

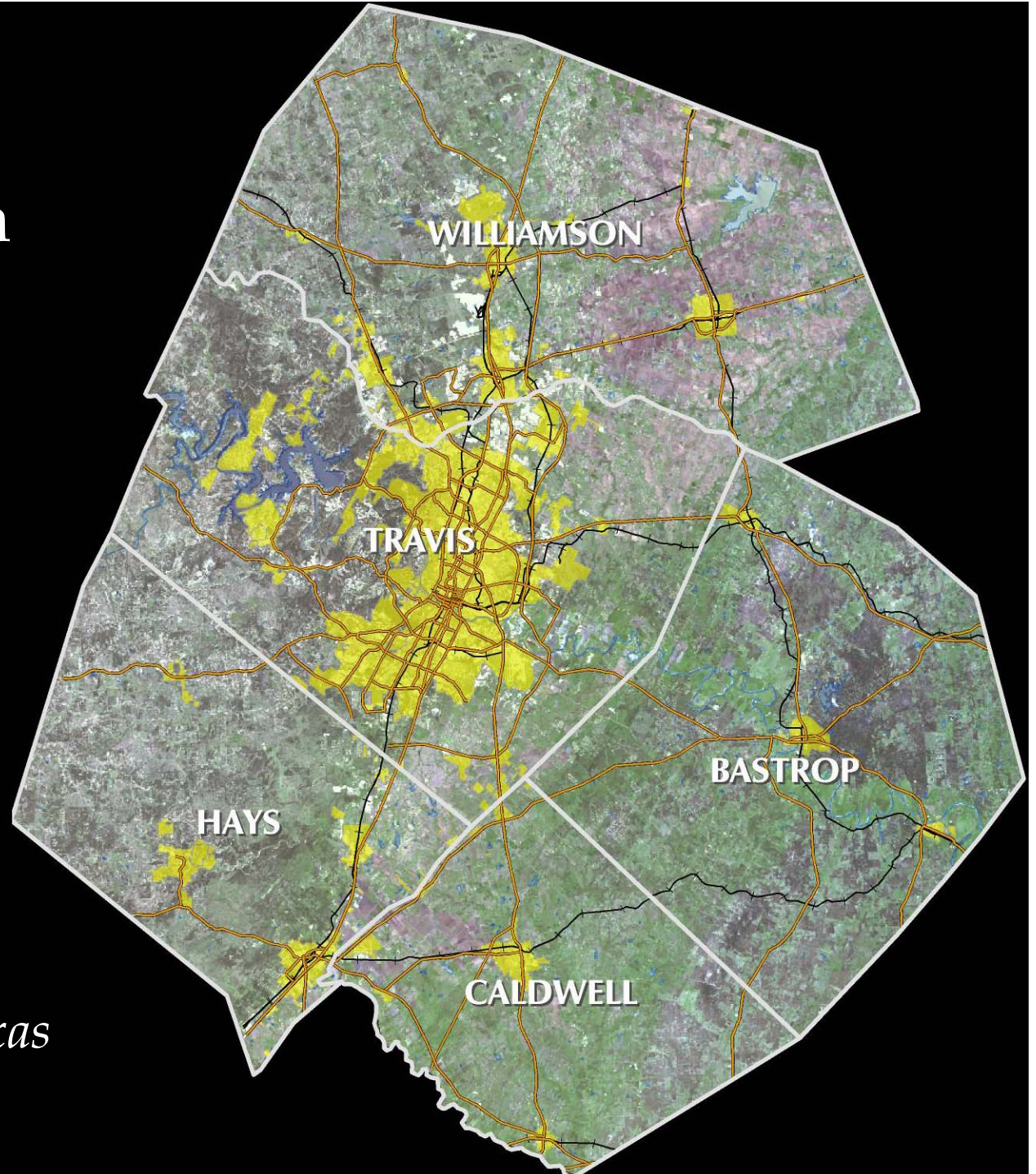
# SH-130 Corridor Watershed Economics

# An Alternative Future for the SH-130 Corridor

## Goal:

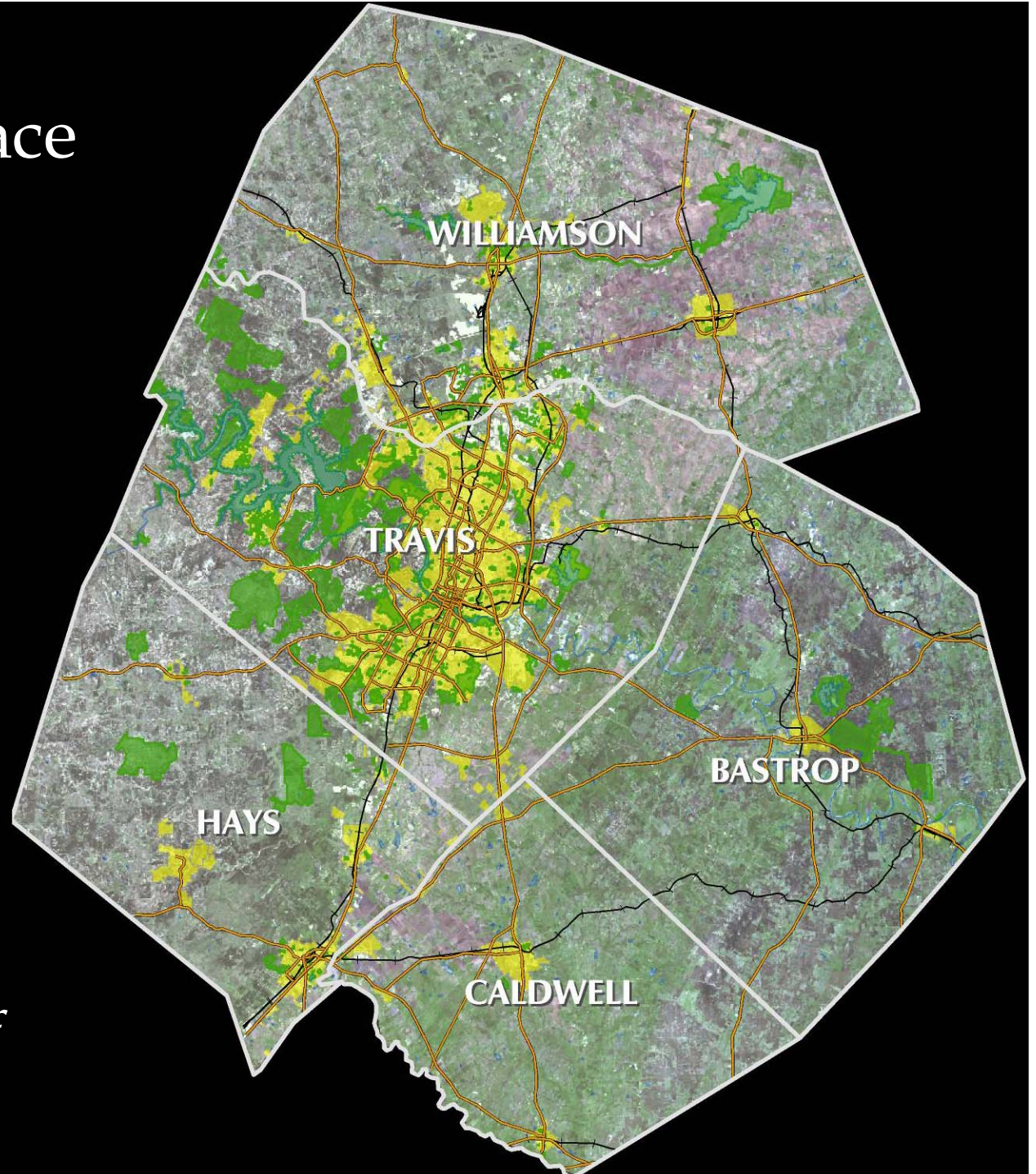
Realize the Envision Central Texas Goals with respect to the SH-130 corridor by absorbing the estimated population growth while outperforming 20-year economic indicators in the area, creating livable communities, and incurring no net loss in natural system function.

