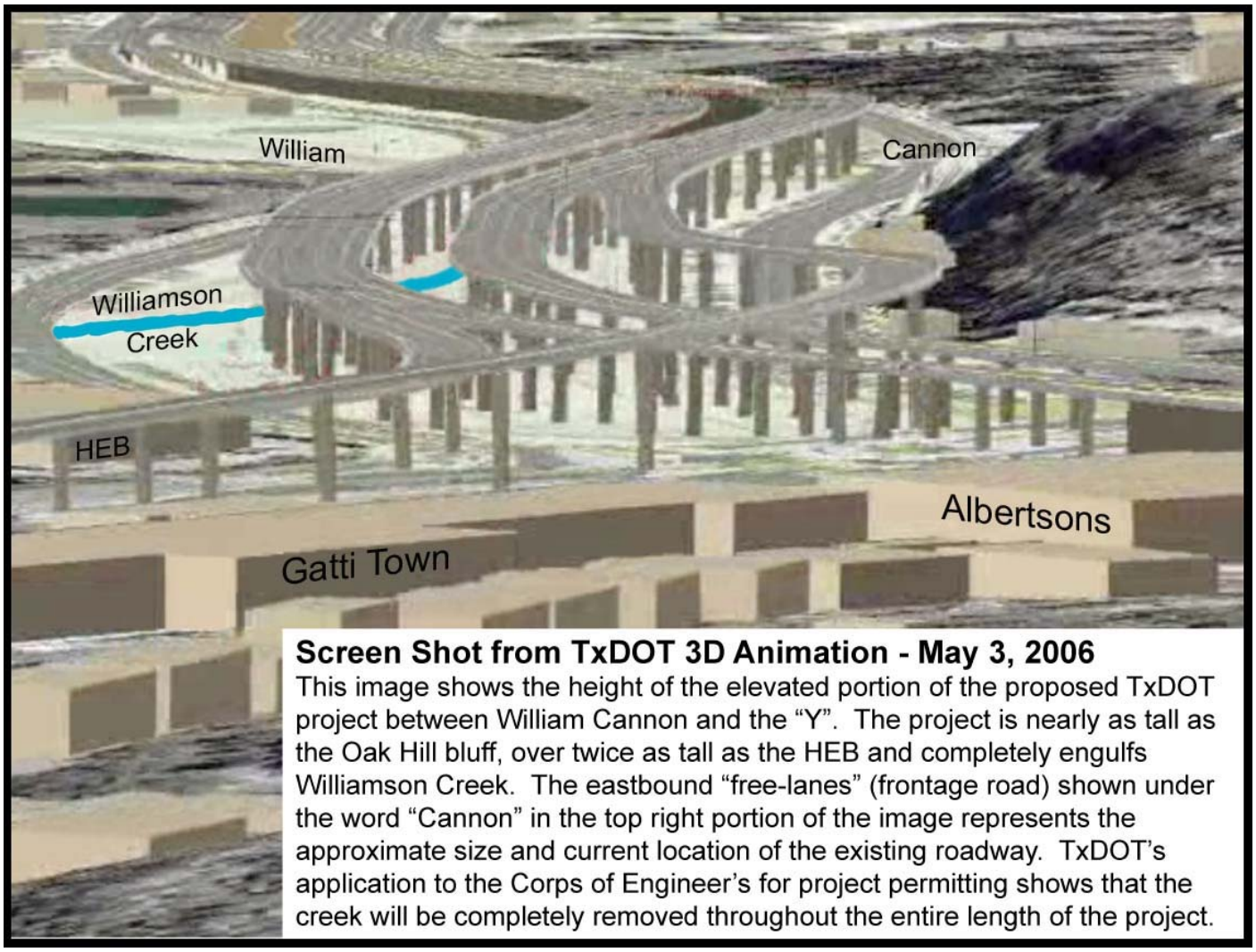
Fix290 Report

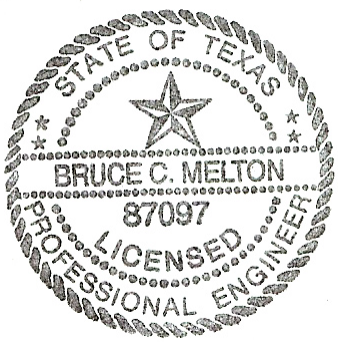
Analysis of the Issues Concerning the TxDOT Hwy 290/71 Interchange Project



Screen Shot from TxDOT 3D Animation - May 3, 2006
This image shows the height of the elevated portion of the proposed TxDOT project between William Cannon and the "Y". The project is nearly as tall as the Oak Hill bluff, over twice as tall as the HEB and completely engulfs Williamson Creek. The eastbound "free-lanes" (frontage road) shown under the word "Cannon" in the top right portion of the image represents the approximate size and current location of the existing roadway. TxDOT's application to the Corps of Engineer's for project permitting shows that the creek will be completely removed throughout the entire length of the project.

Prepared for Fix290.org

October 18, 2006



MESA ENGINEERING
Oak Hill, Texas

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To whom it may concern:

This document was prepared to discuss the issues involved with the construction of the Texas Department of Transportation (TxDOT) project known as the Highway 290/71 Interchange Project. Information used in this report comes from TxDOT, the Federal Highway Administration, the Capital Area Metropolitan Planning Organization (CAMPO), the Texas Commission on Environmental Quality, U.S. Fish and Wildlife, the Environmental Protection Agency, the U.S. Army Corp of Engineers and the City of Austin as well as numerous public records from the above and appropriate planning and engineering standards.

This report represents the consensus position of Fix290 Coalition, a grass roots community association dedicated to the responsible use of resources and the preservation of Oak Hill. Nearly 2,000 petitioners support the Fix290 Coalition concept.

The need for more efficient transportation through and to Oak Hill has been critical since the mid 1980's when TxDOT began work on the Hwy 290/71 Interchange Project. Transportation design concepts and knowledge of the impacts of large-scale highway projects are more advanced in the twenty-first century than they were in the 1980's. TxDOT is capable of redesigning this project so that it minimizes the destruction of the environment and the impacts to homes, businesses and families in Oak Hill and surrounding areas as well. Alternatives are available to build this project with significantly reduced pavement. These alternatives will not require the removal of over a mile of Williamson Creek or the construction of nearly 4,000 feet of elevated superhighway through the heart of Oak Hill. The goals of CAMPO and TxDOT can be met with the transportation concepts supported by Fix290.

The Fix290 Coalition represents a concept. The hundreds of details of the design can most appropriately be addressed during the design phase of the project *after* an appropriate transportation concept for the area has been determined.

Bruce Melton, P.E.

Table of Contents

1. Executive Summary

TxDOT's Highway 290/71 Interchange Project, if implemented, will completely alter the community and environment of Oak Hill. Instances across the country - and here in Austin at Hwy 183 between Mopac and Interstate 35, and downtown at Interstate 35 - show that the construction of a significant elevated roadway through the middle of a community causes irreparable permanent harm.

TxDOT's project was conceived in the mid 1980s. The Environmental Impact Statement (EIS) was approved for construction design in 1988. Design considerations and transportation assumptions have significantly changed in the 18 years since the design concepts for TxDOT's interstate highway through Oak Hill were approved. The Fix290 Coalition has proposed an alternative to this elevated highway. The Coalition seeks to (in no order of priority):

1. Maintain or improve the quality of life in Oak Hill by using Context Sensitive Design principles,
2. Preserve Williamson Creek and the antiquities associated with it,
3. Save 90% or more of the last of the great Oak Hill oaks,
4. Reduce project height, and eliminate the elevated portion of the project at the Oak Hill bluff,
5. Improve interconnectivity and community access by using Transit Oriented Design techniques,
6. Minimize noise with an appropriate design speed,
7. Avoid light pollution through the use of low, hooded lighting fixtures,
8. Meet CAMPO traffic projections, and improve through traffic flow and safety,
9. Significantly reduce the costs of the proposed TxDOT project.

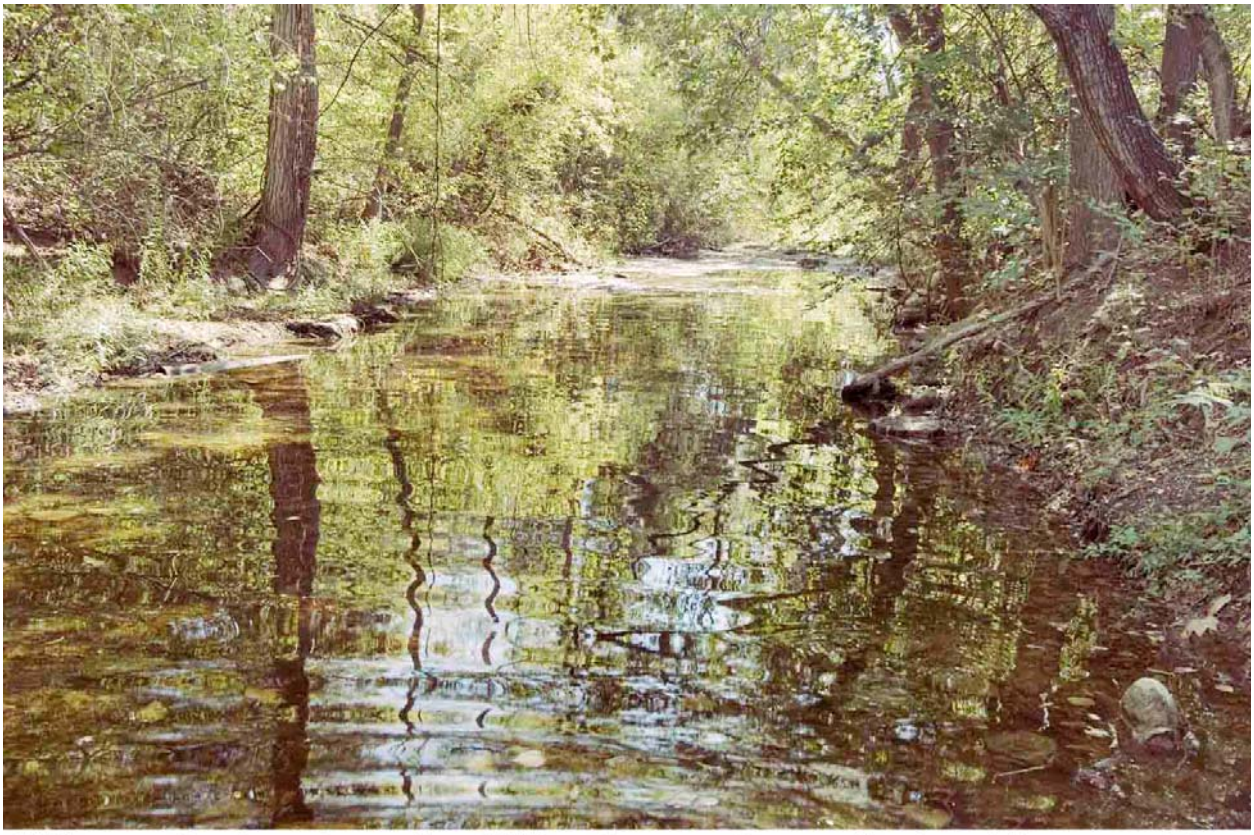
Tolling is not the issue here. Responsible use of resources is the message that the Fix290 Coalition wants to convey. A twenty-first century transportation concept will save millions of dollars, preserve the environment, improve the local quality of life and benefit the entire region. Alternative forms of financing may be necessary to build transportation systems of the future however; waste of finances, and the destruction of environment and community because of outdated design concepts are not acceptable.

The transportation system design concepts that the Fix290 Coalition supports reduce the proposed new impervious cover in the project area by 85 percent. This one single fact eliminates the need for the removal of over a mile of Williamson Creek and its complete environment, reduces the project height, maintains or improves local and regional connectivity and quality of life while meeting traffic projections that TxDOT uses for the year 2030.

The cost reductions alone, while only discussed in relative terms in this report, are worthy of significant consideration for redesign.

2. Background

The Texas Department of Transportation (TxDOT) conceived the current project in the mid 1980s. The Environmental Impact Statement for the project is dated 1988. The project remains virtually unchanged since then. Funding for 24 different project items ranging from preliminary engineering to complete construction has been approved by the Capitol Area Metropolitan Planning Organization twelve (12) times (Appendix A – Project Funding History).



Williamson Creek - upstream from William Cannon: Over a mile of creek is proposed for removal by TxDOT. Over half is a spring fed perennial stream, the rest is recharge zone.

In the late 1980s and early 1990s the Oak Hill Association of Neighborhoods and various other civic organizations were deeply involved with TxDOT in the conceptualization and design processes for the project. At that time, TxDOT vigorously declined to modify any aspect of the project except relatively minor issues such as access ramp location. Additional changes since the mid 1980s relative to the design of a major project are listed below:

- In 1992 the City of Austin adopted the Save our Springs Ordinance in recognition of the environmental fragility and conservation efforts warranted in development over the Edwards Aquifer and its recharge and contributing zones.

- In 1993 the endangered species listing for the Barton Springs salamander was initiated.

- In the mid to late 1990s, TxDOT developed a policy of not allowing increases in floodwater elevations in and downstream of a project. This policy requires that over a mile of Williamson Creek be removed to provide flood control for downstream properties.

- In 1995 Congress passed the National Highway System Designation Act requiring state departments of transportation to take into consideration context sensitive design in new construction.

- In 1997 the Barton Springs Salamander was listed as endangered by U.S. Fish and Wildlife.

- In 2001 TxDOT began supporting the development of new controlled access highways without access roads wherever possible.

- In June 2004, the Capital Area Metropolitan Planning Organization (CAMPO) adopted a resolution calling for Context Sensitive Design in new toll highway projects.

