

Milton Road & US 180 Corridor Master Plans

Project Update

ADOT



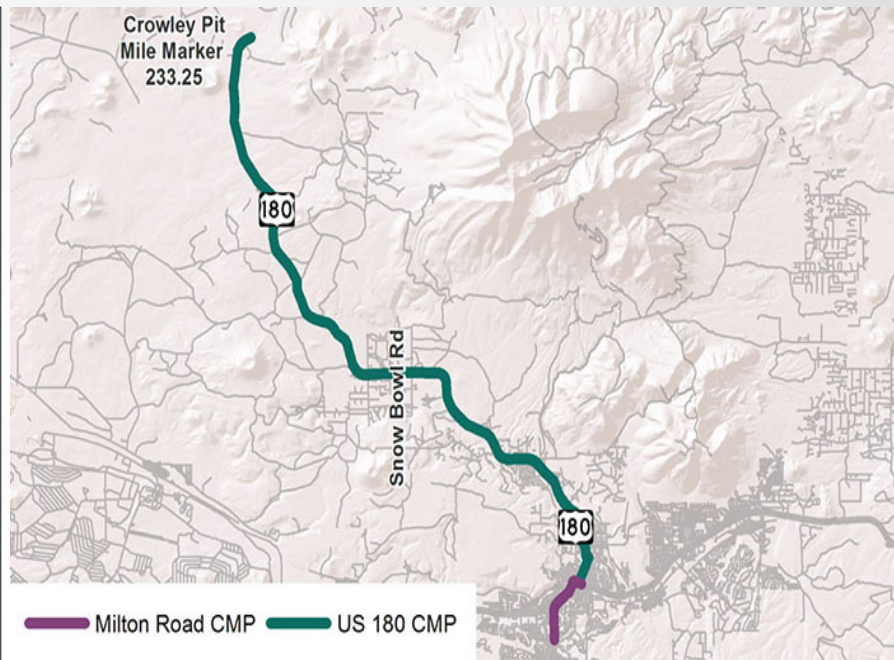
October 13, 2020

Milton Rd / US 180 CMP Study Corridors

Milton Road Study Corridor



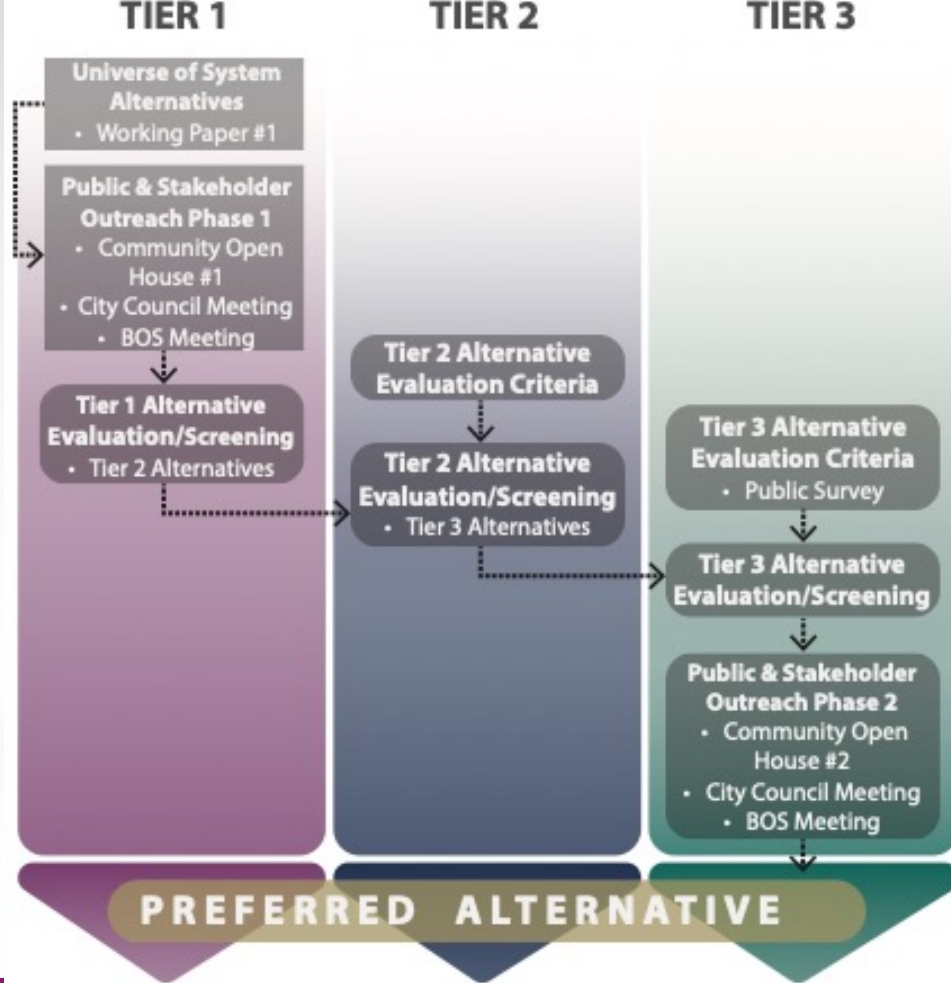
US 180 Study Corridor



Milton Rd / US 180 CMP Study Objectives

- ▶ Address congestion and safety on the Corridors
- ▶ Identify the Long-Term (20-year) vision of the corridors
- ▶ Obtain public and stakeholder input on alternatives, including multimodal alternatives
- ▶ Scope out and further implement previous and new strategies, consistent with the Long-Term vision
- ▶ Prioritize implementation projects for design
- ▶ Assist NAIPTA in completing its Bus Rapid Transit/High Capacity Transit system design
- ▶ Follow the “PEL” process to carry forward decisions into Design & NEPA

3-Tiered Analysis



Milton Rd Tier 2 Results

Recommended for Tier 3 Analysis

No Build / No Build +
 - Project Cost: N/A
 - Required ROW: 26,326 ft²
 - Potential Buildings Impacted: 0

No Build Evaluation Criteria Results						Rank
Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/Implementation (9.64 Possible Points)	Total Score (83.88 Possible Points)	6 th
17.12	0.00	3.51	0.00	9.64	30.27	

Eliminated from Tier 3 Analysis

Alternative 3
 - Project Cost: \$40,514,000
 - Required ROW: 26,326 ft²