# Context: 5-County Area



*Envision Central Texas  
Study Area*

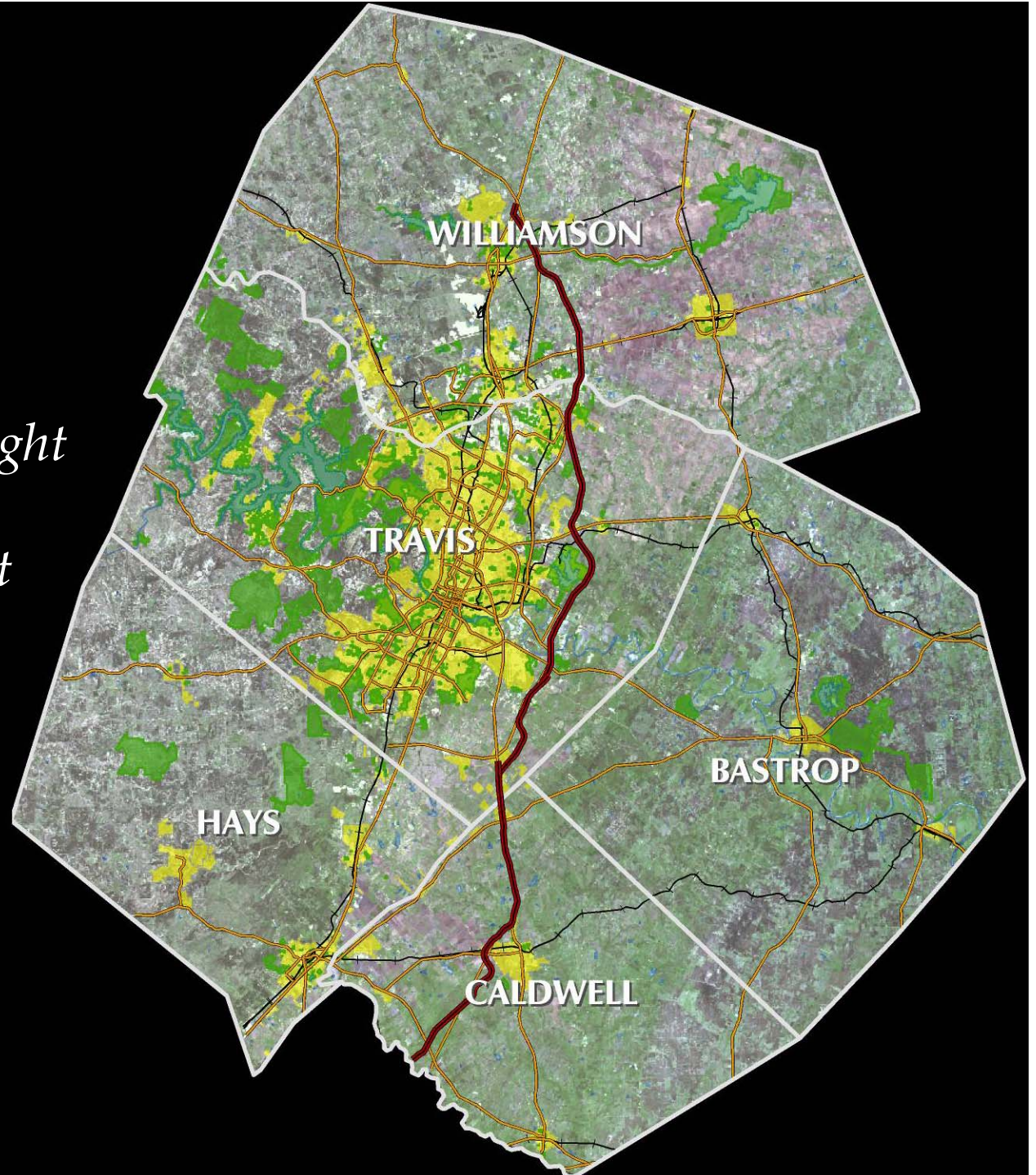
# Add Open Space



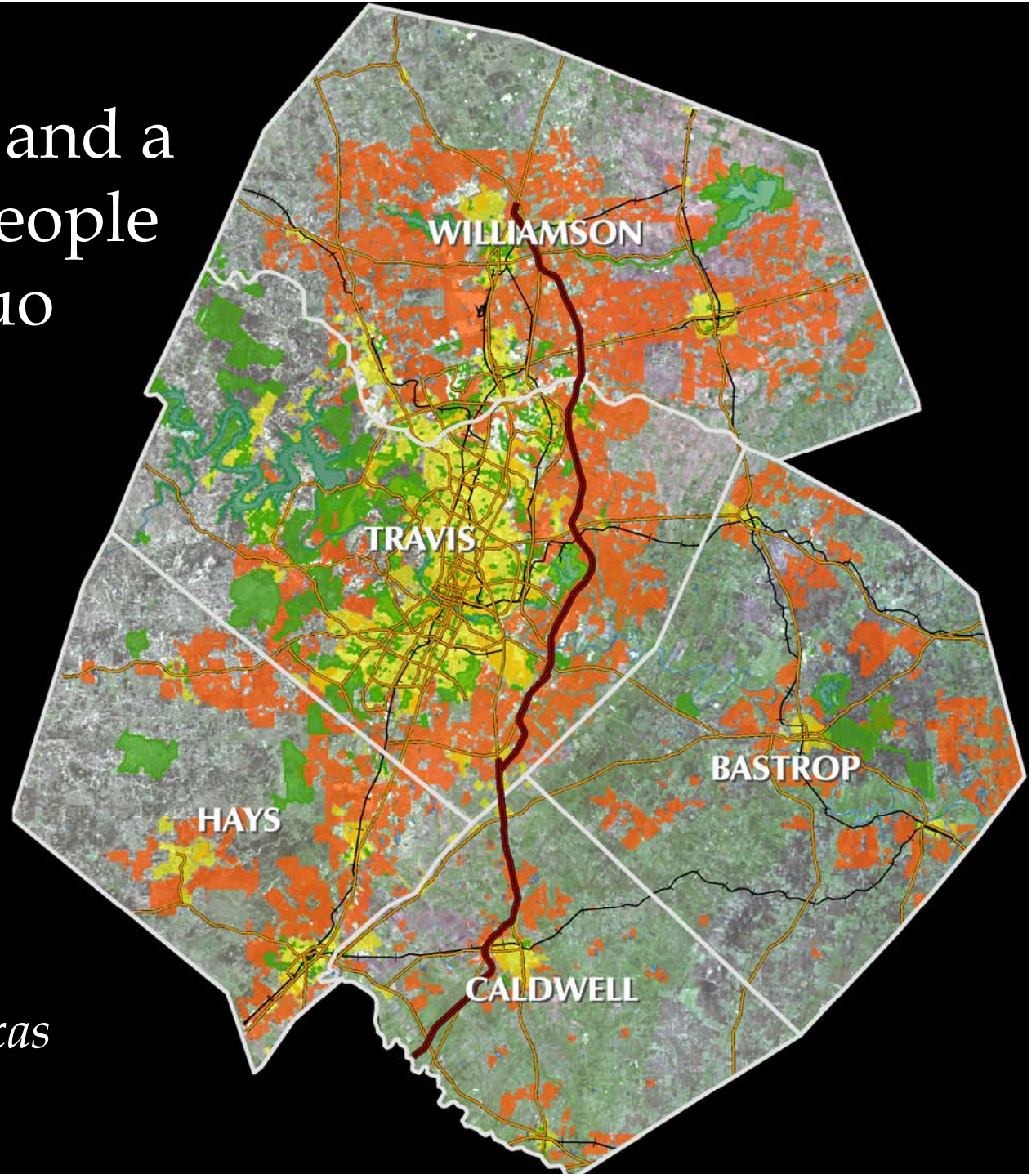
*Current Inventory of  
Open Space*

# Add SH-130

*Purpose: Create an Austin bypass for freight traffic and catalyze economic development in Austin's desired development zone.*



Add 20 Years and a  
Million Plus People  
with Status Quo  
Development  
Patterns



*Envision Central Texas  
Scenario A*

Implications of  
Status Quo  
Development for  
Area Watersheds

# City of Austin 40 year Drainage System Cost by Watershed

Watershed	Flood	Erosion Sideslope	Water Quality/ Erosion Ponds	Total
Barton	-	\$2,640,000	\$11,340,000	\$13,980,000
Blunn	\$4,820,000	\$2,230,000	\$2,230,000	\$9,280,000
Buttermilk	-	\$4,880,000	\$2,660,000	\$7,540,000
Boggy	\$8,000,000	\$8,710,000	\$6,450,000	\$23,150,000
Bull	\$24,420,000	\$10,850,000	\$43,420,000	\$78,690,000
Country Club	\$15,810,000	\$6,390,000	\$7,950,000	\$30,150,000
East Bouldin	\$24,980,000	\$5,740,000	\$7,090,000	\$37,810,000
Fort Branch	\$7,820,000	\$9,930,000	\$3,240,000	\$20,990,000
Harper's Branch	-	\$260,000	\$1,680,000	\$1,940,000
Johnson	\$4,300,000	\$5,620,000	\$1,010,000	\$10,920,000
Little Walnut	\$98,190,000	\$13,440,000	\$12,900,000	\$124,530,000
Shoal	\$69,690,000	\$21,360,000	\$29,450,000	\$120,500,000
Tannehill	\$2,120,000	\$8,520,000	\$3,210,000	\$13,850,000
West Bouldin	\$7,790,000	\$3,140,000	\$13,680,000	\$24,610,000
Walnut	\$54,380,000	\$36,890,000	\$55,910,000	\$147,180,000
Waller	\$21,620,000	\$7,260,000	\$10,770,000	\$39,650,000
Williamson	\$101,050,000	\$18,950,000	\$50,260,000	\$170,250,000
Total	\$444,980,000	\$166,810,000	\$263,240,000	\$875,030,000

