



Slaughter Lane Improvement SOS Amendment 5015 ½ W Slaughter Ln

C20-2022-019

Leslie Lilly

Environmental Program Coordinator

Watershed Protection



What is an SOS Amendment

- **1992 Save Our Springs ordinance adopted by citizen initiative**
- **Per 25-8-515, variances to SOS are not allowed**
- **Supermajority of Council must approve amendments to SOS**
- **Council Resolution 20221027-038 on October 27, 2022:**
 “ The City Manager is directed to initiate site specific variances

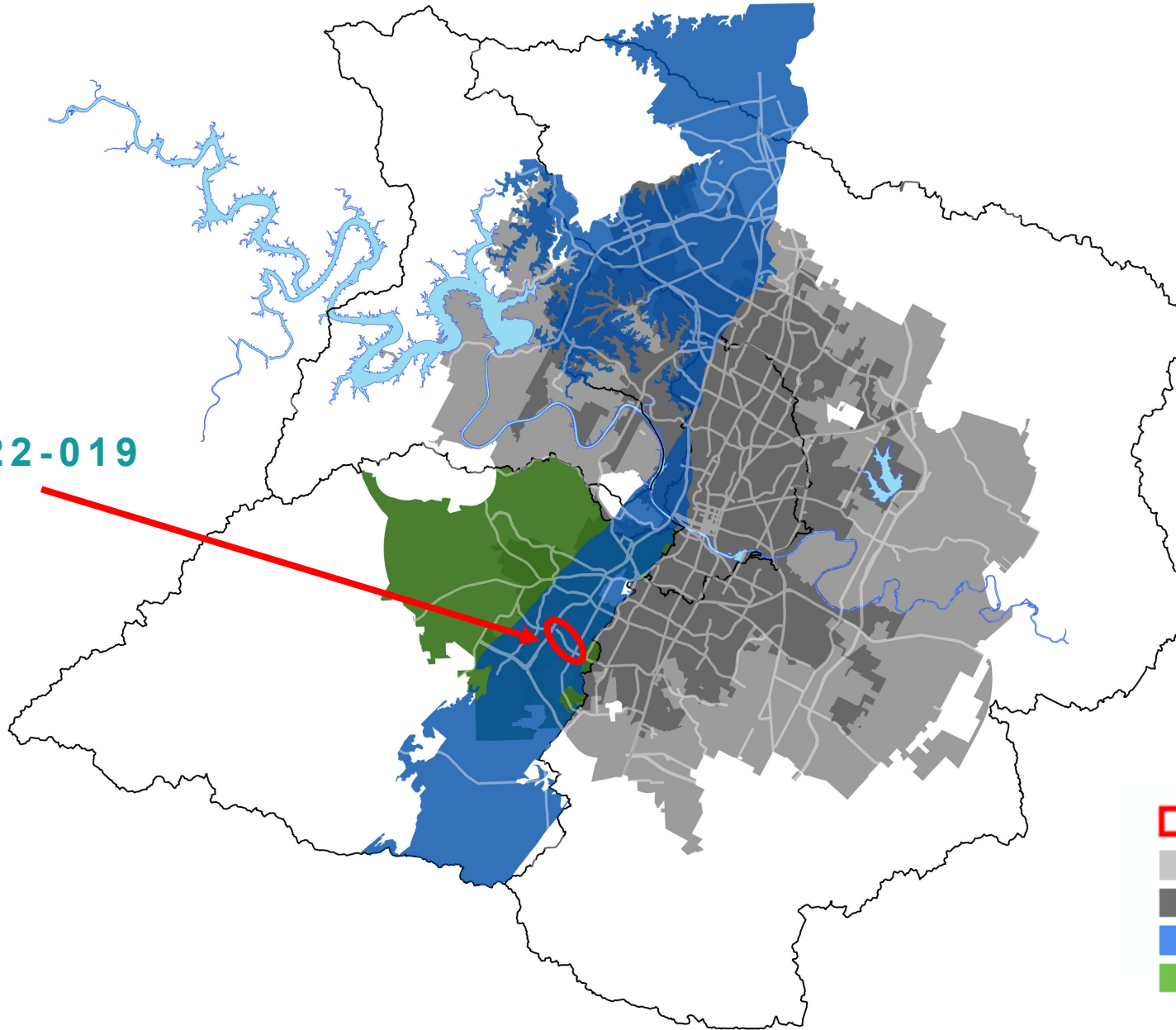







Slaughter Lane Improvement Project

- **Slaughter Lane constructed in ~ 1987 (before SOS)**
- **One of the nine corridor projects identified for improvements in City of Austin Corridor Mobility Program**
- **Improvement funding provided in 2016 Mobility Bond**
- **Requires SOS amendment to impervious cover limits to construct improvements**



C20-2022-019



-  Site Location
-  Austin ETJ
-  Austin City Limits
-  Edwards Aquifer Recharge Zone
-  Edwards Aquifer Contributing Zone