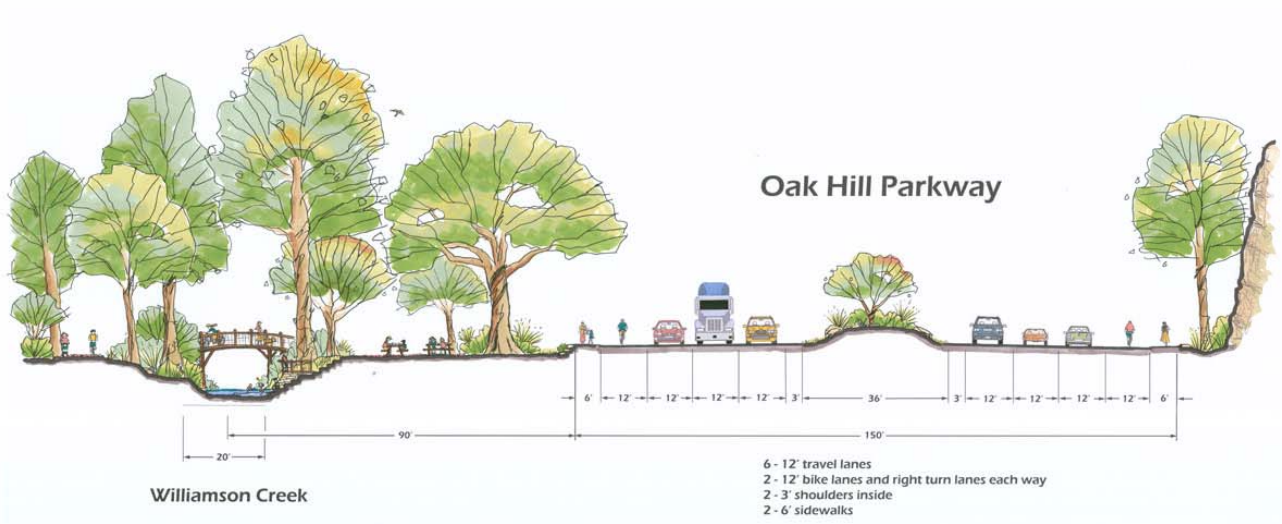
- In May of 2006 TxDOT released their described Context Sensitive Design (CSD) at a public meeting for the project in Oak Hill quoted as follows:

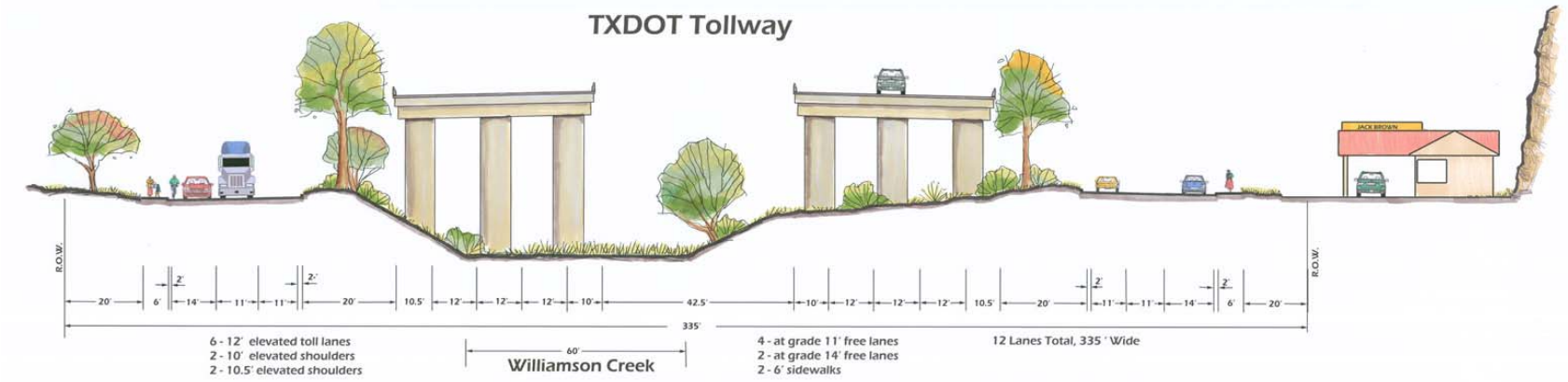
> *CSD is a collaborative process to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic, and environmental resources, while maintaining safety and mobility.*

3. The Fix 290 Concept

Fix290 Represents a New Concept for this Project, Not a Design

Before a project is designed, it first must be conceptualized. The current TxDOT project was conceptualized in the mid 1980s. A great deal has changed since then. The project should be re-evaluated based on twenty-first century design and planning concepts. The sketches on the following page show the Fix290 and TxDOT cross-sections for the project at the Oak Hill Bluff. The two sketches are to scale.


Oak Hill Parkway
6' 12' 12' 12' 12' 3' 36' 3' 12' 12' 12' 12' 6'
20'
90'
150'
Williamson Creek
6 - 12' travel lanes
2 - 12' bike lanes and right turn lanes each way
2 - 3' shoulders inside
2 - 6' sidewalks


TXDOT Tollway
JACK BROWN
R.O.W.
R.O.W.
20' 6' 2' 14' 11' 11' 2' 20' 10.5' 12' 12' 12' 10' 42.5' 10' 12' 12' 12' 10.5' 20' 2' 11' 11' 14' 2' 6' 20'
335'
6 - 12' elevated toll lanes
2 - 10' elevated shoulders
2 - 10.5' elevated shoulders
60'
Williamson Creek
4 - at grade 11' free lanes
2 - at grade 14' free lanes
2 - 6' sidewalks
12 Lanes Total, 335 ' Wide

Fix290 proposes that the project be built to include: 8 limited access, at grade freeway lanes with a divided “no left turn” median and overpasses and access ramps at intersections and other key areas of the project. Other areas would have normal shoulders and highway access. The interchange at Hwy 290/71 should be no more than two levels (ground and overpass) high. The concept does not rule out alternative financing. The concept suggests access measures in the Oak Hill area other than traditional frontage roads including private access roads, joint use access, access buy-out, access easements, property consolidation and a well developed system of interconnected neighborhood streets and transportation alternatives that would normally be considered with community design in the twenty-first century.

To implement the Fix290 concept, five additional businesses will have to be removed adjacent to the foot of the bluff. One of these businesses has been vacant for more than five years, showing the poor suitability of this area to business. The removal of these businesses will also fit in with TxDOT’s removal of 19 businesses in that immediate area. The remaining section of bluff in this area will have to be removed as well (about ten percent of what has already been removed).

Confirmation by an Independent Engineering and Planning Consultant
Smart Mobility Inc., a nationally recognized leader in forward thinking transportation planning and engineering, prepared a study for Fix290 through the Oak Hill Regional Transportation Planning Fund that analyzed the suitability of the Fix290 concept to CAMPO 2030 traffic projection estimates and current engineering and planning concepts for transportation systems. Smart Mobility Inc. found that the Fix290 concept could meet all of the goals of the project with far less costs and many long-term benefits for the region.

4. TxDOT Frontage Road Policy

Policy of No New Frontage Roads Adopted in 2001
The Texas Transportation Commission Minute Order 108731, approved December 13, 2001 states that it will be TxDOT’s policy *NOT* to build frontage roads on new freeways. Amendments to the Texas Administrative Code, Title 43, §15.54(d)(3)(B) state:

> *Existing facilities designated as controlled access: For existing freeways and other facilities designated as controlled access, it is the intent of the department not to construct new or additional frontage roads.*

This policy has proven to be highly controversial between proponents of frontage roads and supporters of the policy. Nevertheless, it is TxDOT’s current stated policy, one that is widely followed across the country in the design of major

transportation projects. TxDOT conducted a series of public hearings in 2002 concerning the rules and has sponsored three studies concerning frontage roads, the last of which was completed in 2004. The studies analyzed the new policy and proposed methods of determining the need for and validity of including frontage road in TxDOT's highway designs.

The studies were as follows:

1. Frontage Roads in Texas: Legal issues, Operational Issues, and Land Use Distinctions (2001)
2. Frontage Roads in Texas: A Comprehensive Assessment (2001)
3. Freeway Design Decisions for Revised Frontage Road Policy (2004)

All of these studies showed that frontage roads were generally less effective than alternatives and tended to promote congestion. Only in the most urbanized areas were frontage roads found to be the most cost effective option.

Frontage Roads Help Only Highly Urbanized Areas

Hwy 290 in Oak Hill would not be classified as highly urbanized. Before TxDOT began taking property and removing businesses from the proposed right of way for this project there were 25 businesses located on Hwy 290 between the Williamson Creek crossing and the "Y". TxDOT has removed 19 of these 25 businesses. Of the remaining six businesses, five are located at the foot of the Oak Hill bluff and have very hazardous access issues (and as mentioned previously, one has been vacant for more than 5 years). This number does not include the businesses at the "Y" because they do not face Hwy 290 and their addresses are on Hwy 71.

The only other business establishment that was not removed by TxDOT between Williamson Creek and the "Y" is the Oak Hill Centre at William Cannon and Hwy290, which was partially removed for the project in about 2001. This business has access on both William Cannon and 290 and both of these access points can likely remain with a limited access design concept. This area of the proposed roadway would realize very little value with the construction of frontage roads, and upon analysis would likely find a very high negative cost benefit. West of the "Y", the small number of other existing access points could easily be accommodated in a parkway plan by using advanced access alternatives.

Frontage roads in an area with so little development do not follow current TxDOT policy or logical rationale developed in academic publications sponsored by TxDOT.

5. Context Sensitive Design (CSD)

CAMPO Adopts CSD

In June 2004, the Capital Area Metropolitan Planning Organization (CAMPO) adopted a resolution calling for Context Sensitive Design in new toll highway projects (See Appendix B).

The National Highway System Designation Act CSD Requirement

Title 23, Section 109 of the United States Code was amended in 1995 by the National Highway System Designation Act to state:

> *(c) DESIGN CRITERIA FOR NATIONAL HIGHWAY SYSTEM-*
> *(1) IN GENERAL- A design for new construction, reconstruction, resurfacing (except for maintenance resurfacing), restoration, or rehabilitation of a highway on the National Highway System (other than a highway also on the Interstate System) may take into account, in addition to the criteria described in subsection (a)--*
> *(A) the constructed and natural environme*nt of the area;
> *(B) the environmental, scenic, aesthetic, historic, community, and preservation impacts of the activity; and*
> *(C) access for other modes of transportation.*

Instructions from a Memo written by the Administrator of the Federal Highway Administration

"…A transportation facility is an integral part of the community's fabric and it can help define the character of the community or it can destroy it. A context-sensitive approach to planning and designing transportation facilities will help us to better understand that role and properly address it. …Our State departments of transportation (State DOT) partners and we in the FHWA should view CSD as an opportunity to connect with the communities and the constituents that we serve. We should seek to institutionalize the principles of CSD with the same commitment that drove the implementation of the Interstate Highway System. We are in an era that calls for innovative thinking, improved coordination, cooperation, interdisciplinary decision-making, streamlined implementation, and community acceptance…" (Mary E. Peters, Administrator, Federal Highway Administration, Memo to Directors of Field Services, Resource Center Managers and Division Administrators, January 2002)

CAMPO Adopts CSD

In June 2004, the Capital Area Metropolitan Planning Organization (CAMPO) adopted a resolution calling for Context Sensitive Design in new toll highway projects (See Appendix B).

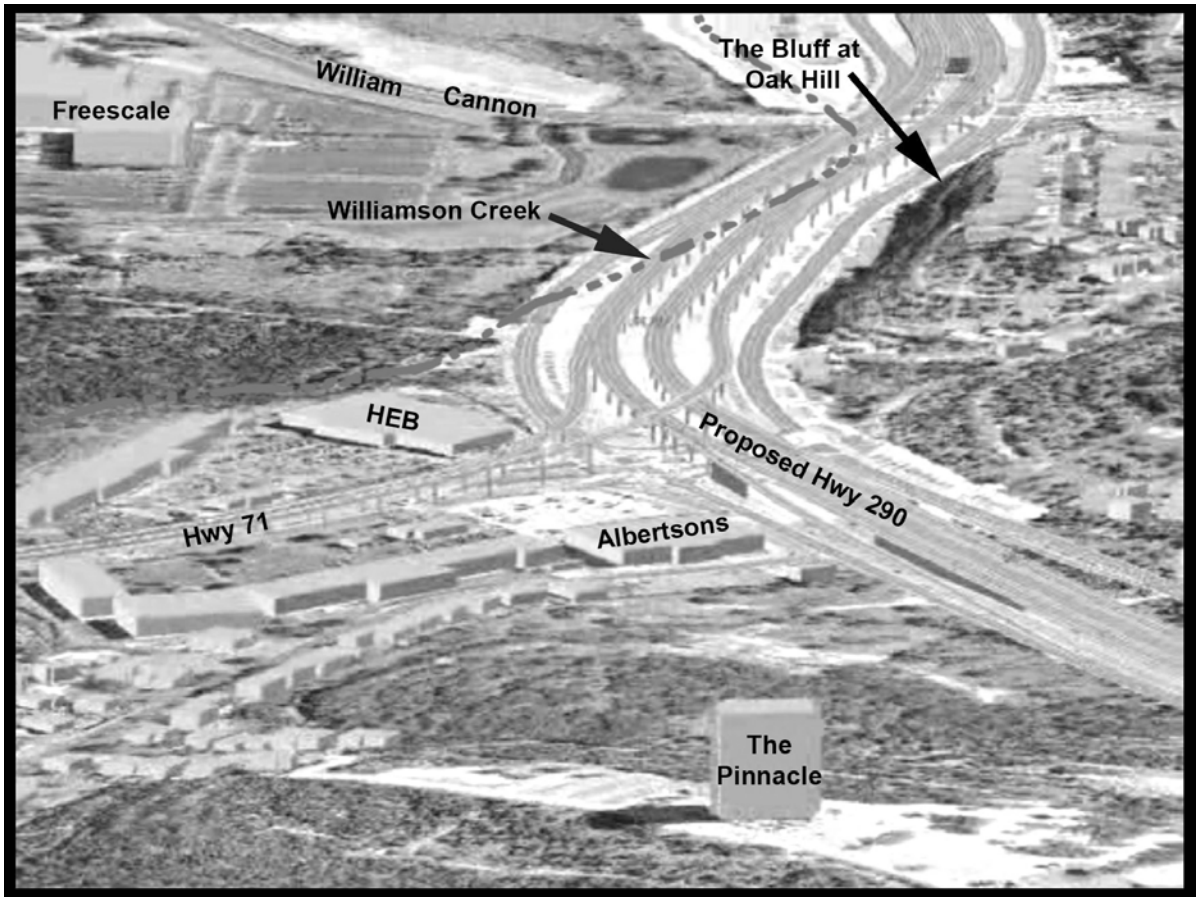
Core Principles of CSD as defined by Federal Highway Administration
The FHWA , under Section 109(c) (2) of Title 23 has adopted the following 8 core principles to guide DOTs in the conceptualization and design of highway projects:

- *The project satisfies the purpose and needs as agreed to by a full range of stakeholders. This agreement is forged in the earliest phase of the project and amended as warranted as the project develops.*
- *The project is a safe facility for both the user and the community.*
- *The project is in harmony with the community, and it preserves environmental, scenic, aesthetic, historic, and natural resource values of the area, i.e., exhibits context sensitive design.*
- *The project exceeds the expectations of both designers and stakeholders and achieves a level of excellence in people's minds.*
- *The project involves efficient and effective use of the resources (time, budget, community) of all involved parties.*
- *The project is designed and built with minimal disruption to the community.*
- *The project is seen as having added lasting value to the community.*

TxDOT's CSD Workshops Did Not Address Any of the Major Issues
In May of 2006, TxDOT held two public meetings in Oak Hill to gather CSD information to ensure that (from the Core CSD Principles) *"The project satisfies the purpose and needs as agreed to by a full range of stakeholders."*

TxDOT's method of information gathering consisted of a questionnaire that offered only aesthetic or miscellaneous types of alternatives like concrete color and concrete imprint, green building concepts, using local materials, creating a gateway into the city, bat habitat, pedestrian and bicycle access, xeriscaping, etc. The questionnaire did not include any significant issues of the project such as - the removal of over a mile of Williamson Creek, the visual division of the community of Oak Hill, the removal of 43 acres of tree cover and most of the last of the great oaks in Oak Hill, the impression of the large scale of the elevated roadway compared to the smaller scale of downtown Oak Hill, costs, environmental and community impacts. The community was not given any opportunity to discuss the context sensitive design issues concerning any of the greater impacts of this project.

The following image shows an aerial view of TxDOT's proposed 12-lane project through the Oak Hill Town Center. The existing 290W is little larger than and located in almost the same place as the proposed eastbound frontage road.



Screen shot captured from TxDOT's animated movie of the proposed Hwy 290/71 Interchange Project, May 2006. Labels and Williamson Creek have been added.

This project completely dominates the area. The project is larger than the largest natural feature in the area, the bluff at Oak Hill. The Austin Community College 10 – story Pinnacle Campus, Albertson's and HEB shopping centers will no longer be dominant in Oak Hill. The proposed TxDOT project will not be in harmony with this small community, it will be the dominant feature.

The following sections discuss CSD issues that are disregarded with the TxDOT project issues

TxDOT's Concept Bisects Oak Hill

The proposed project is 325 to 600 feet wide, with paved area averaging about 320 feet. At the bluff, the existing lanes occupy only 18 percent of the proposed average TxDOT project width. The Fix290 concept occupies less than half of the proposed average TxDOT project width at 46 percent.

Hwy 183 between Mopac and I35, Austin, Texas: The empty parking area was formerly used by an Albertson's grocery.

