quality of life. The West Waco neighborhood stands out for its commute length, according to recent analysis. Residents of the West Waco neighborhood have the pleasure of having one of the shortest commutes to work of any neighborhood in America. 61.6% of the residents have a commute time from home to work (one way) of less than fifteen minutes. This is a higher proportion of residents enjoying a short trip to work than NeighborhoodScout found in 96.5% of U.S. neighborhoods. Less time commuting means more opportunities to walk and cycle to scheduled events.

In the West Waco neighborhoods, residents most

commonly identify their ethnicity or ancestry as Mexican (17.3%). There are also a number of people of German ancestry (13.6%), and residents who report Irish roots (5.7%), and some of the residents are also of English ancestry (5.3%), along with some Puerto Rican ancestry residents (4.9%), among others.

Regardless of income, ethnicity / ancestry, or neighborhood characteristics, everyone can join in and be a part of this application for much needed aesthetic improvements along the Mars Drive corridor.

Anyone can get involved with planting trees, including students, the elderly, and even those faced with disabilities. Foundations such as Texas Trees, Texas A&M Forestry, and Waco Tree Foundation shall be contacted to ensure the best opportunity for plantings survival is based on their suggested target placement, and dates for planting the trees. Stakeholders across our community who desire to participate in the tree planting as a contractor, vendor, or volunteer shall be informed on this opportunity to bid and be educated on the resources and conditions to pursue this opportunity to plant the trees in this more industrial area of our community.

Will your proposed project benefit future generations? In **“He plants trees for the benefit of later generations”**:
what ways? **John Quincy Adams's Motto.**

Planting trees, even just one or two, can make a huge difference. Trees are our lifeline to cleaner air and a healthier environment as trees improve air quality by producing oxygen. We need trees now more than ever!

For decades, I have been encouraged to plant trees and tuber species for reasons that will remain pertinent forever. My grandfather (who farmed peanuts across thousands of acres in Hill County) said that you do not plant a tree for yourself to enjoy, but for the enjoyment of future generations. Therefore, it is important to make sure that we have trees standing and providing us with the multitude of benefits for generations to come... If for nothing more important than shade.

From a safety perspective, the tree plantings shall serve as a natural buffer that provides a spatial space between development, motorists and users along the trail and sidewalks. Buffers shall include landscape plantings such as grass, trees or shrubs, and shall be placed in an area commonly referred to as the “planting strip,” “landscape buffer,” “tree buffer,” or “tree box.” In some areas along the completed trail tree plantings shall be strategically placed in a grassy swales or drainage ditches to improve drainage.

Does your proposed project take into account the ways in which it interacts with surrounding areas and influences current and future accessibility and uses? How?

The active urban construction project to be supported by this application consists of both walking and cycling opportunities adjacent to the largest Higher Learning Independent School District in McLennan County. Planting trees along this improved concrete corridor of streets, sidewalks and multi-use trails could help facilitate more users and allow people to feel better connected to nature in the process. Cities seem to be shifting from urban sprawl and car centric to being more considerate towards pedestrians and cyclists. Planting more trees allows this corridor to be more connected with nature, users to feel more secure, and cyclists to experience a more inviting mode of travel to work and play.

Upon completion of the work proposed along this corridor, it is obvious the various mobility options shall bring many benefits to our transitioning community. By providing safe and accessible transportation and recreation opportunities separated from motor vehicle traffic, sidewalks and trails benefit the individuals using them and can also contribute to economic development and sustainability goals of our larger community.

The Mars corridor has been identified across several master plans to provide for necessary alternative mobility options as related to accessing the evolving industrial, commercial and residential districts in the immediate areas surrounding the State's arterial facility described as Hewitt Drive (FM 1695) and City's Texas Central Parkway growth and development.

What is the Local match committed to this project?

**Estimated Opinion Construction Costs = \$789,984
(Includes 30% Contingency)**

City of Waco Participation Percentages

25% Construction (\$197,496 Based on EOCC)

100% Design Services

100% ROW & Utilities

100% Environmental

100% Inspection Services

100% CA /CM

7.