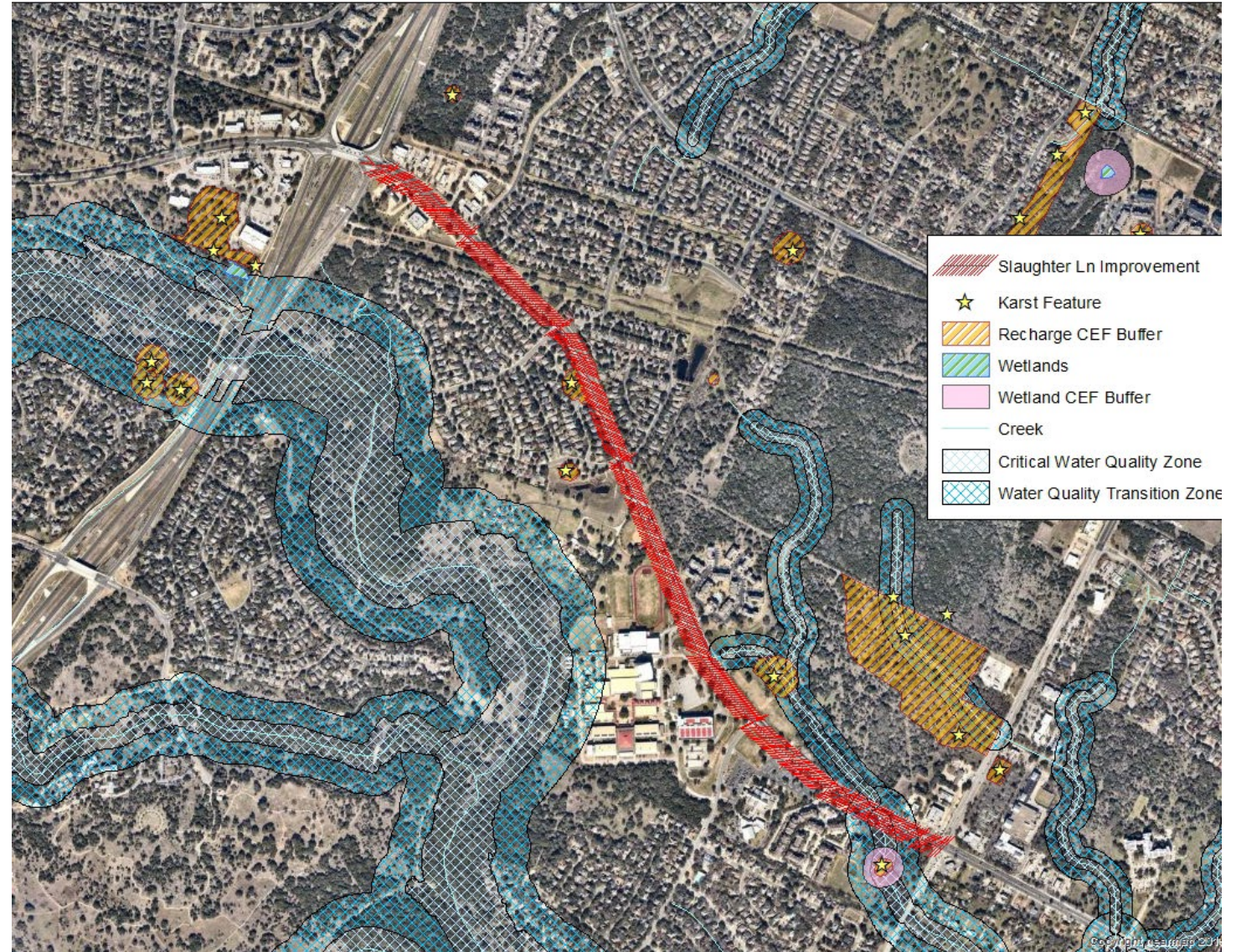


Environmental Features

- Williamson Creek and Slaughter Creek Watersheds
- Barton Springs Zone
- Edward Aquifer Recharge and Contributing Zone
- 54% Impervious Cover
- Karst and Wetland CEFs
- Non-compliant with SOS water quality requirements



**WATERSHED
PROTECTION**





SOS Amendment

- **Section A of 25-8-514 (Pollution Prevention Required)** shall be modified to allow a maximum impervious cover for the site of 69% net site area.

ALLOWABLE Impervious Cover / Zone	Existing Impervious Cover in ROW	Proposed Impervious Cover in ROW
15% / Recharge Zone	54%	69%



SOS Amendment

Slaughter Lane Water Quality improvements

Pollutant	Unit of Measure	SOS Required Annual Pollutant Removals	Project Annual Pollutant Removal (increase over existing)	Project Annual Pollutant Removal Beyond SOS Requirements	Project Annual % Removals Above SOS Requirement
Total Suspended Solids (TSS)	lbs/yr	4,965.04	11,211.42	6,246.38	226%
Chemical Oxygen Demand (COD)	lbs/yr	3,433	8,694	5,261	253%
E Coli	10 ⁶ MPN/yr	3,385,403	10,824,715	7,435,312	320%
Total Lead (Pb)	lbs/yr	1.27	2.33	1.06	184%
Total Nitrogen (TN)	lbs/yr	66.4	344.75	278.35	519%