TxDOT's Concept Creates an Aesthetic Barrier

TxDOT's project will divide Oak Hill like a great wall. The photo above shows something like the actual scope of what is planned for Oak Hill. The Hwy 183 project consists of 6 elevated lanes and 6 lanes of frontage road, identical to what TxDOT plans for Hwy 290 in Oak Hill.

The only difference between the two projects is that the Hwy 183 project utilizes the "tuck-under" approach where the frontage roads are partially underneath the elevated lanes. This technique reduces the overall footprint of the 183 project to approximately 25% less width than the proposed Hwy 290 project.

TxDOT's Concept Creates Extreme Environmental Impact

Over a mile of Williamson Creek will have to be completely removed because of the scope of this extremely large project. Over 2,000 feet of creek (which includes the majority of the wet portion of the only perennial flowing creek in Oak Hill) will be located directly under the elevated lanes of the project, enclosed in an artificial, very large, grass-lined ditch.

TxDOT's Concept Uproots Historic Preservation
TxDOT's proposed project will remove most of the remaining historic oaks in the historic old Oak Hill area. TxDOT's tree removal includes 43 acres of forest and over a dozen trees 36 inches in diameter or greater. The oldest of these trees are 300 years or more.

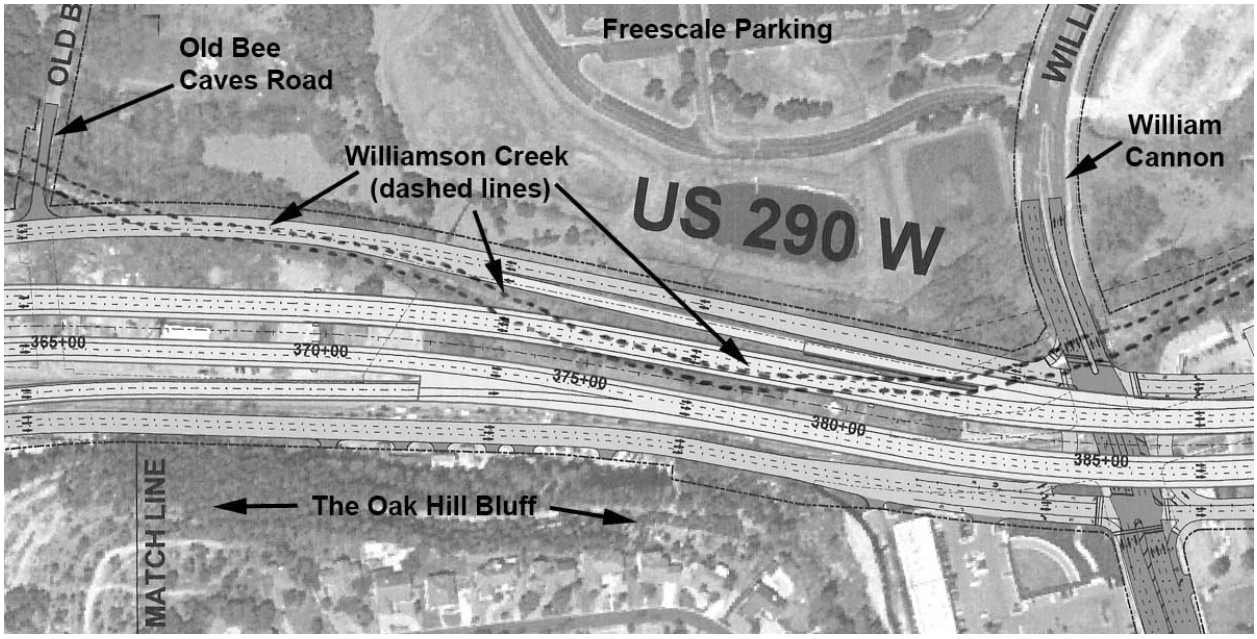
The Fix290.org Concept is a Context Sensitive Solution
TxDOT's project does not exemplify context sensitive design. Construction of this project will result in permanent negative impacts to Oak Hill. The Federal Highway Administrator Mary Peters directed her organization to proceed in 2002: "…*A transportation facility is an integral part of the community's fabric and it can help define the character of the community or it can destroy it."*

6. The Elevated Roadway

Nearly 4,000 feet of the main lanes will be elevated with the TxDOT design. The planned elevated section extends from East of William Cannon to just west of the Hwy 71 intersection. The elevation is required because the 12-lane grade separated TxDOT proposal must be routed over Williamson Creek and over a very large (600 foot long) flood and water quality pond. The 335 to 400 foot right of way required to accommodate this very large project leaves no alternative but to elevate the roadway at the bluff. TxDOT will increase the creek width by over 300 percent for runoff storage to prevent flooding downstream.

Grade Separation Is Not Required to Segregate Commercial or Through Traffic from Local Traffic
Commercial and local traffic are mixed on the same roadways throughout the country. Grade separation is not required in Oak Hill.

Proposed TxDOT Design: Hwy 290 from Joe Tanner to Scenic Brook Drive, March 2006



Elevated Roadways Increase Noise Significantly

A study in the Journal of Planning in December 2001 shows that the elevation of highway systems dramatically increases the amount of noise that is projected into the surrounding area. This paper, by Dr. Hadi Baaj, et. al., analyzed a 160,000 vehicle per day segment of a 12-lane freeway improvement nearly identical to the TxDOT proposal for 290/71. This project analyzed the difference between the 160,000 vehicles per day at-grade and 160,000 vehicles per day with the main lanes elevated. The US Federal Highway Administration (FHWA) Traffic Noise Model and FHWA Noise abatement standards were used in the analysis.

Noise Levels are Almost Three Times Greater with an Elevated Roadway

Results of the Baaj study showed that elevating the highway increased noise levels by 77 to 182 percent. This is an almost doubling to an almost tripling of the noise levels generated by the roadway. It is important to note that the actual noise generated by the project remains the same. It is the lack of noise absorption from ground level objects such as buildings, vegetation and trees that allows the noise to be *projected* out into the surrounding community by the elevated highway. This sound projection works the same way as an air-raid or tornado siren on a tower that is used to warn a community of impending harm.

Benefits of a Non Elevated Roadway

Without elevation the roadway can be much narrower. In this case less than half (46%) as wide. Removal of Williamson Creek is not required because flooding will no longer

be an issue when impervious cover increases are limited to only a small amount above existing levels. Noise and light pollution will be reduced. Aesthetic and community division issues will be reduced, Time to completion of construction over the TxDOT plan is reduced and project costs are reduced.

7. The 1988 Environmental Impact Statement Eliminates the Elevated Roadway Concept

The Environmental Impact Statement Eliminates an Elevated Design from Consideration

The EIS for the Hwy 290/71 project eliminated a space saving alternative where the frontage roads are partially overlapped by the elevated lanes (see Alt 1A and Alt 1B in the following section). This 'double-deck' design was ruled out for a variety of significant reasons. These include: generally increased right of way requirements, higher total costs, complicated design and difficulty in construction. The following quotes are from the EIS:

"In most cases, more right-of-way is required than would be necessary with a traditional system because of the difference in elevation which must be overcome."

"From and economic standpoint, any savings in right-of-way costs is equaled or exceeded by the cost of structures."

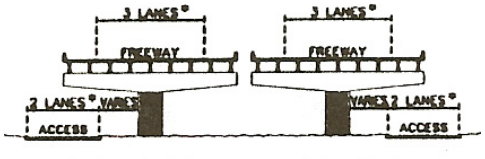
"In additions, an elevated roadway results in costly and complicated interchange designs…"

"But perhaps the biggest disadvantage to an elevated system is the difficulty in constructing it."

8. 1996 Austin Transportation Study Task Force

Preferred Alternative Eliminated by TxDOT

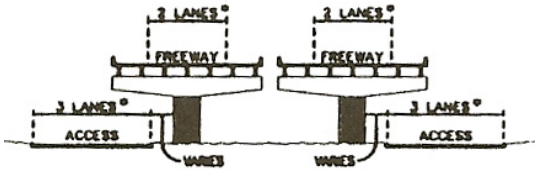
In 1996, the Austin Transportation Study U.S. 290-Loop 1 Task Force adopted an elevated alternative with a space saving concept. The 17-member task force evaluated community, transportation and environmental issues to develop Alt 1 as their preferred design concept.



Task Force Alt 1A
3 elevated, 2 at-grade lanes

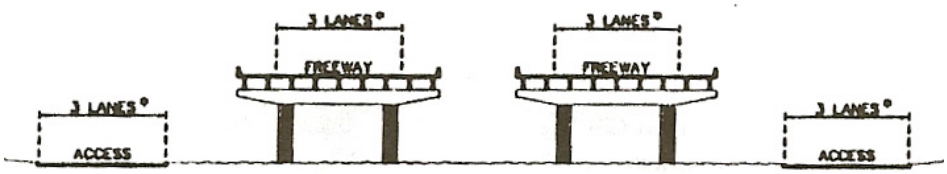
While TxDOT adopted certain aspects of the alternative, their basic concept remained unchanged.

Alternate 1B Eliminated by Task Force
The Task Force also evaluated a 4-lane elevated, 6-lane frontage road alternative and eliminated it from consideration.



Task Force Alt 1B
2 elevated, 3 at-grade lanes

TxDOT's Design Concept Remains
The TxDOT design analyzed in the 1996 Task Force was described as 250 feet wide. Today, TxDOT's design is 300 to 400 feet wide.



TxDOT Design
6 elevated, 6 at grade lanes

9. The Smart Mobility Report

Smart Mobility Inc. (SMI) is a national transportation planning and engineering consulting firm with experience in eighteen states. SMI has worked for municipalities, county governments and community organizations developing alternatives that meet both transportation and community goals. SMI was also the transportation modeling engineer for Envision Central Texas, giving them in-depth knowledge of Austin's transportation needs. SMI evaluated the Fix290 concept to determine how well it met CAMPO 2030 traffic projections and contemporary traffic and planning design standards.

Smart Mobility Inc. found that the Fix290 concept could meet all of the goals of the project with far less costs and many long-term benefits for the region.

Study Purpose *(italics are from the report)*

> *"The purpose of this report is to explore how this alternative would address the future traffic volumes on the 290 and 71 corridors and interchange area. The TXDOT proposal for a 12 lane facility is designed in response to projected future traffic growth in the area solely by increasing highway capacity. The Fix290 plan is a multi-faceted approach*

to future growth in traffic. It seeks to reduce the traffic burden on 290 itself by providing a more effective local street network. In addition, alternative modes of transportation are promoted by this plan, including Bus Rapid Transit and bicycle transportation. Further, the plan will promote a new urbanism form of growth which, due to more compact development and a greater mix of land sues, reduces the amount of vehicle travel."

Fix290 Concept: Higher Level of Service Capacity than Report States

TxDOT used 66 percent of the projected CAMPO 2030 traffic volume in analyzing the Level of Service for the main lanes. This is because CAMPO assumed that 34 percent of the traffic would use the "free" frontage roads. CAMPO estimates that only 6 percent of traffic will use the frontage roads in the un-tolled section of the project already constructed to the east of Joe Tanner Lane. The effects of this traffic volume on the local portion of the project are described by this quote from the report:

The proposal to construct elevated toll lanes could bring severe traffic congestion to the frontage roads.

(A further discussion of Level of Service is presented in Section 13 (A) TxDOT uses unfair Level of Service Analysis.)

Fix290 Concept Promotes Town Center Growth

The Fix290 proposal will foster smart growth and transit-oriented development, which will reduce the generation of new traffic This concept offers development and redevelopment potential along a future BRT [bus rapid transit] *line, as well as environmental benefits to Williamson Creek and recreational opportunities. It is highly consistent with the growth and development principles of transit-oriented development, new urbanism and smart growth, which are strategies that offer widespread benefits to the entire region, including improved air quality, less congestion and delay, and more green and open space.*

Local Congestion and Costs

Congestion and costs are major issues when developing a project that will have far reaching effects. These major issues in the SMI report need to be considered thoroughly:

- *Facilities with express toll lanes that are paralleled by free facilities (in this case the Frontage Roads) can lead to severe congestion on the "free" facilities, as many people will seek to avoid paying tolls and instead tolerate the congestion;*

- *It means that an expensive investment in elevated toll lanes is effectively used for only a small portion of the day, and only by a small portion of the population who are willing to pay a toll;*

- *Finally, it means that the frontage roads will become significantly congested with traffic using them to avoid paying tolls, which will affect all local traffic as well.*

Report Conclusion

The Fix290 at-grade parkway plan will provide the needed vehicular capacity to meet the CAMPO 2030 daily traffic projections for this location. Further, this plan will result in many longer term benefits to the region. It will provide a more highly connected local street network, and will promote more compact, transit-oriented development. It will allow for conservation and recreational opportunities along Williamson Creek, and provide bicycle/pedestrian transportation opportunities. The costs will be far less for the infrastructure, and there will be far greater long term benefits of this plan.

10. Saving the Oaks of Oak Hill

TxDOT's plan destroys dozens of huge live oak trees that were old trees when Oak Hill was very young. These trees, some greater than 300 years old, are the last of the old Oaks in the historic old town area. In the 1800's, these trees were shelter to pioneers in the area. Some were standing when the Declaration of Independence was signed and the Alamo fell. They sheltered picnics, reunions and Fourth of July celebrations and since the mid 1900s have been the center of Oak Hill as it is known today. Oak Hill was named for these trees. They are an integral and intimate part of the community.

TxDOT's 2.7-mile long 12-lane superhighway proposal occupies 103 acres. The existing roadway and 19+ businesses that have been removed occupied 39 acres. Of the remaining 64 acres, approximately 12 acres comprise Williamson Creek proper, which is heavily forested. There is a 4-acre stand of dense forest in the eastern portion of the site and 40 acres of natural Hill Country vegetation in the western portion of the site, approximately half of which can be counted as heavily wooded. The City of Austin prohibits the removal of trees larger than 19 inches in diameter without a permit.

Value of the Trees Proposed for Removal

Putting a value on a tree, especially many trees with historic significance, is difficult at best and controversial at least. But there are accepted standards for tree appraisal. The value of trees can be determined by a formula developed by the Texas Agricultural Extension Service in a paper by Alan Dreesen entitled "Evaluation of Texas Shade Trees." The value takes into consideration the health, location and historic value of the trees. Formulas in the paper describe tree values ranging from $25 to $36 dollars per square inch of trunk cross-section.

Grandmother Oak, William Cannon and Hwy 290. The City of Austin does not allow the removal of any tree larger than 19 inches in diameter without a permit.

$1.5 Million Value of Trees

The value of these oaks as historic landmarks and an integral part of Oak Hill cannot be underestimated. Conservatively, there are two-dozen 24" diameter trees proposed for removal and a dozen over 36". This gives a total value of $576,000. Consider that there are at least a hundred trees worth $25 per square inch that are 18 inches in diameter, and the total value of the trees becomes $1.2 million. This is a conservative

estimate. The most highly valued trees, such as those in prominent places with significant historical background, have a value of $36 per square inch. There is one tree scheduled for removal that is 59 inches in diameter and many more trees that are 4 feet in diameter. The 59” diameter tree alone, at $25 per square inch of cross sectional area, considering the Texas Agriculture Extension Service Analysis, has a value of $68,000 to $100,000.

