

# **Appendix E. Project-Level Congestion Management Analysis and Strategies**

## Projects Located in Congested Corridors

The components of the project level congestion analysis for the RTP are further described below and are informed by current and forecasted congestion trends. For each project submitted, staff tagged project level indicators related to the goals, objectives, and performance measures in the policy framework. For Congestion Management indicators, staff compiled the following project level indicators to determine the extent of existing congestion needs and issues and anticipated congestion impacts in the project area.

### Congestion Level

Column	Definition/Description
Forecasted Congestion	<p>Projects segments are deemed congested if its modeled speed drops below 70% of free flow or if its volume to capacity ratio is 1.0 or greater during any time period of day. Forecasted congested is as follows:</p> <ul style="list-style-type: none"> <li>• Now: congested as of 2017 to 2020</li> <li>• Short-Term: expected to be congested by 2025</li> <li>• Mid-Term: expected to be congested by 2035</li> <li>• Long-Term: expected to be congested by 2045</li> </ul>
Percent Free Flow Speed	<p>This refers to the Lowest modeled speed along the project length as a percentage of that facilities expected free flow speed. 70% is generally the threshold for identifying congestion. The lower the value, the slower the modeled speed indicating increased traffic congestion.</p> <ul style="list-style-type: none"> <li>• <b>Red:</b> Severe Congestion</li> <li>• <b>Orange:</b> Moderate Congestion</li> <li>• <b>Yellow:</b> Light Congestion</li> <li>• <b>Green:</b> Not Congested</li> </ul>
Volume/Capacity Ratio	<p>A measurement of the operating capacity of a roadway or intersection where the number of vehicles passing through is divided by the number of vehicles that could theoretically pass through when at capacity. Values of 1.0 mean that the roadway has reached its designed/intended capacity and is likely failing with a LOS of F. Values over 1 mean the roadway is over capacity.</p> <ul style="list-style-type: none"> <li>• <b>Red:</b> Severe Congestion</li> <li>• <b>Orange:</b> Moderate Congestion</li> <li>• <b>Yellow:</b> Light Congestion</li> <li>• <b>Green:</b> Not Congested</li> </ul>

## Toolbox of Strategies

Next, GNRC identified and assessed the strategies to address congestion needs and issues within the project area based on proposed improvements submitted by proponents through the Call-for-Projects. The congestion management strategies considered are contained with the four main categories below.

### Improve Operations

Operational Improvements are geared toward improving the “supply side” of the transportation system. These efforts are intended to enhance the operation of the transportation system and make it as efficient as possible.

Operational Improvements include intersection upgrades, access management, reversible lanes, traffic signal improvements, and Intelligent Transportation Systems.

Operational strategies can maximize the performance of the existing transportation system in a cost-effective manner through managed lanes, variable speed limits, intersection improvements, access management, and special event coordination and management. Examples include:

- **Traffic Signal Improvements** – signal hardware upgrades, signal software upgrades, signal timing, signal coordination, or (in conjunction with intersection improvements).
- **Intersection / Geometric Improvements** – addition or reconfiguration of turning lanes, lane widenings, realignment of intersecting streets, improved acceleration or deceleration lanes at interchange ramps, construction of roundabouts, single point urban intersection, new and/or improved traffic control devices (signs and markings).
- **Elimination of Bottlenecks** – removal of a physical constriction which delays travel, such as widening an underpass, providing lane continuity (i.e. replacing a two-lane bridge that connects pieces of four-lane roadway), or eliminating a sight barrier.
- **Reversible Lanes** – establishing signals, signage, and pavement markings which permit the direction of travel to be changed during peak travel hours.
- **Ramp Management** – includes strategies such as ramp metering (installing signals at points where ramps enter a freeway, which regulates the rate and spacing of traffic entering the freeway based on actual conditions), ramp widening, ramp closures, and signing and pavement marking changes.
- **Incident Management Systems** – technology and programs for detecting crashes, disabled vehicles, or other incidents that impede travel and resolving or removing the obstructions.
- **Access Management** – policies, design criteria, and facilities that minimize the number of driveways and intersecting roads accessing a main thoroughfare; includes parallel service roads, shared driveways, median barriers, and curb cut limitations.
- **Intelligent Transportation Systems (ITS)** – the use of technology to improve traveler information, traffic flow, and system management.

## Shift to Alternative Modes

Improving access to alternative modes of transportation can help reduce the burden placed on roadways to support travel demand. Multimodal strategies include programs and projects that give people choices beyond just driving alone in their cars. Examples include:

- **Improved Transit Service** – new routes and/or expanded schedules; dedicated lanes to improve speed and reliability.
- **Rideshare Programs** – programs to facilitate carpooling and vanpooling such as Hytch and VanStar.
- **Managed Lanes** – facilities that are restricted for use by vehicles carrying a certain number of passengers during peak times of the day or that may be used by single-occupancy vehicles for payment of a toll.
- **Pedestrian Facilities** – sidewalks, crosswalks, paths, pedestrian signals, pedestrian bridges, maps and signage to promote walking as a viable mode of transportation.
- **Bicycle Facilities** – bike lanes, paths, signals, lockers, maps and signage to promote bicycling as a viable mode of transportation.

## Increased Roadway Capacity

As a last resort, expanding the physical capacity of a roadway can provide relief to traffic congestion, though this relief is often short-lived due to the induced demand that additional capacity often generates. This includes new roadway and roadway widening projects.