Total Phosphorus (TP)	lbs/yr	11.84	42.55	30.69	359%
Zinc (Zn)	lbs/yr	5.67	10.33	4.66	182%



SOS Amendment

Slaughter Lane Water Quality improvements

	Chemical Oxygen Demand lbs/yr	E Coli 10 ⁶ MPN/yr	Total Lead lbs/yr	Total Nitrogen lbs/yr	Total Phosphorus lbs/yr	Total Suspended Solids lbs/yr	Zinc lbs/yr
POLLUTANTS GENERATED BEFORE PROJECT	34,856	62,969,365	5.73	1,235.1	220.3	92,351	28.8
POLLUTANTS REMOVED BEFORE PROJECTS	18,905	41,014,931	1.62	562.2	132.6	70,870	10.8
EXISTING POLLUTANTS UNTREATED BEFORE PROJECT	15,952	21,954,434	4.11	672.9	87.7	21,481	18.1
PERCENT OF POLLUTANTS REMOVED BEFORE PROJECT	54%	65%	28%	46%	60%	77%	37%
POLLUTANTS GENERATED AFTER PROJECT	36,990	65,347,844	6.39	1,281.7	228.6	95,839	31.9
POLLUTANTS REMOVED AFTER PROJECT	27,599	51,839,646	3.95	906.9	175.2	82,081	21.1
POLLUTANTS UNTREATED AFTER PROJECT	9,391	13,508,198	2.44	374.8	53.5	13,758	10.8
PERCENT OF POLLUTANTS REMOVED AFTER PROJECT	75%	79%	62%	71%	77%	86%	66%
INCREASED PERCENT OF POLLUTANTS REMOVED AFTER PROJECT	21%	14%	34%	25%	17%	9%	29%
DECREASE IN POLLUTANTS UNTREATED AFTER PROJECT	(6,561)	(8,446,236)	(1.67)	(298.1)	(34.2)	(7,723)	(7.3)





