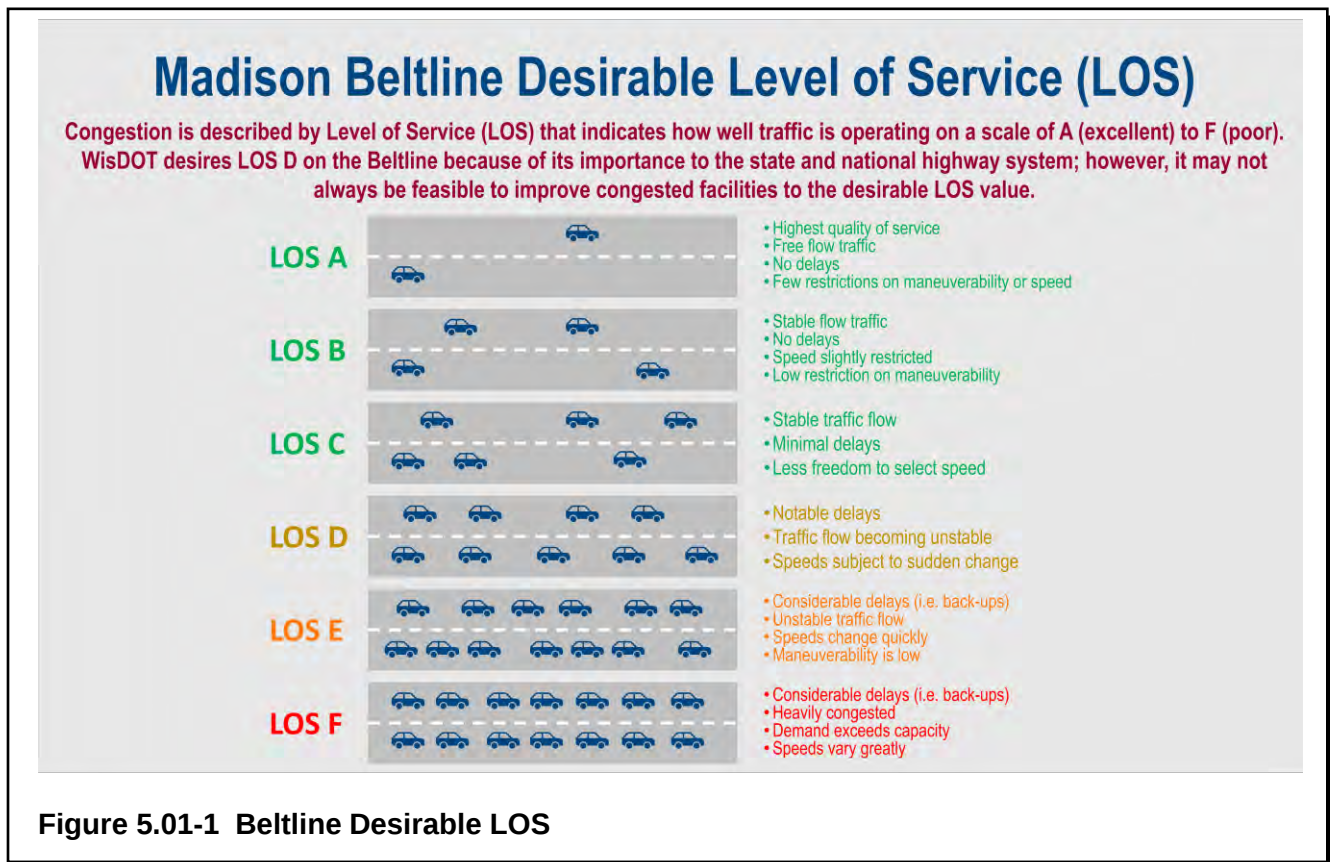


5.01 INTRODUCTION

The first step of the Strategy Package development was to develop and test Stand-Alone Strategies. This section of the report summarizes the analysis and review of the Stand-Alone Strategies documented in the *Stand-Alone Strategies Screening Report*.

Beltline volumes are forecasted to increase significantly, exceeding 150,000 vpd by the 2050 design year without any capacity expansion. In response, the Beltline PEL Study examined Stand-Alone Strategies with high people-moving potential that, if constructed, might eliminate or reduce the need to complete additional Beltline mainline improvements to satisfy root Beltline PEL Study Objectives for improving safety and reducing traffic congestion. As shown on Figure 5.01-1, the desirable Beltline operations goal is LOS D or better.



The Beltline PEL Study examined nine Stand-Alone Strategies. The Stand-Alone Strategies considered included:

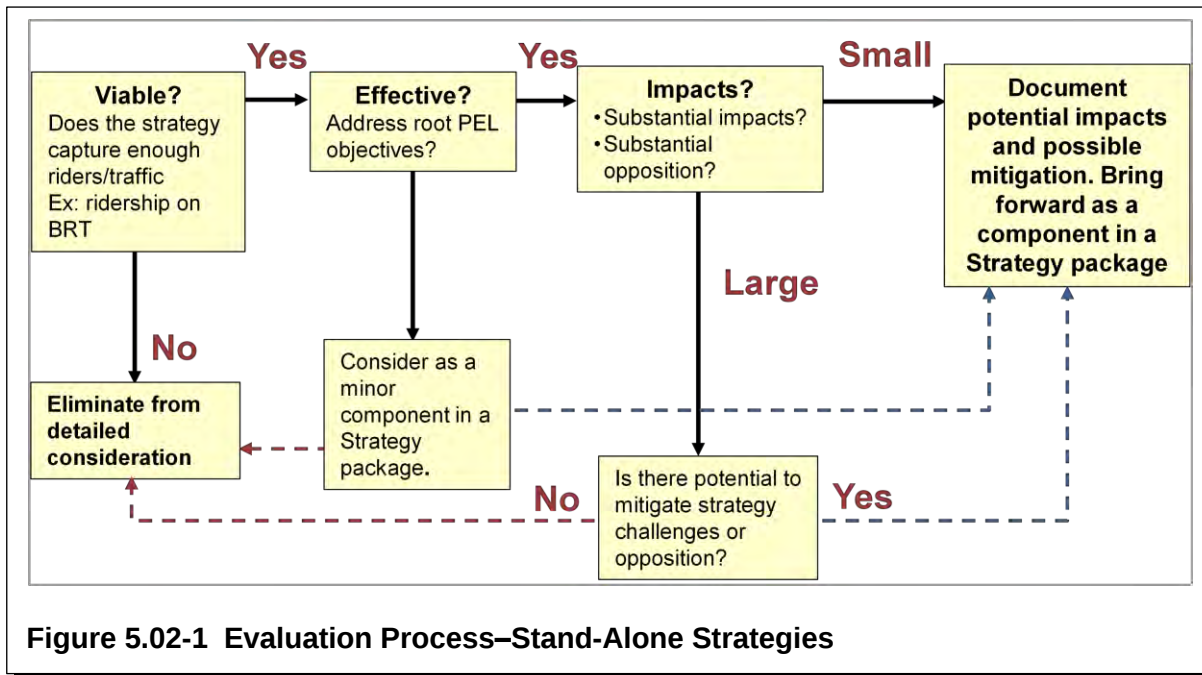
- North Mendota Corridors Strategy
- South Reliever Corridors Strategy
- Rail (Passenger Rail) Strategy
- BRT Strategy

- Transit (Bus) Service on the Beltline Strategy
- Scenario Planning for Alternative Land Uses Strategy
- Scenario Planning for Alternative Mode Choices Strategy
- Combined Off-Corridor Strategies
- Beltline Corridor Strategy

The Beltline Corridor Strategy evaluated improvements on the mainline Beltline. The other eight Stand-Alone Strategies were primarily off-alignment improvements evaluated to see whether each would potentially satisfy Beltline PEL Study Objectives, remove enough traffic from the Beltline to be viable and effective, and minimize impacts to social, cultural, and environmental resources.