## Manage Travel Demand

Demand management programs attempt to address congestion at the root of the problem by reducing the number of vehicles on the road. These initiatives work to modify driver behavior by encouraging people to make fewer single-occupancy trips, travel in off-peak hours when possible, and support land use policies that reduce the demand for automobile transportation. Examples include:

- **Employer-Based Programs** – encouraging telecommuting, flexible or staggered work schedules, company-run carpool/vanpool programs, promotion of transit usage, and parking management at the job site.
- **Parking Management** – public policies or facilities that encourages multi-modal travel and discourage single-occupant vehicle (SOV) use through adjustments in the pricing and availability of parking; could include event-related parking management to address non-recurring congestion.
- **Congestion Pricing** – pricing of transportation services to encourage travel at non-peak hours including fares and tolls
- **Growth Management** – public policies to manage land uses, urban design, and development patterns in a way that optimizes transportation efficiency.
- **Transit-Oriented Development (TOD) Policies** – public policies that encourage concentrated development adjacent to transit stops or stations and easy access to these transit facilities.

## Opportunities to Enhance

In addition to the quantitative evaluation, staff evaluated each project with a set of qualitative analysis questions. Each project was assessed based on project level indicators through the staff analysis questions across all project indicators, including congestion management, transit and managed lanes, and active transportation. Staff's assessment identified opportunities to help manage current or future congestion, improve transit options, and safe access for nonmotorized users. The following strategies were commonly identified by staff through the analysis in order to suggest opportunities for proponents to further mitigate congestion in the project area.

Column	Definition/Description
Traffic Signal Coordination/ITS Improvements	Traffic signal coordination and/or ITS improvements were commonly identified for corridor improvements with a high density of intersection in order to maintain traffic flow.
Access Management	Access management improvements were generally suggested for roadway widening projects along corridors within a high crash area and with a high intersection density in order to preserve the additional capacity into the future.
Transit Improvements	Transit improvements were commonly identified for consideration, such as: <ul style="list-style-type: none"> <li>• New transit service in conjunction with roadway widening projects along congested corridors</li> <li>• Implementing dedicated lanes and/or transit signal priority for existing transit service in conjunction with roadway widening projects along congested corridors</li> <li>• Implementing transit signal priority for existing transit service in conjunction with intersection improvements</li> <li>• New park and ride facilities or transit stations in conjunction with new interchange projects</li> </ul>
Non-Motorized Improvements	Non-motorized improvements to support the shift to alternative modes were suggested for consideration for road widening projects along corridors with no to limited existing bicycle and pedestrian facilities. In addition, staff highlighted opportunities to create separated facilities and improve access to transit stops.

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## Congestion Management Analysis of Candidate Projects

				Congestion Level			Improve Operations							Shift to Alternative Modes							Increase Capacity	Opportunities to Enhance																		
				Forecasted Congestion	Percent Free Flow Speed	Volume/Capacity Ratio	Roadway Realignment	Traffic Operations & Management	Intersection Improvements	Traffic Signalization	Ramp Metering	Other Traffic Control	Dynamic Messaging	Other ITS (specify)	Signage/Wayfinding	Reversible Lane	Carpool Lane	Access Management	Transit Service	Non-Motorized Modes	New sidewalks	Bicycle lane	Shared lane	Mixed-traffic transit route	Dedicated transit lanes	Transit queue jump	Transit vehicle pull-off	Increase Roadway Capacity	Traffic Operations & Management	Intersection Improvements	Traffic Signalization	Ramp Metering	Carpool Lane	Access Management	Transit Service	New sidewalks	Bicycle lane	Dedicated transit lanes	Park and Ride Facility	Transit queue jump
APP ID	PROJECT NAME	Cost-Feasible	Horizon Year																																					
2653	I-65 Interchange, between SR 254 (Old Hickory Blvd) and SR 253 (Concord Road)		2035	Now																																				
2861	Vietnam Veterans (SR 386) Transit Managed Lanes and Widening	Funded	2025	Now																																				
2891	Nolensville Pike (SR 11) Sidewalks, Phase 1-3		2025	Now																																				
2783	Complete Streets Implementation on BRT Lite Corridors - Gallatin Pike	Funded	2035	Now																																				
2876	I-65 Interchange at Buckner Road	Funded	2045	Now																																				
2897	Gallatin Pike (SR 6/US 31E) Sidewalks, Phases 2 and 3		2025	Now																																				
2782	Lebanon Pike (SR 24) Sidewalks Improvements	Funded	2035	Now																																				
2832	Dickerson Pike/Main Street (SR 11/US31A) Widening at CSX Underpass	Funded	2045	Now																																				
2852	I-65 Widening from Bethel Rd (SR 257) to SR 41	Funded	2035	Now																																				
2581	I-24 at Rocky Fork Road Interchange		2035	Now																																				
2612	NET Corridor Sec 3 Extension		2035	Now																																				
2831	I-24 SMART Corridor Phase IV		2035	Now																																				
2946	Edmondson Pike Widening, Phase 2		2025	Now																																				
2827	I-24 Widening from Fern Ave to Trinity Ln	Funded	2025	Now																																				
2585	Weakley Lane Widening		2025	Now																																				
2819	Nolensville Pike (SR 11/US 31A) Reconstruction and Widening	Funded	2025	Now																																				
2671	SR 109 Widening		2025	Now																																				
2757	SR 106 (Hillsboro Road) Widening		2025	Now																																				
2625	SR 11/US 31A Bypass		2035	Now																																				
2824	I-40 Donelson Pike Relocation	Funded	2045	Now																																				
2859	Nolensville Pike (SR 11/US 31A) Reconstruction and Widening from South of Burkitt Rd to North of Mill Creek	Funded	2025	Now																																				
2864	I-40 at Central Pike (SR-265) New Interchange	Funded	2025	Now																																				
2822	Charlotte Pike (SR 24/US70) Widening from Old Hickory Boulevard to I-40	Funded	2045	Now																																				
2767	Hillsboro Road (SR 106) at Old Hillsboro Road (SR-46) Realignment	Funded	2035	Now																																				
2657	Old Hickory Boulevard (SR 254) Intersection Improvements		2025	Now																																				
2630	Harvey Park Greenway	Funded	2035	Now																																				
2834	Columbia Pike (SR 6) Widening from Duplex Rd to I-840	Funded	2045	Now																																				
2652	Off-Street Town Greenway, Phase 2		2035	Now																																				
2830	I-40 Widening from McCrory Ln to US-70S (SR 1)	Funded	2045	Now																																				
2939	Columbia Avenue (SR 6/US 31) Widening	Funded	2035	Now																																				