What is the readiness level of the project? Project funds **#1 - 60% Complete (RBDR Architects under Contract)** are available for obligation for a maximum of 4 years (3 **#2 - Satisfied (Complete)** years after the last day of the fiscal year for which funds **#3 - Satisfied (Complete)** are authorized). Please indicate project status for **#4 - Partially Satisfied (Prelim EOPC - See Section 6)** design, engineering (if applicable), ROWs, and cost **#5 - Partially Satisfied (BCE)** estimates.

8.

Does proposed project have community support? If yes, **#1 - Satisfied (Previously authorized by City Council 9/21/2021)** to what extent?

#2 - Satisfied

#3 - Satisfied

#4 - Satisfied

#5 - Satisfied

Please include letters of support, public comments, endorsement from public officials, or other related documentation demonstrating type and caliber of community support.

[5 - Exhibit 2 Endorsement from Waco District Engineer.docx](#)

[5 - Exhibit 1 MPO Active TP.docx](#)

[1 - exhibit 1 \(council resolution - GRANT\).doc](#)

[5 - Exhibit 3 Endorsement from Bike Texas Executive Director Robin Stallings.docx](#)

[1 - Exhibit 2 \(council resolution BIDS\).doc](#)

[1 - Exhibit 4 \(condition assessment 1\).docx](#)

[1 - Exhibit 5 \(condition assessment 2\).docx](#)

[1 - Exhibit 3 \(plan drawing\).pdf](#)

[1 - Exhibit 6 \(condition assessment 3\).docx](#)

[1 - Exhibit 6 \(condition assessment 4\).docx](#)

[1 - Exhibit 8 \(proposed tree placement.docx](#)

[1 - Exhibit 7 \(condition assessment 5\).docx](#)

[2 - Exhibit 1 \(public meeting invite\).docx](#)

[2 - Exhibit 3 \(trail System Planning Map\).pdf.docx](#)

[3 - Exhibit 1 \(public support letters\).docx](#)