Variances

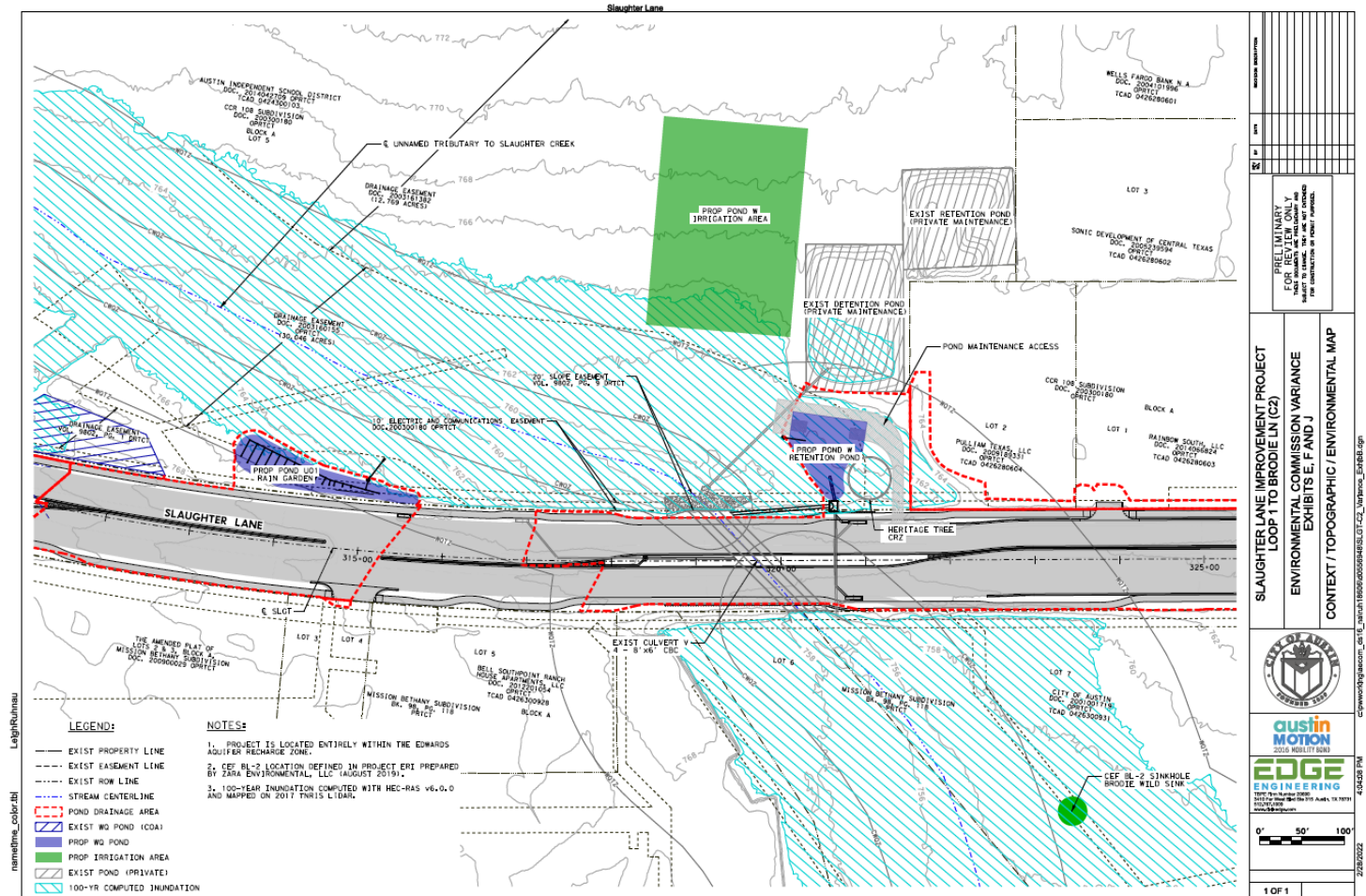
- **25-8-364(B)(3) (*Floodplain Modification*)** to allow floodplain modification within a floodplain that is in good or excellent condition.
- **25-8-641 (*Removal Prohibited*)** to allow the removal of a heritage tree that has at least one stem that is 30 inches or larger in diameter.