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APP ID	PROJECT NAME	Cost-Feasible	Horizon Year																																			
2631	Main Street (US 41)/Long Hollow Pike (SR 174)/Rivergate Pkwy Improvements	Funded	2035	Now																																		
2820	Charlotte Pike (SR 24/US70) Widening from White Bridge Rd to American Rd	Funded	2025	Now																																		
2650	Wilson Pike (SR 252) Widening		2035	Now																																		
2854	Mack Hatcher Parkway West (SR 397) Extension from SR 6 to SR 96	Funded	2045	Now																																		
2932	Harding Place (SR 255) Sidewalks, Phase 3	Funded	2045	Now																																		
2944	Lewisburg Pike (US 431/SR 106) Widening		2045	Now																																		
2902	Stewarts Ferry Pike Widening		2025	Now																																		
2949	Old Hickory Boulevard (SR 171) Widening		2035	Now																																		
2821	Charlotte Pike (SR 24/US70) Widening from American Rd to I-40	Funded	2025	Now																																		
2875	Jefferson Pike (SR 266) Widening	Funded	2035	Now																																		
2898	Edmondson Pike Widening, Phase 1		2035	Now																																		
2855	Columbia Pike (SR 6) Widening from Mack Hatcher Parkway (SR 397) to I-840	Funded	2045	Now																																		
2605	Dickerson Road/Main Street (SR 11/US 41) Sidewalk Improvements		2025	Now																																		
2903	Hitt Lane Bridge and Roadway Reconstruction		2025	Now																																		
2872	I-24 Congestion Reduction		2025	Now																																		
2846	New Salem Highway (SR 99) Widening	Funded	2035	Now																																		
2884	Murfreesboro Pike (SR-1) Sidewalks, Phase 2	Funded	2035	Now																																		
2905	Complete Streets Implementation on BRT Lite Corridors - Murfreesboro Pike	Funded	2025	Now																																		
2848	SR 386 (Vietnam Veterans) at Forest Retreat Road Interchange	Funded	2035	Now																																		
2833	I-65 Widening from Rivergate Pkwy to SR 41	Funded	2035	Now																																		
2640	Nolensville Road (SR 11/US 31A) Widening		2025	Now																																		
2865	Mt. Juliet Road (SR 171) Widening from Central Pike (SR 265) to Providence Way	Funded	2025	Now																																		
2808	Stoner Creek Greenway, Phase II		2035	Now																																		
2867	Lebanon Road (SR 24) Widening from Park Glen Dr to Benders Ferry Rd	Funded	2025	Now																																		
2805	Beckwith Road Widening		2025	Now																																		
2645	Long Hollow Pike (SR 174) Lighting Improvements		2035	Now																																		
2786	Mt. Juliet Road (SR-171) Widening at I-40 Bridge	Funded	2035	Now																																		
2776	Hillsboro Pike – Green Hills Transit Center		2035	Now																																		
2851	Broadway (SR 6) Widening from East Broadway (SR 6) to Albert Gallatin Ave	Funded	2025	Now																																		
2623	Commerce Way Extension		2035	Now																																		
2868	Central Pike (SR 265) Widening from Old Hickory Blvd (SR 45) to Mt. Juliet Rd (SR 171)	Funded	2035	Now																																		

