



## Problem Statement

MCDOT has received complaints of dust from roadways within the Tonto Hills community. The roadways within the Tonto Hills community fall within the Low Volume Road parameters, which requires mitigation efforts be made in order to align with air quality standards set forth by the Environmental Protection Agency. The following provides an overview of the area.

## Roadway Information

- **Jurisdiction:** Unincorporated Maricopa County
- **Right-of-Way:** 60 feet
- **Lane Configuration:** Unpaved residential roadway
- **Improvements:** Deer Trail Road and Old Mine Road have been partially paved to a low volume road standard

## Traffic Counts

- Traffic counts were recorded throughout the entire Tonto Hills community. See list recommendations below.

## Area Analysis:

- **Land Use:** Rural residential development.
  - **128 parcels** are currently developed
  - **102 parcels** remain vacant and potentially developable
- **Drainage:** Multiple washes are within the community that cross current roadways, which may hinder longevity of pavement.

## Cost Per Mile:

- Based upon previous low volume road projects, the average cost per mile is \$2,137,778. The following shows the cost break down for two proposed options for the Tonto Hills community.

Phase	Description	Mileage	Cost	Average LVR Cost
1	Above 80 ADT	3.815	\$8,156,650	\$2,137,778
2	Below 80 ADT	1.929	\$4,125,599	

## Previous Studies:

- TT0515: Deer Trail Rd from Cave Creek Rd to Old Mine Rd (\$703,000 for 0.64 mile)
- TT0524: La Salle Heights Subdivision (16<sup>th</sup> Street from La Salle Road to Tanya Road, 20<sup>th</sup> Street from Tamar Road to La Salle Road, La Salle Road from 16<sup>th</sup> Street to 20<sup>th</sup> Street)
- TT0411: Planada Lane between 87<sup>th</sup> Avenue to west of 83<sup>rd</sup> Avenue
- TT0525: Peak View Road between 59<sup>th</sup> Street and 60<sup>th</sup> Street
- TT0527: 26<sup>th</sup> Street from Old New River Road to Carlise Road and 121<sup>st</sup> Avenue from BoM to Southern Avenue
- A survey was conducted by MCDOT with the Tonto Hills residents.
  - 70% answered that they were full time residents
  - 76% are in support of paving the roadways if possible
  - 76% are in support of other dust mitigation efforts if paving is not possible

**Recommendation:**

Based upon the above information, Planning presents the following 2 recommendations:

- Phase 1: Pave all roadways with an ADT 80 or higher

Roadway	From	To	ADT	Length (miles)	Ranking Out of 116	PRS Score
Old Mine Rd	Deer Trail Rd	Sombrero Rd	213	0.24	14	62
Old Mine Rd	Sombrero Rd	Hohokam Rd	105	0.21	47	50
Old Mine Rd	Hohokam Rd	Filoree Ln	167	0.06	24	54
Old Mine Rd	Filoree Ln	Manana Rd	145	0.12	28	52
Old Mine Rd	Manana Rd	Hohokam Ln	107	0.07	43	50
Blue Wash Rd	Old Mine Rd	La Plata Rd	80	0.84	58	40
La Plata Rd	Old Mine Rd	Blue Wash Rd	197	0.70	16	59
Tonto Rd	La Plata Rd	Blue Wash Rd	111	0.51	41	50
Deer Trail Rd	Old Mine Rd	Manana Rd	197	0.44	17	59
Deer Trail Rd	Kachina Rd	Old Mine Rd	105	0.55	48	50
Deer Trail Rd	Cave Creek Rd	Kachina Rd	118	0.05	35	50

- Cost: \$8.1 million
- Benefits:
  - 81 built parcels
  - 100+ future build out parcels would benefit from improved roadways
  - MCDOT currently has ROW
  - Reduce dust complaints and Air Quality Conformity

- Phase 2: Pave all roadways within the Tonto Hills community

Roadway	From	To	ADT	Length (miles)	Ranking Out of 116	PRS Score
Sombrero Rd	Begin Road	Old Mine Rd	12	0.17	100	6
Hohokam Rd	Old Mine Rd	Hohokam Ln	34	0.34	81	17
Hohokam Ln	Begin Road	Old Mine Rd	23	0.11	92	12
Filoree Ln	Old Mine Rd	End Road	15	0.12	99	8
Old Mine Rd	Hohokam Ln	Blue Wash Rd	58	0.10	68	29
Manana Rd	Old Mine Rd	Tonto Rd	53	0.63	70	27
Yucca Ln	Begin Road	Blue Wash Rd	8	0.08	102	4
Turquoise Ln	Tonto Rd	End Road	25	0.17	91	13
Quail Ln	Deer Trail Rd	End Road	21	0.11	94	11
Cottontail Rd	Begin Road	Deer Trail Rd	33	0.09	83	17
Kendra Ln	Begin Road	Deer Trail Rd	18	0.04	95	9
Kachina Rd	Deer Trail Rd	Old Mine Rd	52	0.42	71	26
Kachina Rd	Begin Road	Deer Trail Rd	32	0.11	86	16

- Cost \$12.2 million
- Benefit: MCDOT currently has ROW
- Constraints: Extensive drainage issues across multiple roadway



**Cost Breakdown by Roadway Segment:**

Roadway	From	To	ADT	Length (miles)	Ranking Out of 116	Cost
Old Mine Rd	Deer Trail Rd	Sombrero Rd	213	0.24	62	\$514,180
La Plata Rd	Old Mine Rd	Blue Wash Rd	197	0.70	59	\$1,504,667
Deer Trail Rd	Old Mine Rd	Manana Rd	197	0.44	59	\$943,601
Old Mine Rd	Hohokam Rd	Filoree Ln	167	0.07	54	\$139,097
Old Mine Rd	Filoree Ln	Manana Rd	145	0.12	52	\$252,614
Tonto Rd	La Plata Rd	Blue Wash Rd	111	0.51	50	\$1,085,092
Old Mine Rd	Manana Rd	Hohokam Ln	107	0.08	50	\$167,450
Old Mine Rd	Sombrero Rd	Hohokam Rd	105	0.21	50	\$457,503
Deer Trail Rd	Kachina Rd	Old Mine Rd	105	0.55	50	\$1,183,672
Blue Wash Rd	Old Mine Rd	La Plata Rd	80	0.84	40	\$1,787,470
Old Mine Rd	Hohokam Ln	Blue Wash Rd	58	0.10	29	\$223,415
Manana Rd	Old Mine Rd	Tonto Rd	53	0.63	27	\$1,347,348
Kachina Rd	Deer Trail Rd	Old Mine Rd	52	0.42	26	\$903,686
Hohokam Rd	Old Mine Rd	Hohokam Ln	34	0.35	17	\$744,087
Cottontail Rd	Begin Road	Deer Trail Rd	33	0.10	17	\$210,800
Kachina Rd	Begin Road	Deer Trail Rd	32	0.12	16	\$253,099
Turquoise Ln	Tonto Rd	End Road	25	0.17	13	\$372,827
Hohokam Ln	Begin Road	Old Mine Rd	23	0.11	12	\$237,754
Quail Ln	Deer Trail Rd	End Road	21	0.12	11	\$251,212
Kendra Ln	Begin Road	Deer Trail Rd	18	0.04	9	\$91,802
Filoree Ln	Old Mine Rd	End Road	15	0.13	8	\$267,258
Sombrero Rd	Begin Road	Old Mine Rd	12	0.18	6	\$378,367
Yucca Ln	Begin Road	Blue Wash Rd	8	0.09	4	\$191,292