



HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) POTENTIAL OPPORTUNITIES AVAILABLE FOR THE CITY OF FAIR OAKS RANCH

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PRESENTATION OUTLINE

- ✓ Quick Summary of Current Status / Future Steps w/HSIP
- ✓ Discuss Opportunities Available for the City
 - Potential Targeted / Systemic Safety Projects
- ✓ Vote/Select Project(s) to Begin Developing and Pursue Advance Funding Agreement (AFA) w/TxDOT



CURRENT STATUS / FUTURE STEPS



Step 1 – Approve pursuit of HSIP funding



Step 2 – Identify projects that may qualify



Step 3 – Prioritize projects



Step 4 – Submit project concept(s)
and estimate(s) to TxDOT



Step 5 – AFA Agreement
with TxDOT

The current available funding (\$2.5M) requires a project letting date of August 2023.



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CAPITAL IMPROVEMENT PLAN (CIP) PROJECTS

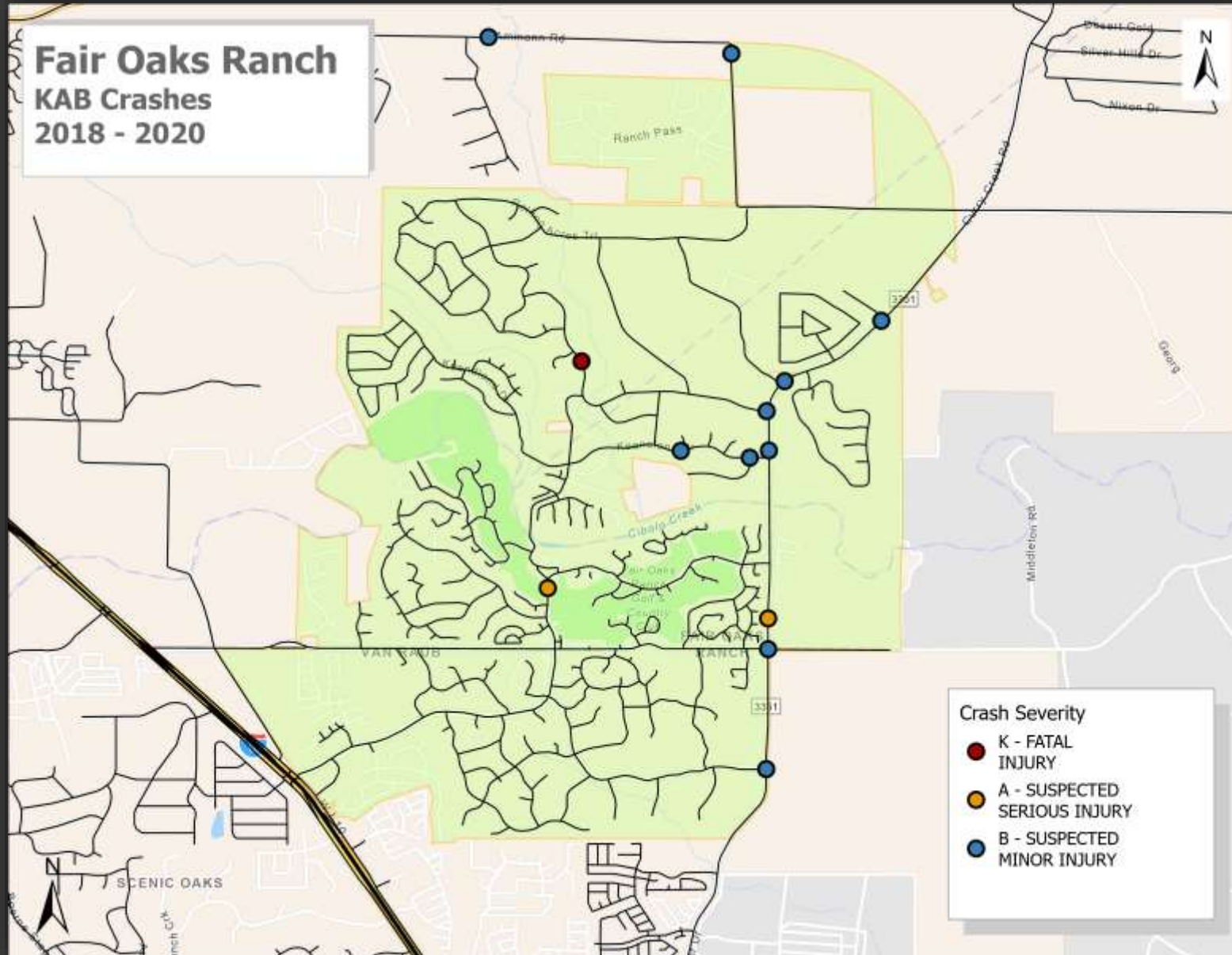
Project Name	Project Description	Phase	Total Amount
Dietz Elkhorn Rd Reconstruction	Roadway Reconstruction, Addition of Ped/Bike Amenities, Drainage Improvements, Utility Adjustments	Design	
		Construction	\$ 3,218,872
Ammann Rd Reconstruction	Roadway Reconstruction, Addition of Paved Shoulders, Drainage Improvements, Utility Adjustments	Design	\$ 721,572
		Construction	\$ 4,810,478
Rolling Acres Trail Reconstruction	Roadway Reconstruction, Addition of Paved Shoulders, Drainage Improvements, Utility Adjustments	Design	\$ 651,019
		Construction	\$ 4,340,126
Post Oak Trail Reconstruction	Roadway Reconstruction, Addition of Paved Shoulders, Drainage Improvements, Utility Adjustments	Design	\$ 352,034
		Construction	\$ 2,346,895
Elkhorn Ridge Sidewalk Connection	Connect sidewalk between Proposed MF Developments to Elkhorn Ridge Crosswalk	Design	\$ 36,782
		Construction	\$ 367,819
Battle Intense Sidewalk	Reconstructing sidewalk curb. Long term solution will include reconstruction of headwall.	Design	
		Construction	\$ 50,000
Rolling Acres Trail Low Water Crossing	Low water crossing improvements along Rolling Acres Trail at the Post Oak Creek crossing	Design	\$ 185,000
		Construction	\$ 500,000
Silver Spur Trail Low Water Crossing	Project to address the Post Oak Creek low water creek crossing at Silver Spur Trail	Design	\$ 190,000
		Construction	\$ 500,000
Tivoli Way	Project to address runoff from Windermere which crosses Fair Oaks Parkway and into private property	Design	\$ 100,000
		Construction	\$ 400,000
Rocking Horse Lane	Repair/replace culvert	Design	\$ 15,000
		Construction	\$ 60,000