5.02 STRATEGY SCREENING

The iterative process for testing Stand-Alone Strategies is documented in the *Stand-Alone Strategies Screening Report*. Figure 5.02-1 shows the evaluation process.



1. Viability

The evaluation process started with determining whether the Strategy was viable and effective. Metrics for viability included amount of traffic captured or amount of ridership obtained. For example, a BRT Strategy that drew 10,000 riders per day was likely viable, whereas a BRT Strategy that drew 1,000 riders per day may not have been viable. In fact, the city of Madison constructed east-west BRT demonstrating its viability. BRT, however, was not found to be sufficiently effective in meeting the Beltline PEL Study Objectives on its own.

2. Effectiveness

Beltline PEL Study Stand-Alone Strategies needed to address some or all seven root Objectives to be recommended for further evaluation in a future NEPA document as a Stand-Alone Strategy or a Component of a Strategy Package. The Stand-Alone Strategy evaluation reviewed whether and to what extent the Stand-Alone Strategy satisfied Beltline PEL Study Objectives while also removing traffic from the Beltline¹.

The Beltline PEL Study used a series of screening questions to determine whether a Stand-Alone Strategy satisfied the root Beltline PEL Study Objectives. The questions for the Stand-Alone Strategies were meant to determine whether and to what extent they were individually effective at addressing root Beltline PEL Study Objectives. These screening questions were presented to and refined by the TAC and PAC committees. Additional detail on this coordination can be found in Appendix C. Table 5.02-1 lists the root Objective, desired outcome, and Stand-Alone Strategy screening questions.

¹Stand-Alone Strategies needed to reduce future traffic volumes to approximately existing volumes, which at the time of the analysis were 2012 conditions, to be considered effective.

Wisconsin Department of Transportation

Madison Beltline Planning and Environment Linkages Summary Report Section 5—Stand-Alone Strategy Screening

Table 5.02-1 Screening Questions

Root Objective	Desired Outcome (What Represents Success?)	Targets of the Stand-Alone Strategy Screening (Effectiveness)
1. Improve Safety for All Modes		
▪ Bicycles	Reduce bicycle and motor vehicle crashes (rates and severities).	Evaluate as part of Strategy Packages when bicycle and pedestrian improvements are incorporated.
▪ Pedestrians	Reduce pedestrian and motor vehicle crashes (rates and severities).	
▪ Motor vehicle	Decrease crashes (rates and severities [in areas of high crash frequency]).	Does the Stand-Alone Strategy address safety deficiencies on the Beltline or have the potential to reduce congestion-related motor vehicle crashes on the Beltline?
2. Address Beltline infrastructure condition and deficiencies.	Critical pavement and geometric deficiencies addressed.	Does the Stand-Alone Strategy preclude addressing Beltline infrastructure deficiencies?
3. Improve system mobility (congestion) for all modes/	Mobility—The ability of the transportation system to facilitate the efficient and comfortable movement of people and goods (along and across).	
▪ Pedestrian	Comfortable and convenient access near, across and along the Beltline corridor.	Evaluate as part of Strategy Packages when bicycle and pedestrian improvements are incorporated.
▪ Bicycle	Direct and comfortable routes across, and along the Beltline corridor.	
	Provide convenient alternate mode choices and transfers (duplicate).	
▪ Transit	Enhance rider access to transit facilities and vehicles. Enhance transit routing opportunities.	Does the Stand-Alone Strategy preclude improvements to transit facilities and routing?
▪ Motor vehicles (including passenger and freight)	Provide better travel time reliability (reduce nonrecurring congestion).	Does the Stand-Alone Strategy decrease Beltline traffic, or increase Beltline capacity, enough to address conditions that lead to unstable traffic flow on the Beltline?
	Decrease and reduce recurring congestion.	
	Provide convenient alternate route choices.	
	Reduce motor vehicle trips during peak periods.	
4. Limit adverse social, cultural, and environmental effects to extent practicable.	Consideration of Strategies that balance transportation need and protection of environmental and community resources.	Evaluate as part of Strategy Packages when impacts are measured.
5. Enhance efficient multimodal access to economic centers.	Ramp terminals and connecting roadways operate at satisfactory service levels.	Evaluate as part of Strategy Packages when bicycle, pedestrian, and transit Components are assembled.
	Convenient and comfortable access to economic centers for all travel modes.	
6. Decrease Beltline diversion impacts to neighborhood streets.	Diverted traffic uses roadways classified as collectors or above.	Evaluate later in the study in a more detailed modeling stage.
7. Complement other major transportation initiatives and studies in the city of Madison area.	Concept complements other transportation initiatives.	Coordination with other transportation initiatives.