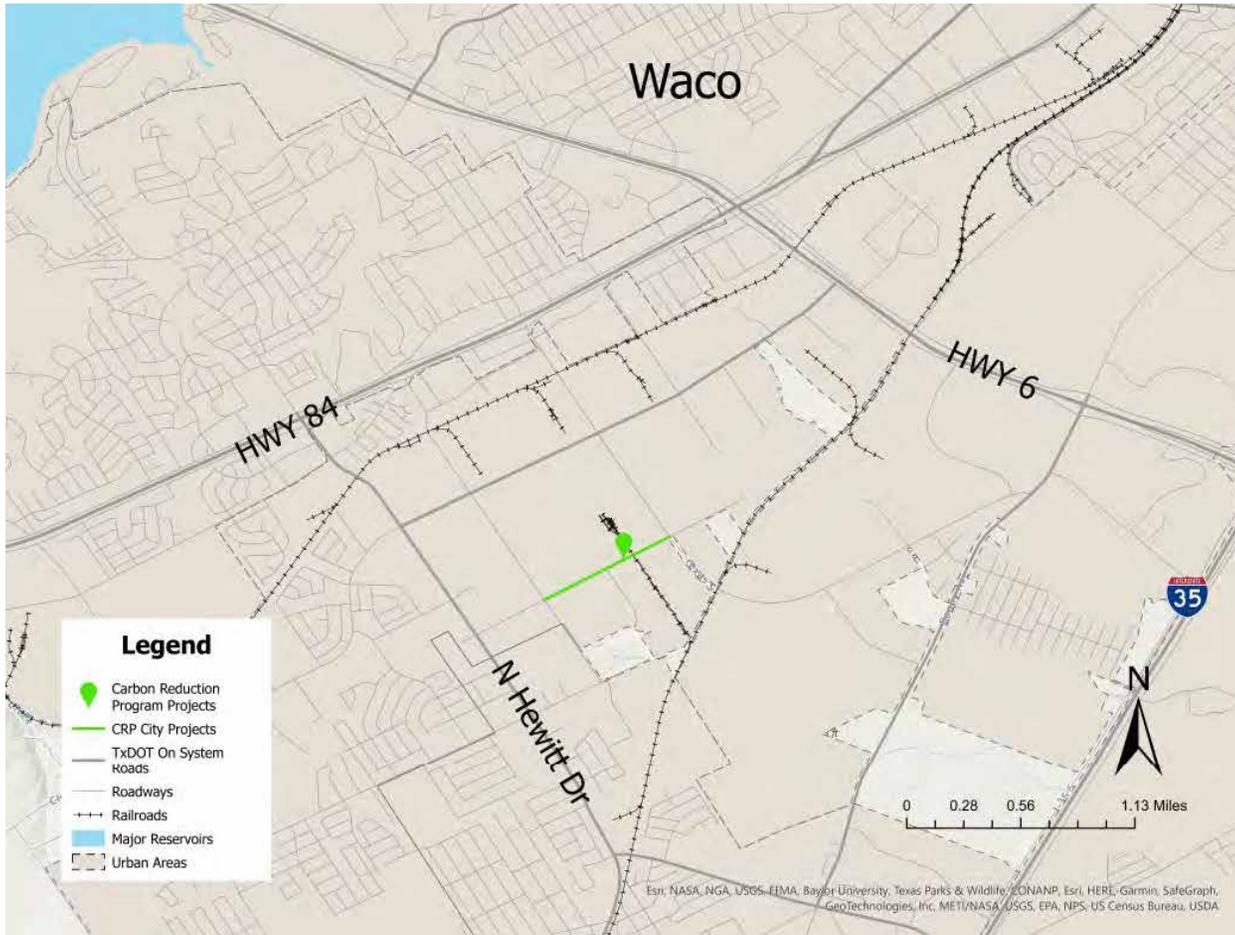
[4 - Exhibit 1 MISD superintendant.pdf](#)

[4 - Exhibit 2 Endorsement from Congressman Bill Flores.docx](#)

[4 - Exhibit 3 Endorsement from Congressman Senator Brian Birdwell.docx](#)

[2 - Exhibit 2 \(city-wide Trails Master Plan\).pdf](#)

[4 - Exhibit 4 Endorsement from State Representative Kyle Kacal.docx](#)





(Revised 06/2019-Public Works)

Resolution

CITY OF WACO

Council Date: 06/18/2019	Originating Department: Public Works	Presentation By: Amy Burlarley-Hyland	Reference #: RES-2019-367
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Item:

Consider a resolution approving the submission of twelve (12) separate applications to the Texas Department of Transportation (TxDOT) for a grant or grants for the following projects in response to TxDOT's 2019 Statewide Call for Projects for the Transportation Alternative Set-Aside (TASA) and/or Safe Routes to School (SRTS) Programs, namely: SRTS Projects: (1) Waco SRTS Alta Vista Elementary; (2) Waco SRTS Cesar Chavez Middle; (3) Waco SRTS Indian Springs Middle; (4) Waco SRTS J. H. Hines Elementary; (5) Waco SRTS Provident Heights Elementary; and (6) Waco SRTS South Waco Elementary, and TASA Projects: (1) Waco SRTS Cesar Chavez Middle; (2) Waco SRTS Indian Springs Middle; (3) Waco SRTS J. H. Hines Elementary; (4) Waco TA Cedar Ridge Neighborhood Bike and Ped SUP Connection; (5) Waco TA Mars Drive Bike & Pedestrian Connectivity Improvements; and (6) Waco TA MKT East Waco Rails to Trails Connection, authorizing the City Manager to act on behalf of the City in all matters relating to this funding nomination and to execute all necessary applications, assurances, certifications, and other documents, relative to the submission of the applications, and supporting funding of and other actions related to the above-mentioned projects.