Table 11 - Watershed Protection Master Plan  
<http://www.ci.austin.tx.us/watershed/rptmptable11.htm>

Source: City of Austin, 2000; Loomis-Austin, Inc., 2000

ENR construction cost index (1999) = 6060



# City of Austin 40 year Drainage System Cost by Watershed

Watershed	Flood	Erosion Sideslope	Water Quality/ Erosion Ponds	Total
Barton	-	\$2,640,000	\$11,340,000	\$13,980,000
Blunn	\$4,820,000	\$2,230,000	\$2,230,000	\$9,280,000
Buttermilk	-	\$4,880,000	\$2,660,000	\$7,540,000
Boggy	\$8,000,000	\$8,710,000	\$6,450,000	\$23,150,000
Bull	\$24,420,000	\$10,850,000	\$43,420,000	\$78,690,000
Country Club	\$15,810,000	\$6,390,000	\$7,950,000	\$30,150,000
East Bouldin	\$24,980,000	\$5,740,000	\$7,090,000	\$37,810,000
Fort Branch	\$7,820,000	\$9,930,000	\$3,240,000	\$20,990,000
Harper's Branch	-	\$260,000	\$1,680,000	\$1,940,000
Johnson	\$4,300,000	\$5,620,000	\$1,010,000	\$10,920,000
Little Walnut	\$98,190,000	\$13,440,000	\$12,900,000	\$124,530,000
Shoal	\$69,690,000	\$21,360,000	\$29,450,000	\$120,500,000
Tannehill	\$2,120,000	\$8,520,000	\$3,210,000	\$13,850,000
West Bouldin	\$7,790,000	\$3,140,000	\$13,680,000	\$24,610,000
Walnut	\$54,380,000	\$36,890,000	\$55,910,000	\$147,180,000
Waller	\$21,620,000	\$7,260,000	\$10,770,000	\$39,650,000
Williamson	\$101,050,000	\$18,950,000	\$50,260,000	\$170,250,000
Total	\$444,980,000	\$166,810,000	\$263,240,000	\$875,030,000

Table 11 - Watershed Protection Master Plan  
<http://www.ci.austin.tx.us/watershed/rptmptable11.htm>

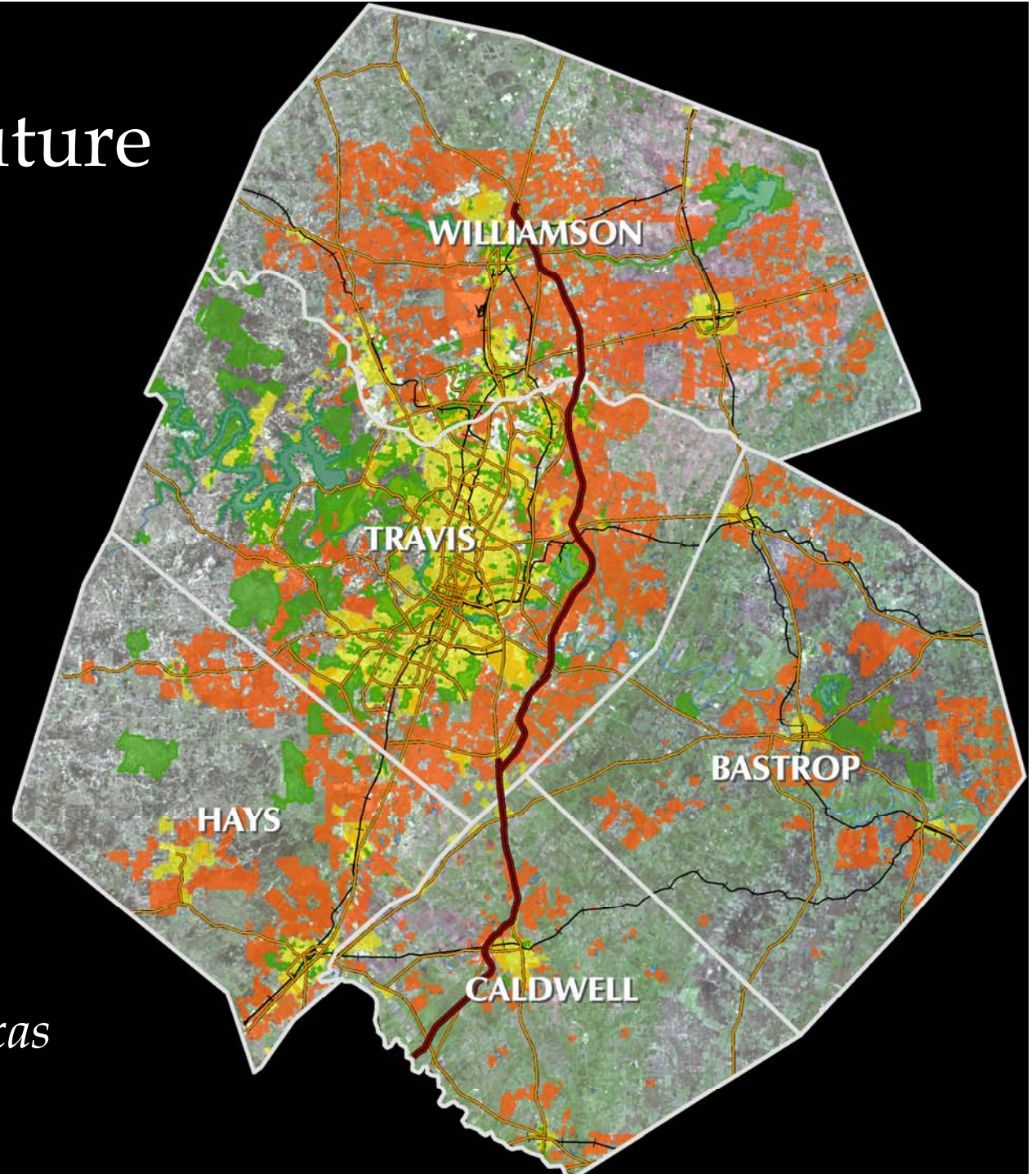
Source: City of Austin, 2000; Loomis-Austin, Inc., 2000

ENR construction cost index (1999) = 6060

# Costs per Acre

<b>Watershed</b>	<b>Total Cost per Acre</b>
BUTTERMILK	\$7,129.76
FORT	
TANNEHILL	
BOGGY	\$6,055.93
ELM	
LITTLE WALNUT	\$17,045.94
HARRIS BRANCH	
LOCKWOOD	
DECKER	
WILLOW CREEK	
GILLELAND	
COTTONWOOD	
WALNUT	\$5,274.76
COLORADO RIVER	
WILBARGER	