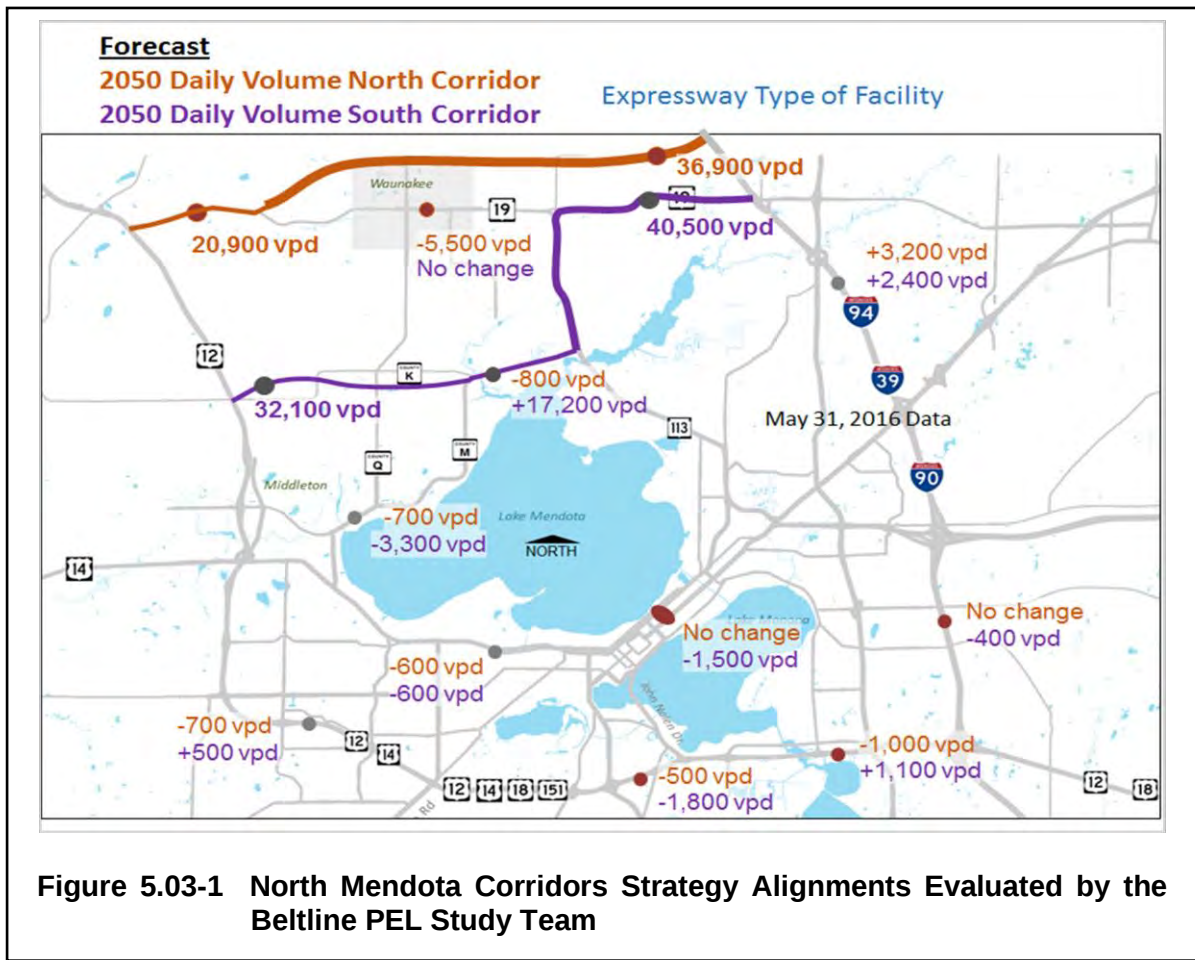
3. Impacts

Impacts associated with the Stand-Alone Strategies were reviewed, including potential impacts to social, cultural, and environmental resources, as well as potential public and agency acceptance or opposition. Large impacts of potential Stand-Alone Strategies are documented in this report, the *Stand-Alone Strategies Screening Report*, and other supporting material. If it remained unclear whether better options than a specific Stand-Alone Strategy existed or challenges within a certain Stand-Alone Strategy had the potential to be mitigated, the Stand-Alone Strategy was considered to be brought forward as a Component of a Strategy Package. Alternatively, Stand-Alone Strategies with large impacts making them unreasonable were considered for elimination from detailed study. Stand-Alone Strategies with substantial opposition were also considered for dismissal. A summary of public, government, and agency involvement in the Stand-Alone Strategies screening and a list of meetings with stakeholders to discuss the Stand-Alone Strategies screening are provided in Section 2—Public, Local Municipalities, and Agency Involvement. Additional details on this coordination can be found in Appendix C.

The following paragraphs summarize the results of the evaluation process for each of the nine Stand-Alone Strategies.

5.03 NORTH MENDOTA CORRIDORS

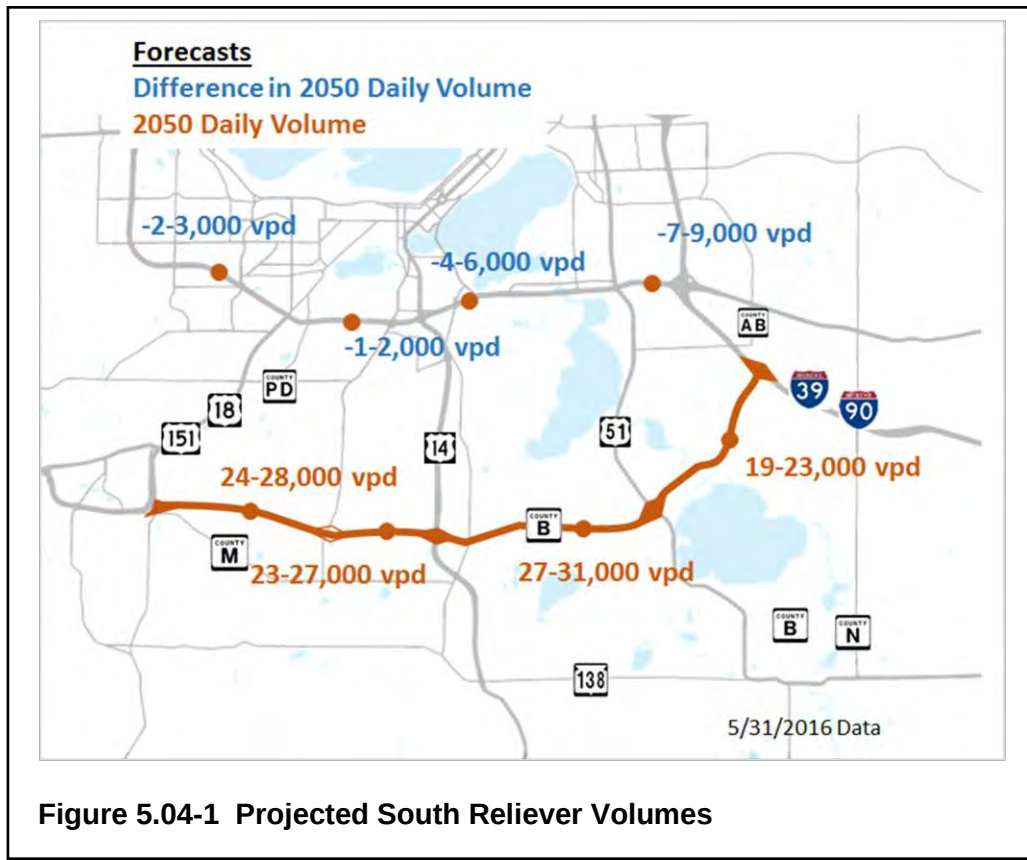
The North Mendota Corridors Stand-Alone Strategy, also known as the North Mendota Parkway, would construct a high-mobility highway corridor from I-39/90/94 to US 12. This was modeled as a four-lane, divided expressway with a 60-mph speed limit. Figure 5.03-1 shows the alignments considered for the North Mendota Parkway and the amount of traffic reduction that would result on area arterial roadways due to this corridor.



The Beltline PEL Study found that an improved connection north of Lake Mendota between US 12 and I-39/90/94 had merit in that the alignments captured a substantial amount of local traffic and were expected to increase mobility for travelers in northern Dane County. Yet the addition of a North Mendota Parkway corridor would have had mixed results for traffic volume reduction on the Beltline and a limited ability to address Beltline PEL Study Objectives. The northern corridor would result in small traffic volume reductions on the Beltline of up to 1,000 vpd in 2050, a reduction of about 2 percent. The southern corridor showed changes to Beltline traffic volumes with increases near US 51 and Gammon Road of 500 to 1,100 vpd (approximately 1 to 2 percent) but a decrease in the central portion of the Beltline near US 14 of 1,800 vpd (approximately 3 percent). Modeling appeared to show that the North Mendota Corridors would have altered travel patterns not only along the Beltline but throughout Dane County, resulting in these increases and reductions. In addition to the conclusions drawn in the *Stand-Alone Strategies Screening Report*, the North Mendota Corridors Stand-Alone Strategy would have resulted in right-of-way (ROW) and natural resource impacts and infrastructure costs that were disproportionate to the benefits received. Because the impacts and costs would be unreasonable when compared to the benefits received, the North Mendota Corridors Stand-Alone Strategy was eliminated from further consideration as a Stand-Alone Strategy in the Beltline PEL Study.

5.04 SOUTH RELIEVER CORRIDORS

The South Reliever Corridors Stand-Alone Strategy would construct a high-mobility corridor approximately 5 miles south of the Beltline. This was modeled as a four-lane, divided expressway with a 65-mph speed limit. As analyzed, it would span from US 18/151 in the city of Verona to I-39/90. Figure 5.04-1 shows the alignment considered, the daily volumes, and the 2050 daily traffic volume reduction the Beltline would experience.



The study found that an improved connection between US 18/151 near the city of Verona and I-39/90 south of US 12 was able to capture a substantial amount of traffic and provide greater mobility to the communities of southern Dane County. The greatest mobility increase appeared to occur where the South Reliever did not parallel existing routes County M or County B between US 51 and the interstate and where it tied into I-39/90 at a new interchange. The South Reliever attracted Beltline traffic and initially reduced volumes on the Beltline by 3 to 8 percent. As area traffic volumes increased approaching the 2050 design year, the South Reliever's Beltline traffic volume reduction diminished to between 1 and 6 percent. This Strategy would result in impacts and infrastructure costs that were greatly disproportionate to the marginal Beltline traffic volume benefits received. The South Reliever had only marginal long-term traffic volume reductions on the Beltline, which was not substantial enough to satisfy root Beltline PEL Study Objectives. In addition to the conclusions drawn in the *Stand-Alone Strategies Screening Report*, it would also create ROW and natural resource impacts as well as infrastructure costs

that are disproportionate to the benefits received. Because the impacts and costs would be unreasonable when compared to the benefits received, the South Reliever was eliminated from further consideration as a Stand-Alone Strategy.