City can use \$2.5M in HSIP funds to offset previously approved Capital Improvement Plan (CIP) projects





TARGETED IMPROVEMENTS



City of Fair Oaks Ranch
Crashes for the Years
Evaluated by the Current
HSIP Program Call



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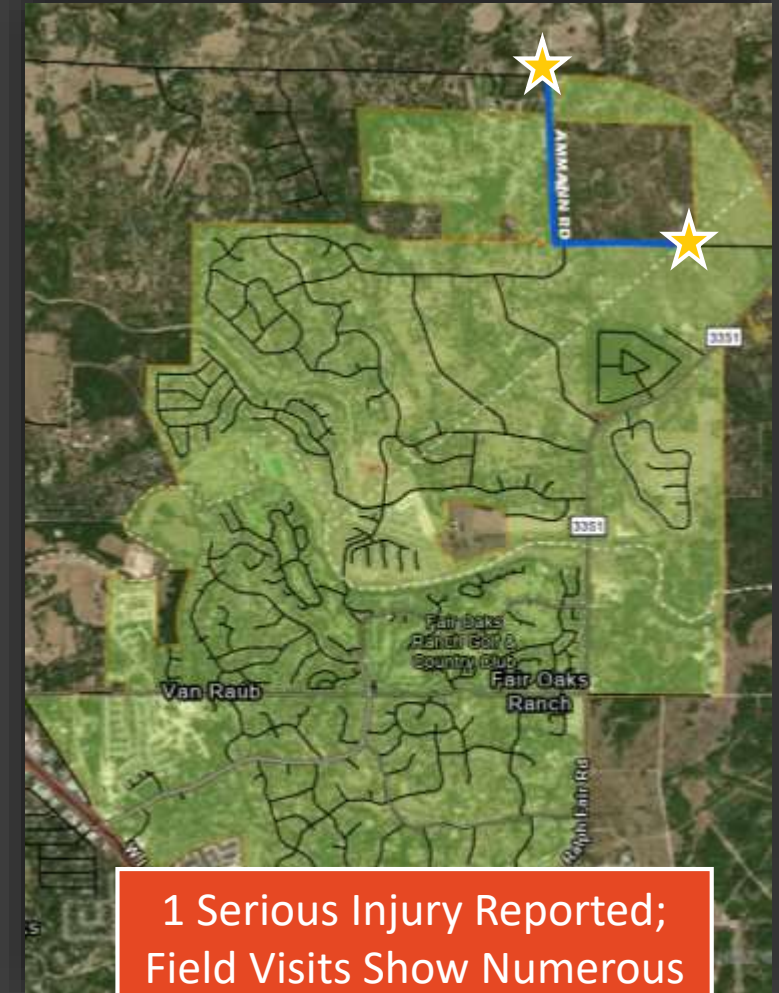