Dodging the Oaks of Oak Hill Can be Done

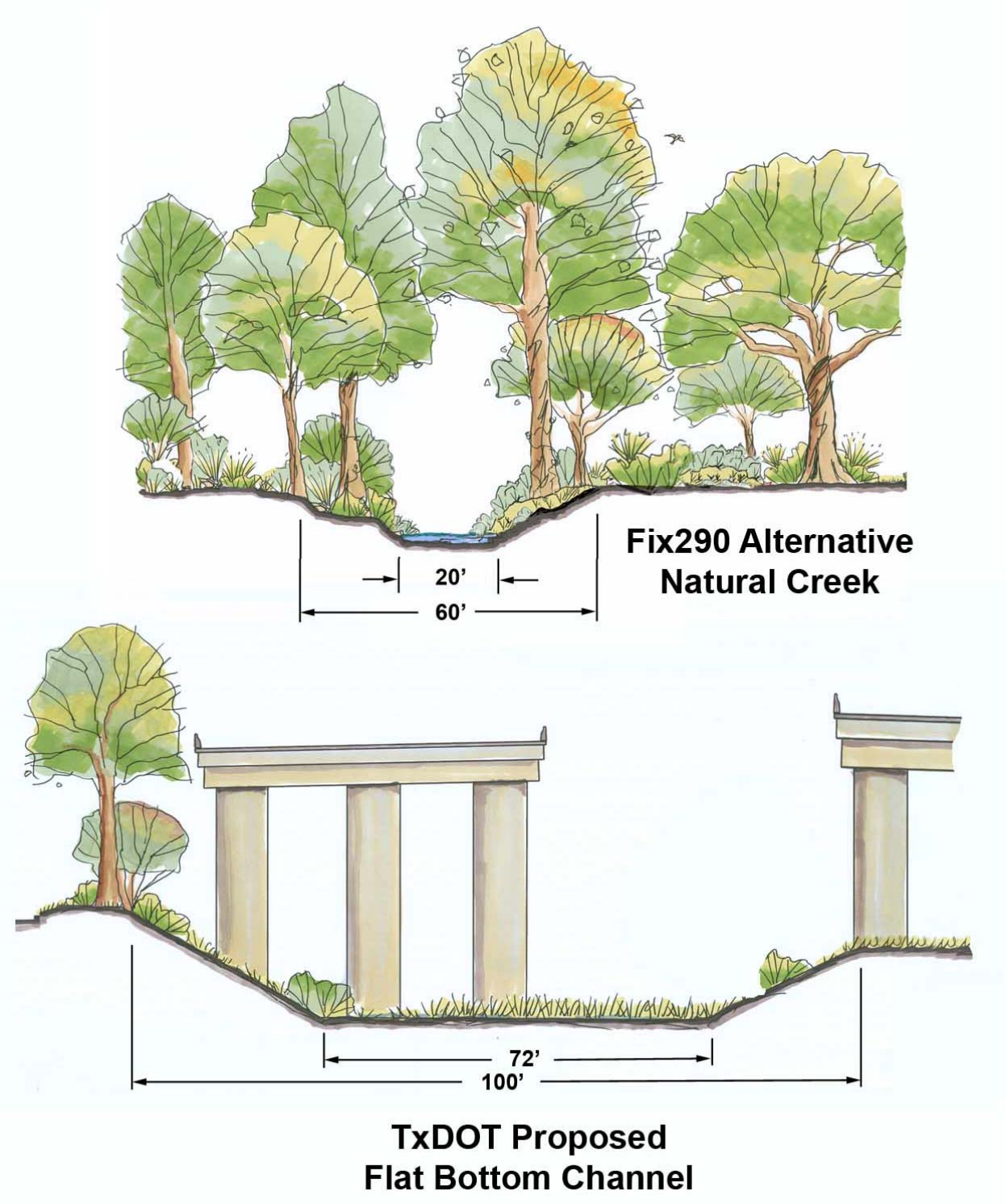
There is a way to save the oaks and build a transportation project to meet CAMPO 2030 as shown in the image below. The main lanes can go over or under William Cannon. Removal of the last small section of bluff just west of William Cannon allows 135 feet for construction between the cliff and the edge of the creek. This is enough room for 8, 12-foot lanes and 4, 8-foot shoulders. This is the configuration that was analyzed by SMI that meets CAMPO 2030 criteria, and has a better overall Level of Service than does TxDOT’s current plan.

Access to and from William Cannon west would be on the Freescale side of Williamson Creek. This would require two additional bridge structures, but the vast majority of Williamson Creek would be saved with the Fix290 concept.

Oak Hill was named for the great oaks in this area. The value of the Oak Hill oaks cannot be underestimated.

11. The Removal of Williamson Creek

The following compares the impacts to Williamson Creek from TxDOT's and Fix290's plans.



TxDOT Proposes to Remove Over a Mile of Williamson Creek

TxDOT's proposed 2006 Corps of Engineers Mitigation Plan for the Hwy 290/71 Interchange Project describes the removal of 4 acres of Williamson Creek extending over a mile downstream from the Old Bee Caves Road low water crossing to nearly the end of the Oak Hill ball fields. The average bottom width of Williamson Creek in this area is 15 to 25 feet. The TxDOT proposed creek channelization average bottom width is approximately 72 feet and the average top width near 100 feet.

TxDOT's Creek Removal Required to Prevent Flooding from the Project

TxDOT must create a very large ditch to store the increase in stormwater created on the site by the their proposed highway project. In addition, the TxDOT project includes five water quality and detention structures capable of both water quality treatment and flood prevention. The TxDOT proposed creek channelization serves the purpose of a very large flood detention pond that extends over a mile through the project. If it were not for this mile-long flood prevention pond, flooding would be worse on Williamson Creek downstream from the project.

This segment of Williamson creek scheduled for removal is behind the Jiffy Lube. The old rock wall on the right is remnant from the pioneer days of Oak Hill. The creek here is about 25 feet wide and the rock wall is about 25 feet from the creek. Everything in this picture will be removed with TxDOT's proposal.

TxDOT has found enough room on its proposed site, in addition to the 73 acres of highway, to include 12.4 acre-feet of floodwater detention ponds. Twelve and four-tenths (12.4) acre-feet would cover 3,000 feet of the existing roadway, from Jack Brown Cleaners to the signal at Hwy 71 with two and a half feet of water. The extensive widening of Williamson Creek holds an even greater volume of floodwater generated by TxDOT's proposed highway.

The Fix290 Alternative Needs No Creek Removal for Flood Prevention

Fix290 alternative will not alter the natural development of the creek. The creek can be saved because the Fix290 concept increases the existing impervious cover in the

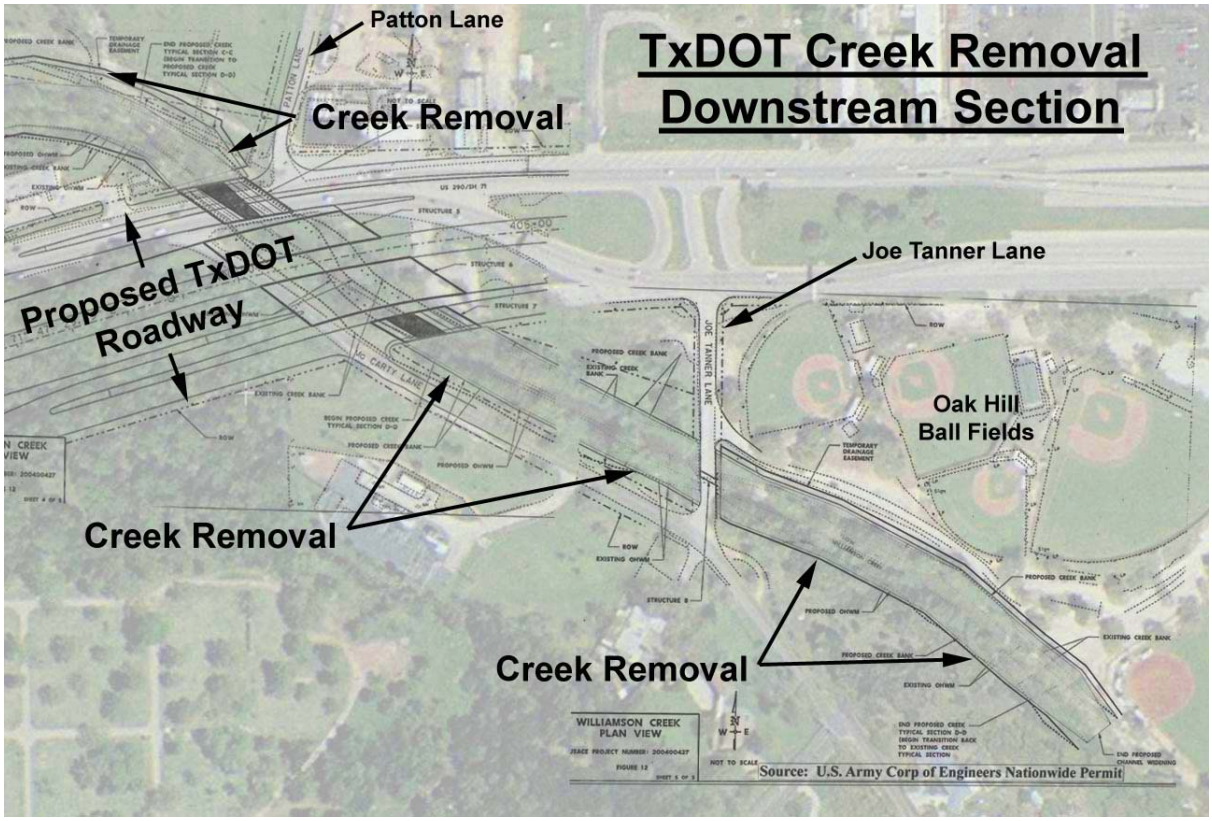
project area by only 5 acres, from 39 acres to 44 acres, or approximately 13 percent. The TxDOT proposal increases the project impervious cover 187 percent from 39 acres to 73 acres. TxDOT's proposed project would require almost seven times more flood detention than the Fix290 concept. The greenspace saved and protected by the adoption of an alternative like the Fix290 concept allows ample room to detain floodwaters on site and not impact the creek.

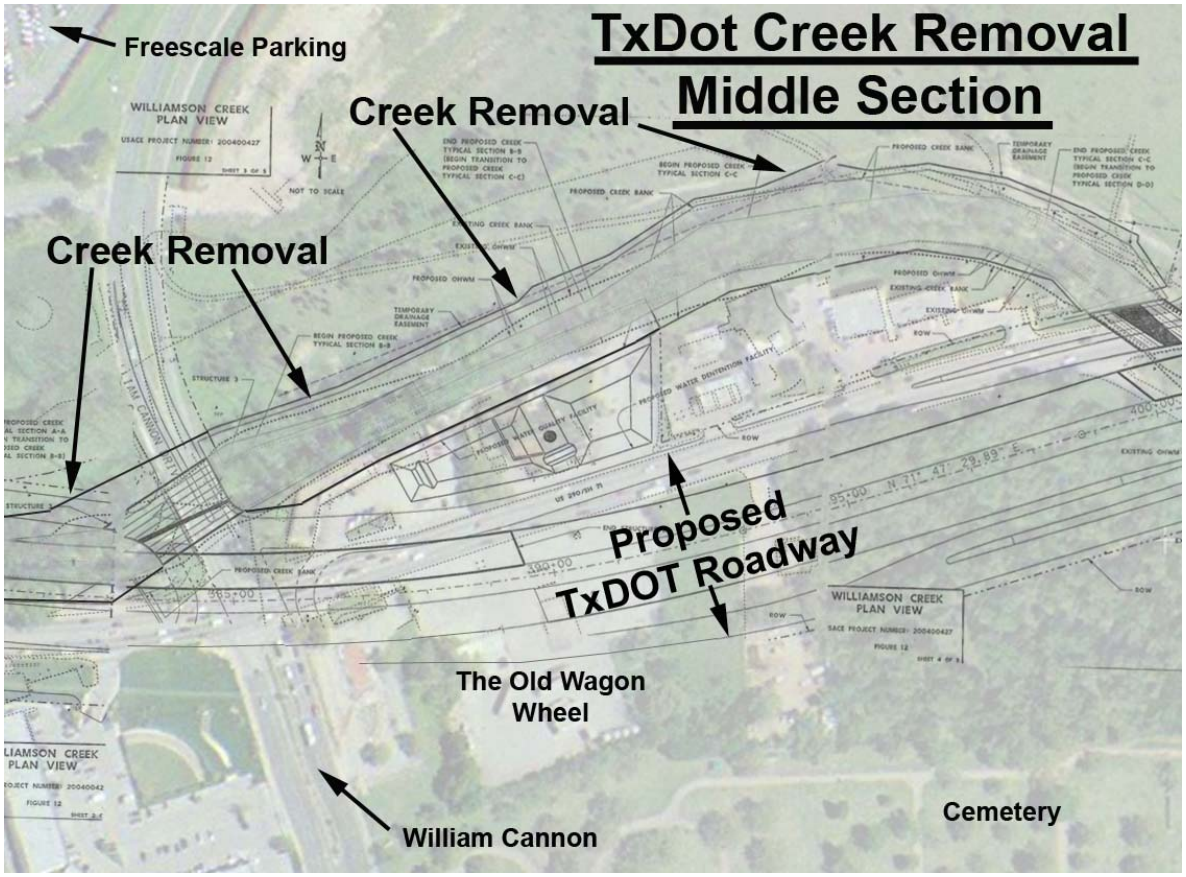
U.S. Army Corps of Engineers Permit for Construction in U.S. Waters

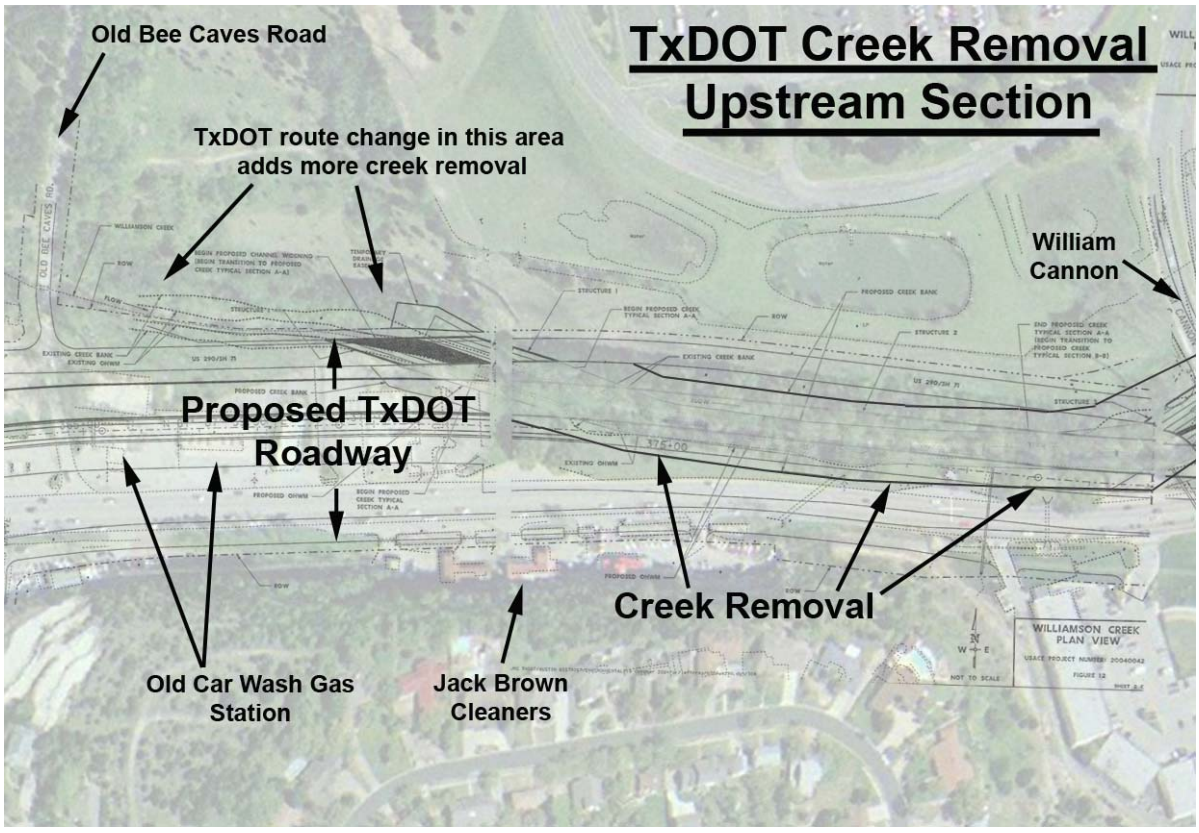
The Corps of Engineers requires that TxDOT obtain a permit for work done in waters of the United States. The application for this work, made on January 31, 2005, included the limits of the proposed creek removal. These limits, plotted onto aerial photography, demonstrate the extensive scope of the construction proposed for Williamson Creek. On average, the creek removal or creek channelization will have an average width of nearly 100 feet. This area is approximately ½ million square feet, or over 12 acres. The creek channelization area includes almost 100% of the creek environment.