 - Potential Buildings Impacted: 9

Alternative 3 Evaluation Criteria Results						Rank
Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/Implementation (9.64 Possible Points)	Total Score (83.88 Possible Points)	4 th
18.73	12.92	4.16	0.00	3.04	38.85	

Eliminated from Tier 3 Analysis

Alternative 4
 - Project Cost: \$40,542,000
 - Required ROW: 26,326 ft²
 - Potential Buildings Impacted: 9

Alternative 4 Evaluation Criteria Results						Rank
Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/Implementation (9.64 Possible Points)	Total Score (83.88 Possible Points)	7 th
16.48	4.77	4.92	0.00	3.04	29.20	

Recommended for Tier 3 Analysis

Alternative 5
 - Project Cost: \$60,994,000
 - Required ROW: 203,517 ft²
 - Potential Buildings Impacted: 21

Alternative 5 Evaluation Criteria Results						Rank
Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/Implementation (9.64 Possible Points)	Total Score (83.88 Possible Points)	1 st
21.31	17.42	18.56	0.00	1.01	58.30	

Recommended for Tier 3 Analysis

Alternative 6a
 - Project Cost: \$73,667,000
 - Required ROW: 362,398 ft²
 - Potential Buildings Impacted: 32

Alternative 6a Evaluation Criteria Results						Rank
Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/Implementation (9.64 Possible Points)	Total Score (83.88 Possible Points)	2 nd
21.79	15.30	13.39	0.00	0.77	51.25	