TARGETED: AMMANN RD REALIGNMENT

- 506 Improve Horizontal Alignment
- 507 Increase Superelevation
- 541 Provide Additional Paved Surface Width
- 533/543 Profile Edge and Centerline Markings
- 137 – Install Chevrons



★ Project Location



1 Serious Injury Reported;
Field Visits Show Numerous
Crashes Not Reported



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**TARGETED:
AMMANN RD
REALIGNMENT**

**COST BREAKDOWN – AMMANN RD SAFETY ENHANCEMENT
REALIGN EXISTING 90° CURVES & PROVIDE 4 LF SHOULDERS**



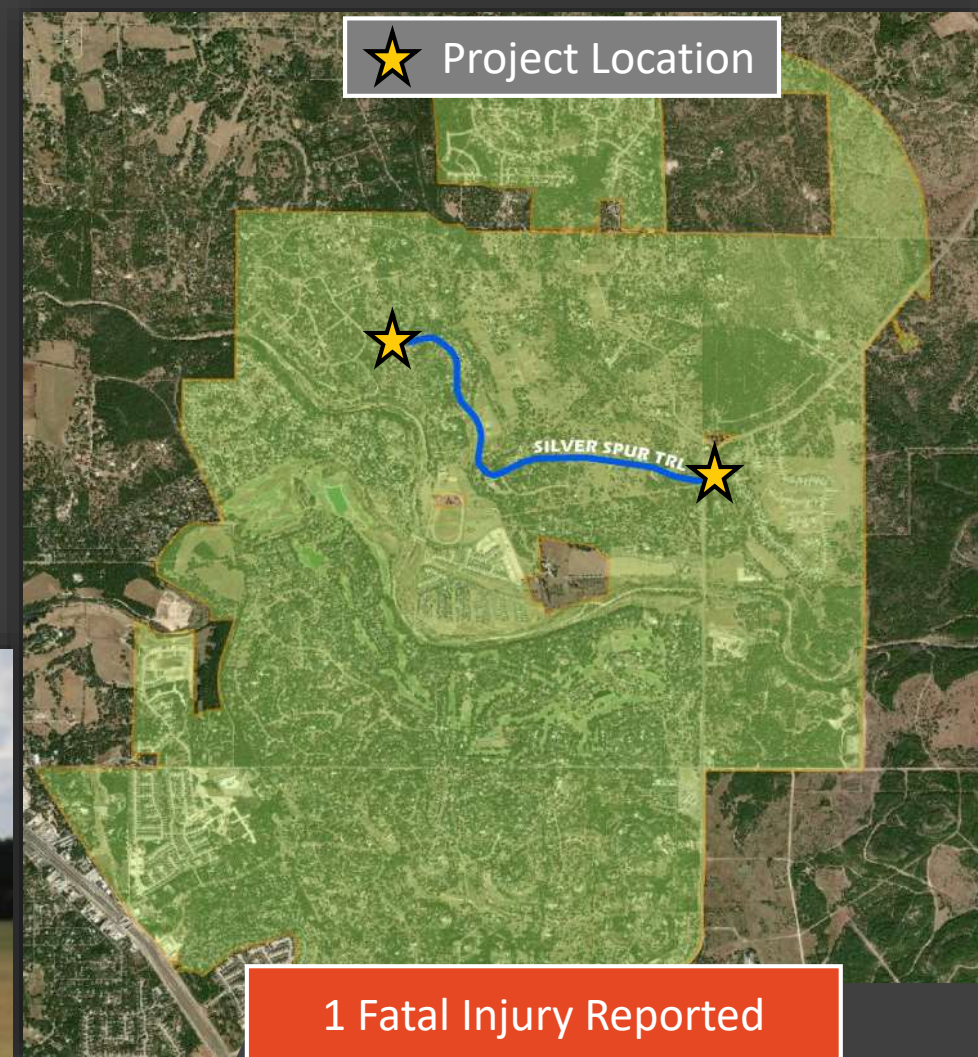
Description	Total Estimated Cost	Federal Participation		State Participation		Local Participation	
		%	Cost	%	Cost	%	Cost
Engineering @15% (By Local Government	\$721,572	0%	\$0	0%	\$0	100%	\$721,572
Construction Estimated at \$4.8M (By State)	\$4,810,478	90%	\$4,329,430	0%	\$0	10%	\$481,048
Environmental Direct State Costs (2.5%)	\$120,262	0%	\$0	0%	\$0	100%	\$120,262
Right of Way Direct State Cost (2.5%)	\$120,262	0%	\$0	0%	\$0	100%	\$120,262
Engineering Direct State Costs (2.5%)	\$120,262	0%	\$0	0%	\$0	100%	\$120,262
Utility Direct State Costs (2.5%)	\$120,262	0%	\$0	0%	\$0	100%	\$120,262
Construction Direct State Costs (5%)	\$240,524	90%	\$216,472	0%	\$0	10%	\$24,052
Indirect State Costs (5.33%)	\$256,398	0%	\$0	100%	\$256,398	0%	\$0
TOTAL	\$6,510,020	\$4,545,902		\$256,398		\$1,707,720	