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APP ID	PROJECT NAME	Cost-Feasible	Horizon Year																																				
2639	Lewisburg Pike (US 431) Widening		2025	Now				●			●						●	●	●						●														
2853	Murfreesboro Road (SR 96) Widening from East of SR 252 (Wilson Pike) to I-840	Funded	2025	Now							●														●														
2646	I-65 at Hwy 31W (SR 41) Interchange Lighting Improvements (Exit 98)		2035	Now																																			
2600	Red River Road/Long Hollow Pike (SR 25/SR 174) Widening	Funded	2025	Now				●	●	●		●					●	●	●						●														
2791	Mt. Juliet ITS and Signal Improvements, Phase II		2025	Now				●			●						●																						
2818	Hillsboro Pike Sidewalks Gaps	Funded	2025	Now						●	●						●	●			●																		
2813	Carothers Road		2025	Now				●																	●											◆	🚲		
2722	Main St (US31 E) Reconstruction	Funded	2035	Now													●	●																					
2829	I-24 SMART Corridor Phase III		2025	Now				●																														🚏	
2593	Lowry Street (SR 1) Improvements, Phase I	Funded	2025	Now						●																													
2602	Lowry Street (SR 1) Improvements, Phase II	Funded	2025	Now													●	●																					
2601	Broadway (US 31E/SR 6) Widening		2035	Now				●	●	●							●	●	●						●														
2626	Town Creek Greenway Extension		2035	Now																																			
2896	Dickerson Pike (SR 11) Sidewalks, Phases 2 and 3		2035	Now							●						●	●			●																		
2746	SR 255 (Harding Place) Extension, Phases 1 and 2		2045	Now						●	●																												
2885	Murfreesboro Pike (SR-1) Sidewalks, Phases 3 - 7		2035	Now													●	●			●																		
2629	Rivergate Parkway Reconstruction		2035	Now				●		●	●							●																					
2950	Burkitt Road/Old Hickory Boulevard Widening		2025	Now							●							●	●						●													🚫	
2858	Mack Hatcher Parkway (SR 397) Widening (South Quadrant) from SR 96 to SR 6	Funded	2025	Now							●										●				●														
2665	Eastgate Blvd Connection		2035	Now						●																												◆	
2807	E. Division Street Widening		2035	Now							●						●	●	●						●														
2837	I-65 Widening from Bethel Rd (SR 257) to SR 25	Funded	2025	Now																					●														
2775	Clarksville Pike Transit Center	Funded	2035	Now																																			
2672	SR 266 (Sam Ridley Parkway) at Old Nashville Highway Intersection Improvements		2035	Now				●	●	●																													
2763	SR 252 (Wilson Pike) Widening		2025	Now				●	●	●									●						●														
2736	Nashville Hwy (SR 6 /US 31) Intersection Improvements	Funded	2035	Now				●	●	●	●							●																					
2674	Crockett Road Widening		2035	Now													●	●							●														
2908	Dickerson Pike (SR 11) Sidewalk Improvements	Funded	2045	Now						●	●						●	●			●																		
2772	Old Nashville Highway Multimodal Improvements	Funded	2045	Now				●									●	●	●																				🚏
2627	Moss Wright to North Creek Park Connector		2035	Now													●	●																					
2823	I-24 at Harding Place (SR 255) Interchange Re-configuration	Funded	2025	Now				●										●	●																				





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APP ID	PROJECT NAME	Cost-Feasible	Horizon Year																																				
2900	Old Harding Pike Sidewalks, Phase 1-3		2025	Now																																			
2594	Long Hollow Pike (SR 174) Widening		2025	Now																																			
2804	Mt. Juliet ITS and Signal Improvements, Phase IV		2035	Now																																			
2806	W. Division Street Widening		2025	Now																																			
2811	Town Center Trail, Phase III		2045	Now																																			
2717	I-840 at Cherry Lane Extension Interchange	Funded	2035	Now																																			
2847	North Thompson Lane (SR 268) Widening from SR 1 to SR 10	Funded	2025	Now																																			
2856	I-65 at SR 441 (Moore's Lane) Interchange Reconstruction	Funded	2025	Now																																			
2635	Almaville Road (SR 102) Widening		2025	Now																																			
2812	Sam Ridley (SR 266) West Extension		2035	Now																																			
2658	Hwy 231 (SR 10) Sidewalk Improvements	Funded	2045	Now																																			
2700	Cedar City Trail Extension		2025	Now																																			
2863	I-40 Widening from I-840 to SR 26 (US 70)	Funded	2045	Now																																			
2583	SR 174 (Long Hollow Pike) at Latimer Lane Intersection Improvements		2045	Now																																			
2789	Lebanon Road (SR 24) Sidewalks, Phase II	Funded	2025	Now																																			
2724	New Shackle Island Rd (SR-258) Widening, Phase 2		2035	Now																																			
2773	South Waldron Road Widening		2045	Now																																			
2711	Hartmann Drive Rail Crossing Improvement		2025	Now																																			
2599	Rivergate Parkway Widening		2025	Now																																			
2940	I-65 at Murfreesboro Road (SR-96) Interchange Reconstruction	Funded	2025	Now																																			
2651	Sunset Road Widening		Not Sure	Now																																			
2916	Central Pike (SR 265) Widening		2025	Now																																			
2933	SR-258 at Drakes Creek Road and Stop 30 Road Intersection Improvements	Funded	2025	Now																																			
2636	Clovercroft Road Widening		2025	Now																																			
2909	Academy Road/Coles Ferry Pike Widening		2025	Now																																			
2614	Conference Drive Enhancements	Funded	2025	Now																																			
2721	Mercury Blvd (SR 1) Sidewalk Improvements Phase 2	Funded	2025	Now																																			
2726	Old Shackle Island Rd Reconstruction		2025	Now																																			
2943	Carothers Parkway South Widening		2025	Now																																			
2945	Peytonsville Road Extension		2035	Now																																			
2730	Centerpoint Road Widening		2045	Now																																			

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## Congestion Management Analysis of Candidate Projects