The Extent of the Creek Channelization

The following three images show that nearly every square foot of creek environment is entirely removed from the project area. This is an extensively wooded riparian (waterway) ecosystem with a wide diversity of plants and animals – more diversity than anything else within several miles. The environment along the creek (upstream from Hwy 290) is a classic example of a spring fed Hill Country stream. Of critical concern is the fact that downstream of the Hwy290 crossing, where the creek is usually dry, lies the Mount Bonnel Fault and the Edwards Aquifer Recharge Zone. 1,800 feet of the creek, within the limits of the recharge zone, is proposed for "improvements" consisting of a 90-foot wide channel with rock gabion (rock and chain link fence).




TxDot Creek Removal
Middle Section
Freescale Parking
Creek Removal
Creek Removal
Proposed
TxDOT Roadway
The Old Wagon
Wheel
William Cannon
Cemetery


TxDOT Creek Removal
Upstream Section
Old Bee Caves Road
TxDOT route change in this area
adds more creek removal
William
Cannon
Proposed TxDOT
Roadway
Creek Removal
Old Car Wash Gas
Station
Jack Brown
Cleaners

Over One Mile of Williamson Creek Will Disappear

TxDOT's plan calls for nearly quadrupling the bottom width area of the existing creek. Almost 4,000 feet of the proposed mile of creek to be removed is a perennially spring fed creek, complete with dozens of species of aquatic plants, fish, turtles, etc. The water that is present normally in the 15 to 25 foot wide creek, when spread out over 60 to 90 feet of TxDOT's proposed flat bottom channel, will simply disappear, taking all of the aquatic life with it. This is the only spring-fed creek in Oak Hill.

This photo of Williamson Creek was taken between the existing William Cannon and Hwy 290 bridges. The aquatic plants in this area will not be able to survive when the small spring flows are spread out over 60 plus feet of channel bottom and evaporation is significantly increased because of the removal of all of the trees. The creek in this photo is 15 to 20 feet wide.

Complete Removal of Oak Hill's Finest and Most Diverse Ecosystem

This is the only creek of its kind within several miles. TxDOT's construction will completely remove all vestiges of what was once a unique ecosystem within the limits of their proposed project. Future recreational and cultural opportunities will no longer be a possibility.

Ferns like these found near the old travelers rest stop at the bluff grow in very few places in the Hill Country. Their environment must be continually wet and shaded. This ecosystem will be completely removed by the TxDOT proposal.

Edwards Aquifer – Artificial Recharge Feature

The downstream 1,700 feet of creek channelization will take place over the Edwards Aquifer Recharge Zone. This part of TxDOT's proposed channel has a 90-foot bottom width comprising 3.5 acres and rock gabion sides. The streambed would have to be scraped clean of centuries of accumulated debris and recharge zone fracture clogging materials to allow for construction of the

improvements. This section of creek bottom averages 25 feet wide. Significant amounts of the banks of Williamson Creek will also be removed to accommodate the proposed 90 foot wide channel, increasing the opportunity for recharge by almost four times.

The above image shows a generic rock gabion creek channelization project in Ohio. This gabion-lined channel is very similar to what can be expected from the proposed TxDOT creek channelization downstream of the 290 crossing, nearly all the way to the end of the Oak Hill ball fields, with one big exception. The TxDOT project has a 90-foot wide bottom, three times larger than shown in the image above.

The way this channel modification acts as a recharge feature is that during storm events, the four-fold increase in channel width will allow for the stormwater to flow much more slowly. This in turn will allow for nearly four times as much recharge, over nearly four times as much area, or nearly 16 times more recharge.

Oak Hill Ball Fields Lose Nearly Every Tree Along the Creek to TxDOT's Creek Channelization

The proposed TxDOT channel will also run parallel to the Oak Hill ball fields almost all of the way to the end of the last ball field. The creek in this area has a consistent 25-foot bottom width. The installation of the proposed 90-foot bottom width gabion lined channel (see the previous image) will cause the removal of nearly every tree that now lines the banks of Williamson Creek in this area as well and, significantly detract from the aesthetics of the main outdoor recreation facility in Oak Hill.

12. Environmental Impact Statement, Delay and Cost Savings

Environmental Impact Statement

TxDOT maintains that the Fix 290 concept will require a complete Environmental Impact Statement (EIS) revision taking three years. Federal law does not reflect this statement. Issues regarding EIS are summarized below:

- Federal Highway Administration National Environmental Policy Act (FHWA NEPA) states that a re-evaluation of an EIS is required if the project is not finalized within 3 years (Section 771.129). TxDOT is currently in the process of re-evaluating their EIS for this project to determine if; supplemental EIS, full EIS or no revisions are necessary. This re-evaluation is based on environmental and other changes in circumstances (not to the project design) that have occurred in the last 18 years.
- FHWA NEPA rules state that a supplemental EIS will not be required if "changes to the proposed action, new information, or new circumstances result in a lessening of adverse environmental impacts evaluated in the EIS " (Section 771.130).

The Fix290 concept significantly lessens the environmental impact of this project. TxDOT's maintains that three years are required to prepare new EIS documents because the FIX290 concept is not one of the alternatives presented in the original EIS. Examination of the EIS reveals that the Fix290 concept is as similar or more similar to the EIS than TxDOT's current design. This is explained below:

- The original EIS presents a design concept only. This design concept is shown in the EIS as an at-grade concept. The cross section for the project alternative designated in the EIS is a ground level design with no elevated structures, like the Fix290 concept. The only elevated highway discussed in the EIS is a 1,600-foot bridge over Williamson Creek. TxDOT's current concept shows nearly 4,000 feet of elevated main lanes.
- TxDOT's current design completely removes over a mile of Williamson Creek and replaces it with a large ditch three to four times the original creek width. The EIS does not discuss any creek channelization. The EIS assumes that there will be no manipulation of the creek and a one-foot increase in flood elevation from the impacts of the project. Current TxDOT flood policy requires that there be zero increase in flood elevation due to construction such as this. Because of the significant impacts of the increased impervious cover of this project, over a mile of creek must be widened three to four times its normal width to accommodate the floodwaters that cannot be stored in the project's detention ponds.

- The FIX290 concept does not alter the existing creek.

The EIS Encompasses the Fix290 Concept
TxDOT says that the Fix290 concept is a parkway without frontage roads and is therefore incompatible with the design alternatives presented in the EIS.

- Fix290 supports a project concept that is generally considered a “Parkway” in nature. The Fix290 design concept shows a parkway at the bluff in Oak Hill. However, like the EIS, this project is only a concept. Fix290 maintains that access is as important as the creek and the historic oaks. The Fix290 concept includes many different alternatives for access. There may be a greater cost/benefit in some areas of the project to have frontage roads than to have joint-use access, backage roads, buy-outs or other designated access requirements; however, like Mopac in Downtown Austin, frontage roads and a parkway can exist along the same transportation corridor.
- TxDOT was able to meet many of the challenges encountered with the Mopac transportation corridor design by using a combination of all of the above access methods.
- The FIX290 concept maintains that the parkway concept will be the choice design that meets project, local and regional goals. However, detailed design work and cost/benefit analysis is beyond the abilities of a neighborhood advocacy group.
- The most important issue for Oak Hill and the region at this point is that consideration of an at-grade parkway concept design with limited or semi-limited access should be paramount in the analysis of the project as it pertains to the EIS.

Implementing the Fix290 Concept Introduces No New Delays
There are many issues involving timelines. The actual time to completion of an at-grade reduced access design, compares favorably to the completion of the current TxDOT project.

Delay Due to EIS Considerations Less for Fix290
Delays to the project due to EIS considerations for the current TxDOT design should be less for the Fix290 concept because it has much less environmental impact. If the reduced environmental impacts of an at-grade design did require re-notification, then a project such as TxDOT’s that has greater environmental impact than the at-grade design would require re-notification as per FHWA NEPA Section 771.130, as stated above.

Delay Due to Additional Acquisitions and Access Issues Is the Same or Less
This portion of the project can proceed in parallel with other project tasks resulting in no overall delay in project completion.

Redesign for Fix290 will be Faster than Redesign for TxDOT's Plan
The Fix290 concept is significantly smaller in scope, therefore additional design time should be somewhat proportionally less. This is especially true when considering that TxDOT does not have a final design for the 12-lane elevated project.

The public information portion of TxDOT's design process has already occurred for the current TxDOT design. Additional public input would be required for implementation of the Fix290 concept. Because of the proportionally reduced design time of a smaller project, the overall design and public input portion of the Fix290 design would be smaller or not significantly greater than the design time remaining for the current TxDOT design.

Implementing the Fix290 Concept Reduces Cost and Construction Time
The significantly reduced scope of the Fix290 alternative would allow a relatively proportional reduction of construction time because of the reduced amount of work required.

Description	Time Reduction
TxDOT's design is 12 lanes with 8 shoulders. Fix290's concept is 8 lanes with 4 shoulders - a reduction of roughly 40%	40%
Phasing of the Fix290 concept should be considered so that 6 lanes are constructed with the first phase, which will reduce the amount of construction by another 2 lanes or another 10%	10%
Reduction for less construction time for the elevated portion of the project and the height of the interchange at the "Y" to two levels instead of three	5%
Reduction for over a mile of creek channelization to Williamson Creek also carries a significant amount of timeline,	5%

Arguably, the above reductions in construction quantities are greater than 50%. This reduction is highly significant in the timeline analysis.

Other Factors Reducing Both Costs and Time to Construct
Alternative access techniques such as access easements, joint property access, private frontage roads, backage roads and an advanced local street network prioritized by ongoing local planning efforts will allow for reduced time to construct. Reducing the number of levels of the interchange from three to two will reduce the quantity of materials in the air by shortening overpass and flyover lengths 800 feet each. Signage,

revegetation and landscaping are all significantly reduced. Detention and water quality treatment costs are greatly reduced when the proposed impervious cover increase is only 5 acres rather than 34. Overhead construction also carries a significant premium that when eliminated or reduced can favorably lower project costs.

Additional Acquisitions Costs for the Parkway Concept
Most of the Right of way for TxDOT's existing project has been purchased. Nineteen businesses have been bought out. Planning and progressive access techniques covered elsewhere in this report will allow for cost effective solutions to complete the property acquisitions portion of a new design.

TxDOT has stated that additional costs of $30 million would be required to switch to a parkway design concept. There is very little existing development left in the 2.7 mile 290 corridor involved in this project making entitlement acquisition easier and more cost efficient. The existing project has nine access ramps and three major intersections that already have approximately 12,000 feet (almost half) of entitlement rights. Little alteration of these access entitlements would likely be required with a limited frontage road project. There are many access techniques that are mentioned in this report that can be used that simply reduce these costs. These techniques are common practices across the nation.

13. Conflicts

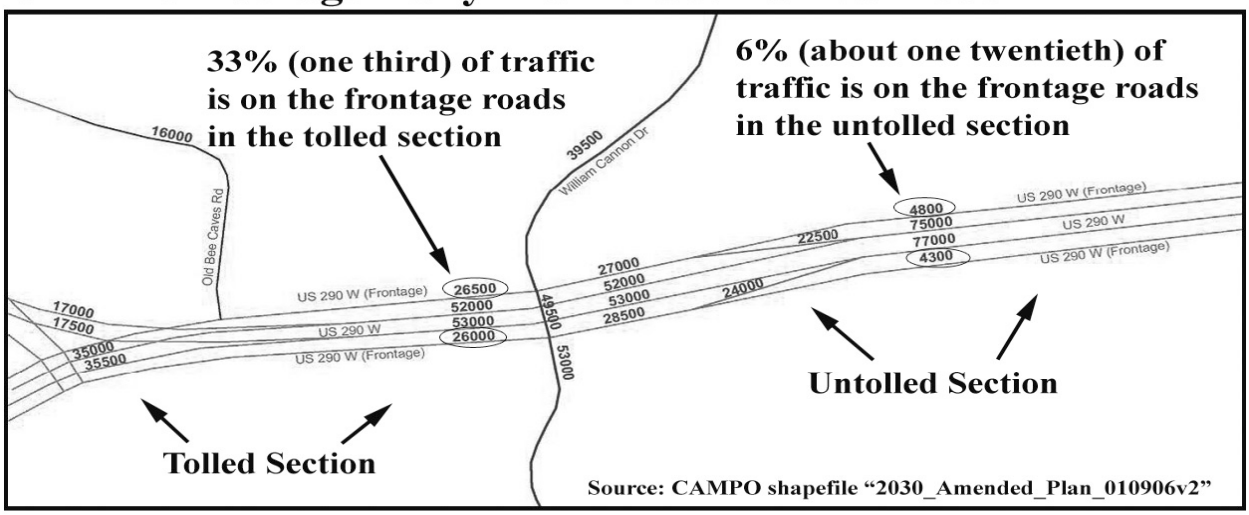
A) TxDOT's Level of Service Is Worse than Fix290's
TxDOT asserts that their design offers superior performance to Fix290's, based on Smart Mobility Inc.'s (SMI) analysis that the Fix290 project will have a Level of Service (LOS) of D/E.[1] TxDOT designs their main lanes for LOS "C". TxDOT unfairly compares its proposal with Fix290's because TxDOT only uses two thirds of the total CAMPO 2030 traffic volume to get their LOS C. The rest of the traffic is shown by CAMPO 2030 to be on the frontage roads, or the "free lanes."

[1] LOS C is what transportation planners design for with maximum flow and minimal congestion. Level D can be associated with traffic in a highly urbanized area during the middle of the day - very heavy. In highly urbanized areas LOS D is the goal for transportation designers because a LOS C would be cost prohibitive. Level E is a marginal service state and is considered to be beyond design capacity. Level F is failing, or worse than level E.

This is a reflection of the toll avoidance that CAMPO feels will occur with this short stretch of toll road. This assumption is verified by the fact that CAMPO 2030 uses only 6% of traffic for frontage roads East of William Cannon where there will be no tolls.

SMI states repeatedly that 34 percent of the projected future traffic on the frontage roads will cause severe congestion, and that this congestion will have the greatest impact on local traffic.

CAMPO Average Daily Traffic Count: Year 2030



Local Traffic has LOS of "F" for TxDOT Plan

For the frontage roads and local traffic, TxDOT's plan has a Level of Service of "F", or failing as shown in the following chart.

Peak Hour Direction Traffic Volumes for Urbanized Areas

STATE TWO-WAY ARTERIALS

Class I (>0.00 to 1.99 signalized intersections per mile)

		Level of Service				
Lanes	Divided	A	B	C	D	E
1	Undivided	**	220	720	860	890
2	Divided	250	1,530	1,810	1,860	***
3	Divided	380	2,330	2,720	2,790	***
4	Divided	490	3,030	3,460	3,540	***

Class II (2.00 to 4.50 signalized intersections per mile)

		Level of Service				
Lanes	Divided	A	B	C	D	E
1	**Cannot be achieved using table input value defaults.					850
2	Divided	**	220	1,360	1,710	1,800
3	Divided	**	340	2,110	2,570	2,710
4	Divided	**	440	2,790	3,330	3,500

Source: Highway Capacity Manual, 2002

** can not be achieved using table input defaults.

(*** Not applicable for that level of service letter grade. For automobile/truck mode, volumes greater than level of service D becomes F because intersection capacities have been reached.