TARGETED: SILVER SPUR WIDENING

- 504 Construct Paved Shoulders 1-4 ft
- 401 Install Pavement Markings
 - 533/543 Install Profile Markings
- 137 – Install Chevrons
- Address Low Water Crossing



1 Fatal Injury Reported





TARGETED:
SILVER SPUR WIDENING



COST BREAKDOWN – SILVER SPUR WIDENING (1.9 MILES)
WIDEN TO ADD SHOULDERS UP TO 4’, CENTERLINE, CHEVRONS

Description	Total Estimated Cost	Federal Participation		State Participation		Local Participation	
		%	Cost	%	Cost	%	Cost
Engineering @15% (By Local Government)	\$326,701	0%	\$0	0%	\$0	100%	\$326,701
Construction Estimated at \$2.2M (By State)	\$2,178,009	90%	\$1,960,208	0%	\$0	10%	\$217,801
Environmental Direct State Costs (2.5%)	\$54,450	0%	\$0	0%	\$0	100%	\$54,450
Right of Way Direct State Cost (2.5%)	\$54,450	0%	\$0	0%	\$0	100%	\$54,450
Engineering Direct State Costs (2.5%)	\$54,450	0%	\$0	0%	\$0	100%	\$54,450
Utility Direct State Costs (2.5%)	\$54,450	0%	\$0	0%	\$0	100%	\$54,450
Construction Direct State Costs (5%)	\$108,900	90%	\$98,010	0%	\$0	10%	\$10,890
Indirect State Costs (5.33%)	\$116,088	0%	\$0	100%	\$116,088	0%	\$0
TOTAL	\$2,947,499	\$2,058,218		\$116,088		\$773,193	





**TARGETED:
SILVER SPUR WIDENING**

**OPTION: REDUCE LIMITS TO VICINITY OF CRASH (W/CULVERT REPLACEMENT)
COST BREAKDOWN – SILVER SPUR WIDENING TO ADD SHOULDERS (0.6 MILES)
WIDEN TO ADD SHOULDERS UP TO 4’, ADD CENTERLINE, ADD CHEVRONS ON CURVES**