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APP ID	PROJECT NAME	Cost-Feasible	Horizon Year																																			
2921	Experiment Station Road over Wartrace Creek Bridge Repair		2025	Now																																		
2761	SR 246 (Carters Creek Pike) Widening		2035	Now																																		
2826	I-24 Ramp Improvements at Whites Creek Pike (SR 65) Old Hickory Blvd (SR 45) Haywood Ln Bell Road (SR 254) and Hickory Hollow Pkwy	Funded	2025	Now																																		
2841	I-65 Widening from SR 25 to SR 109	Funded	2035	Now																																		
2849	SR 109 Portland Bypass (North segment)	Funded	2025	Now																																		
2850	SR 109 Portland Bypass (South segment)	Funded	2035	Now																																		
2719	Rutherford Blvd. Adaptive Signal Control Technology		2025	Now																																		
2668	South Hartmann Drive at West Main Street Intersection Improvements	Funded	2025	Now																																		
2696	Baddour Parkway (SR 26) Widening West		2025	Now																																		
2716	SR 266 (Sam Ridley Parkway) West Widening, Phase II		2035	Now																																		
2694	S Hartmann Drive at Franklin Road Intersection Improvements		2025	Now																																		
2611	NET Corridor Sec 2A (SR 386/SR 174)		2035	Now																																		
2624	Gallatin Volunteer State-GAP Greenway		2035	Now																																		
2765	SR 96 West Widening		2025	Short-term																																		
2604	I-65 at Hwy 31W (Louisville Highway) Interchange Modification		2035	Now																																		
2755	I-40 at McCrory Lane Interchange, Phase 1		2035	Now																																		
2663	Carver Lane at West Main Street Intersection Improvements	Funded	2025	Short-term																																		
2795	Old Lebanon Dirt Road Widening		2025	Now																																		
2744	Walton Ferry Road Widening		2035	Now																																		
2660	Briskin Lane Widening		2035	Now																																		
2714	Baddour Parkway East Widening		2025	Now																																		
2779	Ragsdale Road Widening		2035	Now																																		
2685	Walton Ferry Road/Old Shackle Island Road Reconstruction	Funded	2035	Short-term																																		
2914	Couchville Pike Widening	Funded	2035	Now																																		
2913	Percy Priest North Shore Multi-Use Trail		2025	Now																																		
2598	Rivergate Parkway at Moss Trail and Two Mile Pike Intersection Improvements	Funded	2025	N/A																																		
2845	Church St (SR 10) Joe Jackson Pkwy and Epps Mill Rd	Funded	2035	Mid-term																																		
2802	Eastern Connector, Phase III		2025	Mid-term																																		
2881	NET Corridor Section 4, US 31/SR 6 Widening		2025	Short-term																																		
2582	Smyrna/Wm County New Connector Road		2025	Short-term																																		

# Regional Transportation Plan, 2021-2045

## Congestion Management Analysis of Candidate Projects

				Congestion Level			Improve Operations										Shift to Alternative Modes							Increase Capacity	Opportunities to Enhance													
				Forecasted Congestion	Percent Free Flow Speed	Volume/Capacity Ratio	Roadway Realignment	Traffic Operations & Management	Intersection Improvements	Traffic Signalization	Ramp Metering	Other Traffic Control	Dynamic Messaging	Other ITS (specify)	Signage/Wayfinding	Reversible Lane	Carpool Lane	Access Management	Transit Service	Non-Motorized Modes	New sidewalks	Bicycle lane	Shared lane	Mixed-traffic transit route	Dedicated transit lanes	Transit queue jump	Transit vehicle pull-off	Increase Roadway Capacity	Traffic Operations & Management	Intersection Improvements	Traffic Signalization	Ramp Metering	Carpool Lane	Access Management	Transit Service	New sidewalks	Bicycle lane	Dedicated transit lanes
APP ID	PROJECT NAME	Cost-Feasible	Horizon Year																																			
2713	Baddour Parkway Rail Crossing Improvement		2045	Short-term																																		
2586	Rock Springs Road Widening		2025	Short-term																																		
2910	Stewarts Ferry Pike Widening	Funded	2025	Now																																		
2698	Hartmann Drive Widening and Extension		2025	Mid-term																																		
2702	Indian Lake Road Widening	Funded	2035	Mid-term																																		
2720	Mercury Blvd (SR 1) Sidewalk Improvements Phase 1		2025	Now																																		
2662	Lebanon ITS Improvements		2035	Short-term																																		
2703	I-24 at Epps Mill Road Interchange Modification and Epps Mill Road Widening		2025	Mid-term																																		
2774	Hwy 31W at Raymond Hirsch Rd (SR 258) Sidewalk Improvements	Funded	2025	Short-term																																		
2633	Blythe Avenue/Dorothy Jordan Ave. Widening	Funded	2025	Mid-term																																		
2648	Buckner Road Widening		2035	Short-term																																		
2735	Nashville Highway (SR 6/US 31) at Bear Creek Pike (SR 99/US 412) Intersection Improvements	Funded	2025	Long-term																																		
2684	Tennessee Blvd at S College Street (SR 266) Intersection Improvement		2025	Short-term																																		
2574	SR 174 (Long Hollow Pike) at Upper Station Camp Creek Road Intersection Improvements	Funded	2045	Mid-term																																		
2669	West Main Street (SR 24) Sidewalk Improvements		2035	Mid-term																																		
2666	I-840 and Central Pike (SR 265) Interchange Improvements		2035	N/A																																		
2675	Drakes Creek Road Widening	Funded	2025	Mid-term																																		
2792	Cedar Creek Greenway, Phase I		2035	Long-term																																		
2794	Eastern Connector, Phase II		2025	Long-term																																		
2587	Florence Road Sidewalks	Funded	2035	Short-term																																		
2814	Jefferson Pike Multimodal Improvements	Funded	2025	Mid-term																																		
2941	I-65 Interchange, between I-840 and SR 248 (Goose Creek Bypass)		2025	N/A																																		
2825	I-24 Widening from Old Hickory Blvd (SR 45) to I-65	Funded	2045	Short-term																																		
2781	SR 50 (James Campbell Blvd) Reconstruction	Funded	2025	Long-term																																		
2936	Enon Springs Road Sidewalk Improvements		2045	Mid-term																																		
2862	Hartsville Pike (SR 141) Widening	Funded	2025	Short-term																																		
2673	Hartsville Pike (SR 141) Relocation		2035	Short-term																																		
2877	I-24 Ramp Improvements at I-840 Old Fort Pkwy (SR 96) and New Salem Hwy (SR 99)	Funded	2045	Long-term																																		
2727	Drakes Creek Road Widening		2025	Mid-term																																		
2733	Shute Lane Widening		2025	Long-term																																		

