

Concept Development Study for CR 537 Corridor Improvements

Borough and Township of Freehold, Monmouth County, NJ

Comparison Category/Issue			No Build			Concept 1			Concept 2			Concept 3			
Meets Project Purpose and Need			No			Yes			Yes			Yes			
Maintenance and Protection of Traffic															
Number of lanes provided during construction			N/A			All lanes maintained at intersections; one lane in each direction at Rt 33 and Rt 9 bridges.			All lanes maintained at intersections; one lane in each direction at Rt 33 and Rt 9 bridges.			All lanes maintained at intersections; one lane in each direction at Rt 33 and Rt 9 bridges.			
Detour Required / Length			N/A			None			None			None			
Construction Duration															
Duration (months)			N/A			18			20			22			
Substandard Geometric Design Elements Corrected															
CR 537	1. Vertical Stopping Sight Distance (Sag Curve west of Redwood Lane)		No			Yes			Yes			Yes			
	2. Vertical Stopping Sight Distance (Crest Curve on bridge over Route 33)		No			Yes			Yes			Yes			
	3. Acceleration Lane Length (EB, on bridge over Route 33)		No			No			No			No			
	4. Deceleration Lane Length (WB, on bridge over Route 33)		No			No			No			No			
	5. Through Lane Drop Transition Length (WB, east of bridge over Route 33)		No			Yes			Yes			Yes			
	6. Intersection Sight Distance (NB Enright Avenue approach)		No			Yes			Yes			Yes			
Traffic Congestion Reduction Impacts															
Proposed ITS Improvements (Traffic signal efficiency improved to reduce congestion along Corridor)			No			Yes			Yes			Yes			
			AM	PM	SAI	AM	PM	SAI	AM	PM	SAI	AM	PM	SAI	
CR 537 Corridor  Signalized Intersection Future Level of Service (LOS)	1. Iron Bridge Road/ CentraState Hospital Drive	Overall LOS (delay, sec)	C (31s)	F (82s)	C (23s)	C(29s)	C(33s)	C(21s)	C(20s)	C(32s)	B(18s)	N/A			
		# of LOS 'E' movements	1	0	0	0	1	0	0	0	0				0
		# of LOS 'F' movements	0	1	0	0	0	0	0	0	0				0
	2. Redwood Lane / Village Center Drive	Overall LOS (delay, sec)	C(28s)	D(36s)	E(60s)	C(27s)	C(33s)	D(43s)	B(19s)	C(25s)	C(33s)	N/A			
		# of LOS 'E' movements	0	0	2	0	0	1	0	0	0				
		# of LOS 'F' movements	0	0	1	0	0	0	0	0	0				
	3. Stillwells Corner Road /Wemrock Road	Overall LOS (delay, sec)	C(29s)	F(149s)	F(117s)	C(32s)	F(86s)	E(79s)	C(25s)	D(45s)	D(39s)	C(25s)	D(38s)	D(46s)	
		# of LOS 'E' movements	0	2	1	4	0	3	1	1	4	0	0	0	
		# of LOS 'F' movements	0	4	6	0	5	4	0	0	0	0	0	0	
	4. Walmart Drive / Castronova Way	Overall LOS (delay, sec)	E(59s)	E(71s)	F(108s)	C(34s)	C(27s)	E(71s)	C(34s)	C(27s)	E(71s)	B(19s)	C(28s)	C(32s)	
		# of LOS 'E' movements	1	0	1	0	1	3	0	1	3	0	0	0	
		# of LOS 'F' movements	1	1	1	0	0	1	0	0	1	0	0	0	
	5. NJ RT 33 Interchange			Covered by problem statement											
	6. Trotters Way (Freehold Mall)	Overall LOS (delay, sec)	B(11s)	C(34s)	D(46s)	A(8s)	C(30s)	D(51s)	A(8s)	C(30s)	D(51s)	N/A			
		# of LOS 'E' movements	0	0	0	0	0	0	0	0	0				
# of LOS 'F' movements		0	1	1	0	0	1	0	0	1					
7. US RT 9 Interchange			Covered by problem statement												
8. Route 33 Business (Park Avenue)	Overall LOS (delay, sec)	C(30s)	F(84s)	F(170s)	C(29s)	C(34s)	D(40s)	C(28s)	C(32s)	D(35s)	N/A				
	# of LOS 'E' movements	0	0	0	0	0	0	0	0	0					
	# of LOS 'F' movements	0	2	2	0	0	0	0	0	0					
Crash Reduction Impacts															
Anticipated overall crash reduction along CR 537 corridor			No			Yes			Yes			Yes			
Anticipated crash reduction on WB CR 537, between Route 33 Interchange and Trotters Way			No			Yes			Yes			Yes			
Anticipated crash reduction on NB Route 9 Ramp at Barkalow Avenue			No			No			No			No			

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<b>Driver Expectation Impacts</b>				
Improved driver expectation on WB CR 537 over Route 33 bridge	No	Yes	Yes	Yes
Improved driver expectation on WB CR 537 between Route 33 Interchange and Trotters Way	No	Yes	Yes	Yes
Improved driver expectation on EB/WB CR 537 inside (left) lane at Maplewood Cemetery Driveways	No	No	No	No
Improved driver expectation on EB/WB CR 537 inside (left) lane at Route 9 Interchange	No	No	No	No
Improved driver expectation at NB Route 9 Ramps and Barkalow Avenue	No	No	No	No
Improved driver expectation on EB/WB CR 537 inside (left) lane at Route 33 Business (Park Avenue)	No	Yes	Yes	Yes
<b>Complete Streets Impacts</b>				
Continuous sidewalks and pedestrian connectivity provided	No	Yes	Yes	Yes
Bicycle compatible outside travel lanes along CR 537 provided	No	Yes	Yes	Yes
Opportunity to enhance public transportation provided	No	Yes	Yes	Yes
<b>Right of Way Impacts</b>				
Required ROW (Acres)	0	5.708	6.801	7.393
Number of Temporary Construction Easements		61	63	66
Number of Partial Residential Property Acquisitions	0	23	24	25
Number of Entire Residential Property Acquisitions	0	6	6	7
Number of Partial Commercial Property Acquisitions	0	38	39	41
Number of Entire Commercial Property Acquisitions	0	1	2	2
Number of Business Relocations	0	2 (block 69, lot 37)	13 (2 -block 69, lot 37, 11-block 70, lot 25)	13 (2 -block 69, lot 37, 11-block 70, lot 25)
<b>Access Impacts</b>				
Proposed Access Management Strategies	No	Yes	Yes	Yes
<b>Environmental Impacts</b>				
Floodplain (acres)	0	0	0	0
Riparian Zone (acres)	0	0.113	0.113	0.113
Wetlands (acres)	0	0.011	0.011	0.011
State Open Waters (acres)	0	0	0	0
Total Wetland and State Open Water Permanent Impacts (acres)	0	0.011	0.011	0.011
Wetland Transition Area (acres)	0	0.38	0.38	0.38
Historic Resources (#)	0	8-13 & 16-21	8-13 & 16-21	8-14 & 16-21
Contaminated Sites (#)	0	1, 2, & 3	1, 2, & 3	1, 2, & 3
Threatened and Endangered Species Habitat (Y/N)	0	No	No	No
<b>Public Transportation Enhancements Provided</b>				
Bus Stops	No	Yes	Yes	Yes
Right of Way Cost	\$0	\$4,063,551	\$5,606,505	\$6,522,580
<b>Total Cost</b>	<b>\$0</b>	<b>\$20,152,000</b>	<b>\$22,873,000</b>	<b>\$23,960,800</b>