Reasonable Use Memo

To: Kevin Ramberg, Chair, City of Austin Environmental Commission, and Honorable Environmental Commissioners

From: City of Austin Corridor Program

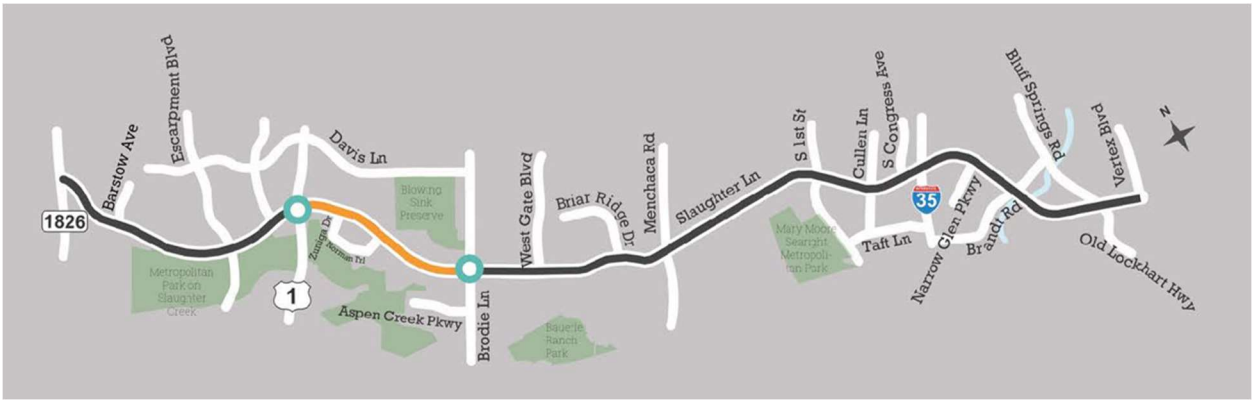
Date: April 24, 2023

Re: AIM: Slaughter Lane Imp. Project Loop 1 (Mopac) to Brodie Lane (C2) CAMPO (Case # SP-2022-0336D) – Reasonable Use Memorandum

SITE:

The Slaughter Lane Segment C2 mobility improvements project is located in the Slaughter Lane Right-of-way (ROW) between Loop 1 (Mopac) to Brodie Lane in Austin, Travis County, Texas. The entire length of the Slaughter Lane corridor improvements is shown in black in Exhibit 1 below; Segment C2 is highlighted in orange.

Exhibit 1



EXISTING SITE CONDITIONS:

Slaughter Lane between Mopac Loop 1 and Brodie Lane is a 4-lane roadway divided by a grassy median. Commercial, residential, and public land uses line the corridor and abut the ROW. There are trees scattered in the median, including Tree #3003. This tree is surrounded by a limestone tree well, a few feet off the back of curb near the intersection of Slaughter Lane and Zuniga Drive at these coordinates: 30.1969, -97.8606. Exhibit 2 shows the location of Tree #3003.

Exhibit 2

REQUEST:

There is one (1) heritage tree with a single stem over 30 inches in diameter that is being requested for removal. Removal of a heritage tree is prohibited by LDC §25-8-641 unless a variance is granted by the Land Use Commission under §25-8-643. Tree #3003 is a 34-inch Live Oak with three co-dominant stems, is approximately 25-feet tall, and is in poor condition The tree is surrounded by a limestone tree well within a few feet behind the curb in the grassy median of Slaughter Lane. The City of Austin Corridor Program is requesting approval to remove this 34-inch Live Oak to implement mobility improvements along Slaughter Lane. This request is based on:

1) The poor condition of the tree (as determined by City Arborist, Naomi Rotramel).

2) The tree is not a good candidate for transplanting because of main stem decay and the elevation difference between the root flare and surrounding overburden (as determined by the consulting arborist, EDI).

3) The tree's location prevents the opening of necessary vehicular traffic lanes in a public street which is an approved criteria for protected tree removal in the Land Development Code §25-8-624 (A)(6)(a).

4) The tree's location restricts development of the Slaughter Lane corridor impeding the reasonable use of the Right of Way.

5) The tree, in its existing location and condition, does not meet the tree preservation criteria outlined in the Environmental Criteria Manual.