5.05 RAIL

Transport 2020 New Starts Application (Transport 2020) was a major transportation study designed to develop a long-term transportation solution for Dane County and the city of Madison metropolitan area. The Transport 2020 study proposed a system that included commuter rail, express bus services, park and ride lots, and improvements to local bus service.

In 2008, Transport 2020 submitted a New Starts Application to the FTA for financing to begin project engineering on the Locally Preferred Alternative (LPA). The application was subsequently withdrawn since there was not a local financing mechanism in place. The Beltline PEL Study analyzed the effects of the Transport 2020 rail system on regional traffic patterns, including the Beltline. Figure 5.05-1 shows the system considered.

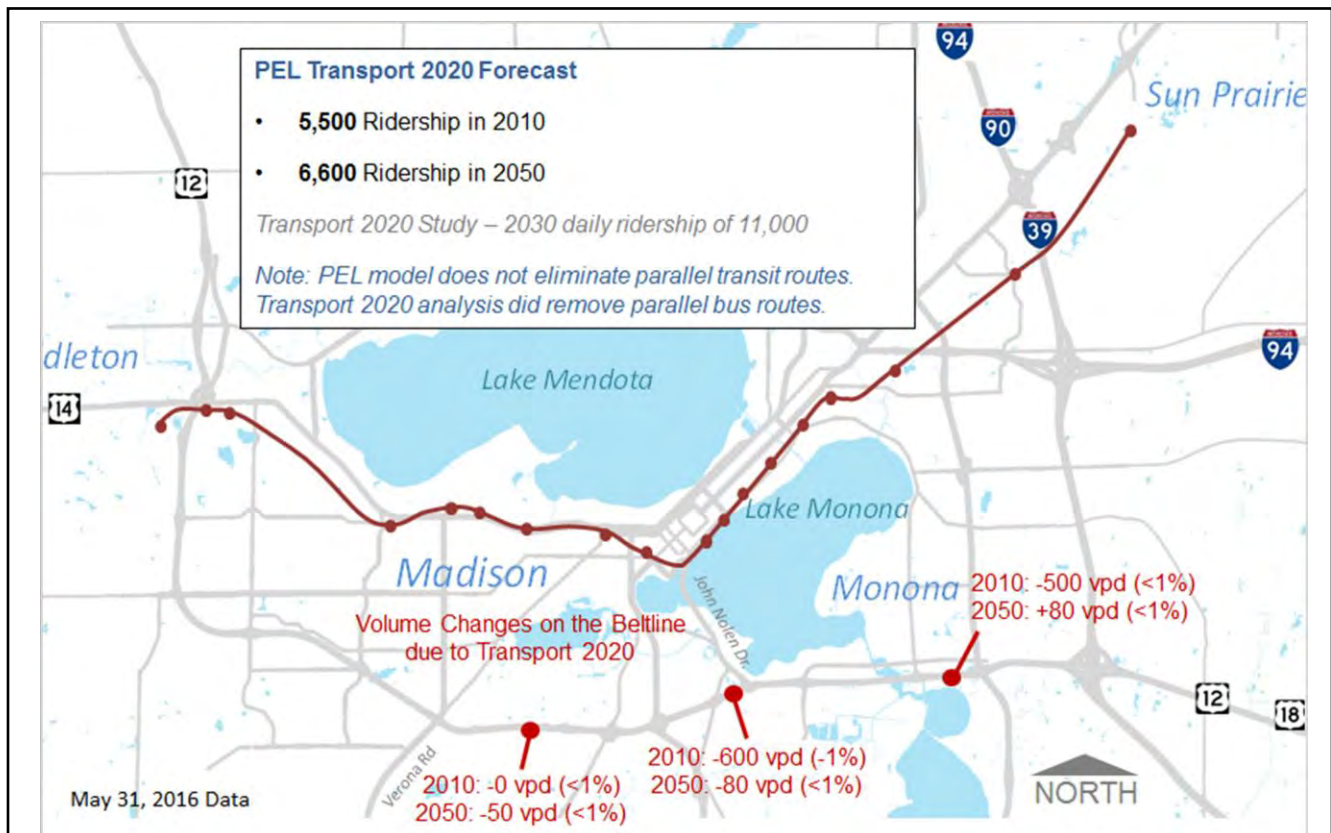
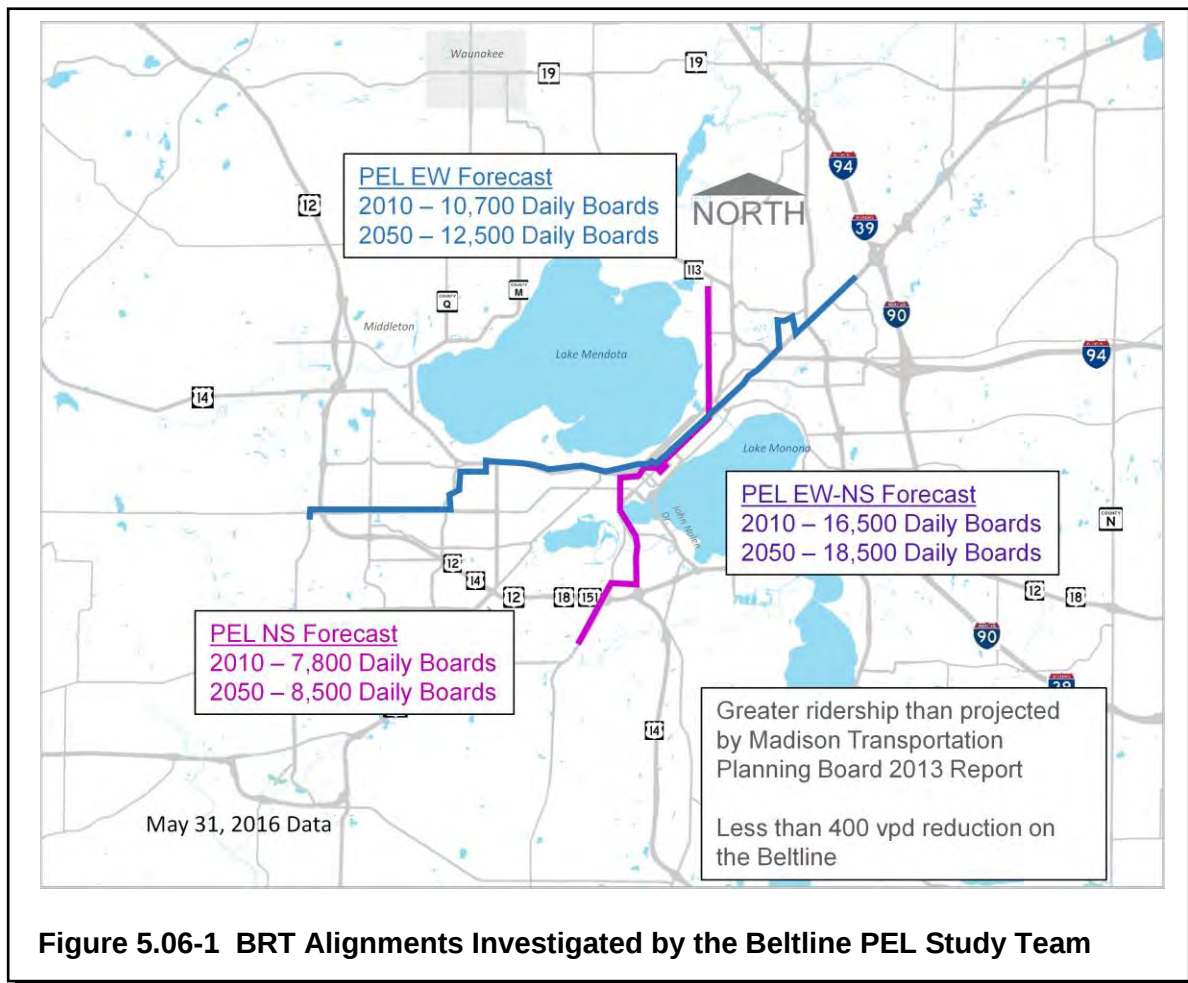


Figure 5.05-1 Transport 2020 System Evaluated by the Beltline PEL Study

Transport 2020 captured from 5,500 to 6,600 daily riders and would have enhanced access to and through the city of Madison Isthmus. Because a rail Strategy such as Transport 2020 did not remove traffic from the Beltline (less than 1 percent in 2010 and 2050) and was not able to satisfy root Objectives for the Beltline PEL Study, rail was eliminated from further consideration as a Stand-Alone Strategy.