The failing frontage road Level of Service is based on a peak hourly flow of 9% of the 55,500 vehicles per day on the frontage roads as per CAMPO 2030 west of William Cannon and a 60% direction factor equaling a peak of 2,997 vehicles per hour.

TxDOT needs more lanes to accommodate local traffic in order for their overall level of service to be better than what the Fix290's concept offers. TxDOT is making the Level of Service comparison with a smaller amount of traffic than Fix290. It is not appropriate to make that kind of comparison.

B) Extreme Congestion on Frontage Roads

The following quotes are from the SMI report. They represent the significant level of congestion with which the current TxDOT design will burden Oak Hill: (bold underlined text is the author's):

> *The proposed TXDOT toll plan will bring **high levels of congestion** to both local residents making short trips on the frontage roads, and to commuters wishing to avoid tolls.*
>
> *While toll roads have become an appealing means of funding needed infrastructure improvements, the short tolled segment proposed by TXDOT is not an ideal application of toll lanes. Facilities with express toll lanes that are paralleled by free facilities (in this case the Frontage Roads) can lead to **severe congestion** on the "free" facilities, as many people will seek to avoid paying tolls and instead tolerate the congestion.*
>
> *Tolled facilities that are immediately paralleled by "free" facilities are generally used very lightly through most of the day, and only see heavy use during peak hours, when the "free" lanes will be **severely congested**. Potential toll revenue is far less on parallel facilities compared to a toll facilities without adjacent parallel routes. It also means that an expensive investment in elevated toll lanes is effectively used for only a small portion of the day, and only by a small portion of the population who are willing to pay a toll. Finally, it also means that the frontage roads will become **significantly congested** with traffic using them to avoid paying tolls, which will affect all local traffic as well.*
>
> *In the segment that is tolled, near the 71 interchange, there is a dramatic shift so that*
> *34% use the frontage roads and only 66% use the express lanes (see Figure 1, following page). The frontage roads have significantly lower capacity and lower speeds. It is very possible that the express toll lanes,*

while providing a congestion-free route for those willing to pay, will create ***high levels of congestion*** *on the frontage roads. Unless street connectivity in the Oak Hill area is improved, most local trips will also require use of the* ***congested frontage roads****, and* ***most local traffic will be burdened by this increased congestion****.*

C) TxDOT's Significant Under-estimate of Proposed Impervious Cover Using Existing Exposed Limestone

TxDOT asserts in their Biological Assessment (BA) dated March 2005 that they are only increasing impervious cover in the watershed by 18.82 acres. The assumption is made in the Biological Assessment that there are 15.23 acres of exposed limestone rock in the project area that behave as impervious cover. This assumption can be made only if the existing exposed limestone rock is contiguous. The existing exposed limestone rock on this project is scattered and not contiguous.

Discussions with Texas Commission on Environmental Quality (TCEQ) staff, who reviewed and approved of this project for a required Water Pollution Abatement Plan (WPAP) indicate that they were not aware that TxDOT had used this assumption in their calculations, had not received a copy of the BA and that no mention of evaluation had been made in the WPAP application. Subsequent conversations with TCEQ indicate that TxDOT is possibly in the process of revising their calculations.

D) Williamson Creek Channelization; Omitted information from the TCEQ WPAP Omitted information from USFW Biological Assessment

TxDOT did not include the creek channelization to over a mile of Williamson Creek in their Water Pollution Abatement Plan application to TCEQ for the construction plans to the HWY 290/71 Project from Scenic Brook Drive to Joe Tanner Lane that was submitted in March 2005 and approved by TCEQ on May 16, 2005. TxDOT also did not include the creek channelization in their Biologic Assessment for U.S. 290 from Joe Tanner Lane to Scenic Brook Drive in Travis County, Texas, submitted to US Fish and Wildlife in March 2005 and concurred with on April 4, 2005.

TCEQ has discussed this issue with TxDOT, and TCEQ understands that additions to the already approved Water Pollution Abatement Plan are forthcoming.

TCEQ was also unaware that creek channelization was planned for nearly 1,700 feet of the Williamson Creek bed within the limits of the recharge zone.

The status of the “concurrence” for US Fish and Wildlife Biological Assessment due to these issues is unknown.

E) Four Acres of Creek Removal in the Corps Nationwide Permit Application vs. 12 to 16 Acres of Actual Creek Removal

TxDOT describes their creek removal action as being “Approximately four acres of vegetation cover (tree and ground cover) along and within Williamson Creek within TxDOT right-of-way and the temporary drainage easements [that] would be affected as a result of the proposed channel alterations.” TxDOT’s assertion in this document are highly inaccurate.

Williamson Creek occupies an ecological zone that is approximately 75 to 150 feet wide throughout the project. Species within this zone interact together to form a riparian or creek ecology. TxDOT is defining the creek as that area that is included within its “ordinary high water mark”. TxDOT says this is equal to 4 acres of creek. Four acres would make a mile of creek average 34 feet wide.

The water of the creek may stop at the ordinary high water mark, but the influence of the creek extends far beyond this point. The 100 to 130 foot width of proposed TxDOT channelization will remove 12 to 16 acres of creek, creek banks, and bottomland associated with the creek.

As a follow-up to the January 31, 2005 application, The Corps required that TxDOT submit a mitigation plan for the project. TxDOT has responded with a native plant mitigation plan that calls for the revegetation of approximately 1.1 acres of Williamson Creek.

F) Tolling and Prior Fiscal Dedication

TxDOT’s project has been completely or partially funded, funding has been set aside, funding has been authorized, funding has been made a public commitment by funding authorities and the project has been scheduled for construction for a total of at least twelve (12) times during the project history. In total, 24 separate instances or items have been authorized, funded or scheduled for construction. Details are presented in Appendix A.

In-light of these facts, the appropriateness of tolling is consideration that must be made.

G) Flooding of the Main Lanes

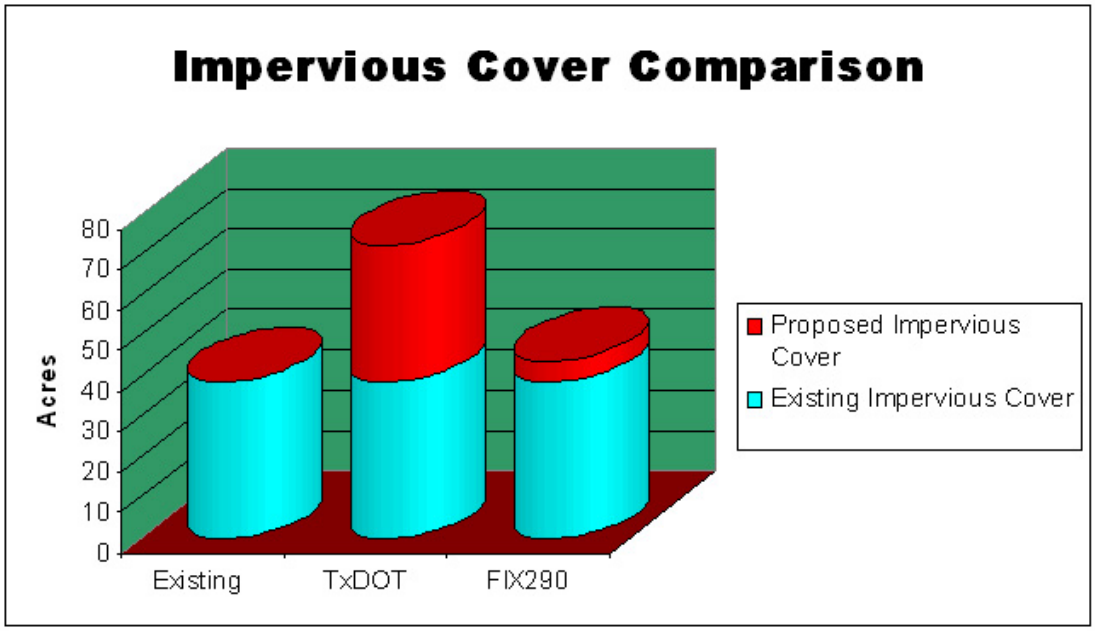
A TxDOT precedent exists to raise all main travel lanes above the height of the 25-year storm with new construction. There are a number of techniques and assumptions that will allow the Fix290 concept to have only minimal, if any, impacts on Williamson Creek, and still meet TxDOT flood precedent.

- The 85% reduction of proposed impervious cover associated with the Fix290 concept will allow a corresponding reduction in stormwater volume. The replacement of over a mile of Williamson Creek with a 60 to 90 foot wide flat bottom ditch for the sole purpose of floodwater detention would be significantly reduced or eliminated.
- Reducing the footprint of the project on already purchased ROW, will increase the area available for the construction of flood prevention ponds.
- Approximately 60 percent of the project is within the Williamson Creek watershed. Decreases to the proposed elevated lanes and to the extent of the interchange are all within the Williamson Creek Watershed (the other 40 percent of the project does not drain to Williamson Creek). Therefore the Fix290 alternative has an even more beneficial impact to the creek because of the greater removal of excess roadway in the Williamson Creek Watershed.
- And of course, excavation methods and roadway elevation methods can be used to remove the roadway from the 25-year flood. The roadway will have to be raised a few to several feet. These changes can be made without any creek channelization.

H) Proposed Impervious Cover

The increase in impervious cover is the root of the environmental controversies surrounding this project. If TxDOT were to build a roadway more appropriate for the use and projected traffic, environmental issues would be appropriately manageable. Comparing TxDOT's and Fix290's plans demonstrates the following:

- Approximately 27 acres of roadway currently exists within the project area and 12 acres of impervious cover from adjacent development has been purchased by TxDOT. This totals the 39 acres of existing impervious cover.
- TxDOT proposes to build an additional 34 acres of impervious roadways with this project for a total of 73 acres.
- The Fix290 concept proposes that this project include a total of approximately 44 acres (including access ramps and interchange pavement).
- The Fix290 concept includes only five acres more proposed impervious cover than all of the existing developments and roadway in the project area.
- Fix290 proposes 85% less impervious cover for the project



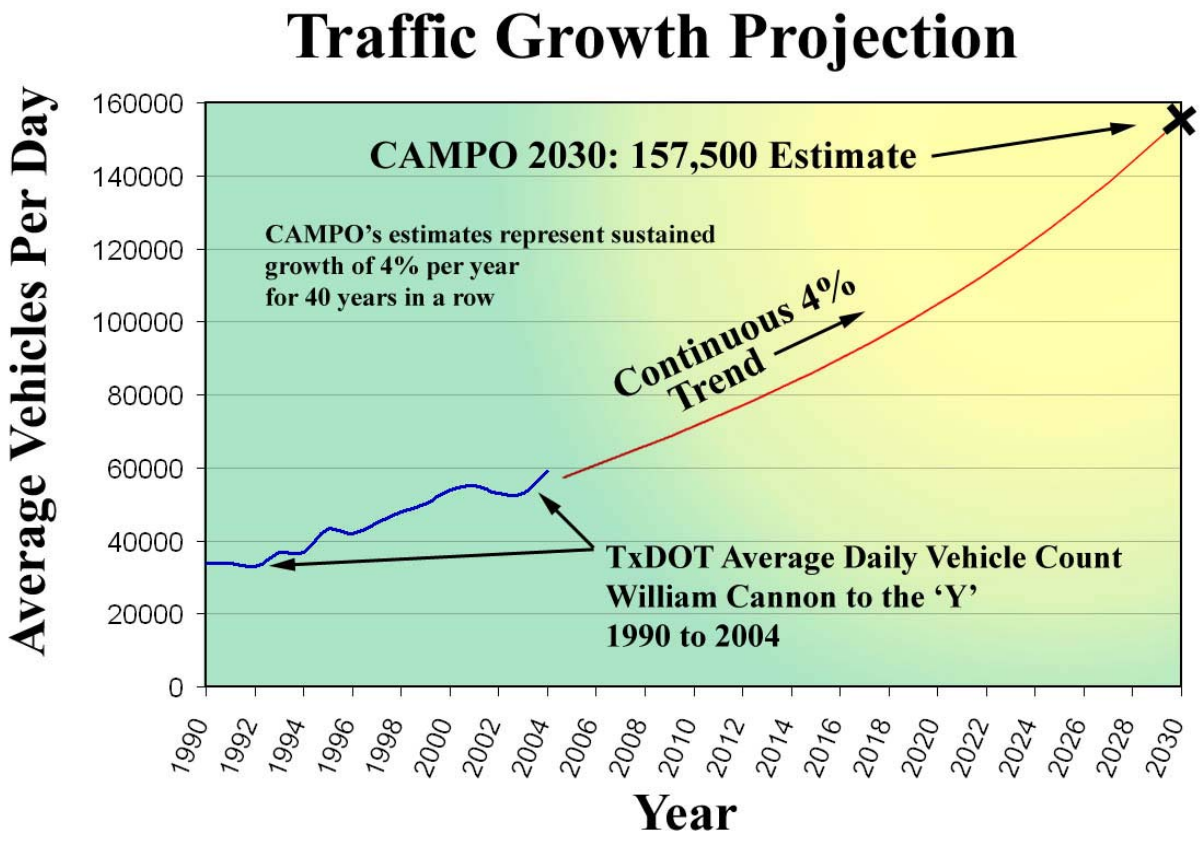
This significant reduction in TxDOT's proposed total project impervious cover will allow for complete stormwater detention on-site, likely with significantly less capital outlay than is already included in the proposed TxDOT detention ponds. Because stormwater will be detained on-site, no modifications (removal) of any of Williamson Creek would be required.

I) Traffic Projections are Very Aggressive

TxDOT uses CAMPO 2030 traffic projections to justify their design. Analysis of CAMPO 2030 reveals that a four (4%) annual growth rate is projected over a 40-year consecutive period to achieve the estimated traffic counts at the end of the period.

TxDOT traffic counts from 1990 to 2004 reveal that Hwy 290 traffic between Hwy 71 and William Cannon increased at approximately four percent per year for the period (34,000 vehicles per day to 59,000 vehicles per day). Sustaining this magnitude of growth for a 40-year period however is not likely.

Projected into the future, the CAMPO estimate of 157,500 vehicles per day equals an additional 25 years of consecutive 4% growth. When added to the 15 years of existing traffic records from TxDOT, the total is 40 years of continuous annual four percent growth. This is a very aggressive growth to be achieved in a 40-year consecutive time span.



14. Conclusion

This project was conceived in the mid 1980's. Its general concept has remained virtually unchanged for 20 years. We are now in the 21st century. We have more knowledge than we did in the 1980s. This project does not reflect the knowledge of the last 20 years.

Federal Highway Administrator Mary Peters directed her organization to proceed in 2002:

> *"…We should seek to institutionalize the principles of CSD with the same commitment that drove the implementation of the Interstate Highway System. We are in an era that calls for innovative thinking, improved coordination, cooperation, interdisciplinary decision-making, streamlined implementation, and community acceptance…"*

15. Final Notes:

Nationwide Permit Rejected by Army Corps of Engineers
The Army Corp of Engineers rejected the Nationwide Permit Application for this project in late September 2006. The project manager Jennifer Knowles, for the Army Corps, said that there was not a Nationwide Permit available for permitting work of this magnitude. TxDOT would have to reduce the scope of their channelization or submit for a standard, public notice permit.