Floodplain Modification

Considerations

- Floodplain modification for water quality treatment
- Down stream CEFs
- Environmental constraints on other locations
- Limited area in ROW
- Existing development and real estate constraints
- 20+ locations examined





Heritage Tree Variance Request

ORDINANCE:	Heritage Tree Ordinance (LDC 25-8-641)
REQUEST:	The City of Austin Corridor Program is seeking the removal of a Heritage tree with a single stem over 30 inches in diameter, Tree #3003.
STAFF RECOMMENDATION:	The request meets City Arborist approval criteria set forth in LDC 25-8-624(A)(2). The variance is recommended.

Naomi Rotramel

City Arborist

Development Services Department



Heritage Tree Variance Request

The variance request is to allow removal of a Heritage tree with a stem greater than 30 inches as allowed under LDC [§ 25-8-643](#) and [§ 25-8-624\(A\)\(1\)\(2\)\(6\)\(a\)\(b\)](#)

§ 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) (*Approval 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*);

§ 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;
 - (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.



Heritage Tree Variance Request

- EXISTING SITE CONDITIONS
- REQUEST
- TREE CONDITION
- CONSTRAINTS AND CONSIDERATIONS
- PROPOSED IMPROVEMENTS AND PROJECT BENEFITS
- TRANSPLANT INVESTIGATION AND TREE HEALTH ASSESSMENT
- MITIGATION EFFORTS





Heritage Tree Variance Request

EXISTING SITE CONDITIONS:

- Slaughter Ln. between Mopac and Brodie Ln
 - Four-lane roadway divided by grassy median
 - Commercial, residential, and public land uses line corridor
 - Few trees in median, including #3003
 - Surrounded by limestone tree well, four feet below grade, less than six feet from median curb
 - Tree #3003 has been hit many times by vehicles





Heritage Tree Variance Request

REQUEST:

- One (1) Heritage tree removal under §25-8-643 with a diameter of 34 inches
- The City of Austin Corridor Program is requesting approval of Tree #3003 Live oak to implement mobility improvements based on:
 1. Poor structural condition of the tree due to multiple vehicle collisions
 2. Tree is not a candidate for transplant due to
 - Structure and main stem decay
 - Elevation difference between the root flare and surrounding grade
 3. Tree's location prevents opening of necessary vehicular traffic lanes in a public street
 - Meets approval criteria per LDC §25-8- 624 (A)(6)(a)(b)
 - 4) Tree's location restricts development of Slaughter Lane corridor impending reasonable use of the ROW
 - 5) Tree poses a safety hazard to motorists because of location near back of curb
 - Extensive damage from being struck by motorists several times





Heritage Tree Variance Request

TREE CONDITION:

- Assessed by City Arborist and Certified Arborist review staff
 - Main stem decay
 - Cracks from motor accidents under multiple attachments bearing load
- Main stem decay assessed by private arborist company's sound testing
- Structurally not sound for transplant from transplant feasibility study