Background:

Approval of this resolution will allow the Public Works Department to apply for federal funding consideration under the Texas Department of Transportation 2019 Statewide Call for Projects for the Transportation Alternatives Set-Aside (TASA) Program and/or Safe Routes to School (SRTS) Programs. These Programs provide the opportunity for the City to secure federal funds to complete high priority alternative transportation projects, if selected.

The attached resolution includes language provided by TxDOT that outlines the required written commitments by the City to apply for funding under these Programs.

The twelve (12) applications to be submitted to TxDOT for consideration of funding include the following:

Transportation Alternatives Set-Aside (TASA)

- Waco SRTS Cesar Chavez Middle
Estimated Construction Costs \$1,166,608.00 - Estimated Local Participation \$268,320.00 (Match)
- Waco SRTS Indian Springs Middle
Estimated Construction Costs \$577,932.00 - Estimated Local Participation \$132,925.00 (Match)
- Waco SRTS J. H. Hines Elementary
Estimated Construction Costs 721,685.00 - Estimated Local Participation \$165,988.00 (Match)
- Waco TA Cedar Ridge Neighborhood Bike and Ped SUP Connection
Estimated Construction Costs \$1,811,217.00 - Estimated Local Participation \$416,580.00 (Match)

Waco TA Mars Drive Bike & Pedestrian Connectivity Improvements

Estimated Construction Costs \$5,134,198.00 - Estimated Local Participation \$1,180,866.00 (Match)

Waco TA MKT East Waco Rails to Trails Connection

Estimated Construction Costs \$3,615,633.00 - Estimated Local Participation \$831,596.00 (Match)

Safe Routes to School-Infrastructure (SRTS)

Waco SRTS Alta Vista Elementary

Estimated Construction Costs \$507,626.00 - Estimated Local Participation \$50,763.00 (Engineering)

Waco SRTS Cesar Chavez Middle

Estimated Construction Costs \$1,166,608.00 - Estimated Local Participation \$116,661.00 (Engineering)

Waco SRTS Indian Springs Middle

Estimated Construction Costs \$577,932.00 - Estimated Local Participation \$57,793.00 (Engineering)

Waco SRTS J. H. Hines Elementary

Estimated Construction Costs \$721,685.00 - Estimated Local Participation \$72,169.00 (Engineering)

Waco SRTS Provident Heights Elementary

Estimated Construction Costs \$1,016,146.00 - Estimated Local Participation \$101,615.00 (Engineering)

Waco SRTS South Waco Elementary

Estimated Construction Costs \$468,610.00 - Estimated Local Participation \$46,861.00 (Engineering)

Local Match for Transportation Alternatives Set-Aside (TASA) Projects

TASA funding provides 80% federal funds with a 20% minimum local match required. The local funding match is a cash match or a combination of cash and in-kind contributions provided by or through the project sponsor. Projects selected by the Texas Transportation Commission will also require the addition of a 15% TxDOT administrative fee (based on the total estimated project construction cost) for department administration and oversight. The department's administrative fee will be 80% federally funded with a 20% local match. The 20% local match for TxDOT's administrative cost must be provided in cash.

Local Match for Safe Routes to School (SRTS) Projects

SRTS funds are 100% federal funds, meaning no local match is required.

The Texas Transportation Commission will select TASA and SRTS projects through a competitive process administered by

TxDOT departments and the Director of the Division responsible for administering the Programs.

Any project selected for federal funding by the Texas Transportation Commission shall be further authorized by Council action at a later date and prior to the execution of a local agreement with TxDOT. This action shall authorize the City's participation in the appropriate Program(s) and commit the financial match requirements found under the associated Program(s).

Attachments:

Resolution (DOCX)

RES 2019-367 (PDF)

Fiscal Impact:

There is no fiscal impact associated with applying for the grants. However, if awarded a TASA grant, the City will be responsible for 20% of the selected TASA project costs plus an additional 3% for the State's administrative fees and 100% of any construction costs overruns. If awarded a SRTS grant, no match is required since the program funds projects at 100% but the City is responsible of 100% of all costs overruns. Projects awarded funding and approved by the Texas Transportation Commission by minute order shall be proposed for Council consideration through an appropriate budget amendment or the proposed 2021 Streets CIP Budget. Acceptance of funding arrangements with the State of Texas would be subject to future City Council action.