# Inevitable Future Costs?



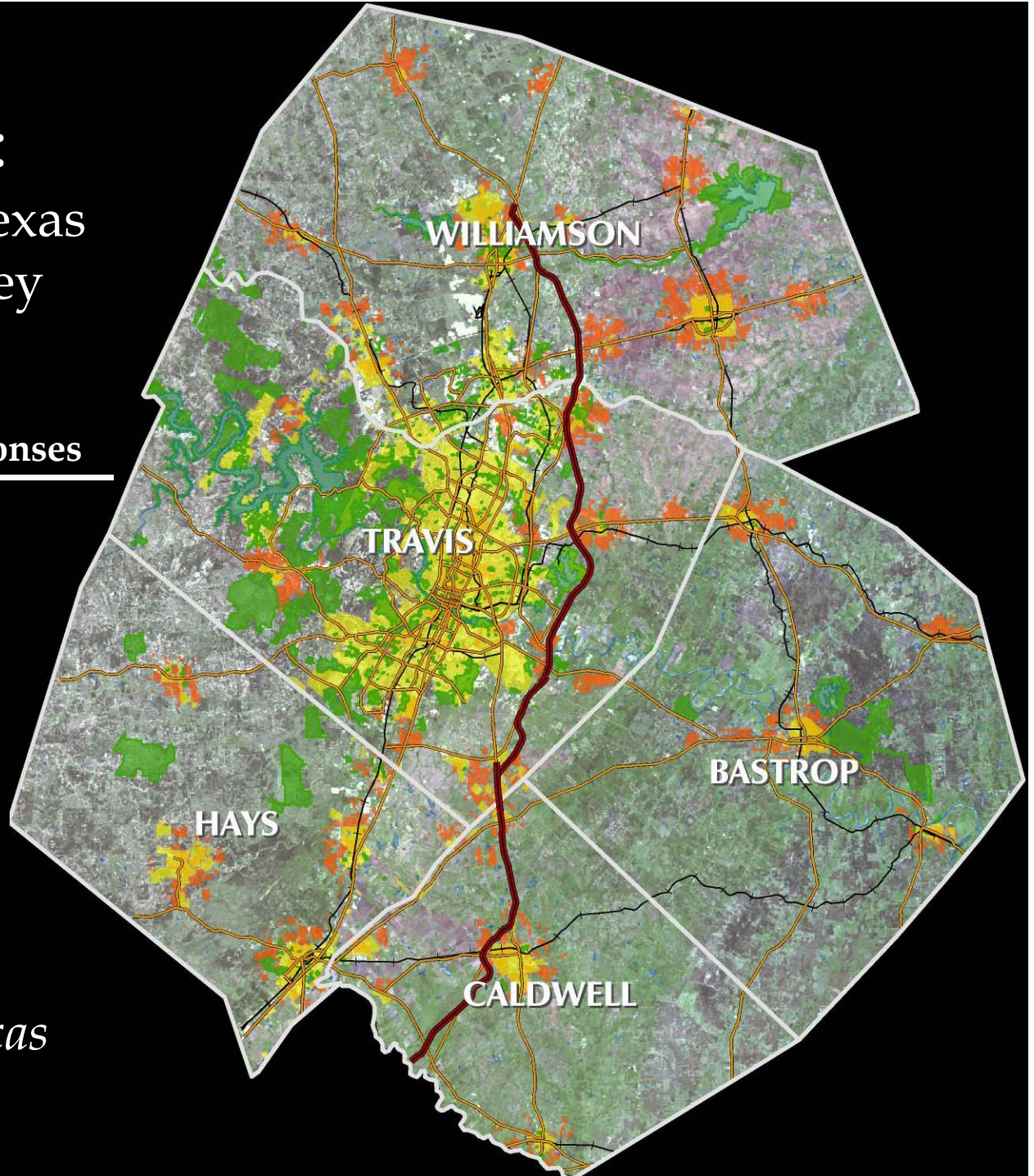
*Envision Central Texas  
Scenario A*

# Citizen Vision: Envision Central Texas 13,000 Person Survey

## Top Ten Concerns for the Future

Top Ten Concerns for the Future	% of Responses
Congestion	16.0
Air Quality	11.5
Cost of Living	11.5
Jobs	9.9
Water Quality	8.7
Water Availability	8.2
Public Education	7.8
Parks/Open Space	6.0
Land Use	5.6
Health Care	4.2