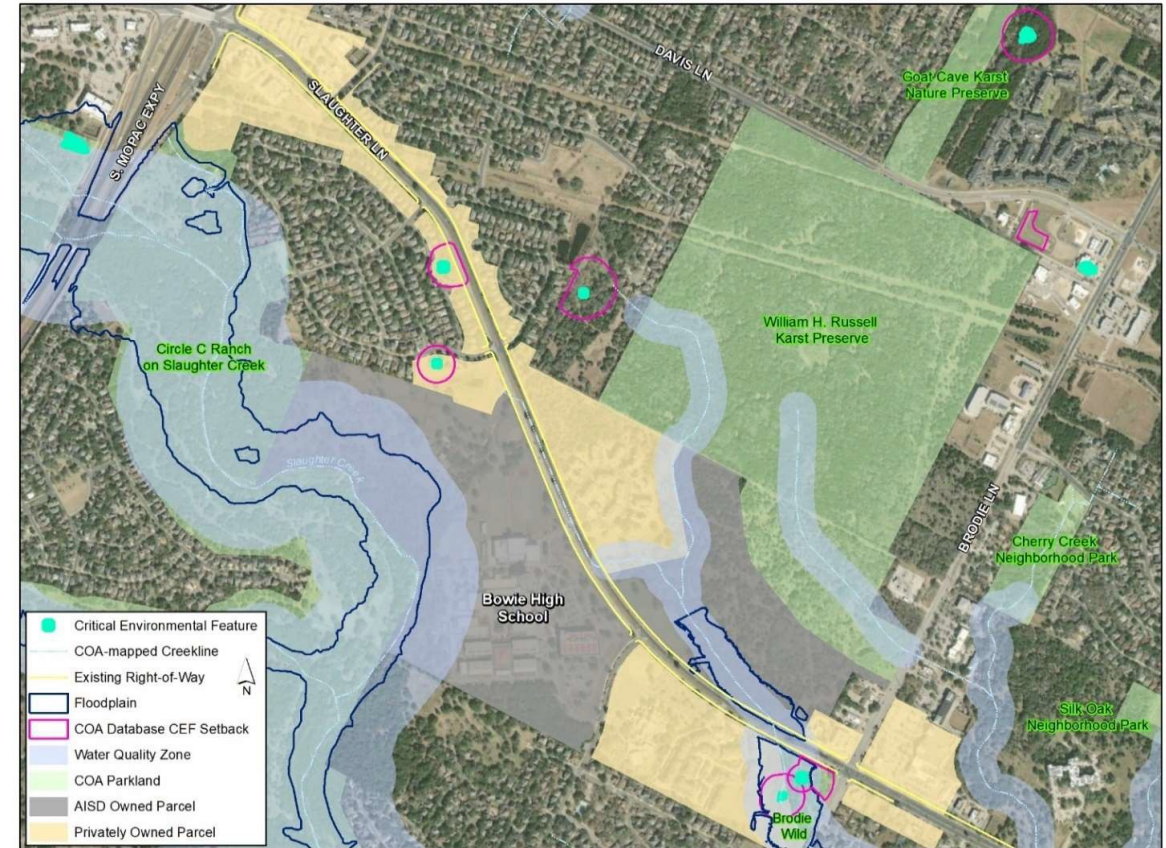




Heritage Tree Variance Request

CONSTRAINTS AND CONSIDERATIONS:

- Projects limits and adjacent land use in order to expand travel lanes:
 - Unable to add westbound travel lane north
 - 1) Existing development abuts ROW impacting 14 parcels
 - 2) Environmental impacts in existing culvert further east would need to be extended causing construction within Critical Water Quality Zone and 100-year floodplain
 - Added travel lanes need to stay inside ROW and expand into Slaughter Ln. median
- Location of Tree #3003 within median and behind curb prevents opening of necessary vehicular traffic lanes in a public street
 - Meets approval criteria for tree removal Land Development Code 25-8-623(A)(6)(a)