Recommended for Tier 3 Analysis

Alternative 6b
 - Project Cost: \$55,137,000
 - Required ROW: 237,564 ft²
 - Potential Buildings Impacted: 23

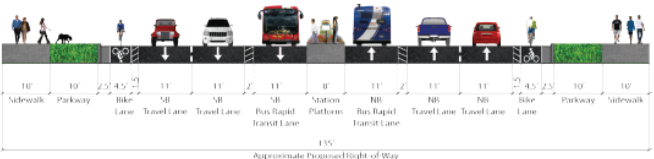
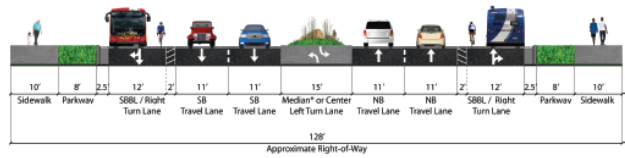
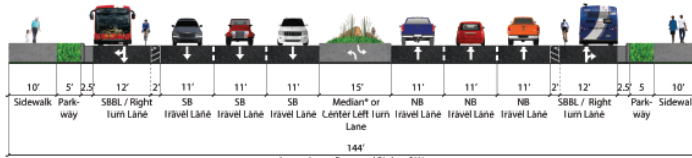
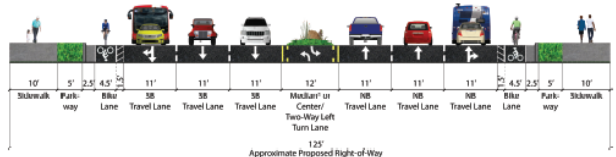
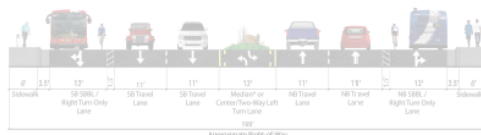
Alternative 6b Evaluation Criteria Results						Rank
Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/Implementation (9.64 Possible Points)	Total Score (83.88 Possible Points)	5 th
17.00	4.77	12.04	0.00	1.06	34.87	

Recommended for Tier 3 Analysis

Alternative 13
 - Project Cost: \$57,695,000
 - Required ROW: 245,096 ft²
 - Potential Buildings Impacted: 23

Alternative 13 Evaluation Criteria Results						Rank
Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/Implementation (9.64 Possible Points)	Total Score (83.88 Possible Points)	3 rd
16.31	7.28	18.83	0.00	1.01	43.44	

No Build
 (No Gas Section)



Milton Rd Tier 3 Results

Milton Road Tier 3 Travel Time Summary Table

Alternative	AM Peak Hour				PM Peak Hour			
	Northbound		Southbound		Northbound		Southbound	
	Travel Time (min)	Travel Time % Change	Travel Time (min)	Travel Time % Change	Travel Time (min)	Travel Time % Change	Travel Time (min)	Travel Time % Change
No Build	9.9	-	5.2	-	6.6	-	6.6	-
No Build Plus	5.9	40.7%	5.6	-7.6%	6.9	-4.8%	8.1	-23.3%
5	5.5	44.5%	5.4	-3.7%	6.8	-2.7%	7.6	-15.3%
6a	5.5	44.3%	5.7	-10.1%	6.9	-4.8%	7.4	-11.9%
6b	6.9	30.5%	6.3	-20.4%	7.3	-11.2%	7.9	-19.7%
13	6.5	34.6%	6.5	-24.5%	7.6	-15.1%	7.3	-11.3%

Total	Total
28.3	-
26.5	6.4%
25.3	10.8%
25.5	9.8%
28.4	-0.2%
27.9	1.5%

Alternative	Average AM Travel Time	
No Build	7.6	
No Build Plus	5.8	24.1%
5	5.5	27.9%
6a	5.6	25.6%
6b	6.6	13.0%
13	6.5	14.3%

Average PM Travel Time	
6.6	
7.5	-14.0%
7.2	-9.0%
7.1	-8.4%
7.6	-15.4%
7.4	-13.2%