6) The tree poses a safety hazard to motorists because of its location near the back of curb. The tree shows extensive damage from being struck several times.

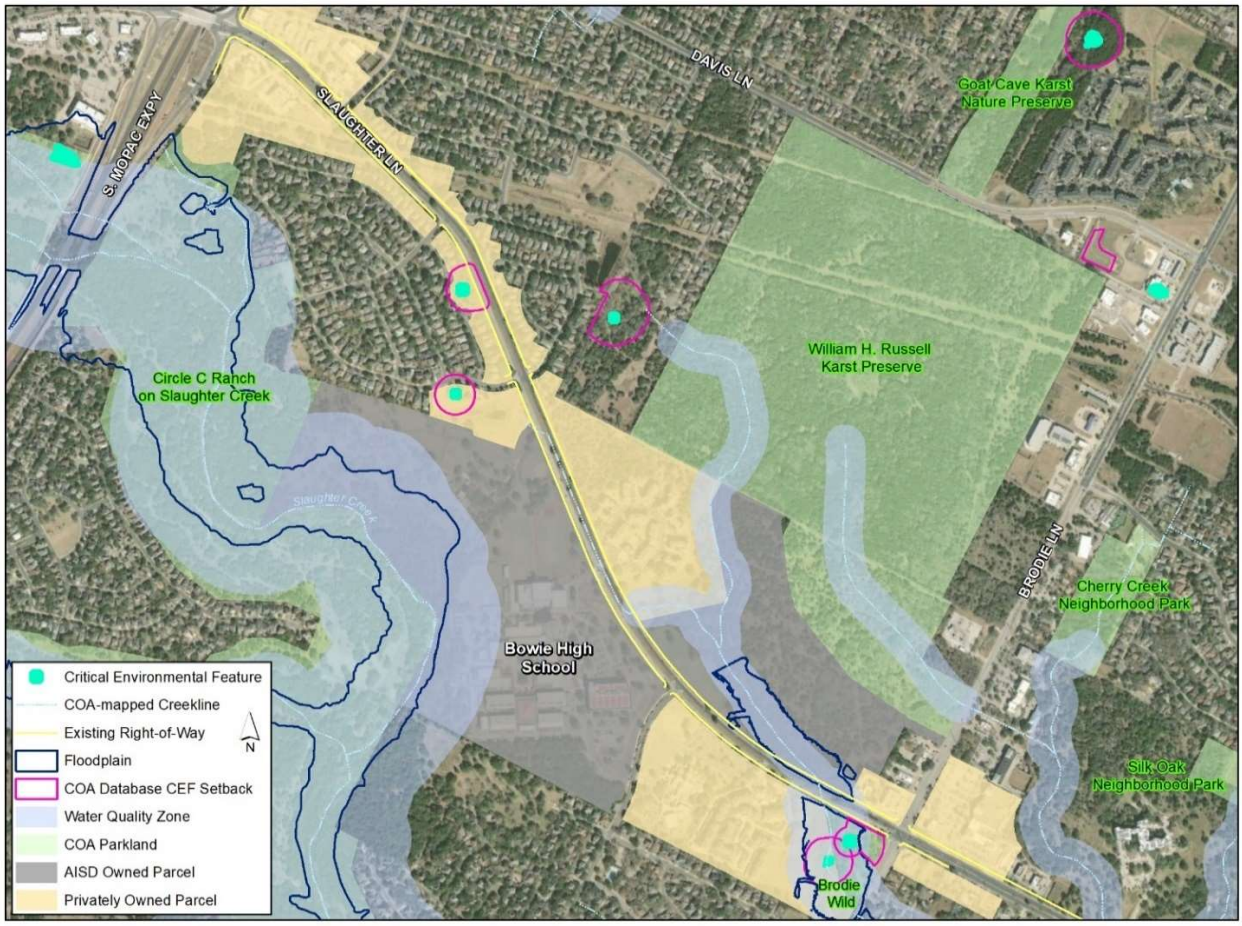
TREE CONDITION:

Tree #3003 was assessed by Environmental Design Inc. (EDI) Transplant Feasibility Specialists, and Bartlett Tree Experts. Tree #3003 is described as a mature Live Oak standing approximately 25 feet tall with three co-dominant stems approximately three feet from grade. Several vines sharing the tree pit grow up the trunk of the oak and into its canopy. The tree has main stem decay confirmed with a mallet and sound testing. EDI described the main stem decay as tremendous and noted that it was not a good candidate for relocation. Additionally, the difference in root flare elevation and surrounding overburden elevation is extreme and renders the tree unsuitable for relocation.