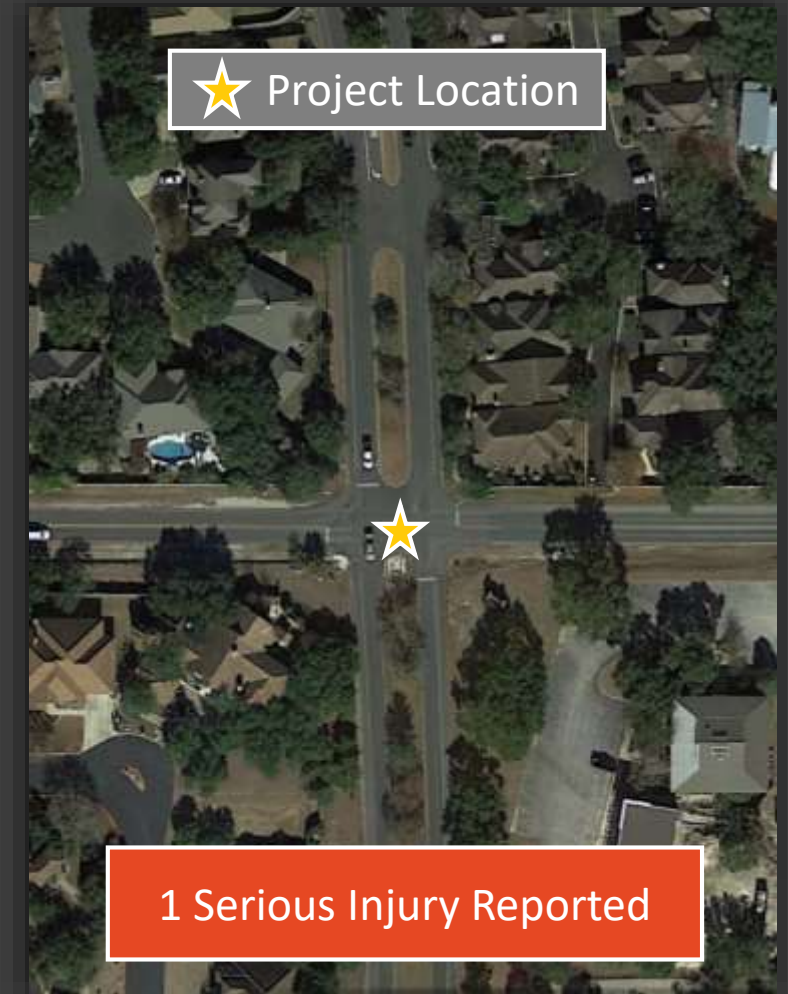
Description	Total Estimated Cost	Federal Participation		State Participation		Local Participation	
		%	Cost	%	Cost	%	Cost
Engineering @15% (By Local Government)	\$168,635	0%	\$0	0%	\$0	100%	\$168,635
Construction Estimated at \$1.1M (By State)	\$1,124,231	90%	\$1,011,808	0%	\$0	10%	\$112,423
Environmental Direct State Costs (2.5%)	\$28,106	0%	\$0	0%	\$0	100%	\$28,106
Right of Way Direct State Cost (2.5%)	\$28,106	0%	\$0	0%	\$0	100%	\$28,106
Engineering Direct State Costs (2.5%)	\$28,106	0%	\$0	0%	\$0	100%	\$28,106
Utility Direct State Costs (2.5%)	\$28,106	0%	\$0	0%	\$0	100%	\$28,106
Construction Direct State Costs (5%)	\$56,212	90%	\$50,590	0%	\$0	10%	\$5,621
Indirect State Costs (5.33%)	\$59,922	0%	\$0	100%	\$59,922	0%	\$0
TOTAL	\$1,521,422	\$1,062,398		\$59,922		\$399,102	





**TARGETED:
DIETZ-ELKHORN &
FAIR OAKS PARKWAY**

- 547 Construct a Roundabout
- Qualifies for G-Match (100% Construction Funded)





**TARGETED:
DIETZ-ELKHORN &
FAIR OAKS PARKWAY**

BENEFITS OF ROUNDABOUT

- ✓ Provides Continuous Flow
- ✓ Reduces Traffic Noise
- ✓ Promotes Safer/Lower Travel Speeds
- ✓ Reduces Potential of Severe Collisions
- ✓ Reduces Conflict Points from 32 to 8
- ✓ Enhances Pedestrian Safety/Mobility
- ✓ Requires Less Maintenance
- ✓ Eliminates Need for Future Signal
- ✓ Reduces Emissions
- ✓ Creates Branding Opportunity for City





**TARGETED:
DIETZ-ELKHORN &
FAIR OAKS PARKWAY**



**COST BREAKDOWN – DIETZ-ELKHORN & FAIR OAKS PARKWAY
CONSTRUCT A ROUNDABOUT**

Description	Total Estimated Cost	Federal Participation		State Participation		Local Participation	
		%	Cost	%	Cost	%	Cost
Engineering @15% (By Local Government)	\$90,000	0%	\$0	0%	\$0	100%	\$90,000
Construction Estimated at \$600K (By State)	\$600,000	90%	\$540,000	0%	\$0	10%	\$60,000
Environmental Direct State Costs (2.5%)	\$15,000	0%	\$0	0%	\$0	100%	\$15,000
Right of Way Direct State Cost (2.5%)	\$15,000	0%	\$0	0%	\$0	100%	\$15,000
Engineering Direct State Costs (2.5%)	\$15,000	0%	\$0	0%	\$0	100%	\$15,000
Utility Direct State Costs (2.5%)	\$15,000	0%	\$0	0%	\$0	100%	\$15,000
Construction Direct State Costs (5%)	\$30,000	90%	\$27,000	0%	\$0	10%	\$3,000
Indirect State Costs (5.33%)	\$31,980	0%	\$0	100%	\$31,980	0%	\$0
TOTAL	\$811,980	\$567,000		\$31,980		\$213,000	