# Regional Transportation Plan, 2021-2045

## Congestion Management Analysis of Candidate Projects

				Congestion Level			Improve Operations										Shift to Alternative Modes								Increase Capacity	Opportunities to Enhance												
				Forecasted Congestion	Percent Free Flow Speed	Volume/Capacity Ratio	Roadway Realignment	Traffic Operations & Management	Intersection Improvements	Traffic Signalization	Ramp Metering	Other Traffic Control	Dynamic Messaging	Other ITS (specify)	Signage/Wayfinding	Reversible Lane	Carpool Lane	Access Management	Transit Service	Non-Motorized Modes	New sidewalks	Bicycle lane	Shared lane	Mixed-traffic transit route	Dedicated transit lanes	Transit queue jump	Transit vehicle pull-off	Increase Roadway Capacity	Traffic Operations & Management	Intersection Improvements	Traffic Signalization	Ramp Metering	Carpool Lane	Access Management	Transit Service	New sidewalks	Bicycle lane	Dedicated transit lanes
APP ID	PROJECT NAME	Cost-Feasible	Horizon Year																																			
2857	Fairview Boulevard (SR 100) Widening from Bowie Lake Rd to I-840	Funded	2025	Mid-term																																		
2609	NET Corridor Sec 2B (Offit Drive Extension)		2035	Long-term																																		
2618	Long Hollow Pike (SR 174) Widening		2025	Long-term																																		
2634	Albert Gallatin Avenue (SR 174) - Hatten Track Road Extension	Funded	2025	Long-term																																		
2723	Brinkley Road Reconstruction	Funded	2025	Mid-term																																		
2664	I-40 at SR 109 Interchange Improvements		2025	N/A																																		
2707	South College Street Rail Crossing Improvement		2035	Long-term																																		
2704	Sanders Ferry/Drakes Creek Bike Trail	Funded	2035	N/A																																		
2732	Sanders Ferry Road Widening		2025	N/A																																		
2697	Almaville Road (SR 102) Widening		2025	Mid-term																																		
2616	Bison Trail Extension		2035	Long-term																																		
2729	Saundersville Road Widening		2025	Long-term																																		
2874	I-65 at SR 99 (US 412) Interchange Modification	Funded	2045	N/A																																		
2754	McCrary Lane Widening		2025	Mid-term																																		
2737	Iron Bridge Road over Lytle Creek Bridge Replacement		2025	Long-term																																		
2670	N Castle Heights and W Main Street (SR 24) Intersection Improvements	Funded	2025	Long-term																																		
2608	Airport Road Widening		2045	Long-term																																		
2715	Bradyville Pike (SR 99) Widening	Funded	2025	Long-term																																		
2708	N Greenwood St Rail Crossing Improvement		2025	Long-term																																		
2839	I-24 Ramp Improvements at Maxey Rd (SR 256) and SR 49	Funded	2025	N/A																																		
2667	Central Pike (SR 265) Widening		2025	N/A																																		
2709	North Castle Heights Avenue Rail Crossing Improvement		2025	Long-term																																		
2712	Babb Drive Rail Crossing Improvement		2025	Long-term																																		
2810	Belinda Parkway Pedestrian Connector, Phase II		2025	N/A																																		
2798	I-40 at Golden Bear Gateway Interchange Lighting Improvements		2035	N/A																																		
2917	Central Pike (SR 265) Widening		2025	Long-term																																		
2728	Stop 30 Road Widening		2025	Long-term																																		
2948	Couchville Pike Widening		2025	N/A																																		
2879	NET Corridor Section 5, Nashville Pike (US 31E/SR 6) Widening		2025	N/A																																		
2799	Woodridge Place Sidewalks, Phase II		2025	N/A																																		
2923	Longview Drive Extension		2025	N/A																																		

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### Congestion Management Analysis of Candidate Projects