CONSTRAINTS AND CONSIDERATIONS:

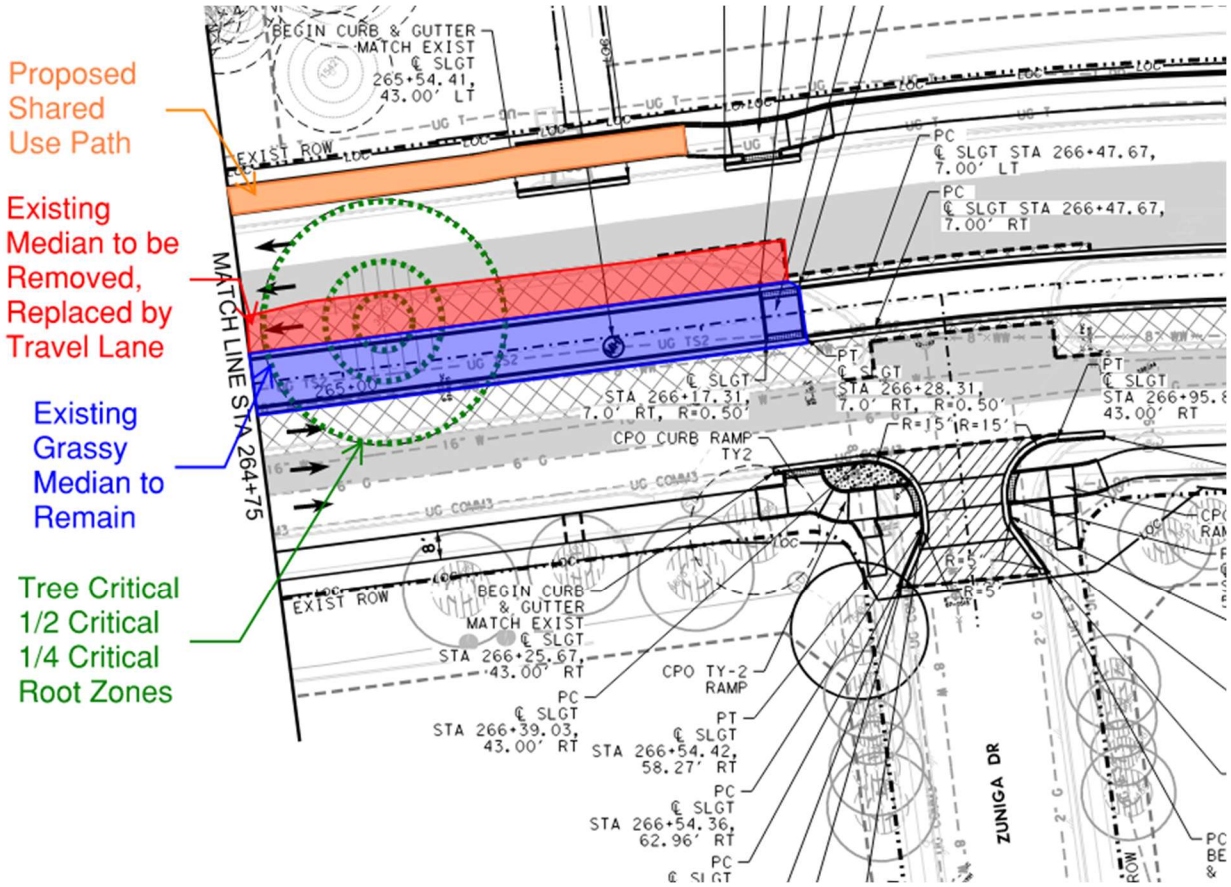
There are multiple site constraints, design considerations, and safety concerns that were evaluated during the planning and design of the project. The exhibit below shows an overview of the project limits and its adjacent land use and environmental constraints.