SYSTEMIC IMPROVEMENTS

POTENTIAL SYSTEMIC IMPROVEMENTS

- ✓ Illumination / Safety Lighting*
- ✓ Rumble Strips on Stop-Controlled Approaches
- ✓ Installation of Roadside Flashers or Embedded LEDs for Stop Signs on Controlled Approaches
- ✓ "Intersection Ahead" Warning Signs* Along Uncontrolled Approaches
- ✓ Systemically Treat Curves within a Geographical Area or Roadway Type
- ✓ Systemically Apply Pedestrian Treatments
- ✓ Roadway Widening (increase $\leq 24'$ to $28'$)

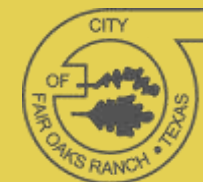
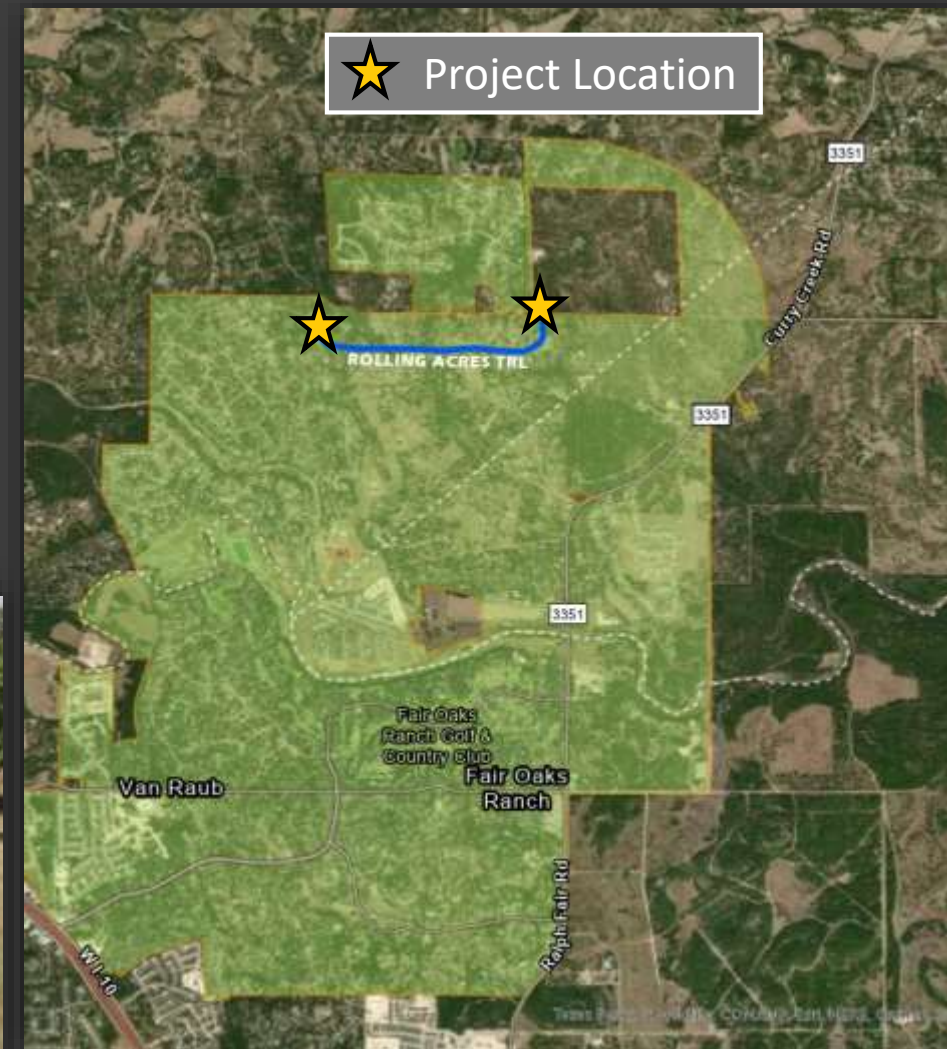
* May qualify for G-Match





SYSTEMIC: ROLLING ACRES WIDENING

- 541 Widen Narrow Roadway to 28'
- 401 Install Pavement Markings or
 - 533/543 Install Profile Markings
- Improve Low Water Crossing