Milton Rd Tier 3 Results

Final T3 Evaluation Criteria			No-Build	No-Build+	Alternative 5	Alternative 6a	Alternative 6b	Alternative 13
Category	Metrics	Weight	Weighted Score	Weighted Score	Weighted Score	Weighted Score	Weighted Score	Weighted Score
Traffic Operations (13.9% Weight)	Level of Service	2.07%	1.60	1.60	1.91	2.07	1.75	1.67
	Travel Time (AM)	4.03%	2.90	3.83	4.03	3.90	3.34	3.39
	Travel Time (PM)	4.03%	4.03	3.53	3.70	3.72	3.49	3.56
	Network Delay (AM)	1.88%	1.57	1.63	1.83	1.88	1.82	1.84
	Network Delay (PM)	1.88%	1.74	1.70	1.79	1.88	1.76	1.63
Vehicular Safety (16.6% Weight)	Reduction in Conflict Points	16.60%	16.60	15.79	12.20	11.16	12.59	12.08
Expand Travel Mode Choices (19.3% Weight)	Bicycle Comfort Quality Index	4.94%	2.47	3.29	4.53	4.53	4.94	3.29
	Pedestrian Comfort Index	6.97%	2.32	3.10	5.03	6.19	6.97	4.64
	Transit Travel Time (AM)	1.83%	1.02	1.71	1.53	1.64	1.83	1.50
	Transit Travel Time (PM)	1.83%	1.60	1.53	1.58	1.83	1.64	1.48
	Transit Ridership	3.72%	2.26	2.26	2.26	3.24	3.24	3.72
Public Acceptance (12.0% Weight)	Public Support	12.00%						
Cost / Implementation (10.6% Weight)	Construction Cost	3.10%	3.10	3.10	0.36	0.32	0.42	0.40
	Right-of-Way (Property) Impact	4.55%	4.55	0.84	0.18	0.11	0.17	0.16
	Implementation Opportunities	2.96%	2.96	0.99	0.12	0.31	0.35	0.46
Environmental Impacts (13.6% Weight)	Neighborhood Impacts	4.43%	4.38	4.38	4.43	4.43	4.15	4.15
	Title VI Impacts	5.36%	3.29	3.29	5.36	5.36	3.20	3.20
	Air Quality	3.79%	3.69	3.79	3.68	3.62	3.70	3.58
Community Character (14.0% Weight)	Great Street	14.00%						
Aggregate Score			100.0%	60.10	56.38	54.53	56.22	55.35
Rank			1	2	5	3	4	6



Milton Rd Tier 3 Results

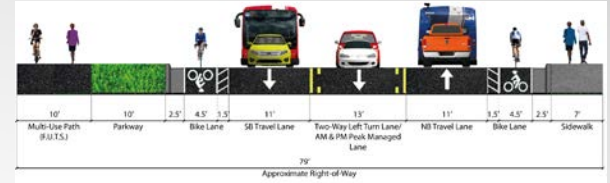
Tier 3 Alternative	Tier 3 Score	Tier 3 Rank
No Build	60.10	1
No Build Plus	56.38	2
6a	56.22	3
6b	55.35	4
5	54.53	5
13	50.75	6