5.06 BRT

BRT is a high-capacity system that is viable, has local support, and is currently being designed and constructed. The Greater Madison MPO investigated BRT and released a report, *Madison Transit Corridor Study Investigating Bus Rapid Transit in the Madison Area*, in May 2013. The report investigated routes, costs, and potential ridership for a BRT system in the metropolitan area. BRT is a high-frequency, limited-stop, corridor-based transit improvement intended to provide fast, frequent, reliable, and comfortable service through key design and vehicle components. Figure 5.06-1 shows the alignments evaluated by the report, which were evaluated independently by the Beltline PEL Study.



The TDM predicted that the proposed BRT system would capture from 16,500 to 18,500 daily riders, depending on the route and the year modeled. Despite the strong ridership projections, a BRT system

would have removed fewer than 400 vpd from the Beltline in 2050 (less than one-half of 1 percent in the most heavily traveled section). This Strategy did not remove enough traffic from the Beltline to improve traffic operations and satisfy root Beltline PEL Study Objectives. BRT was eliminated from further consideration as a Stand-Alone Strategy. BRT did, however, appreciably improve transit mobility. In addition to the conclusions drawn in the *Stand-Alone Strategies Screening Report*, this Stand-Alone Strategy also addressed other Beltline PEL Study Objectives, including:

- Enhancing efficient multimodal access to economic centers.
- Enhancing transit ridership and routing opportunities.
- Complementing other major transportation initiatives and studies in the city of Madison area.
- Supporting infrastructure and other measures that encourage alternatives to SOV travel.
- Limiting adverse social, cultural, and environmental effects to the extent practicable.

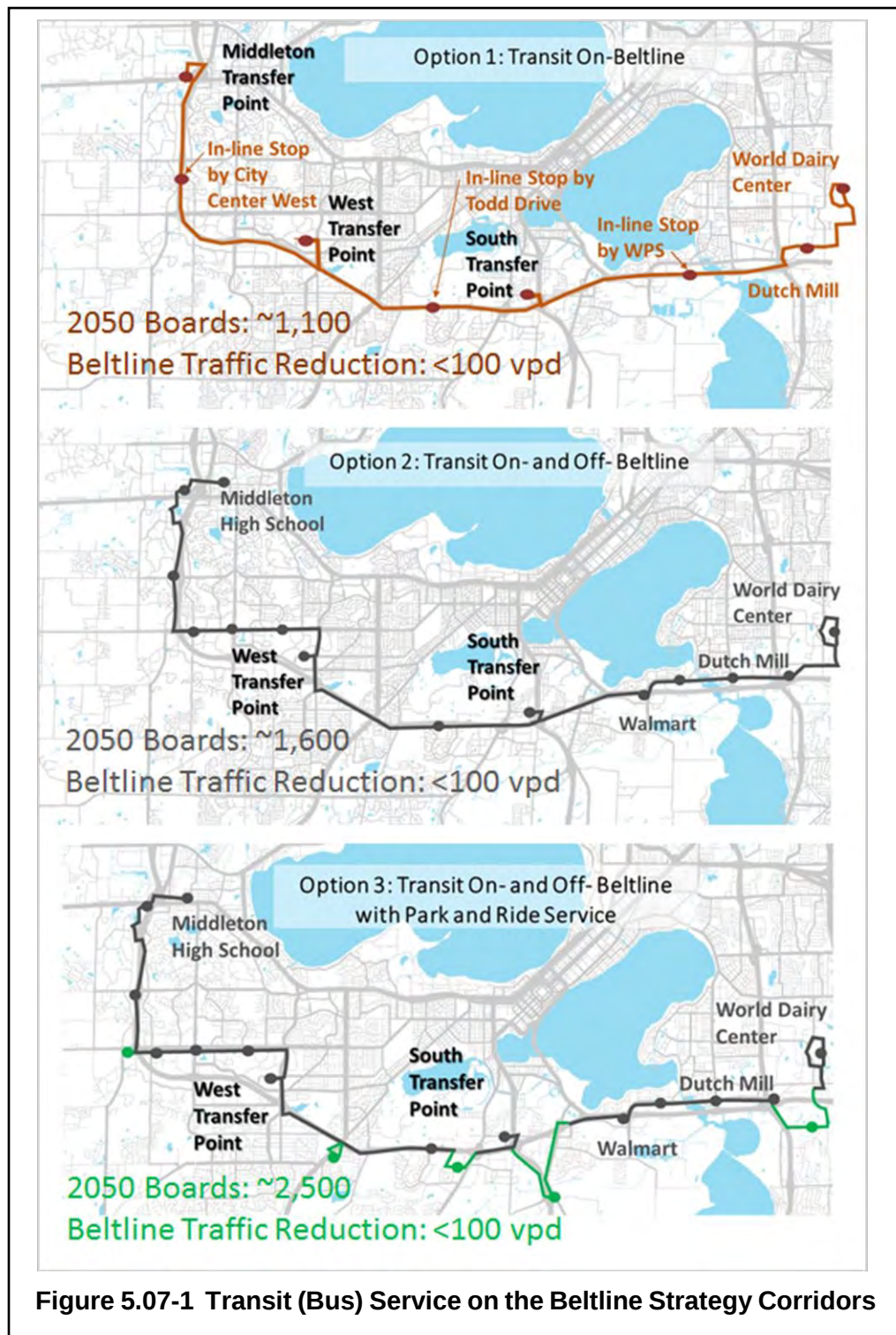
The Beltline PEL Study team recommended that future study documentation investigate infrastructure improvements that ideally complement, but at a minimum do not negatively impact, local BRT initiatives. The city of Madison studied and designed the Madison East-West BRT and began construction in fall 2022. Service began on September 22, 2024. As of September 2025, the city of Madison is currently in the design phase of a north-south BRT system.

5.07 TRANSIT (BUS) SERVICE ON THE BELTLINE

The Beltline PEL Study modeled the traffic effects of routing buses on the Beltline from US 14 in the city of Middleton to Stoughton Road and the World Dairy Center. Service assumptions included 15-minute peak-period frequency and 30-minute off-peak frequency. Three options were investigated.

- | | |
|----------|---|
| Option 1 | Option 1 would have started at the city of Middleton Metro transfer point and run to the World Dairy Center on the east side of the city of Madison, stopping at every transfer point and making at least one in-line (e.g., on Beltline) stop between transfer points. The in-line stops would have been at employment centers along the Beltline (City Center West, Todd Drive, WPS Health Solutions) and bus patrons would have been able to get to both sides of the Beltline with some type of grade-separated crossing. |
| Option 2 | Option 2 would have been similar to Option 1 except that it would have also used local streets for a portion of the routes in order to collect more riders. This on- and off-Beltline route would have used John Q Hammons Drive, Junction Road, Mineral Point Road, and Whitney Way on the west side of the city of Madison and would have used Broadway Street on the east side of the city of Madison. |
| Option 3 | Option 3 was similar to Option 2 except that it also included service to strategically placed park and ride lots in an effort to further increase ridership. |

Figure 5.07-1 illustrates the options considered by the study, the modeled ridership, and the amount of daily traffic removed from the Beltline.