				Congestion Level			Improve Operations										Shift to Alternative Modes							Increase Capacity	Opportunities to Enhance													
				Forecasted Congestion	Percent Free Flow Speed	Volume/Capacity Ratio	Roadway Realignment	Traffic Operations & Management	Intersection Improvements	Traffic Signalization	Ramp Metering	Other Traffic Control	Dynamic Messaging	Other ITS (specify)	Signage/Wayfinding	Reversible Lane	Carpool Lane	Access Management	Transit Service	Non-Motorized Modes	New sidewalks	Bicycle lane	Shared lane	Mixed-traffic transit route	Dedicated transit lanes	Transit queue jump	Transit vehicle pull-off	Increase Roadway Capacity	Traffic Operations & Management	Intersection Improvements	Traffic Signalization	Ramp Metering	Carpool Lane	Access Management	Transit Service	New sidewalks	Bicycle lane	Dedicated transit lanes
APP ID	PROJECT NAME	Cost-Feasible	Horizon Year																																			
2926	North Russell Street Reconstruction		2025	N/A																																		
2725	Rucker Lane Reconstruction	Funded	2025	Long-term																																		
2706	Tennessee Blvd Rail Crossing Improvement		2025	N/A																																		
2880	NET Corridor, Section 6, US 31E/SR 6 Widening		2025	N/A																																		
2915	Beckwith Road Widening		2025	N/A																																		
2925	Kirby Road Widening		2025	N/A																																		
2928	TGT Road at SR 109 Intersection Improvements		2035	N/A																																		
2705	Cutoff Road/Powell's Chapel Road Widening		2035	N/A																																		
2906	I-840 at Stewarts Ferry Pike Interchange Lighting		2025	N/A																																		
2619	Union Road Extension		2025	N/A																																		
2734	Cages Bend Road Widening		2035	N/A																																		
2838	Pisgah Ridge Rd (SR-166) Widening from Lawrenceburg Hwy (SR-6/ US 43) to Hampshire Pk (SR-99/ US 412)	Funded	2035	N/A																																		
2924	East Connector		2035	N/A																																		
2597	Sage Road Widening		2035	N/A																																		
2718	Rock Springs Road Sidewalk Improvements		2035	N/A																																		
2919	W A Batson Parkway Extension, Phase 2		2035	N/A																																		
2911	Watertown Sidewalk Program		2035	N/A																																		
2912	Cedar Forest Greenway		2035	N/A																																		
2927	I-65 at SR 109 Interchange Lighting		2035	N/A																																		
2621	Smith Street Extension		2025	N/A																																		
2643	Otter Creek Road Reconstruction		2025	N/A																																		
2677	Arterial CCTV Surveillance and Fiber Optic Communication Deployment, Phase 1	Funded	2035	N/A	N/A	N/A																																
2692	Commuter Rail Capitalization	Funded	2035	N/A	N/A	N/A																																
2739	WeGo Preventative Maintenance	Funded	2035	N/A	N/A	N/A																																
2740	Columbia Downtown Streetscape Improvements	Funded	2025	N/A	N/A	N/A																																
2743	Vehicle Replacement and Expansion for Fixed Route Service	Funded	2035	N/A	N/A	N/A																																
2756	Various Intersections on Federal-Aid Routes	Funded	2035	N/A	N/A	N/A																																
2840	I-65 Weigh Station Improvements (near the Tennessee/Kentucky State Line)	Funded	2025	N/A	N/A	N/A																																
2918	W A Batson Parkway Extension	Funded	2035	N/A	N/A	N/A																																
2942	Franklin ITS Infrastructure	Funded	2035	N/A	N/A	N/A																																

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### Congestion Management Analysis of Candidate Projects

				Congestion Level			Improve Operations									Shift to Alternative Modes							Increase Capacity	Opportunities to Enhance														
				Forecasted Congestion	Percent Free Flow Speed	Volume/Capacity Ratio	Roadway Realignment	Traffic Operations & Management	Intersection Improvements	Traffic Signalization	Ramp Metering	Other Traffic Control	Dynamic Messaging	Other ITS (specify)	Signage/Wayfinding	Reversible Lane	Carpool Lane	Access Management	Transit Service	Non-Motorized Modes	New sidewalks	Bicycle lane	Shared lane	Mixed-traffic transit route	Dedicated transit lanes	Transit queue jump	Transit vehicle pull-off	Increase Roadway Capacity	Traffic Operations & Management	Intersection Improvements	Traffic Signalization	Ramp Metering	Carpool Lane	Access Management	Transit Service	New sidewalks	Bicycle lane	Dedicated transit lanes
APP ID	PROJECT NAME	Cost-Feasible	Horizon Year																																			
2575	Local Bus Service, Preventive Maintenance, Capitalization (2025)		2025	N/A	N/A	N/A																																
2576	Local Bus Service, Preventive Maintenance, Capitalization (2035)		2025	N/A	N/A	N/A																																
2577	Local Bus Service, Preventive Maintenance, Capitalization (2045)		2025	N/A	N/A	N/A																																
2578	Regional Vanpool Operations (2025)		2035	N/A	N/A	N/A																																
2579	Regional Vanpool Operations (2035)		2025	N/A	N/A	N/A																																
2580	Regional Vanpool Operations (2045)		2035	N/A	N/A	N/A																																
2589	Carpool and TDM (2025)		2035	N/A	N/A	N/A																																
2590	Carpool and TDM (2035)		2035	N/A	N/A	N/A																																
2591	Carpool and TDM (2045)		2035	N/A	N/A	N/A																																
2596	Regional Park and Ride (2025)		2025	N/A	N/A	N/A																																
2613	City of Gallatin ITS & Signal Coordination, Phase 2		2035	N/A	N/A	N/A		●	●	●							●																					
2615	Gallatin Traffic Operations Improvement Program		2035	N/A	N/A	N/A		●	●	●												●																
2622	City of Gallatin ITS & Signal Coordination, Phase 1		2035	N/A	N/A	N/A		●	●	●																												
2628	Sumner County Bicycle and Pedestrian Master Plan		2035	N/A	N/A	N/A																																
2641	Gallatin Public Transit System		2035	N/A	N/A	N/A																																
2649	Goodlettsville Traffic Flow Improvements and Traffic Signal Upgrades, Phases II-IV		2035	N/A	N/A	N/A		●		●																												
2655	Downtown Nashville Traffic and Wayfinding Program		2025	N/A	N/A	N/A		●																														
2676	Smyrna ITS Phase 3, 4, and 5		2035	N/A	N/A	N/A		●																														
2686	Davidson County Traffic Management Center		2035	N/A	N/A	N/A		●		●																												
2687	Regional Park & Rides and Transit Centers		2045	N/A	N/A	N/A																																
2688	Commuter Bus Replacement		2035	N/A	N/A	N/A																																
2689	WeGo Star Rail Improvements		2035	N/A	N/A	N/A																																
2690	Commuter Bus Service Support Equipment		2035	N/A	N/A	N/A																																
2691	Regional Commuter Bus Service Operation		2035	N/A	N/A	N/A																																
2695	Blair Lane Extension		2035	N/A	N/A	N/A												●	●	●																		
2699	Woodall Road Extension		2035	N/A	N/A	N/A												●	●	●																		
2701	Lebanon Maintenance Program		2035	N/A	N/A	N/A																																
2710	Hidden Acres Rail Crossing Improvement		2035	N/A	N/A	N/A												●																				
2731	Saundersville Road to SR-6 (US 31E/East Main Street) Local Interstate Connector		2035	N/A	N/A	N/A				●									●																			
2738	ADA Service Capitalization		2035	N/A	N/A	N/A																																
2741	Purchase Replacement and Expansion Vehicles for Paratransit Service		2025	N/A	N/A	N/A																																