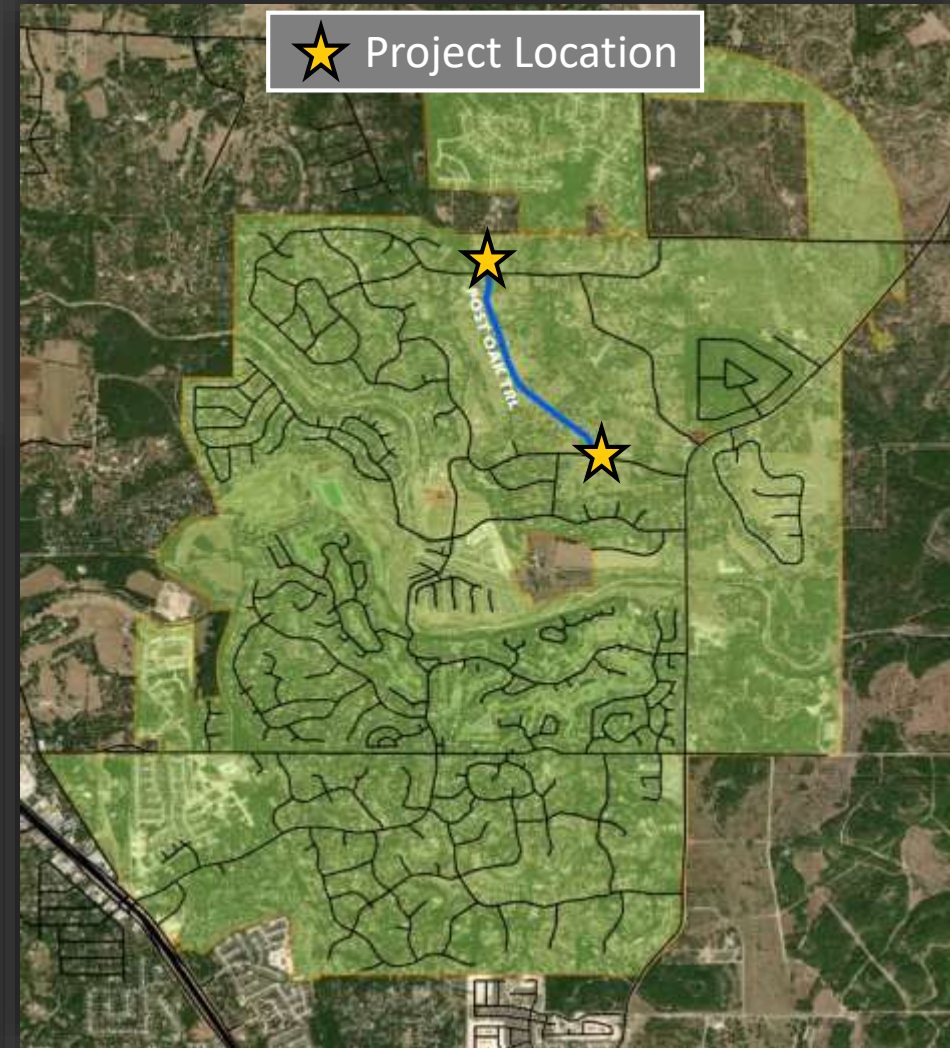
COST BREAKDOWN – ROLLING ACRES WIDENING (1.2 MILES) **WIDEN TO 28', ADD CENTERLINE**

Description	Total Estimated Cost	Federal Participation		State Participation		Local Participation	
		%	Cost	%	Cost	%	Cost
Engineering @15% (By Local Government	\$726,019	0%	\$0	0%	\$0	100%	\$726,019
Construction Estimated at \$5.6M (By State)	\$4,840,126	90%	\$4,356,113	0%	\$0	10%	\$484,013
Environmental Direct State Costs (2.5%)	\$121,003	0%	\$0	0%	\$0	100%	\$121,003
Right of Way Direct State Cost (2.5%)	\$121,003	0%	\$0	0%	\$0	100%	\$121,003
Engineering Direct State Costs (2.5%)	\$121,003	0%	\$0	0%	\$0	100%	\$121,003
Utility Direct State Costs (2.5%)	\$121,003	0%	\$0	0%	\$0	100%	\$121,003
Construction Direct State Costs (5%)	\$242,006	90%	\$217,806	0%	\$0	10%	\$24,201
Indirect State Costs (5.33%)	\$257,979	0%	\$0	100%	\$257,979	0%	\$0
TOTAL	\$6,550,143		\$4,573,919		\$257,979		\$1,718,245



SYSTEMIC: POST OAK TRAIL WIDENING

- 541 Widen Narrow Roadway to 28'
- 401 Install Pavement Markings or
 - 533/543 Install Profile Markings