Each of the three options removed less than 100 vpd from the Beltline in 2050 (less than one-half of 1 percent in the most heavily traveled section), which was not enough to improve Beltline traffic operations and satisfy root Beltline PEL Study Objectives. The Transit (Bus) Service on the Beltline options did not satisfy the screening criteria for Stand-Alone Strategies of the Beltline PEL Study and were eliminated from further consideration as a Stand-Alone Strategy.

5.08 SCENARIO PLANNING FOR ALTERNATIVE LAND USES

Scenario planning identifies land use patterns as variables, rather than static inputs that could affect transportation networks, investments, and operations. It is the practice of considering alternative future conditions for factors that significantly impact travel and/or mode choice in an area. Land use scenario planning answers the question, “If the city of Madison area developed land in a different way or pattern, would Beltline capacity and modal improvements still be necessary?”

Beginning in 2014, the city of Madison began developing a new sustainable master transportation plan called *Madison in Motion*. One of the exercises of that planning effort was comparing the effects of two land use scenarios. Land use Scenario A continued existing land development trends, with 70 percent peripheral development and 30 percent infill development. This was also the future scenario thought to be most likely for the metropolitan area based on land use plans and population and job growth in Dane County. This was the scenario used by the Greater Madison MPO Transportation Planning Board in the version of the TDM that was current at the time of the analysis. Scenario B substantially increased infill redevelopment while limiting peripheral development by allocating 70 percent of development to infill areas. The plan uses “activity nodes” where redevelopment efforts would be concentrated. Figure 5.08-1 shows the two land use scenarios considered by *Madison in Motion* and the different assumptions about households, population, and employment.² The Beltline PEL Study modeled the two scenarios in the TDM to understand how the different land use development patterns would have influenced area traffic volumes.

²Figures adjusted by the Beltline PEL Study team to match Department of Administration Control totals.

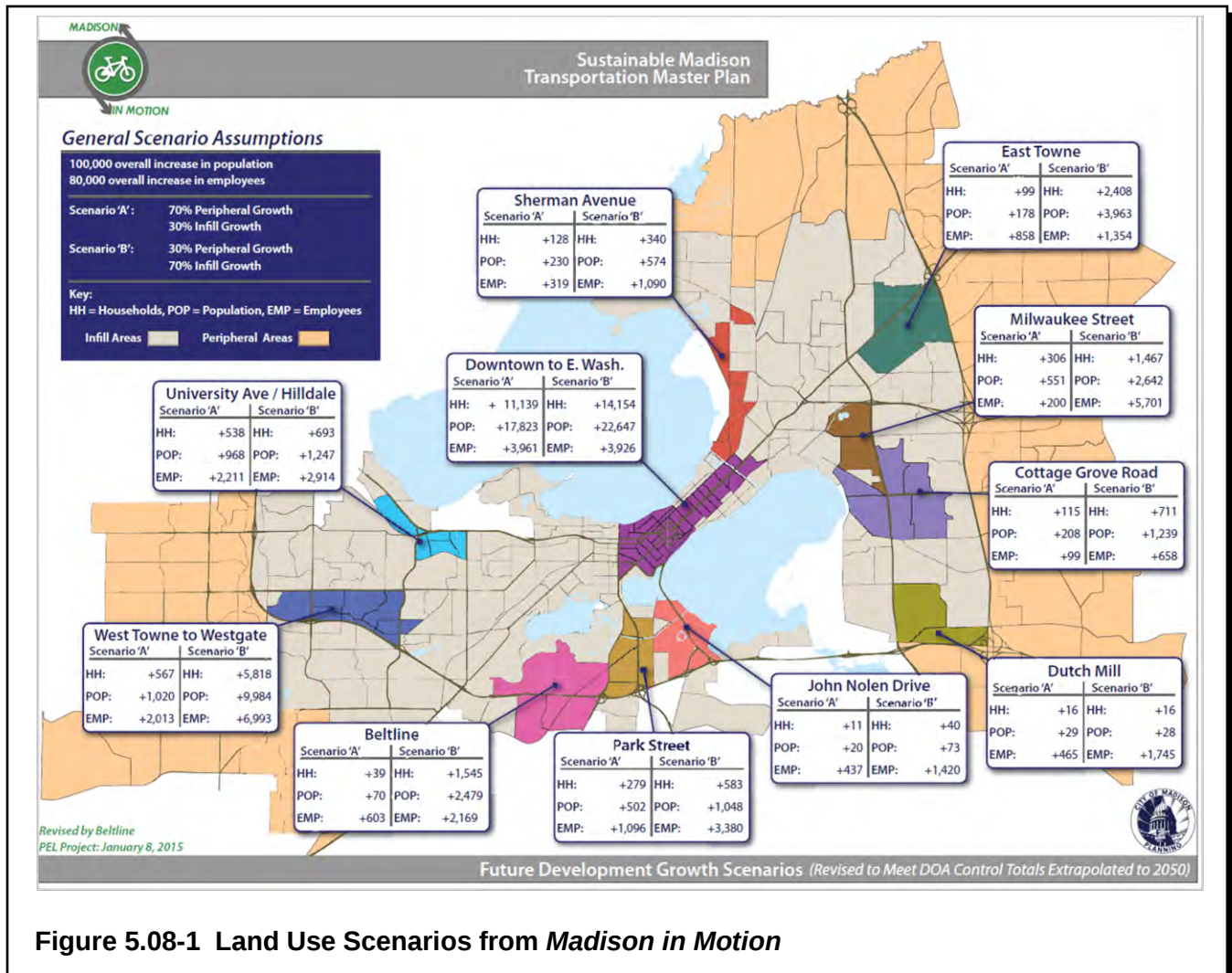


Figure 5.08-1 Land Use Scenarios from *Madison in Motion*

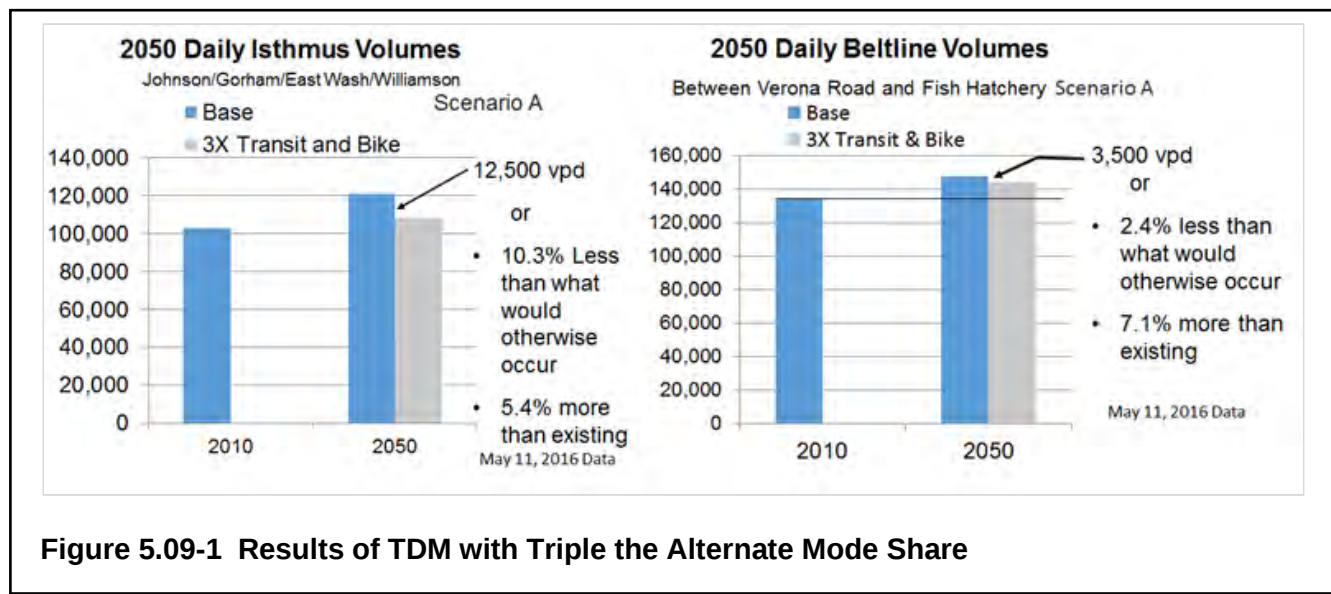
The compact land use scenario, Scenario B, increased BRT ridership, which satisfied one of the Root Objectives considered in the screening of Stand-Alone Strategies. However, the remaining root Objectives were not met. Beltline traffic volumes under Scenario B increased up 3 percent since many of the high-growth infill areas were directly served by the Beltline. Based on this analysis, a compact land use scenario as presented in *Madison in Motion* was not able to satisfy root Beltline PEL Study Objectives such as reducing or eliminating the need for Beltline capacity expansion. Scenario Planning for Alternative Land Uses was eliminated from further consideration as a Stand-Alone Strategy.