Exhibit 3



In order to add travel lanes, the roadway could either expand to the north or expand into the median. Adding the westbound travel lane north of the existing roadway was not a viable option because of two main reasons: 1) existing development abuts the ROW and expanding in that direction would impact 14 parcels (including multiple private residences) and between 12,000 and 14,000 SF; and 2) the environmental impacts that could occur because of encountering additional trees and an existing culvert further east which would need to be extended causing construction within the Critical Water Quality Zone and the 100-year floodplain. Thus, the added travel lanes need to stay inside the ROW and expand into the Slaughter Lane median. The location of the tree restricts development of the Slaughter Lane corridor and impedes the reasonable use of the ROW. Furthermore, the tree's location within the median and immediately behind the curb prevents the opening of necessary vehicular traffic lanes in a public street which is an approved criteria for tree removal in the Land Development Code 25-8-624 (A)(6)(a). The proposed improvements are shown in the exhibit below.

Exhibit 4: Proposed Improvements



The tree does not meet tree preservation criteria outlined in the Environmental Criteria Manual §3.5.2. In its existing location, approximately 40% of the critical root zone of the tree is under existing impervious cover with approximately 55% of the root zone containing fill/overburden that was likely placed with the construction of Slaughter Lane. The only portion of the root zone remaining at its natural elevation is the area within the tree well which is perhaps 5% of the critical root zone. The half CRZ already contains more than 4 inches of fill and the ¼ CRZ is already impacted by the tree well.

The tree is in conflict with the Transportation Criteria Manual's (TCM) lateral offset requirements, and it poses a safety hazard to motorists as is evidenced by the tree showing damage from being struck several times. Per TCM §11.1.1, a minimum lateral offset of 18 inches is required for existing trees and a minimum lateral offset of 4.5 feet is required for newly planted trees. While the tree in question is existing and not newly planted it is still best practice to meet this criterion when feasible, as objects within the lateral offset can present an obstruction that pose a collision risk for vehicles.

PROJECT BENEFITS:

The Slaughter Lane project between Loop 1 (MoPac) to east of Brodie Lane is anticipated to implement $16 million in critical mobility, safety, and connectivity improvements including:

- Adding extra lanes for better vehicular travel time

- 8-ft Shared Use Path (SUP) for SAFE community connectivity throughout the corridor for cyclist and pedestrians.
- Increased safety for users of the SUP by creating a vegetated buffer between SUP and vehicles
- New signals and improving existing signals
- ADA-compliant curb ramps at each intersection

Mobility improvements were approved by Austin voters in 2016. That year, improvements to Slaughter Lane were identified as one of nine key corridors to receive these voter-approved mobility funds. Since that time, the City of Austin and the Corridor Program office have been involved in public engagement; project development; coordination with City staff to meet environmental code and criteria; securing federal funding through CAMPO; and design of the improvements. The location of the 34-inch Live Oak tree impacts the developable area of the ROW and would not allow for reasonable use of the ROW to construct the critical mobility improvements that Austin voters approved in 2016.

TRANSPLANT INVESTIGATION AND TREE HEALTH ASSESSMENT

The project team, in a good faith effort to transplant the tree, had the tree evaluated by two reputable arborists who have experience with tree evaluations and transplanting in Austin. Jon Hillis, with Environmental Design Inc., conducted a visual assessment of the tree and provided his professional opinion about its transplant feasibility. Michael Embesi of Bartlett Tree Experts conducted a level three advanced tree assessment for the 34-inch Live Oak.

Bartlett's report identified that a large wound and decay column was observed at the stem union, the vines were adding unnecessary weight to the branches, and the root collar was buried. EDI's report identified that there was a tremendous amount of stem decay that disqualifies it from being a candidate for transplanting. The report goes on to state that the difference in root flare elevation and surrounding overburden elevation is the most extreme of the several trees evaluated along Slaughter Lane.