TCEQ Awaiting Further Information Concerning Channelization from TxDOT
The Texas Commission on Environmental Quality is anticipating additional information to be submitted for the WPAP for the project concerning the removal of Williamson Creek and recharge issues from in-stream detention over the recharge zone.

TxDOT EIS Re-evaluation Release Postponed to September 2007
TxDOT has announced that the EIS re-evaluation will become public about September 2007, based on new TxDOT guidance on addressing cumulative impacts and awaiting new TxDOT guidance addressing indirect impacts. The EIS re-evaluation will take the above guidance into consideration.

CAMPO Approves Study of At-grade Design Concept
The Capitol Area Metropolitan Planning Organization voted unanimously in Early October to stud the Fix290 concept as an alternative to the TxDOT Design.

Appendices

Appendix A - Project Funding and Scheduling History: Hwy 290/71 Interchange

	Date	Segment	Length (Mi)	Project #	Work Phase ($K)			Scheduled	Ref.	Status
					Prelim	ROW	Construct			
1	5/2/1987	E of Wm Cannon to Boston Ln Construct frontage roads			$661	$27,791	$6,608	(1987-92)	1	
2	"	W of RM 1826 to E of Wm Cannon Construct frontage roads			$960	$16,467	$9,600	(1987-92)	1	
3	"	E of Wm Cannon to Boston Ln Construct main lanes of 6-lane			$1,012		$9,204	(1987-92)	2	
4	"	W of RM 1826 to E of Wm Cannon Construct main lanes of 6-lane			$2,198		$19,983	(1987-92)	2	
5	"	E of Wm Cannon to Boston Ln Construct frontage roads	1.8		$661	$27,791		(1987-88)	3	
6	"	W of RM 1826 to E of Wm Cannon Construct frontage roads	2.4		$960	$16,467		(1987-88)	3	
7	"	E of Wm Cannon to Boston Ln Construct main lanes of 6-lane	1.8		$1,012			(1987-88)	4	
8	"	W of RM 1826 to E of Wm Cannon Construct main lanes of 6-lane	2.4		$2,198			(1987-88)	4	
9	3/21/1990	0.2 mi E of Wm Cannon to E of Williamson Cr (Const Frt Rds &	0.2	0113-08-041		$4,063	$1,755	May-93	5	Not Started
10	"	E of Williamson Cr to E of Industrial Oaks (Const Frt Rds &	1.4	0113-09-048		$28,437	$13,280	May-93	5	Not Started
11	"	0.7 mi W of RM 1826 to 0.2 mi E of Wm Cannon (Const Frt Rds &	2.5	0113-08-037		$21,750	$28,710	Apr-94	6	Not Started
12	5/1/1990	0.2 mi East of William Cannon to East of Williamson Creek Constr.				700-County	$1,755	(1990-95)	7	
13	"	East of Williamson Cr to East of Industrial Oaks Constr. Main Lns.					$13,280	(1990-95)	7	
14	5/12/1990	0.2 mi E of Wm Cannon to E of Williamson Cr (Const Frt Rds &	0.2	0113-08-041		$4,063	$1,755	Aug-93	8	Not Started
15	"	E of Williamson Cr to E of Industrial Oaks (Const Frt Rds &	1.4	0113-09-048		$28,437	$13,280	Aug-93	8	Not Started
16	"	0.9 mi W of RM 1826 to 0.2 mi E of Wm Cannon (Const Frt Rds &	2.5	0113-08-037		$21,750	$28,710	Apr-98	9	Not Started
17	3/7/1994	East of Williamson Cr to East of Industrial Oaks Construct Fr.	1.449				$21,400	1995	10	Not Started
18	"	0.2 Mi. East of William Cannon Blvd. to East of Williamson Creek	0.2				$2,500	1999	11	Not Started
19	"	0.9 Mi. West of RM 1826 to 0.2 Mi. East of William Cannon Blvd. Construct Fr. Roads & Main Lanes	2.5				$31,000	1999	11	Not Started
20	1/21/1997	No Relevant Projects Listed							13	
21	7/20/1998	No Relevant Projects Listed							14	
22	11/8/1999	No Relevant Projects Listed							15	
23	4/9/2001	East of Williamson Creek to SH 71 Construct frontage roads (Phase I)		TEX-290W -4,5			$9,400	2004	16	Not Started
24	4/14/2003	East of Williamson Creek to SH 71 Construct frontage roads (Phase I)		0113-08-037			$1,880	2005	17	Not Started
25	"	West of FM[sic] 1826 to SH 71 Construct frontage roads		0113-08-041			$9,100	2005	17	Not Started
26	4/12/2004	East of Williamson Creek to west of RM 1826 Eng., ROW and constr. of a 6-lane toll facility with			==>	==>	$120,420		18	Not Started
27	"	SH 71 From US 290 to 1.1 mile west of US 290 Eng., ROW and constr. of two direct connectors			==>	==>	$64,620		18	Not Started

Appendix A References

Funding for Western Segments of US 290 Freeway-Document References

1. 1987-1992 Transportation Improvement Program and Annual Element, Austin Transportation Study, 5/2/1987: 1987-92 Transportation Improvement Program: Austin, Texas; Federal-Aid Primary Program, Pg. 8
2. 1987-1992 Transportation Improvement Program and Annual Element, Austin Transportation Study, 5/2/1987: 1987-92 Transportation Improvement Program: Austin, Texas; Federal-Aid Primary Program, Pg. 9
3. 1987-1992 Transportation Improvement Program and Annual Element, Austin Transportation Study, 5/2/1987: 1987-88 Annual Element: Austin, Texas; Federal-Aid Primary Program, Pg. 45
4. 1987-1992 Transportation Improvement Program and Annual Element, Austin Transportation Study, 5/2/1987: 1987-88 Annual Element: Austin, Texas; Federal-Aid Primary Program, Pg. 46
5. US 290/SH 71 Ben White Freeway Projects, TxDOT, District 14, Austin, 3/21/1990: US 290/SH 71 – From Hays County Line to E of FM 973, Pg. 1
6. US 290/SH 71 Ben White Freeway Projects, TxDOT, District 14, Austin, 3/21/1990: US 290/SH 71 – From Hays County Line to E of FM 973, Pg. 2
7. 1990-1995 Transportation Improvement Program and Annual Element, Austin Transportation Study, 5/1/1990: 1990-95 Transportation Improvement Program: Austin, Texas; Projects Recommended for Possible Use of Federal Funds within Urban Limits (FY 92-93 TIP), Pg. 2
8. US 290/SH 71 Ben White Freeway Projects, TxDOT, District 14, Austin, 5/12/1990: US 290/SH 71 – From Hays County Line to E of FM 973, Pg. 1
9. US 290/SH 71 Ben White Freeway Projects, TxDOT, District 14, Austin, 5/12/1990: US 290/SH 71 – From Hays County Line to E of FM 973, Pg. 2
10. Transportation Improvement Program, Fiscal Year 1995-1997, Austin Transportation Study, 3/7/1994: Project Information, 2.1.1 Federally Funded Highway Projects Sponsored by TxDOT – FY 1995 (Adopted), Pg. 15
11. Transportation Improvement Program, Fiscal Year 1995-1997, Austin Transportation Study, 3/7/1994: Project Information, 2.1.4 Federally Funded Highway Projects Sponsored by TxDOT – FY 1998 - 2000 (Requested), Pg. 20
12. Transportation Improvement Program, Fiscal Year 1996-1998, Austin Transportation Study, 9/11/1995: Project Information, Table 2.1.1 Federally Funded Highway Projects – FY 1996, Pg. 16

13. Transportation Improvement Program, Fiscal Years 1997-2000 Projects, Austin Transportation Study, 1/21/1997: Table 1.1 FY 1997 TxDOT Highway Projects,

Pg. 1; Table 1.2 FY 1998 TxDOT Highway Projects, Pg. 2; Table 1.3 FY 1999 TxDOT Highway Projects, Pg. 3; Table 1.4 FY 2000 TxDOT Highway Projects, Pg. 4

14. Transportation Improvement Program, Fiscal Years 1998-2000 Projects, Austin Transportation Study, 7/20/1998: Table 1.1 FY 1998 TxDOT Highway Projects, Pg. 1; Table 1.2 FY 1999 TxDOT Highway Projects, Pg. 2; Table 1.3 FY 2000 TxDOT Highway Projects, Pg. 3.
15. Transportation Improvement Program, Fiscal Years 2000-2002 Projects, CAMPO, 11/8/1999: Table 1.1 FY 2000 TxDOT Highway Projects, Pg. 1; Table 1.2 FY 2001 TxDOT Highway Projects, Pg. 2; Table 1.3 FY 2002 TxDOT Highway Projects, Pg. 3.
16. Transportation Improvement Program, Fiscal Years 2002-2004 Projects, CAMPO, 4/9/2001: Table 1.3 FY 2004 TxDOT Highway Projects, Pg. 4
17. Transportation Improvement Program, Fiscal Years 2004-2008, CAMPO, 4/14/2003: Section1 - TxDOT Roadway Projects, Fiscal Year 2005, Pg. 10
18. CAMPO FY 2004 - FY 2008 Transportation Improvement Program – April 2004 Amendments, CAMPO, 4/12/2004: (Table 2)Proposed Amendments to FY 2005 and FY 2006 to Begin Implementation of CTRMA & TxDOT Toll Plan

Appendix B – CAMPO Context Sensitive Design Resolution

CAMPO Capital Area Metropolitan Planning Organization

RESOLUTION 4 - Context Sensitive Design

WHEREAS, a well-constructed and well-designed road improves mobility, improves commercial activity and increases property values;

WHEREAS, poorly designed roads such as elevated highways and highways with no noise protection or aesthetic attributes actually damage property values and lead to reduced sales tax receipts, reduced commercial activity and the emergence of economic grayfields;

WHEREAS, elevated highways and other poorly designed highways create visual blight and substantial noise, separate communities and harm the community's quality of life;

WHEREAS, in the National Highway System Act of 1995, Congress directed that designs for new and reconstructed highways take into account: (1) the constructed environment of the area; (2) the natural environment of the area; (3) the aesthetic impact of the road construction; and (4) the community impact of the road construction;

WHEREAS, the Federal Highway Administration ("FHWA") and a number of states, including California, Connecticut, Kentucky, Maryland, Minnesota, Nevada, New Jersey, South Carolina, Utah and Washington have addressed the economic damage and diminished quality of life caused by elevated highways and other poorly designed roads by adopting "context sensitive design" ("CSD") as part of the road design and construction process;

WHEREAS, the FHWA, the American Association of State Highway and Transportation Officials ("AASHTO"), the Texas Transportation Institute ("TTI") and the Transportation Research Board ("TRB") actively support and promote CSD;

WHEREAS, an effective CSD program incorporates in the planning, project development, final design and construction phases of road construction designs the following road design criteria:

1. the road integrates with the built environment of the area and of the community and region to enhance the built environment, and in particular the area's economic activity and quality of life;

2. the road integrates into the natural environment of the area to maximize the road's scenic, recreational and aesthetic qualities;

3. the road design incorporates aesthetic considerations so that the road fits its physical setting and preserves scenic, aesthetic, neighborhood, historic and environmental attributes of the area;

4. the road design includes design elements such as those identified in the Federal Highway Administration's *Flexibility in Highway Design*, AASHTO's, "A Guide for Achieving Flexibility in Highway Design," and the Texas Transportation

Institute's "Guidelines for Aesthetic Design in Highway Corridors: Tools and Treatments for Texas Highways."

(collectively, the "CSD Criteria");

WHEREAS, as part of the scoping, planning, project development, final design and/or construction phases for toll road projects in the CTRMA/TxDOT Regional Implementation Plan, TxDOT, CTRMA and/or the general contractor for each toll road project should do the following:

1. include(s) in the design and road construction persons with professional experience in developing and implementing road designs that include the CSD Criteria;
2. minimize value engineering to the extent inconsistent with CSD Criteria;
3. include ongoing stakeholder involvement and stakeholder input in the design process; and
4. incorporate the recommended context sensitive solutions into the final road design and construction.

(collectively, the "CSD Program");

WHEREAS, the implementation of a CSD Program is central to the goals and critical to the success of the goals of the CTRMA/TxDOT Regional Implementation Plan;

NOW, THEREFORE, BE IT RESOLVED that it is the intent of CAMPO that a CSD Program (as defined in this Resolution) that incorporates the CSD Criteria (as defined in this Resolution) be implemented as part of each road project in the CTRMA/TxDOT Regional Implementation Plan. CAMPO requests that the CTRMA report to the CAMPO Board in six months on the CTRMA's progress in adopting a CSD Program.