5.09 SCENARIO PLANNING FOR ALTERNATIVE MODE CHOICES

In another scenario planning exercise, the Beltline PEL Study evaluated how increased trips on bicycles and by bus could affect area transportation and Beltline traffic volumes. The analysis used Scenario A land uses, which assumed future development would be 70 percent on the periphery and 30 percent infill which matched local plans and trends over the last few decades. This scenario assumed the number of work trips made by bicycle and transit tripled in the city of Madison

metropolitan area. This would have increased the city of Madison's daily trips using transit to a similar percentage as the city of Chicago, Illinois (10th highest percentage in the country), and those using bicycles to a similar percentage as Davis, California (highest percentage in the country). The Beltline PEL Study used this condition to understand how setting highly aggressive goals for increasing transit and bicycle mode shares would have impacted motor vehicle conditions on the Beltline.

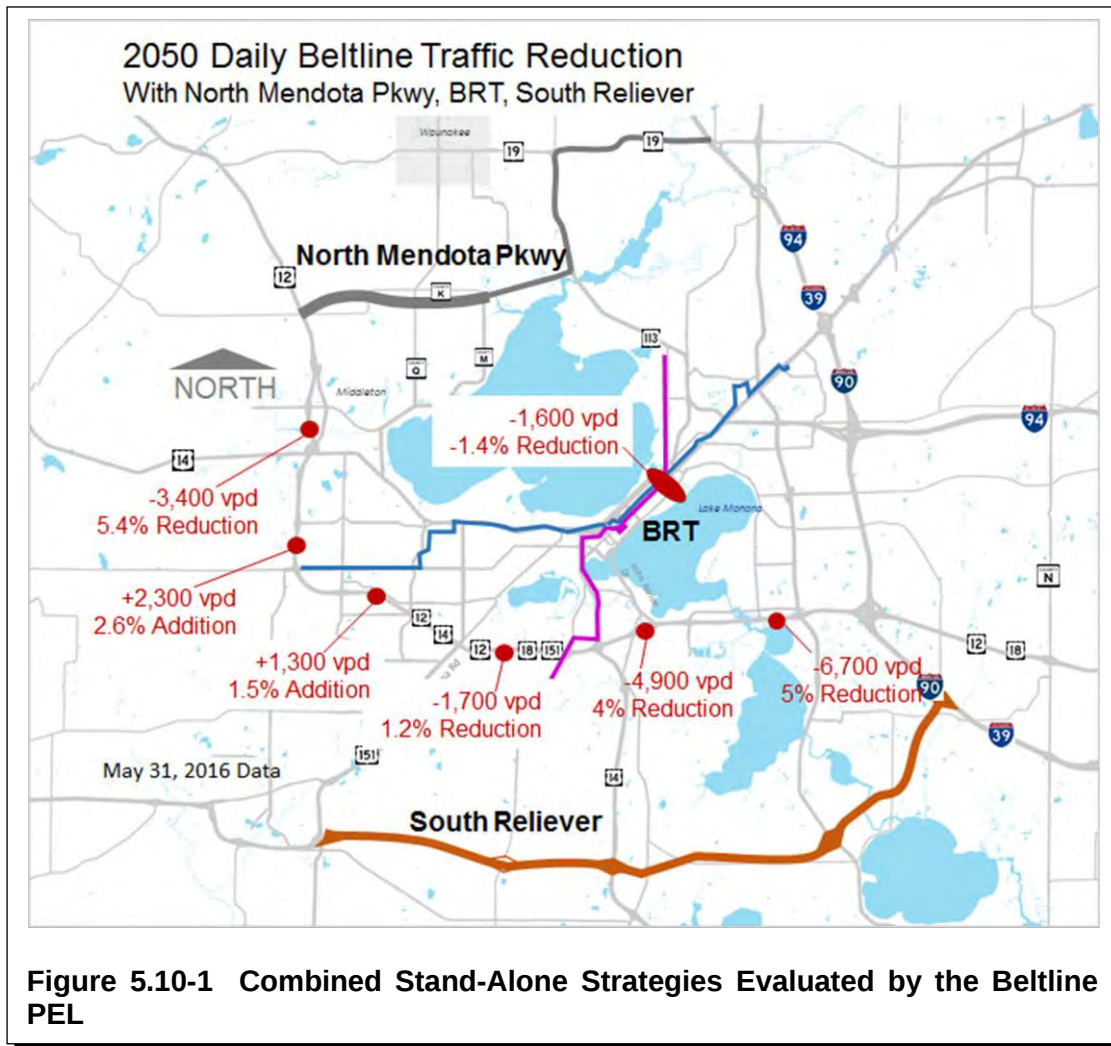
Figure 5.09-1 shows the results from the TDM. The modeling predicted that increasing the alternate mode share by a factor of three substantially reduced traffic volumes through the city of Madison Isthmus by approximately 10 percent, or 12,500 vpd in 2050. However, this increase in biking and riding transit would have resulted in a much smaller reduction of future Beltline traffic volume increases (a decrease of approximately 3,500 vpd, in 2050 or less than 3 percent).



Modeling predicted that future Beltline volumes would have continued to grow over time; therefore, increasing bicycle and transit usage would not meet desirable operational goals. Scenario Planning for Alternative Mode Choices was eliminated from further consideration as a Stand-Alone Strategy. However, Beltline PEL Study Objectives also included enhancing bicycle and transit mobility as well as decreasing SOV usage. Therefore, the Beltline PEL Study team recommended that bicycle, pedestrian, and transit improvements that encourage higher use of these modes be considered as Components in the Strategy Packages.

5.10 COMBINED STAND-ALONE STRATEGIES

The Beltline PEL Study also evaluated combining Stand-Alone Strategies to see if multiple major infrastructure investments had the potential to result in desirable Beltline operations without the need for Beltline capacity expansion. This Strategy combined a North Mendota Parkway Corridor, a South Reliever Corridor, and BRT service because these three generally have higher potential to remove traffic from the Beltline. Figure 5.10-1 illustrates the combination along with the modeled 2050 daily traffic reductions through the Isthmus and on the Beltline.



The Combined Strategies are anticipated to alter travel patterns along the Beltline and throughout Dane County. For the Beltline corridor, increases up to 2,300 vpd and reductions up to 6,700 vpd are anticipated. This represented a 2050 traffic volume change of between 5 percent reduction and 2.6 percent increase over what would have otherwise occurred. This reduction amount could have modestly improved Beltline traffic operations from what they otherwise would have been. Yet even with the traffic reductions from these Strategies, the 2050 Beltline traffic volumes would have still been greater

than base year (2012) traffic volumes. Therefore, the base year congestion that resulted in LOS E and LOS F operations along the Beltline east of Verona Road during the peak commuting hours would still be present, or worse, in the horizon year of this study. Additionally, this Strategy would have created two new roadway corridors across largely farm and environmentally sensitive lands and the costs and impacts were disproportionate to the benefits derived. Because the root Beltline PEL Study Objectives were not satisfied, Combined Stand-Alone Strategies was eliminated from further consideration as a Stand-Alone Strategy.