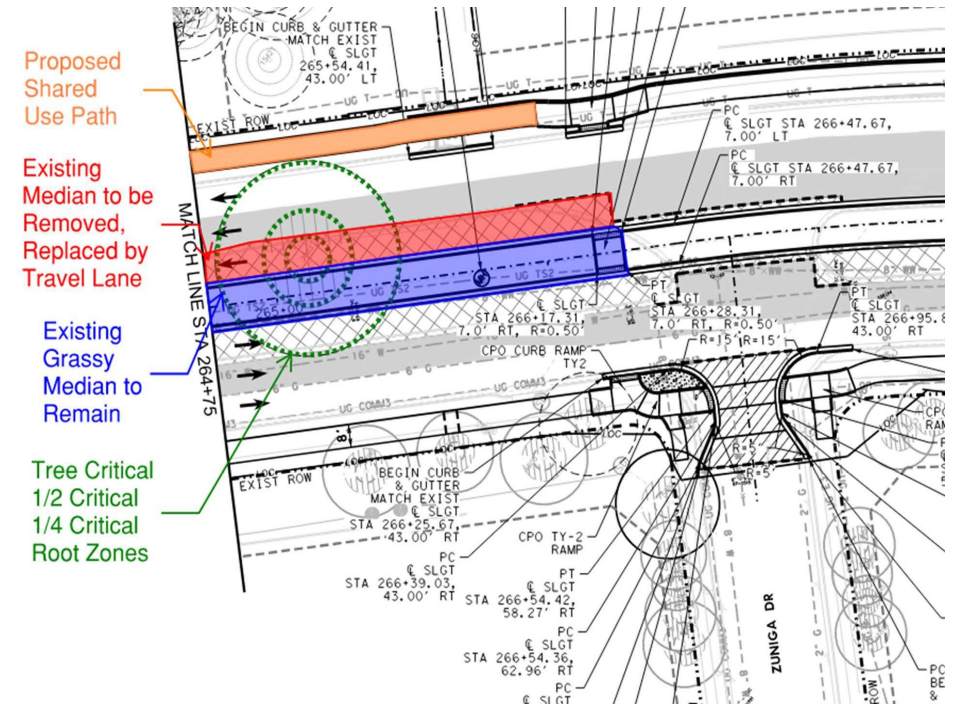


Mobility improvements were approved by Austin voters in 2016

- Per TCM 11.1.1:
 - 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
- Continued collision risk

\$16 million critical mobility, safety, connectivity improvements, securing federal funding (CAMPO)

- Adding extra lanes for better vehicular travel
- 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





Heritage Tree Variance Request

TRANSPLANT INVESTIGATION AND TREE CONDITION:

- Significant decay at stem union due to multiple wounds
- Vines in canopy adding extra weight to scaffolding branches above decay
- Buried root collar
- Resistance Drill detected loss of structural integrity at one of four drilling locations
- Disqualified for transplant due to loss of structural integrity





Heritage Tree Variance Request

MITIGATION EFFORTS:

- Mitigation for Tree #3003 - 34" Live oak is 102 inches
- Total required mitigation for project is 838 inches (Segment C2)
- Corridor Program is planting 102 new trees (490 inches) in existing ROW
- After planting new trees, remaining mitigation amount is \$69,576
- Corridor Program plans to transplant three heritage trees (#3000, 3007, 3018) for an estimated cost of \$545,000



	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



Staff Recommendation

Staff recommends approval of the proposed amendment and associated variances with the following conditions:

- The project is providing compliance with SOS non-degradation water quality treatment for all new and reconstructed impervious cover.
- The project is providing improved water quality treatment for all existing impervious cover.
- The project is updating 2 existing water quality ponds to provide SOS non-degradation water quality treatment for 121.6 acres of offsite drainage including 31.9 acres of offsite impervious cover.
- The project will reduce impact to 2 Critical Environmental Features – recharge features within a tributary of Slaughter Creek
- The project will pay into the Riparian Zone Mitigation Fund in lieu of providing mitigation for the Floodplain Modification associated with the new water quality ponds.
- Other than the SOS amendment and variances identified, the project complies with City Code.



Questions?

Contact Information:

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