Gonzalo Barrientos

Senator Gonzalo Barrientos

July 12, 2004

ID_01	COUNTY	STREET	LIMITS	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
10	Williamson	IH 35	FM 2243 - FM 1431	68000	46000	48000	50000	59000	63000	68000	76000	82000	81000	83000	88000	84000	81000	80000
11	Williamson	IH 35	FM 1431 - FM 3406	56000	56000	60000	62000	69000	76000	84000	93000	99000	98000	101000	101000	99000	101000	104000
12	Williamson	IH 35	FM 3406 - US 79	60000	66000	69000	75000	80000	87000	96000	107000	110000	109000	115000	120000	118000	120000	86000
13	Williamson	IH 35	US 79 - RM 620	77000	82000	89000	101000	117000	117000	124000	136000	142000	144000	141000	149000	154000	153000	138000
14	Williamson	IH 35	RM 620 - McNeil Rd	84000	89000	96000	92000	114000	116000	125000	136000	139000	144000	148000	159000	158000	156000	154000
15	Williamson	IH 35	McNeil Rd - BR IH 35 (Round Rock)	81000	83000	93000	103000	118000	119000	132000	139000	142000	146000	154000	161000	162000	164000	166000
16	Williamson	IH 35	BR IH 35 (Round Rock) - FM 1325	84000	84000	90000	105000	115000	120000	121000	144000	152000	156000	168000	171000	179000	169000	188000
17	Travis	IH 35	FM 1325 - FM 1825	74000	73000	80000	86000	99000	100000	111000	120000	127000	133000	138000	155000	157000	164000	160500
18	Travis	IH 35	FM 1825 - Lamar Blvd.	84000	84000	93000	99000	110000	113000	123000	135000	141000	150000	145000	171000	176000	181000	183000
19	Travis	IH 35	Lamar Blvd. - FM 734 (Parmer Ln.)	85000	88000	92000	100000	108000	113000	121000	129000	138000	148000	151000	164000	170000	174000	170000
20	Travis	IH 35	FM 734 (Parmer Ln.) - Braker Ln.	91000	90000	98000	110000	121000	124000	128000	133000	137000	143000	145000	162000	160000	161000	159000
21	Travis	IH 35	Braker Ln. - Rundberg Ln.	103000	105000	114000	126000	134000	136000	142000	147000	149000	157000	155000	172000	170000	167000	178000
22	Travis	IH 35	Rundberg Ln. - US 183	131000	106000	139000	158000	167000	173000	170000	174000	171000	181000	180000	196000	193000	197000	225000
25	Travis	IH 35	Town Lake - US 290 (W)/SH 71	131000	139000	131000	139000	142000	150000	169000	164000	161000	153000	167000	172500	177000	162000	167000
26	Travis	IH 35	US 290 (W)/SH 71 - Stassney Ln.	114000	121000	131000	135000	131000	142000	170000	166000	169000	157000	161000	166000	175000	167000	159000
27	Travis	IH 35	Stassney Ln. - William Cannon Dr.	104000	109000	107000	107000	108000	128000	140000	136000	148000	132000	145000	145000	156000	147000	142000
28	Travis	IH 35	William Cannon Dr. - Slaughter Ln.	67000	69000	73000	75000	74000	91000	94000	97000	101000	104000	115000	118000	119000	107000	114000
29	Travis	IH 35	Slaughter Ln. - FM 1327	54000	55000	60000	57000	69000	72000	75000	78000	85000	87000	93000	98000	100000	94000	96000
30	Travis	IH 35	FM 1327 - Travis County Line	53000	54000	59000	58000	68000	70000	75000	78000	84000	87000	94000	100000	100000	96000	98000
43	Williamson	BR IH 35 (N. M	FM 3406 - US 79	16100	11600	9300	14900	15600	12300	17900	18200	18800	19600	21000	21700	20300	20700	20900
44	Williamson	BR IH 35 (N. M	US 79 - RM 620	9700	10200	7100	10300	9200	8600	11800	12800	12100	12600	14500	15900	13800	14400	13500
45	Williamson	BR IH 35 (N. M	RM 620 - IH 35 (N)	11400	12200	10500	13700	12800	11200	14000	13600	17000	14600	16100	20300	17600	19200	18700
48	Williamson	US 79	FM 1460 - SH 130	9700	7900	10700	12000	12300	15900	17600	17700	21000	21000	23000	26000	25000	30000	33000
49	Williamson	US 79	SH 130 - FM 685	7800	8700	9400	9900	10900	11700	13500	13900	16100	16400	16900	20000	23000	21000	23000
72	Williamson	US 183	New Hope Dr. - FM 1431	21000	23000	23000	28000	29000	30000	33000	30000	39000	34000	45000	39000	34000	38000	36000
73	Williamson	US 183	FM 1431 - Park St.	28000	29000	31000	33000	36000	36000	38000	43000	45000	41000	46000	42000	39000	45000	46000
74	Williamson	US 183	Park St. - Cypress Creek Rd.	30000	30000	32000	35000	37000	38000	39000	41000	45000	47000	48000	43000	44000	49000	52000
75	Williamson	US 183	Cypress Creek Rd. - RM 620	33000	31000	34000	36000	39000	39000	44000	48000	48000	47000	58000	52000	55000	55000	56000
76	Williamson	US 183	RM 620 - Anderson Mill Rd.	37000	37500	38500	38000	42000	41000	42000	47000	60000	56500	66000	65500	58000	57500	57500
77	Williamson	US 183	Anderson Mill Rd. - McNeil Rd.	56000	56000	50500	55000	56000	61000	64000	66000	80000	75000	78000	85500	81000	87000	86000
79	Travis	US 183	Travis County Line - Duval Rd.	58000	57000	59000	62000	59000	69000	73000	99000	120000	126000	137000	156000	146000	151000	143000
80	Travis	US 183	Duval Rd. - Loop 360	68000	65000	64000	68000	64000	80000	84000	117000	142000	144000	152000	175000	164000	170000	166500
81	Travis	US 183	Loop 360 - Loop 1	84000	84000	91000	92000	96000	110000	119000	140000	159000	164000	164000	191000	180000	186000	172000
82	Travis	US 183	Loop 1 - FM 1325	71000	71000	77000	82000	87000	92000	117000	143000	175000	174000	184000	191000	187000	189000	183000
83	Travis	US 183	FM 1325 - Peyton Gin Rd.	57000	57000	63000	64000	72000	72000	83000	125000	156000	154000	160000	172000	164000	168000	157000
			Peyton Gin Rd. - Lamar															

84	Travis	US 183	Peyton Gin Rd. - Lamar Blvd.	57000	57000	65000	57000	64000	64000	82000	126000	154000	150000	173000	168000	164000	166000	158000
86	Travis	US 183	IH 35 (N) - Cameron Rd.	37000	37000	38000	44000	45000	46000	56000	61000	69000	72000	81000	86000	79000	83000	73000
87	Travis	US 183	Cameron Rd. - US 290 (E)	34000	34000	35000	37000	39000	43000	43000	52000	59000	54000	65000	70000	56000	58000	50000
88	Travis	US 183	US 290 (E) - Loyola Ln.	35000	35000	38000	39000	44000	47000	50000	54000	54000	54000	70000	66000	49000	69000	50000
89	Travis	US 183	Loyola Ln. - FM 969	30000	31000	37000	35000	38000	45000	43000	48000	48000	49000	59000	57000	53000	57000	52000
90	Travis	US 183	FM 969 - Austin & Northwestern RR	26000	27000	29000	30000	32000	38000	39000	43000	43000	43000	55000	53000	48000	47000	50000
91	Travis	US 183	Austin & Northwestern RR - Colorado River	23000	24000	23000	27000	29000	34000	50000	39000	41000	39000	50000	55000	61000	44000	45000
92	Travis	US 183	Colorado River - Montopolis Dr.	43000	44000	49000	48000	48000	48000	50000	67000	67000	71000	73000	84000	76000	80000	81000
93	Travis	US 183	Montopolis Dr. - SH 71	34000	35000	37000	36000	36000	36000	46000	53000	52000	58000	72000	72000	70000	65000	66000
94	Travis	US 183	SH 71 - McKinney Falls Pkwy.	14400	14800	15100	17000	17300	17600	19700	21000	23000	26000	27000	29000	29000	29000	31000
95	Travis	US 183	McKinney Falls Pkwy. - Burleson Rd.	13800	14400	14700	15200	15800	16100	17800	18900	17600	22000	23000	27000	24000	23000	25000
96	Travis	US 183	Burleson Rd. - FM 812	16100	16000	16700	17800	18600	19800	21000	22000	23000	24000	26000	27000	26000	27000	26000
97	Travis	US 183	FM 812 - FM 1625	9900	10700	10500	11500	12200	12700	14200	14900	15400	15800	17400	19000	18900	19000	21000
98	Travis	US 183	FM 1625 - FM 973	8000	8500	8700	9700	9700	10500	11100	12200	15000	15500	15500	15400	15400	16400	18000
99	Travis	US 183	FM 973 - Travis County Line	8900	8700	8800	9300	10400	10700	11500	12300	13100	13700	16000	15100	14800	15900	15300
125	Travis	US 290 (E)	IH 35 (N) - Cameron Rd.	48000	43000	49000	51000	55000	58000	59000	60000	60000	63000	61000	62000	61000	71000	73000
126	Travis	US 290 (E)	Cameron Rd. - US 183 (N)	37000	35000	39000	42000	45000	48000	47000	52000	53000	54000	55000	53000	60000	59000	73000
127	Travis	US 290 (E)	US 183 (N) - SH 130	22000	23000	31000	33000	31000	37000	41000	42000	45000	47000	48000	43000	47000	42000	59000
128	Travis	US 290 (E)	SH 130 - FM 3177	18900	19700	21000	22000	27000	27000	30000	31000	34000	35000	38000	39000	37000	33000	38000
129	Travis	US 290 (E)	FM 3177 - FM 734 (Parmer Ln.)	16900	15100	18800	19200	21000	19100	21000	24000	27000	28000	28000	29000	29000	26000	30000
130	Travis	US 290 (E)	FM 734 (Parmer Ln.) - Spur 212	15900	14800	17700	18200	19600	19300	21000	23000	26000	28000	26000	27000	30000	33000	34000
131	Travis	US 290 (E)	Spur 212 - FM 973	14100	14900	15900	16300	17300	17000	19100	22000	23000	24000	24000	26000	27000	29000	33000
113	Travis	US 290 (W)	Travis County Line - Circle Dr.	10400	11900	13200	14400	15900	17200	17900	19000	20000	22000	23000	24000	24000	23000	25000
114	Travis	US 290 (W)	Circle Dr. - FM 1826	17700	17500	18700	20000	22000	23000	24000	24000	24000	29000	33000	32000	32000	31000	29000
115	Travis	US 290 (W)	FM 1826 - SH 71 (W)	21000	22000	23000	25000	28000	30000	31000	30000	33000	40000	36000	40000	41000	41000	39000
116	Travis	US 290 (W)	SH 71 (W) - William Cannon Dr.	34000	34000	33000	37000	37000	43000	42000	45000	48000	50000	54000	55000	53000	53000	59000
117	Travis	US 290 (W)	William Cannon Dr. - Industrial Oaks Blvd.	34000	33000	33000	36000	36000	39000	42000	53000	53000	52000	60000	63000	67000	65000	67000
118	Travis	US 290 (W)	Industrial Oaks Blvd. - Loop 1	37000	37000	36000	42000	41000	44000	51000	70000	63000	60000	77000	76000	80000	77000	80000
119	Travis	US 290 (W)	Loop 1 - Brodie Ln.	29000	27000	24000	25000	38000	36000	46000	41000	55000	62000	74000	75000	73000	70000	68000
120	Travis	US 290 (W)	Brodie Ln. - Loop 360	35000	34000	34000	40000	42000	36000	46000	54000	64000	70000	81000	84000	88000	83000	82000
121	Travis	US 290 (W)	Loop 360 - FM 2304 (Manchaca Rd.)	50000	49000	53000	55000	53000	49000	59000	93000	91000	99000	110000	130000	122000	118000	121000
122	Travis	US 290 (W)	FM 2304 (Manchaca Rd.) - South 1st St.	54000	54000	56000	56000	54000	50000	60000	97000	97000	106000	118000	138000	131000	128000	130000
123	Travis	US 290 (W)	South 1st St. - S. Congress Ave.	53000	55000	55000	58000	56000	52000	61000	76000	72000	94000	99000	115000	112000	108000	116000
			S. Congress Ave. - IH 35															

124	Travis	US 290 (W)	S. Congress Ave. - IH 35 (S)	55000	52000	54000	55000	53000	55000	64000	69000	66000	81000	80000	93000	88000	84000	80000
1011	Travis	SH 45 S (exist	FM 1826 - Loop 1	0	0	100	430	2500	2800	2600	3100	4500	3900	5600	4700	5000	5100	5000
177	Travis	SH 71 (E)	IH 35 (S) - Pleasant Valley Rd.	44000	40000	45000	46000	50000	54000	57000	56000	51000	54000	71000	72000	56000	56000	54000
178	Travis	SH 71 (E)	Pleasant Valley Rd. - Riverside Dr.	35000	31000	34000	36000	31000	37000	37000	37000	33000	37000	44000	42000	38000	37000	44000
179	Travis	SH 71 (E)	Riverside Dr. - US 183 (S)	37000	32000	34000	35000	32000	37000	36000	36000	38000	43000	52000	50000	49000	46000	50000
180	Travis	SH 71 (E)	US 183 (S) - Ave. F (Bergstrom Airport)	42000	40000	40000	41000	41000	44000	46000	46000	47000	52000	73000	70000	63000	63000	65000
181	Travis	SH 71 (E)	Ave. F (Bergstrom Airport) - FM 973	26000	25000	26000	28000	28000	31000	33000	38000	40000	44000	50000	49000	48000	46000	49000
182	Travis	SH 71 (E)	FM 973 - SH 130	18500	18500	21200	25000	26000	30000	31000	31000	32500	32000	33000	38000	37500	42000	45000
172	Travis	SH 71 (W)	FM 2322 - FM 3238	7500	6900	7700	8300	10000	9800	10000	11800	12500	12900	14200	15600	15900	16600	16200
174	Travis	SH 71 (W)	RM 620 - FM 2244	16100	15800	17200	19900	22000	22000	22000	25000	26000	28000	32000	39000	36000	39000	40000
173	Travis	SH 71 (W)	FM 3238 - RM 620	10000	9700	10100	12100	14100	14100	14600	15900	18800	19300	23000	25000	25000	27000	28000
175	Travis	SH 71 (W)	FM 2244 - Southwest Pkwy.	9400	9000	11000	12700	14800	15300	16200	17500	20000	20000	24000	26000	25000	26000	29000
176	Travis	SH 71 (W)	Southwest Pkwy. - US 290 (W)	16000	16300	13600	14200	15600	15700	16700	15800	17500	17400	21000	21000	21000	23000	22000
249	Travis	Loop 1 (MOPA	IH 35 (N) - CR 172 (Quick Hill Rd.)	16000	16900	0	22000	28000	28000	31000	33000	36000	32000	31000	35000	33400	40000	36000
250	Williamson	Loop 1 (MOPA	CR 172 (Quick Hill Rd.) - Wells Branch Pkwy.	29000	31000	27000	36000	43000	45000	50000	50000	60000	52000	56000	60000	56000	33500	42700
251	Travis	Loop 1 (MOPA	Wells Branch Pkwy. - FM 734 (Parmer Ln.)	36000	37000	37000	41000	47000	49000	54000	56000	60000	61000	71000	71000	63000	68000	67000
252	Travis	Loop 1 (MOPA	FM 734 (Parmer Ln.) - FM 1325	39000	56000	56000	63000	75000	78000	91000	95000	99000	102000	109000	122000	110000	114000	111000
253	Travis	Loop 1 (MOPA	FM 1325 - Braker Ln.	25000	40000	49000	58000	67000	71000	81000	91000	94000	98000	102000	119000	111000	117000	114000
254	Travis	Loop 1 (MOPA	Braker Ln. - US 183 (N)	23000	54000	61000	64000	76000	72000	77000	88000	93000	94000	96000	124000	110000	112000	100000
255	Travis	Loop 1 (MOPA	US 183 (N) - Far West Blvd.	70000	93000	103000	112000	121000	129000	139000	144000	152000	155000	164000	183000	166000	174000	167000
256	Travis	Loop 1 (MOPA	Far West Blvd. - RM 2222 (Koenig Ln.)	100000	106000	112000	118000	125000	130000	138000	138000	141000	142000	147000	157000	147000	155000	157000
257	Travis	Loop 1 (MOPA	RM 2222 (Koenig Ln.) - 45th St.	111000	117000	121000	128000	133000	139000	144000	145000	149000	155000	156000	175000	155000	170000	160000
258	Travis	Loop 1 (MOPA	45th St. - 15th St.	96000	99000	105000	112000	116000	120000	126000	127000	131000	134000	137000	154000	140000	148000	139000
259	Travis	Loop 1 (MOPA	15th St. - Cesar Chavez	100000	107000	109000	117000	124000	130000	126000	135000	138000	144000	146000	156000	149000	154000	145000
260	Travis	Loop 1 (MOPA	Cesar Chavez - FM 2244	81000	88000	82000	93000	99000	108000	103000	119000	121000	139000	137000	182000	167000	174000	164000
261	Travis	Loop 1 (MOPA	FM 2244 - Loop 360	62000	68000	67000	75000	83000	87000	86000	101000	104000	127000	124000	142000	135000	142000	142000
262	Travis	Loop 1 (MOPA	Loop 360 - US 290 (W)	37000	40000	45000	53000	65000	67000	73000	78000	77000	97000	91000	106000	106000	101000	11000
263	Travis	Loop 1 (MOPA	US 290 (W) - William Cannon Dr.	9000	0	16900	17900	20000	22000	25000	32000	38000	51000	40000	63000	63000	64000	64000
265	Travis	Loop 1 (MOPA	Slaughter Ln. - SH 45 (S)	0	0	9200	10500	14100	14300	15400	18000	14900	17000	20000	20100	20200	20100	19700
266	Hays	Loop 4	IH 35 (S) - FM 967	4500	5400	6700	6800	6700	7000	6700	6300	7000	7700	9100	10700	11000	12100	0
267	Hays	Loop 4	FM 967 - FM 2770	4700	4500	5900	5400	5400	5400	5900	5500	6400	7000	7200	7400	8200	8900	9400
281	Travis	Loop 360	US 183 (N) - Spicewood Springs Rd.	16200	17200	22000	24000	28000	29000	32000	41000	44000	46000	49000	55000	44000	49000	49000
282	Travis	Loop 360	Spicewood Springs Rd. - RM 2222	19600	22000	25000	27000	31000	32000	33000	38000	42000	44000	44000	49000	43000	47000	47000