Exhibit 5: Tree #3003

Exhibit 6: Tree's Proximity to Back of Curb and Tree Well

Exhibit 7: Mainstem Decay and Vines

MITIGATION EFFORTS

The total required mitigation based on removals for this project (Segment C2) is 837.88 inches. The program is planting 102 new trees (490 inches) along the corridor within the existing ROW. After planting the new trees, the amount remaining mitigation amount is $69,576. The Corridor Program plans to transplant three heritage trees (#3000, 3007, and 3018) for an estimated cost of $545,000 which is $475,424 over the mitigation amount required. See summary table below.

	Tree inches	**Cost**
Required Mitigation	837.88	$167,576 (at $200/ inch)
Trees being planted for mitigation	490.00	$98,000 (at $200/ inch)
Remainder required for tree mitigation	347.88	$69,576 (at $200/ inch)
Transplanting 3 heritage trees (estimate provided by EDI)		$545,000 plus costs for 5-year tree establishment plan for each tree
Overmitigation Amount		$475,424

SUMMARY

To fulfill the promise to Austin voters to implement mobility improvements as part of the 2016 Bond, the City of Austin Corridor Program Office requests to remove Tree #3003, a 34-inch Live Oak located in the ROW of Slaughter Lane. This request is based on the tree's poor condition, its unsuitability to be transplanted, and its location which prevents the opening of necessary vehicular traffic lanes in a public street and impedes the reasonable use of the ROW.

The 34-inch Live Oak tree is described by tree experts as being in poor condition with visible decay, large wounds, and a buried root collar. Existing conditions consisting of approximately 55% of the root zone containing fill/overburden result in unhealthy conditions that do not provide an ideal environment for the continued survival of the tree. In addition, the tree's location close to vehicular travel proves to be a dangerous hazard for motorists as is evidenced by the tree showing damage from being struck several times. In its existing alignment, the corridor is not as safe as current code dictates. The project will make the corridor safer for motorists, cyclists, and pedestrians.

LAND DEVELOPMENT CODE § 25-8-624 – APPROVAL CRITERIA & § 25-8-643 – LAND USE COMMISSION VARIANCE

34-inch Live Oak (#3003)

LAND DEVELOPMENT CODE § 25-8-624 – APPROVAL CRITERIA.

(A) The Planning and Development Review Department may approve an application to remove a protected tree only after determining that the tree:

(1) prevents reasonable access to the Property;
(2) prevents a reasonable use of the Property;
(3) is an imminent hazard to life or property, and the hazard cannot reasonably be mitigated without removing the tree;
(4) is dead;
(5) is diseased, and:
    (a) restoration to sound condition is not practicable; or
    (b) the disease may be transmitted to other trees and endanger their health; or
(6) for a tree located on public property or a public street or easement:
    (a) prevents the opening of necessary vehicular traffic lanes in a street or alley; or
    (b) prevents the construction of utility or drainage facilities that may not feasibly be rerouted.

Response: The 34-inch Live Oak tree meets the criteria of (6)(a) above. The tree is located in the Right of Way and is preventing the opening of necessary vehicular traffic lanes in Slaughter Lane.

The 34-inch Live Oak tree also meets the criteria of (5)(a) above. The City arborist determined the tree was in poor condition.

LAND DEVELOPMENT CODE § 25-8-643 – LAND USE COMMISSION VARIANCE.

(A) The land use commission may grant a variance from Section 25-8-641 (Removal Prohibited) to allow removal of a heritage tree that has at least one stem that is 30 inches or larger in diameter measured four and one-half feet above natural grade only after determining, based on the city arborist's recommendation, that the heritage tree meets the criteria in Section 25-8-624(A) (Approved Criteria) and that:

(1) the applicant has applied for and been denied a variance, waiver, exemption modification, or alternative compliance from another City Code provision which would eliminate the need to remove the heritage tree, as required in Section 25-8-646 (Variance Prerequisites); and

Response: The applicant has no other alternative equivalent compliance available to allow reasonable use of the Right of Way along Slaughter Lane. No variances can be pursued which would eliminate the removal of the heritage trees.

(2) Removal of the heritage tree is not based on a condition caused by the method chosen by the applicant to develop the property, unless removal of the heritage tree will result in a design that will allow for the maximum provision of ecological service, historic, and cultural value of the trees on the site.

Response: The applicant evaluated different options for the addition of the travel lanes. Expanding outside of the existing ROW is not an option thus expanding into the median is the only feasible option.