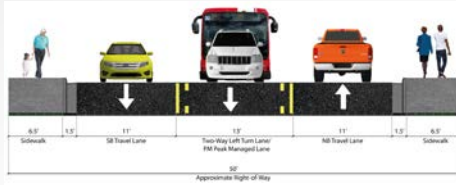
US 180 Tier 2 Alternatives

No Build – Existing Condition

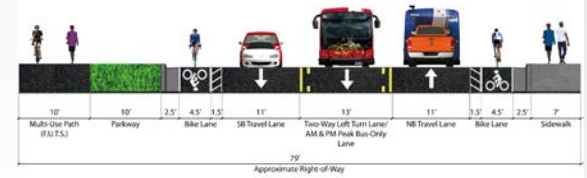
Alt 4a



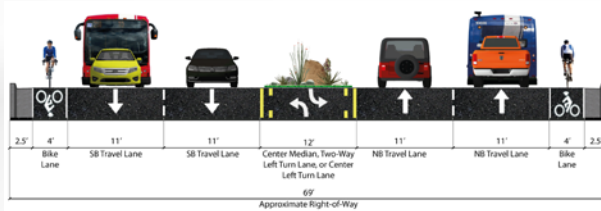
Alt 2



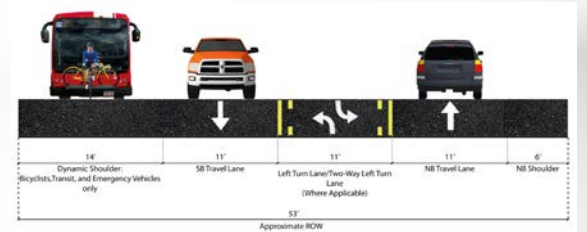
Alt 4b



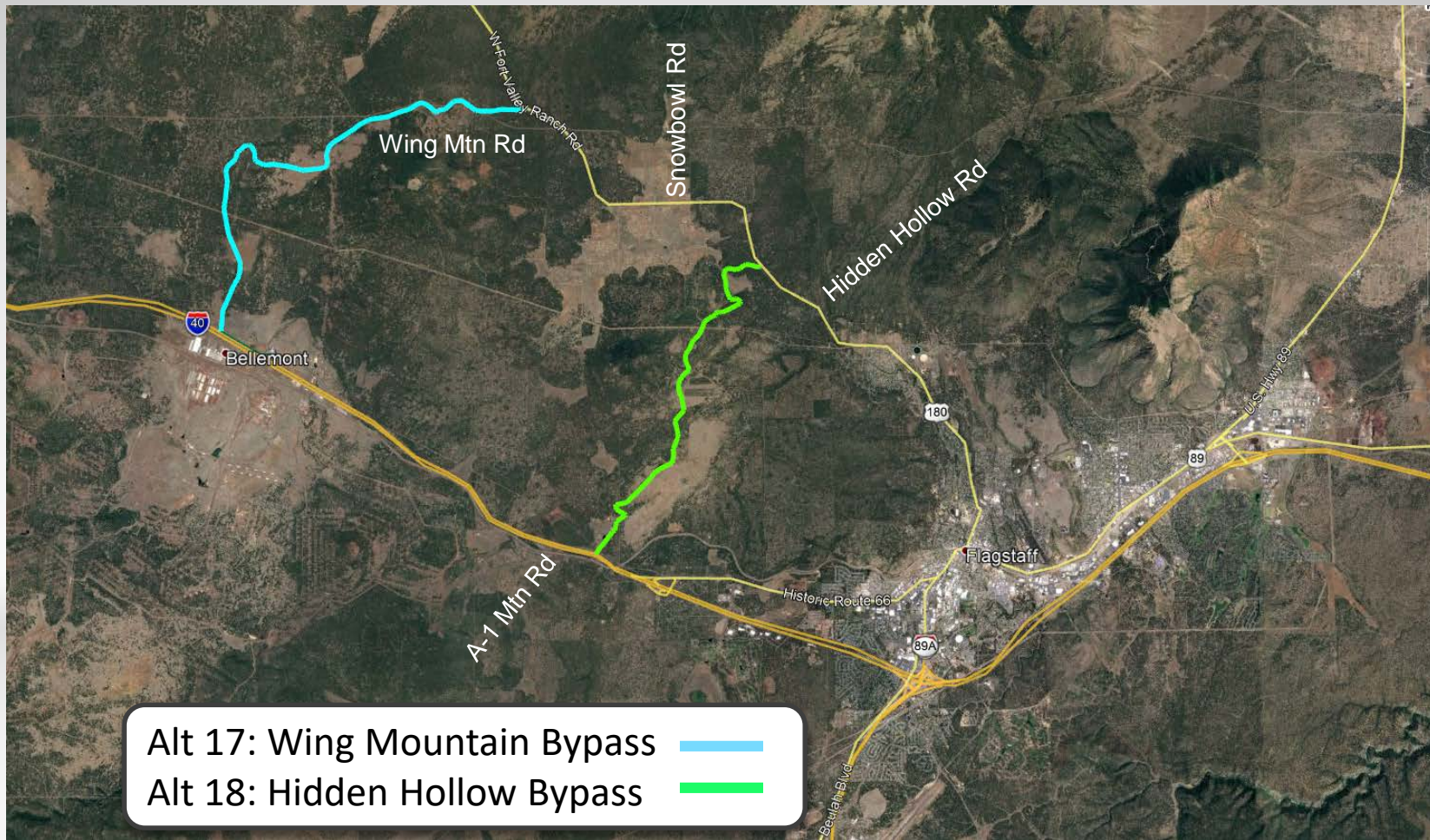
Alt 3



Alt 6



US 180 Tier 2 Alternatives



US 180 Alternative Modeling Packages

Segment		Alternative Package						
		A	B	C	D	E (Alt 17 -Alt Route)	F (Alt 18 -Alt Route)	
1	Route 66 to Columbus (Suburban)	No Build	Alt 2 - AM no change - PM SB managed lane	Alt 2 - AM no change - PM SB managed lane	Alt 2 - AM no change - PM SB managed lane	Alt 2 - AM no change - PM SB managed lane	No Build	No Build
2	Columbus to Peak View (Suburban)		Alt 3 Suburban	Alt 4A - AM managed lane NB - PM managed lane SB	Alt 4B (Transit) - AM Bus NB - PM Bus SB	Alt 6 (Transit) - SB bus lane	No Build	No Build
3	Peak View to Snowbowl Rd		Alt 3 Rural	Alt 6 (Transit) - SB bus lane	Alt 6 (Transit) - SB bus lane	Alt 6 (Transit) - SB bus lane	No Build	No Build
4	Snowbowl Rd to MP 233.55 (Rural)		Alt 3 Rural	No Build	No Build	No Build	No Build	No Build

US 180 Corridor Travel Times

Package	AM Peak Hour				PM Peak Hour				Overall Impact
	Westbound		Eastbound		Westbound		Eastbound		
	Travel Time (sec)	Travel Time % Change	Travel Time (sec)	Travel Time % Change	Travel Time (sec)	Travel Time % Change	Travel Time (sec)	Travel Time % Change	