*Envision Central Texas  
Scenario D*



# Some Rough Numbers:

1 million people to 5-county Area

1/3 to Austin

1/3 to Surrounding Areas

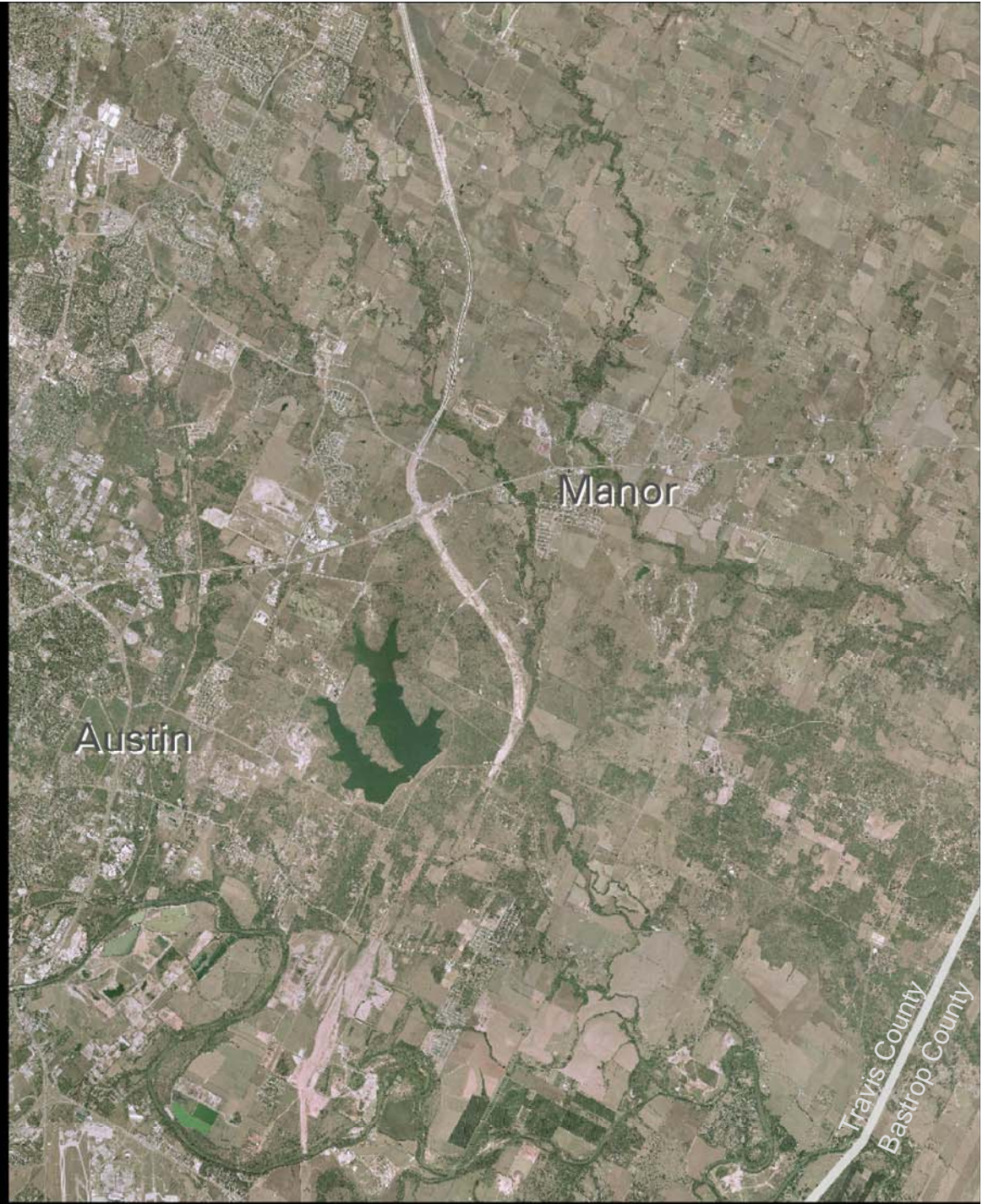
1/3 to East Austin

333,000 over SH-130 Corridor

Over 130,000 residential Units

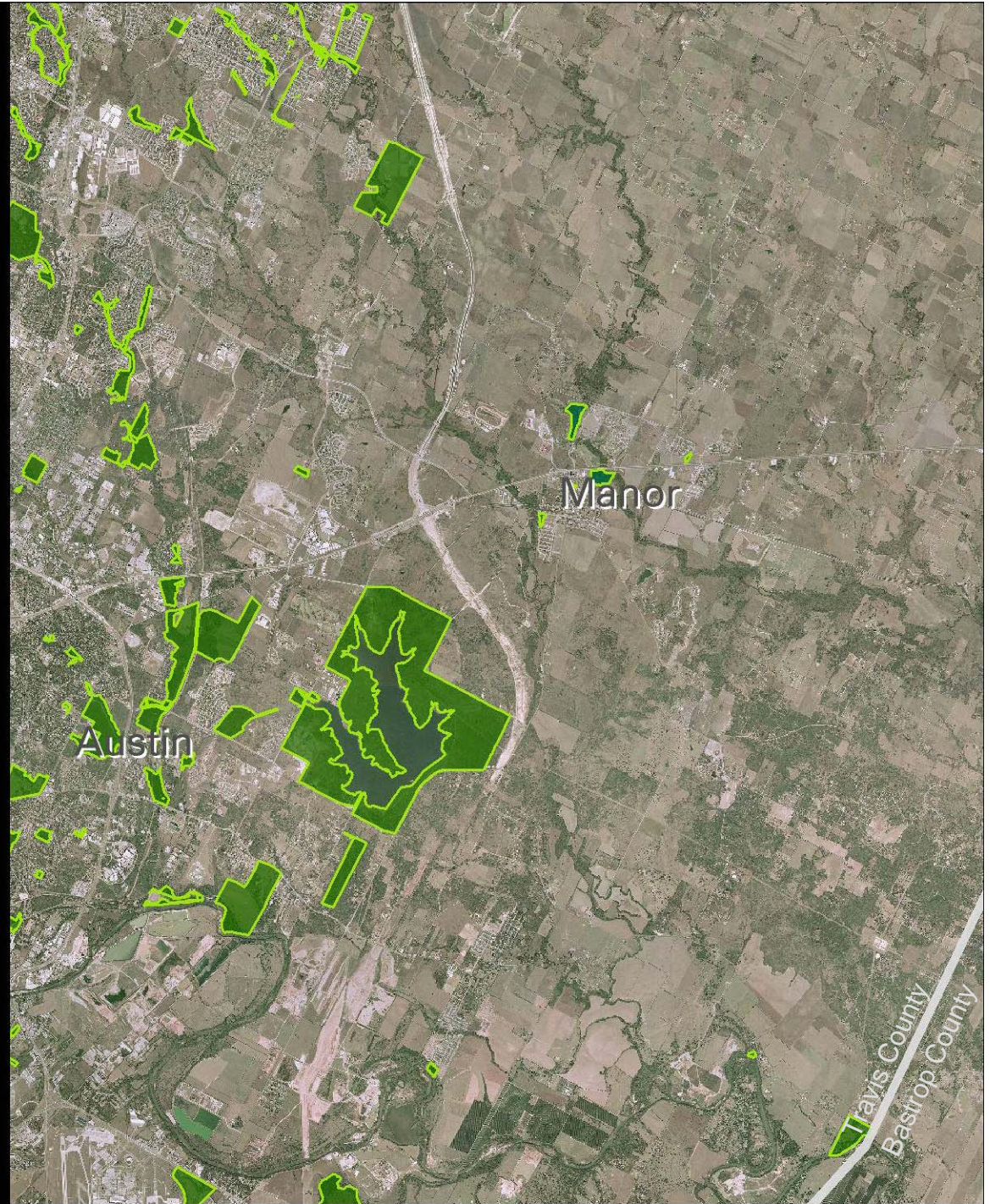
Equivalent to 29 Mueller's

# Zooming-In to Manor



Sources: Landiscor Oct. 2005 Aerial,  
City of Austin, Travis CAD, FEMA 100 yr  
Floodplain, Envision Central Texas

# Add Open Space

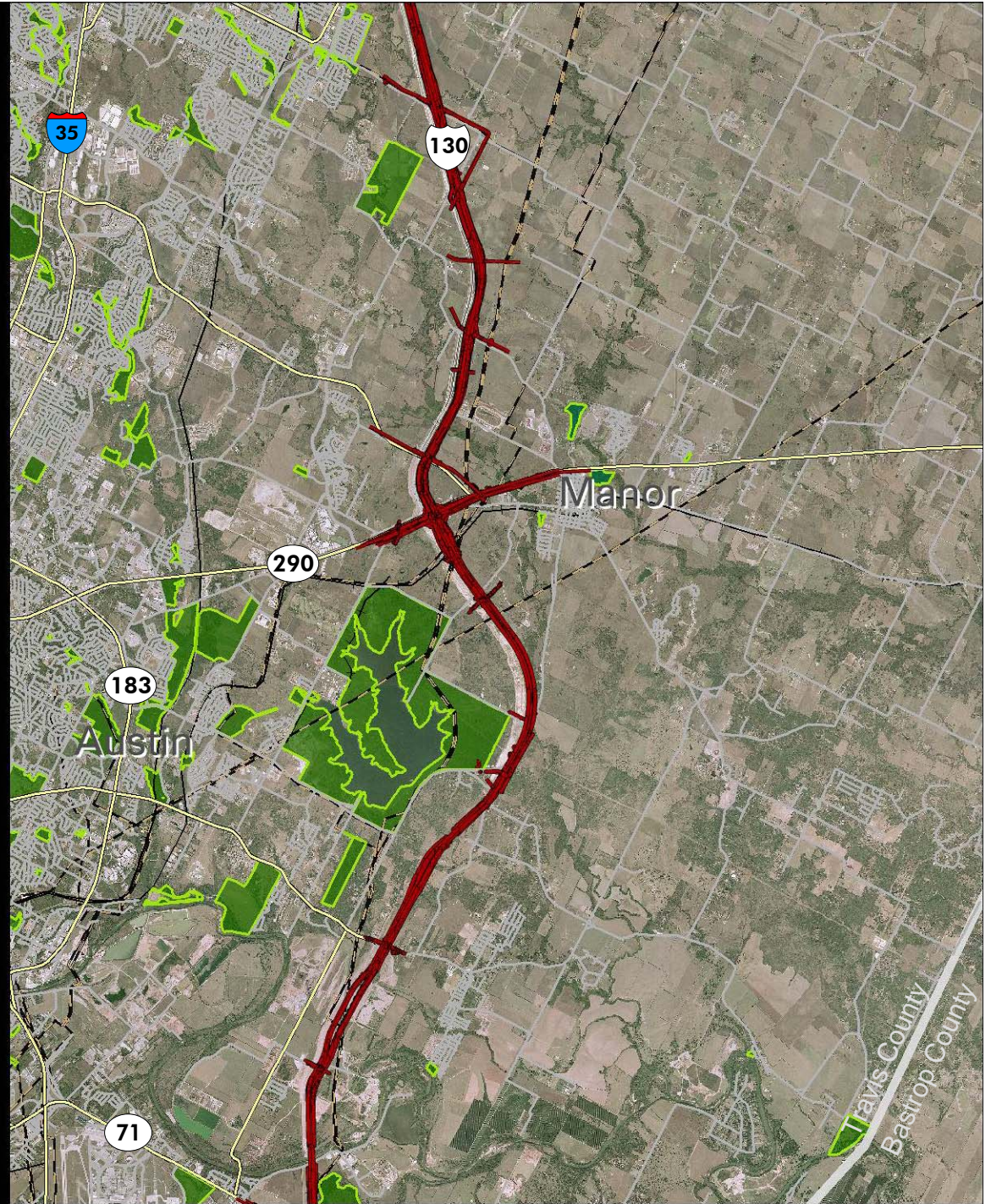


Sources: Landiscor Oct. 2005 Aerial,  
City of Austin, Travis CAD, FEMA 100 yr  
Floodplain, Envision Central Texas

# Add New Highway with Existing Infrastructure



Sources: Landiscor Oct. 2005 Aerial, City of Austin, Travis CAD, FEMA 100 yr Floodplain, Envision Central Texas



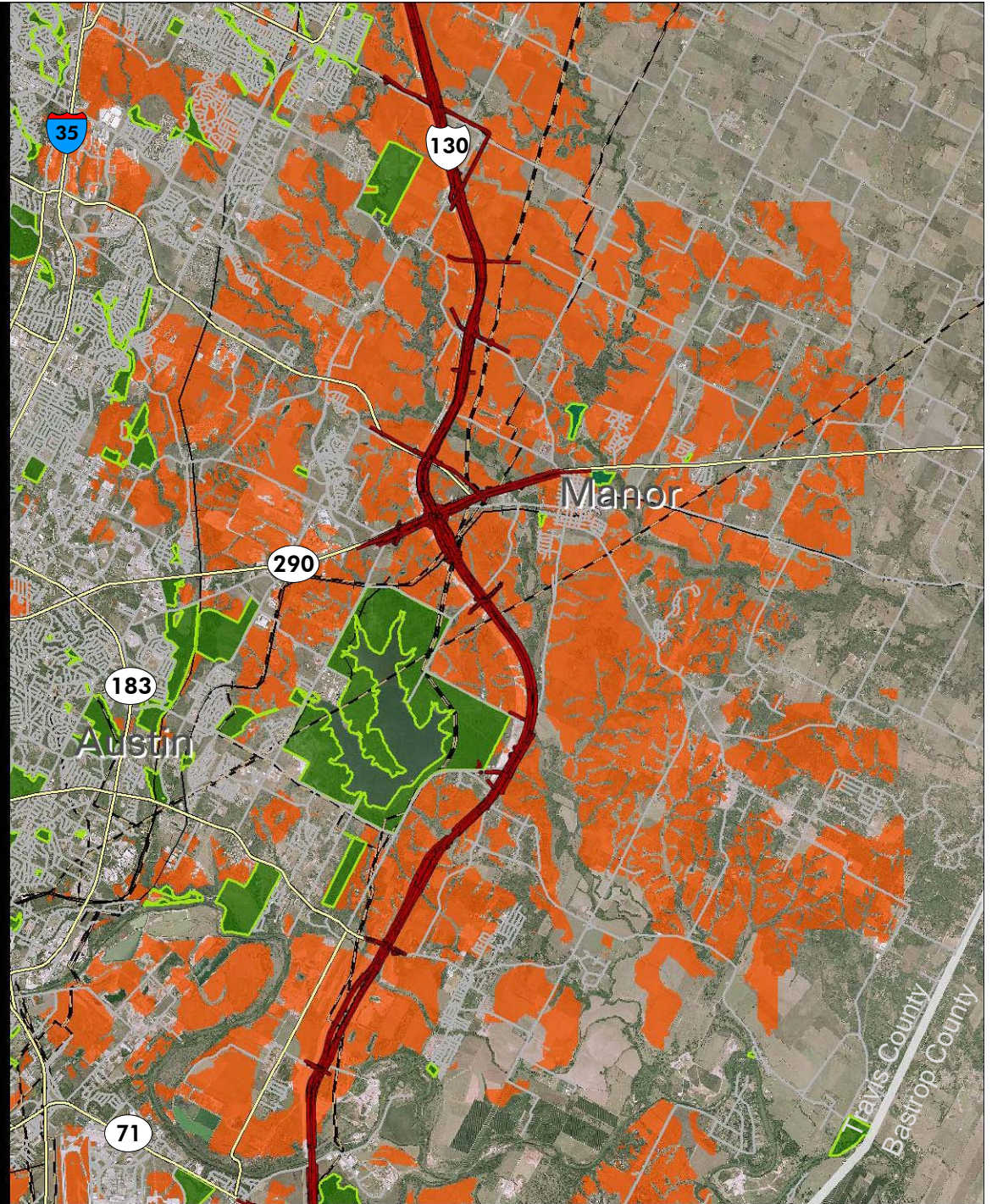


# Add a lot of People with Status Quo Development Patterns



0 12,000 24,000  
Feet

Sources: Landiscor Oct. 2005 Aerial,  
City of Austin, Travis CAD, FEMA 100 yr  
Floodplain, Envision Central Texas