Project Schedule:

Awards for 2019 Transportation Alternative Set-Aside (TASA) and Safe Routes to School (SRTS) Programs are expected to be announced in the Spring of 2020.



(Revised 09/2021-City Manager)

Resolution

CITY OF WACO

Council Date: 09/21/2021	Originating Department: Public Works	Presentation By: Amy Burlarley-Hyland	Reference #: RES-2021-685
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Item:

Consider a resolution awarding a contract to Big Creek Construction, Ltd., lowest responsible bidder, for the Mars Drive and Old Hewitt Road Improvements project in an amount not to exceed \$8,587,612.00 and establishing a 5% construction contingency in the amount of \$429,380.60, for a total authorization amount not to exceed \$9,016,992.60, and authorizing the City Manager to execute any documents in connection therewith.

Background:

On December 19, 2017, by Resolution No. 2017-1073, the City Council authorized BSP Engineers, Inc. to design street, water, storm, and traffic improvements to Mars Drive from Hewitt Drive to Texas Central Parkway and Old Hewitt Road from Mars Drive to Imperial Drive.

On October 28, 2019, the City was notified by MRB Group, Engineering, Architecture & Surveying, D.P.C. ("MRB Group") that BSP Engineers and its stockholders entered into an Asset Purchase Agreement with MRB Group which provided that MRB Group would acquire certain assets owned by BSP Engineers, including the assignment of the contract for design of this project. The consent to assignment was approved by the City Council on January 7, 2020 (Resolution No. 2020-026).

Approval of this resolution will allow construction of approximately 40,760 square yards of concrete street improvements, 2,600 linear feet ("LF") of drainage improvements, 200 LF of water line improvements, and traffic signal improvements. The Engineer's Opinion of Probable Cost was \$8,699,647.98.

A Request for Bids (RFB 2021-042) was issued on July 26, 2021, for the improvements to Mars Drive from Hewitt Drive to Texas Central Parkway and Old Hewitt Road from Mars Drive to Imperial Drive. A total of two bids were received and publicly opened on August 27, 2021. The bids ranged from \$8,587,612.00 to \$10,480,872.95 and were as follows:

Bidder	Bid	MBE/WBE
Big Creek Construction Ltd.	\$8,587,612.00	N
Barsh Company	\$10,480,872.95	N
Engineer's Estimate	\$8,699,647.98	N/A

The Request for Bids was advertised in the Waco Tribune-Herald and the following: City of Waco media outlets (City Website, Facebook, Twitter and WCCC-TV), Demand Star, CIVCAST and Electronic State Business Daily (the website that is utilized by HUB vendors statewide).

Notification of this solicitation was also sent to the Greater Waco Chamber of Commerce, the Cen-Tex Hispanic Chamber of Commerce, the Cen-Tex African American Chamber of Commerce, and the Central Texas Chapter of Associated General Contractors of America.

The City's consulting engineer for the project, MRB Group, and City staff recommend awarding the project to the lowest responsible bidder, Big Creek Construction, Ltd.

Project Location Map (PDF)

Resolution (DOC)

Fiscal Impact:

RQ Pending Council Approval

Funding is located at the below source

18ST2103 CIPEXPENSE TC021 (40581899-757504) Construction FY21 Bond in the Amount of 9,016,992.60

Project Schedule:

Following City Council approval, execution of the contract is expected to take two to four weeks. It is anticipated that construction will begin in the Fall of 2021.

Landscape

Quantity	Symbol	Description
Trees		
11		Crape Myrtle, Dynamite
11		Crape Myrtle, Natchez
25		Cypress, Arizona
19		Holly, Nellie Stevens
5		Holly, Yaupon
16		Maple, Shantung
10		Oak, Monterrey
14		Pistache, Chinese
13		Redbud, Texas