SYSTEMIC: POST OAK TRAIL WIDENING



COST BREAKDOWN – POST OAK TRAIL WIDENING (1.15 MILES) WIDEN TO 28', ADD CENTERLINE, ADD CHEVRONS ON CURVES

Description	Total Estimated Cost	Federal Participation		State Participation		Local Participation	
		%	Cost	%	Cost	%	Cost
Engineering @15% (By Local Government)	\$352,034	0%	\$0	0%	\$0	100%	\$352,034
Construction Estimated at \$2.35M (By State)	\$2,346,895	90%	\$2,112,206	0%	\$0	10%	\$234,690
Environmental Direct State Costs (2.5%)	\$58,672	0%	\$0	0%	\$0	100%	\$58,672
Right of Way Direct State Cost (2.5%)	\$58,672	0%	\$0	0%	\$0	100%	\$58,672
Engineering Direct State Costs (2.5%)	\$58,672	0%	\$0	0%	\$0	100%	\$58,672
Utility Direct State Costs (2.5%)	\$58,672	0%	\$0	0%	\$0	100%	\$58,672
Construction Direct State Costs (5%)	\$117,345	90%	\$105,610	0%	\$0	10%	\$11,734
Indirect State Costs (5.33%)	\$125,090	0%	\$0	100%	\$125,090	0%	\$0
TOTAL	\$3,176,053	\$2,217,816		\$125,090		\$833,148	





SYSTEMIC: CURVE TREATMENTS

➤ 137 – Install Chevrons Systemically throughout City of FOR



Construction Estimate: \$7,500 Per Curve for Static Chevrons

Construction Estimate: \$27,000 Per Curve for LED Chevrons





KEY TAKEAWAYS

- ✓ The health, safety, and welfare of Fair Oaks Ranch residents is the paramount objective of the Public Works Department; these projects will enhance the safety of the existing roadway network for citizens at a fraction of the cost it would normally take to do so.
- ✓ \$2.5M of funding is available for our community; on certain projects, 100% of construction costs are covered. Only the engineering, environmental, ROW, and administrative charges are the City's responsibility.
- ✓ The current City of Fair Oaks Ranch Roadway CIP will require general debt obligations and/or a voter-approved Bond Program---taking advantage of the HSIP available funding will save our community millions of dollars.



PROJECT RANKING / RECOMMENDATION

PROJECT RANKING CRITERIA UTILIZED

- ✓ Total Estimated Project Cost (Construction)
- ✓ Direct Costs to the City of Fair Oaks Ranch
- ✓ On Current City Roadway CIP
- ✓ Funding Covers Full Roadway CIP Budget
- ✓ Project Limits Provide Logical Termini
- ✓ No/Limited ROW Acquisition Required
- ✓ No/Limited Utility Conflicts/Challenges
- ✓ No/Limited Impacts to Rural Aesthetic Goals
- ✓ No/Limited Local Funding Outside of Roadway CIP
- ✓ Excess Construction Costs (Over \$2.5M)



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Potential Project	Total Estimated Project Cost (Construction)	Direct Costs to FOR	On Current City Roadway CIP	Funding Covers Full Roadway CIP Budget	Provides Logical Termini	No/Limited ROW Acquisition Required	No/Limited Utility Conflicts/Challenges	No/Limited Impacts to Rural Aesthetic Goals	No/Limited Local Funding Outside of Roadway CIP	Excess Construction Costs (Over \$2.5M)	Project Ranking
Post Oak Trail Widening	\$2.35M	\$833K	✓	✓	✓	✓	✓	✓	✓	-	1
Silver Spur Widening (0.6 Mi)	\$1.2M	\$434K	✗	✗	✗	✓	✓	✓	✗	-	2
Chevrons (Static Signs)	\$7.5K per curve	Varies	✗	-	-	✓	✓	✗	✓	-	3
Chevrons (LED Signs)	\$27K per curve	Varies	✗	-	-	✓	✓	✗	✓	-	4
Silver Spur Widening (1.9 Mi)	\$3.8M	\$1.3M	✗	✗	✓	✓	✓	✓	✗	\$1.3M	5
Rolling Acres Trail Widening	\$4.8M	\$1.7M	✓	✗	✗	✓	✓	✓	✗	\$2.3M	6
Dietz Elkhorn & Fair Oaks Pkwy Roundabout	\$600K	\$213K	✗	✗	-	✗	✗	✓	✗	-	7
Ammann Rd Realignment & Widening	\$4.8M	\$1.7M	✓	✗	✗	✗	✗	✓	✗	\$2.3M	8



DISCUSSION / POTENTIAL ACTION BY COUNCIL

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