# Same Development = Same Costs

## Estimated Watershed Costs Over Next 40-years in Travis County

Watershed	Total Area (Acres)	Cost per Acre*	Estimated Total Cost
<b>GILLELAND</b>	24,887.07	\$5,274.76 <b>\$17,045.94</b>	<b>\$131,273,279</b> <b>\$424,223,487</b>
<b>WILLBARGER**</b>	30,128.76	\$5,274.76 <b>\$17,045.94</b>	<b>\$158,922,000</b> <b>\$513,573,106</b>
<b>Total</b>	<b>55,015.83</b>		<b>\$290,195,279</b> <b>\$937,796,593</b>

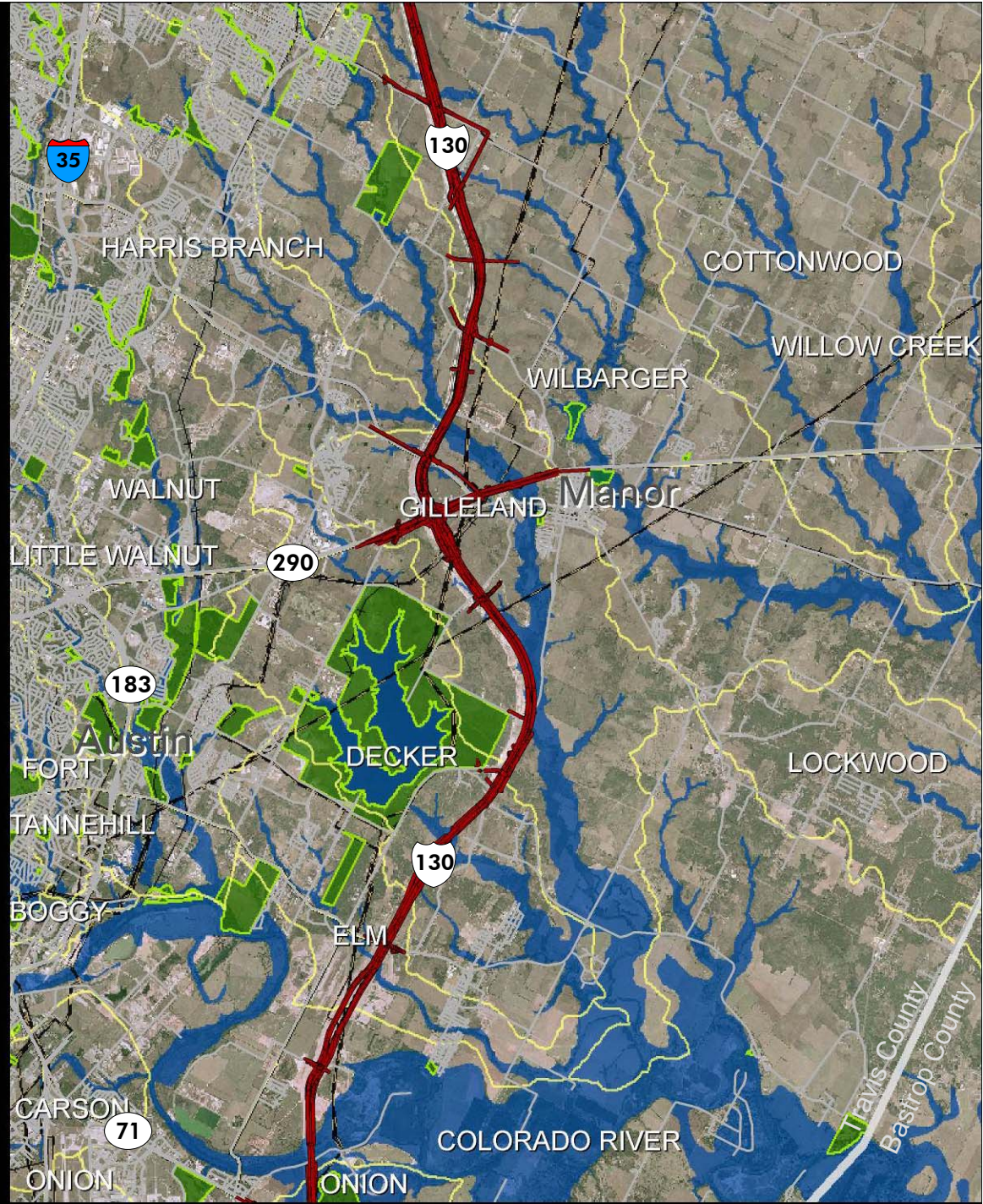
## 2005 Assessed Land Values for Parcels Over 20 Acres in Travis County

Watershed	Total Area (Acres)	Cost per Acre	Estimated Total Cost
<b>GILLELAND</b>	23,735.77	\$8,429.83	<b>\$200,088,535</b>
<b>WILLBARGER**</b>	30,128.79	\$3,829.39	<b>\$115,374,912</b>
<b>Total</b>	<b>53,864.56</b>		<b>\$315,463,447</b>

\* Calculated Using City of Austin Walnut and **Little Walnut** Costs per Acre

\*\*Costs for portion of Watershed within Travis County Only






# Add Land and Infrastructure Realities



0 12,000 24,000 Feet

Sources: Landiscor Oct. 2005 Aerial,  
City of Austin, Travis CAD, FEMA 100 yr  
Floodplain, Envision Central Texas