No Build	979	-	939	-	955	-	1,014	-	Neutral
A	952	2.8%	909	3.2%	932	2.4%	985	2.9%	Positive, yet negligible
B	990	-1.1%	983	-4.6%	959	-0.4%	1,187	-17.1%	Negative
C	991	-1.2%	938	0.1%	979	-2.5%	1,230	-21.3%	Negative
D	1,033	-5.5%	940	-0.1%	972	-1.8%	1,211	-19.4%	Negative
E* Wing Mntn bypass	935	4.5%	935	0.4%	944	1.2%	975	3.8%	Positive, yet negligible
F* Hidden Hollow bypass	951	2.9%	939	0.0%	946	0.9%	968	4.5%	Positive, yet negligible

US 180 Results

- The analysis concludes that there is a significant correlation between the traffic delay on US 180 and the operations on Milton Rd.
- Without improvements to travel time on Milton Rd., the potential to see improvement on US 180 is very unlikely.
- The majority of the public input received on US 180 generally did not support bypasses or adding lanes on US 180.
- ADOT and the Project Partners recommended the No Build Plus alternative for US 180
 - “PLUS” including several multimodal improvements on US 180, but not adding lanes

Public Involvement / Next Steps

- ▶ Publish Working Paper #2: Alternatives Analysis (Milton Rd. & US 180)
- ▶ Extensive Public Outreach – mid-November
 - Virtual Public Meeting for each CMP
 - Online Public Survey
 - Community Outreach
 - Business Community Outreach

THANK YOU

www.azdot.gov/MiltonCorridorMasterPlan

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