5.11 BELTLINE CORRIDOR

This Strategy would expand the motor vehicle capacity of the Beltline mainline and interchanges where needed. This mainline expansion could be through managed lanes (such as HOV or High-Occupancy Toll (HOT) lanes), hard shoulder running, or through conventional expansion. This Strategy increased projected Beltline daily traffic volumes compared to other Strategies that did not add capacity. This was because when the capacity constraint was removed, vehicles that would have been seeking alternate routes returned to the Beltline corridor. This is sometimes called “latent demand”. This Strategy would have improved Beltline operations by providing sufficient capacity to accommodate the latent travel demand. This Strategy therefore satisfied some root Beltline Objectives. However, the Beltline Corridor Strategy was unable, on its own, to address other Beltline PEL Study Objectives including those Objectives that address safety and mobility for modes other than motor vehicles. Therefore, the Beltline Corridor Strategy was eliminated from further consideration as a Stand-Alone Strategy. Because the Beltline Strategy addresses mainline LOS and congestion, and to a higher degree than the other Stand-Alone Strategies, the Beltline PEL Study team recommended that this Strategy be considered as a Component of the Strategy Packages.

5.12 SUMMARY

Table 5.12-1 summarizes the findings of the Stand-Alone Strategies evaluation. Each Strategy is shaded according to how well it met the seven Beltline Study Root Objectives. Red shading indicates that the Strategy did not meet the Root Objectives and is eliminated as a Stand-Alone Strategy from further consideration in the Beltline PEL Study. Yellow indicates it met some of the Root Objectives and, while it is eliminated from further consideration in the Beltline PEL Study as a Stand-Alone Strategy, it is carried forward for evaluation for possible inclusion as a Component in a Strategy Package. Additional information is available in the *Stand-Alone Strategies Screening Report*, available upon request.

Table 5.12-1 Summary of the Stand-Alone Strategy Screening and Results

Strategy	Change in 2050 Beltline Volume Between Verona Road and Fish Hatchery Road ³	Discussion	Results
NMP	+2,300 vpd	NMP has merit in providing mobility north of Lake Mendota, yet it does not reduce Beltline traffic volumes enough to satisfy root PEL objectives.	Eliminate as a Stand-Alone Strategy from further consideration.
SR	-1,100 vpd	SR is able to capture a large amount of traffic and provides greater mobility to southern Dane County communities, yet it only reduces Beltline volumes by 11 percent in 2010 and 3 percent in 2050. These Beltline traffic reductions are not great enough to address Beltline operational problems. The SR also has considerable natural resource impacts. Therefore, this strategy is unable to satisfy root PEL objectives.	Eliminate as a Stand-Alone Strategy from further consideration.
Transport 2020 Rail	-50 vpd	Transport 2020 Rail greatly enhances access to and through the Isthmus. It does not remove enough traffic from the Beltline to improve traffic operations. Because there are other, potentially more viable, high-capacity transit alternatives being studied, Transport 2020 Rail is being eliminated from consideration as a Stand-Alone Strategy.	Eliminate as a Stand-Alone Strategy from further consideration.
BRT	-200 vpd	BRT is projected to draw up to nearly 20,000 daily riders in its east-west route line, yet it does not reduce Beltline traffic volumes and, therefore, is unable to address Beltline congestion. BRT is unable to satisfy all root PEL objectives; therefore, it is eliminated from further consideration as a Stand-Alone Strategy. It does address several other PEL objectives that focus on alternate mode mobility and access.	Eliminate as a Stand-Alone Strategy, but carry forward and evaluate for possible inclusion as a Component in Strategy Packages.
Beltline Buses	-360 vpd	Beltline buses could capture up to 2,100 daily boards in 2010, and 2,500 daily boards in 2050, yet this strategy does not reduce Beltline traffic volumes by any appreciable amount and, therefore, does not satisfy that root PEL objective. Beltline buses do address other PEL objectives that focus on alternate mode mobility and access.	Eliminate as a Stand-Alone Strategy but carry forward and evaluate for possible inclusion as a Component in Strategy Packages.
Scenario Planning—Alternate (infill, more compact) Land Use	+3,700 vpd	Implementing Madison in Motion's Infill Scenario (B) would increase households and employment by redeveloping urban activity centers. The Infill Scenario (B) does increase potential BRT ridership, yet, because many urban activity centers lie adjacent to the Beltline, the Infill Scenario (B) would increase Beltline traffic volumes. Therefore, alternate, and more compact, land use patterns as evaluated by Madison in Motion, are not able to change traffic patterns enough to satisfy root PEL objectives. Therefore, it is eliminated as a Stand-Alone Strategy. The city of Madison may continue to pursue more	Eliminate as a Stand-Alone Strategy. More compact land use, while not technically an improvement component, should be considered in the evaluation of Strategy Packages in future analyses.

³Volumes listed are an anticipated increase (+) or decrease (-) from the 2050 Beltline TDM projected volume of 147,500 vpd. Note that this value represents a “constrained” condition in 2050 for the Beltline corridor (assumed the existing number of travel lanes in 2016 remained in place) from the TDM for comparison and analysis purposes only.

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Strategy	Change in 2050 Beltline Volume Between Verona Road and Fish Hatchery Road ³	Discussion	Results
		compact land use patterns in efforts to increase transportation and utility network efficiency.	
Scenario Planning—Alternate Mode Choice	-3,500 vpd	Tripling transit and bicycle ridership provides a measurable difference in traffic volumes through the Isthmus. This strategy has a very modest effect on Beltline traffic volumes and, consequently, does not satisfy root PEL objectives. Therefore, this scenario-planning alternative is being eliminated from consideration as a Stand-Alone Strategy. The infrastructure measures that would be associated with tripling transit and bike ridership do address other PEL objectives. Measures associated with effecting a mode shift should be a Component in Strategy Packages.	Eliminate as a Stand-Alone Strategy. Investigation of enhancements to improve existing transit and bicycle infrastructure should be part of Strategy Packages in future analyses.
Combined Off-Corridor Strategies (NMP, BRT, SR)	-1,700 vpd	The Combined Off-Corridor Strategies result in Beltline traffic volumes in 2050 that are similar to existing volumes, yet current traffic volumes still produce operations that do not meet operational goals. These combined strategies would also incur considerable land and monetary impacts. The combination of these three strategies, therefore, do not satisfy root PEL objectives and the combination of them is eliminated from further study as a Stand-Alone Strategy.	Eliminate as a Stand-Alone Strategy from further consideration.
Beltline Corridor Strategy	43,000 vpd ⁴	The Beltline Corridor Strategy addresses three root PEL objectives and one that can be paired with other components. The Beltline Corridor Strategy is unable, on its own, to address some PEL objectives.	Eliminate as a Stand-Alone Strategy but carry forward and evaluate for possible inclusion as a Component in Strategy Packages.

³Volumes listed are an anticipated increase (+) or decrease (-) from the 2050 Beltline TDM projected volume of 147,500 vpd. Note that this value represents a “constrained” condition in 2050 for the Beltline corridor (assumed the existing number of travel lanes in 2016 remained in place) from the TDM for comparison and analysis purposes only.

⁴43,000 vpd is the forecasted increase in 2050 traffic for an “unconstrained” Beltline corridor (unlimited daily capacity available) versus a “constrained” Beltline corridor (assumes the existing number of travel lanes remain).