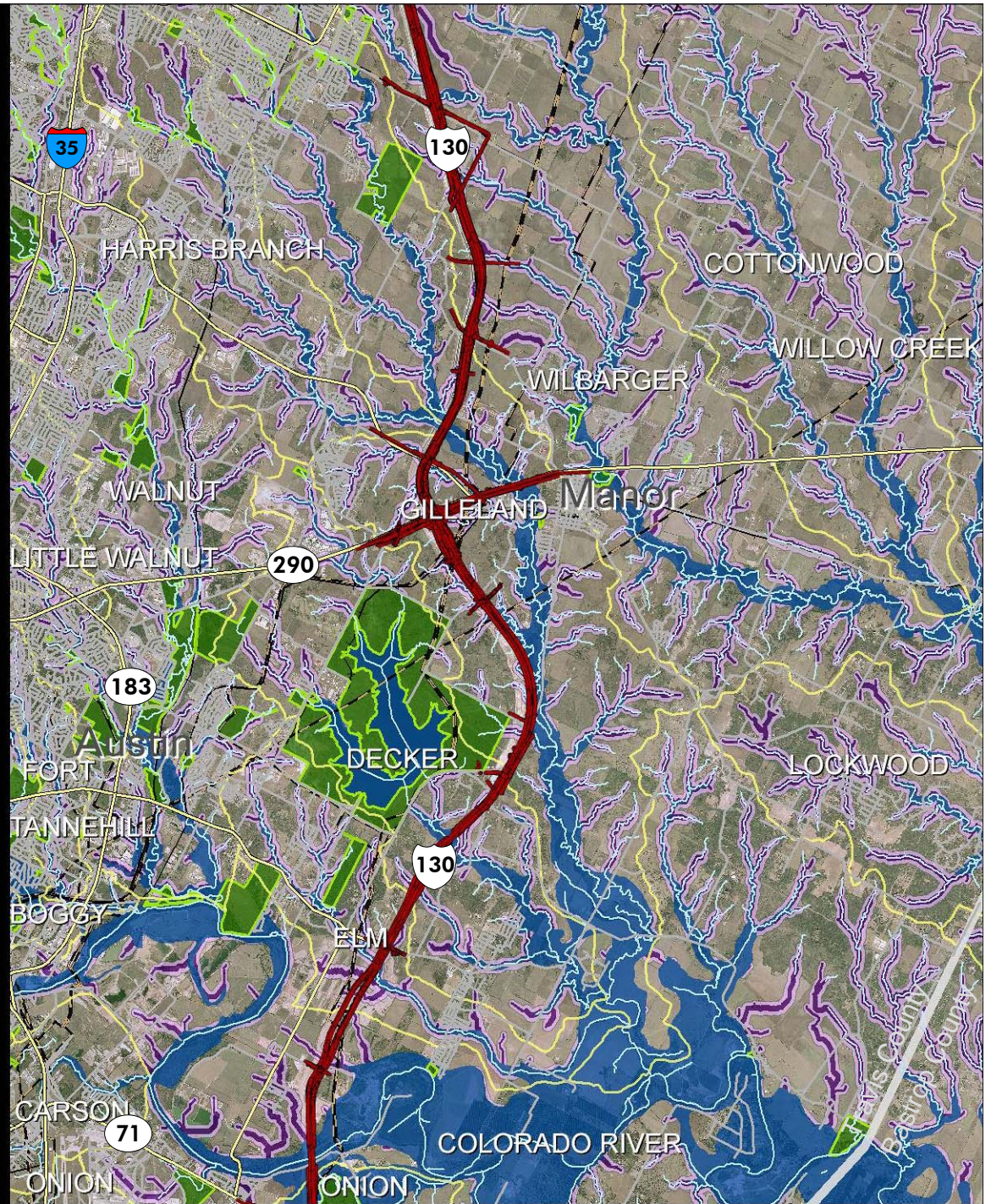
# Add Stream Buffers

-  Watershed Boundaries
-  Stream Network
-  100 yr Floodplain
-  Critical Water Quality Zone\*
-  Water Quality Transition Zone\*

\* Calculated for 320 and 640 acre drainages using City of Austin standards.



Sources: Landiscor Oct. 2005 Aerial, City of Austin, Travis CAD, FEMA 100 yr Floodplain, Envision Central Texas



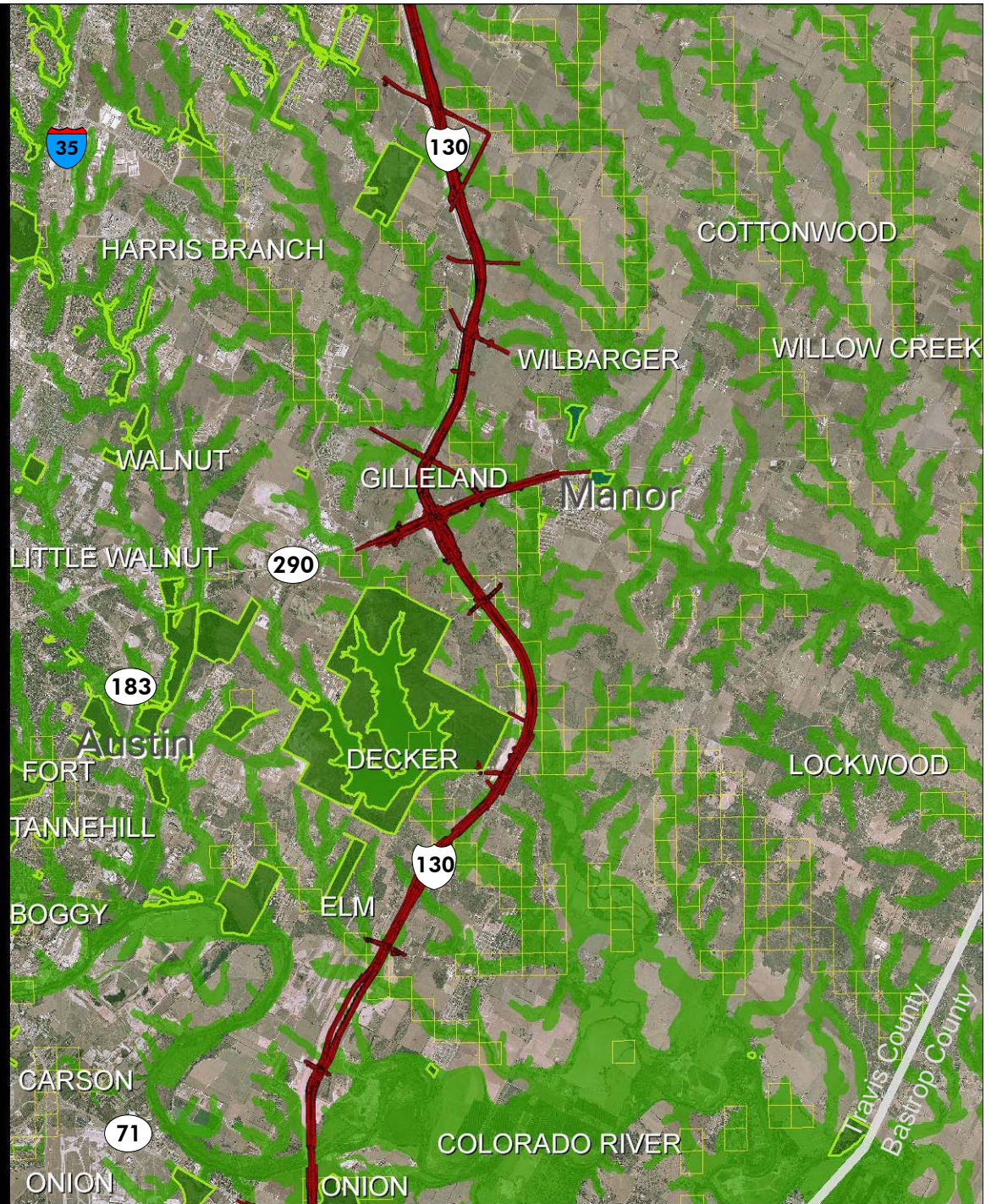
# Rethinking Green Space

Add an additional 10 to 20% open space based on opportunities:

- Recreation
- Water Resource Protection
- Biodiversity
- Environmental Diversity
- Cultural Preservation
- Farmland Protection



Sources: Landiscor Oct. 2005 Aerial, City of Austin, Travis CAD, FEMA 100 yr Floodplain, Envision Central Texas

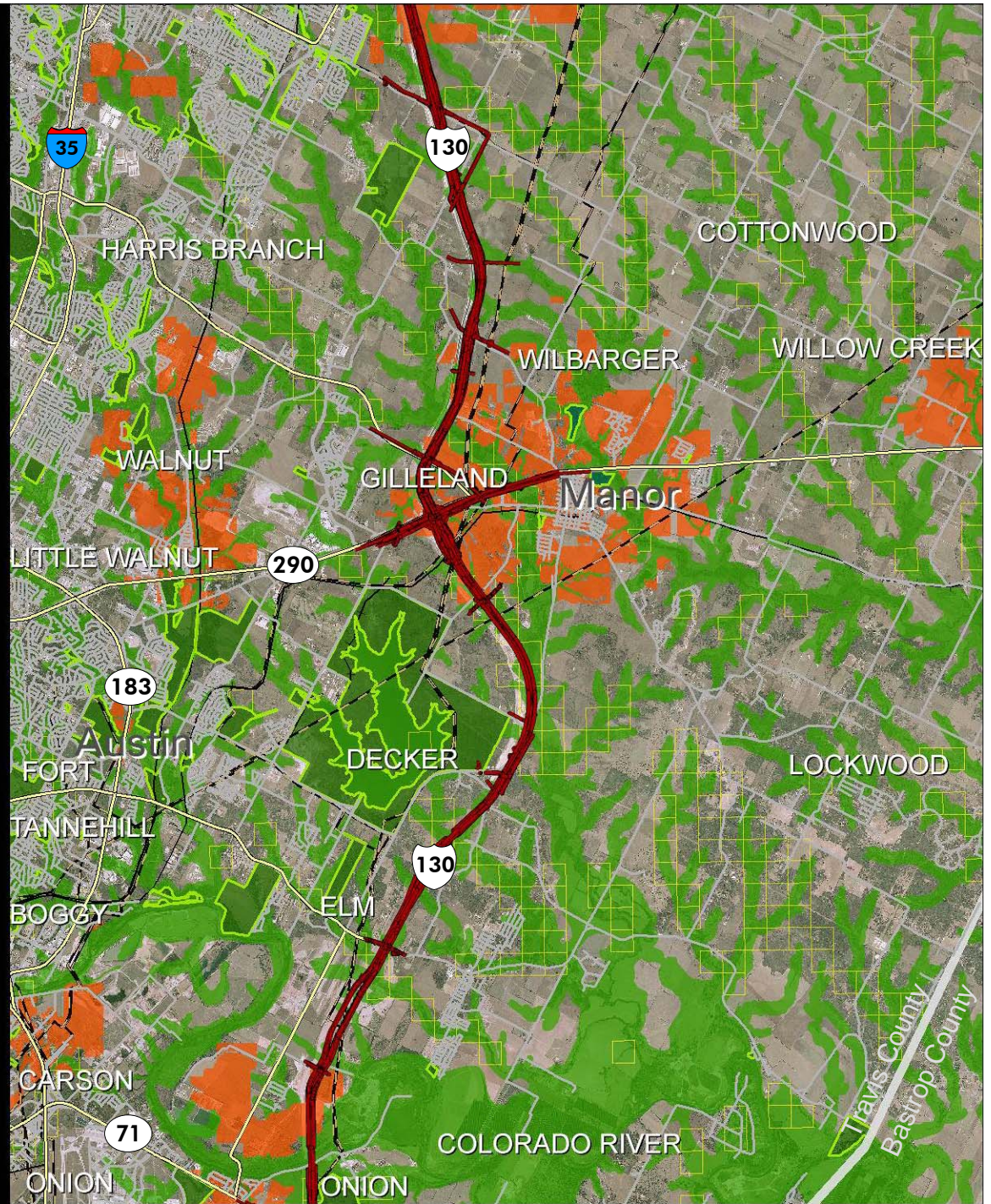


# Resulting Development when thinking economically and environmentally



0 12,000 24,000  
Feet

Sources: Landiscor Oct. 2005 Aerial,  
City of Austin, Travis CAD, FEMA 100 yr  
Floodplain, Envision Central Texas