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### Congestion Management Analysis of Candidate Projects

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				Forecasted Congestion	Percent Free Flow Speed	Volume/Capacity Ratio	Roadway Realignment	Traffic Operations & Management	Intersection Improvements	Traffic Signalization	Ramp Metering	Other Traffic Control	Dynamic Messaging	Other ITS (specify)	Signage/Wayfinding	Reversible Lane	Carpool Lane	Access Management	Transit Service	Non-Motorized Modes	New sidewalks	Bicycle lane	Shared lane	Mixed-traffic transit route	Dedicated transit lanes	Transit queue jump	Transit vehicle pull-off	Increase Roadway Capacity	Traffic Operations & Management	Intersection Improvements	Traffic Signalization	Ramp Metering	Carpool Lane	Access Management	Transit Service	New sidewalks	Bicycle lane	Dedicated transit lanes	Park and Ride Facility	Transit queue jump
APP ID	PROJECT NAME	Cost-Feasible	Horizon Year																																					
2742	Arterial CCTV Surveillance and Fiber Optic Communication Deployment, Phase 2		2025	N/A	N/A	N/A		●	●																															
2745	Job Access and Reverse Commute Program (Grouping)		2045	N/A	N/A	N/A																																		
2748	Enhanced Mobility of Seniors & Individuals with Disabilities (Grouping)		2045	N/A	N/A	N/A																																		
2749	Opry Mills Multi-use Path		2035	N/A	N/A	N/A																																		
2750	Charlotte Corridor Greenway		2035	N/A	N/A	N/A											●	●	●																					
2751	440 Greenway, Phase Two		2025	N/A	N/A	N/A											●	●	●																					
2752	Park Plaza Greenway Connector		2035	N/A	N/A	N/A											●	●	●																					
2753	Stones River Pedestrian Bridge		2035	N/A	N/A	N/A											●	●																						
2759	Transit Asset Management, Public Transportation Agency Safety, and Strategic Planning		2035	N/A	N/A	N/A																																		
2760	Bus Stop Improvements and Passenger Amenities, State of Good Repair		2025	N/A	N/A	N/A																																		
2762	State of Good Repair, Capital Transit Support		2025	N/A	N/A	N/A																																		
2764	Transit Operations and Maintenance Center, Nestor- State of Good Repair		2045	N/A	N/A	N/A																																		
2766	WeGo Central Transfer Hub, State of Good Repair		2035	N/A	N/A	N/A																																		
2768	Transit Administrative Headquarters, State of Good Repair		2025	N/A	N/A	N/A																																		
2769	Expansion of Bus Stops and Passenger Amenities		2025	N/A	N/A	N/A																																		
2770	Hendersonville Traffic Management System Improvements		2025	N/A	N/A	N/A		●				●																												
2771	Hendersonville Signal Timing Optimization Program		2035	N/A	N/A	N/A		●																																
2778	Track and Rail Way Facilities, State of Good Repair		2035	N/A	N/A	N/A																																		
2780	Rail Station Facilities, State of Good Repair		2035	N/A	N/A	N/A																																		
2784	Rover Public Transit - Fixed Route Service		2045	N/A	N/A	N/A																																		
2785	5307 Urban Operating for Rover Public Transit-Mld Cumberland Human Resource Agency (MCHRA) Contract		2045	N/A	N/A	N/A																																		
2790	Rover Public Transit - Relax and Ride Service		2045	N/A	N/A	N/A																																		
2793	Rover Public - Capital for Preventive Maintenance Activites		2045	N/A	N/A	N/A																																		
2797	Rover Public Transit - New Transit Facility		2025	N/A	N/A	N/A																																		
2801	Bus & Bus Facilities (Grouping) Murfreesboro UZA		2045	N/A	N/A	N/A																																		
2803	Rover Public Transit - Bus Purchase/Replacement		2025	N/A	N/A	N/A																																		
2815	Secondary Downtown Transit Hub		2045	N/A	N/A	N/A											●																							
2816	Upgrade Pedestrian Access/Crossings/Sidewalk at Transit Stops		2045	N/A	N/A	N/A											●																							
2817	Development of Transit Centers		2025	N/A	N/A	N/A																																		
2890	Nashville Arterial Pikes/BRT Corridor Multi-Modal Safety Improvements		2025	N/A	N/A	N/A				●			●	●	●		●	●	●		●																			





# Maps of Congested Corridors

Please visit [www.gnrc.org/maps/2045RTP](http://www.gnrc.org/maps/2045RTP) to view proposed projects in relation to congested corridors across the metropolitan area.