# Example Communities:

## Mueller, TX

700 Acres

4580 DU

8244 people



# Example Communities:

## West Valley, UT

160 Acres

1040 DU

2600 people



## Orenco, OR

418 Acres

3444 DU

8360 people

## Stapleton, CO (Phase 1)

167 Acres

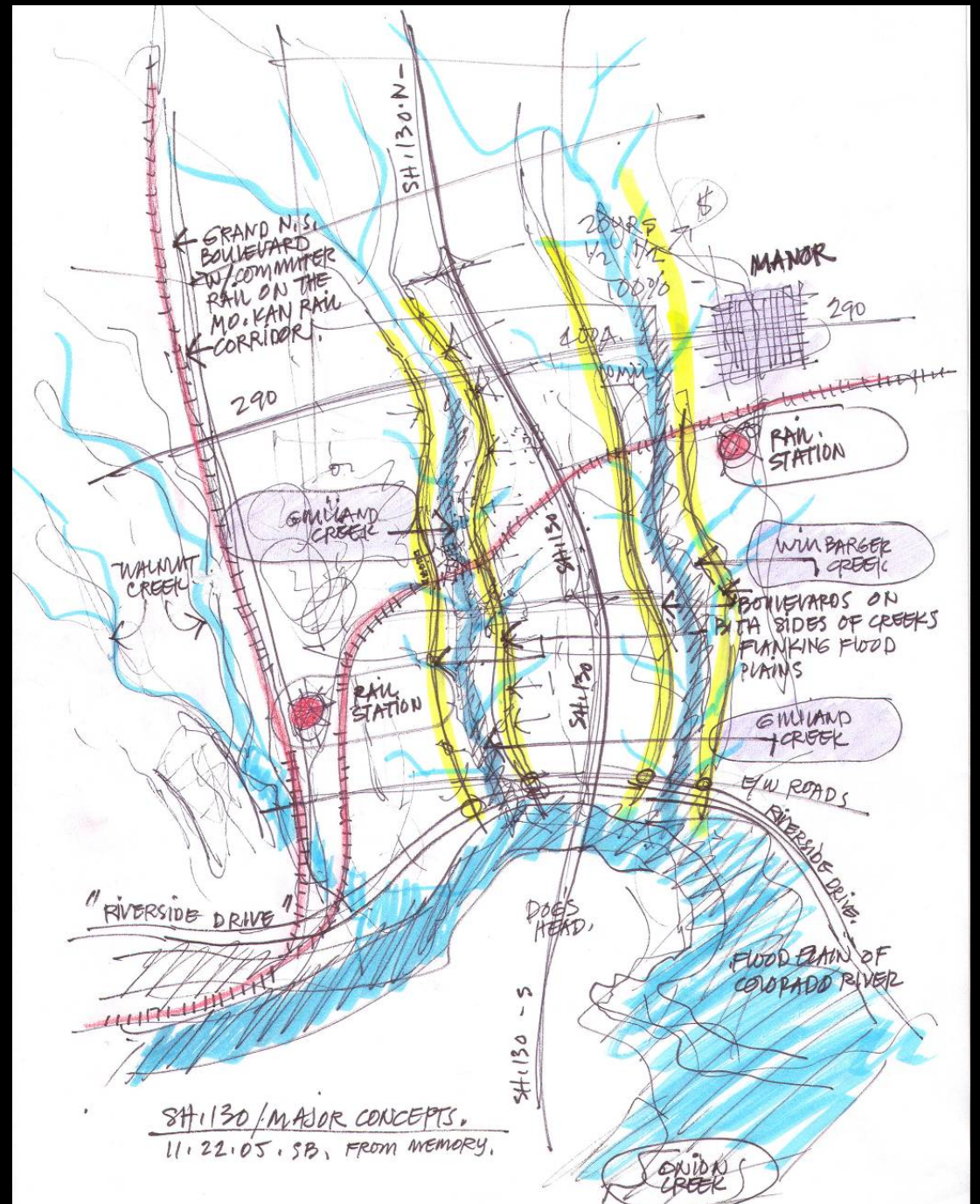
1089 DU

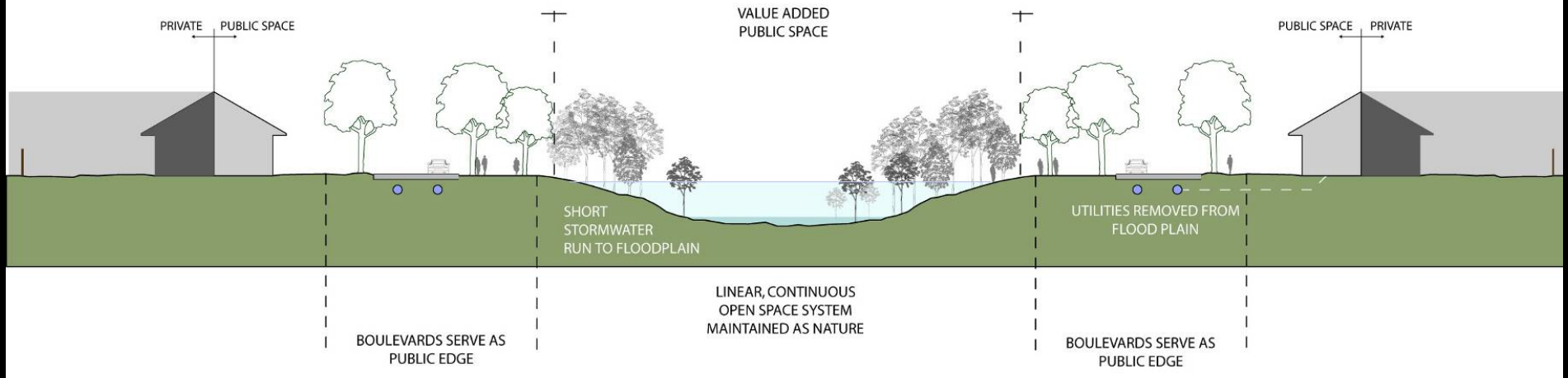
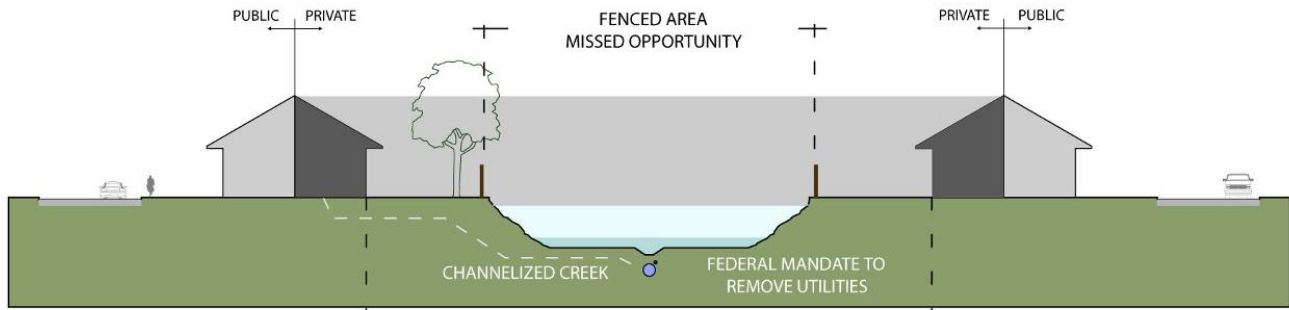
2918 people





# Visioning Infrastructure





BLACK + VERNOOY  
ARCHITECTURE AND URBAN DESIGN

END

