



Appendix C

Systemwide Lane Elimination Analysis





Systemwide Lane Elimination Analysis

Lane elimination (LE), also referred to as a road diet or lane repurposing is a tool that communities can use to integrate Complete Streets elements. Implementation of lane elimination projects provide an opportunity to reconfigure the existing cross section of a roadway to create space for other uses, such as bike lanes, on-street parking, or transit. If coordinated with an existing reconstruction or resurfacing project, a lane elimination can also provide a low-cost option for constructing a Complete Street.

State Review Process

FDOT has a statewide lane elimination review process which must be followed for potential lane elimination projects proposed on a state road by cities, counties, MPO's, and/or private entities. For lane eliminations on state roads, a review team in each FDOT district formally reviews the information, analyses, and design concepts provided by the applicant. The goal is to develop a consistent process for approval of lane elimination requests. FDOT guidance materials for lane eliminations can also serve as a resource for lane eliminations on a local road.

Another source of information and guidance is Federal Highway Administration (FHWA) Road Diet Informational Guide. This guide can assist communities in determining the objectives of the lane elimination and if a lane elimination is appropriate or feasible in the location identified. [Table 1](#) provides a summary of the Lane Elimination status definitions for state roads and non-state roadway.

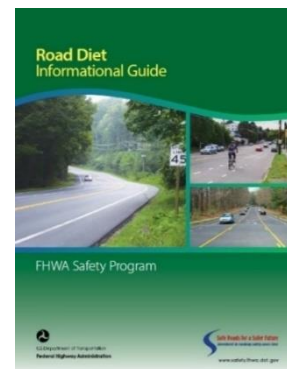


Table 1. Lane Elimination Status Definitions for State and Non-State Roadways

FDOT Roads		Non-FDOT Roads		
FDOT LE Status	Definition	MPO/Local LE Project Status	Definition	Active/Inactive
Under Consideration	The project is in early stages of consideration, but no official study has begun. The project is not yet in the FDOT LE review process.	Under Consideration	The project is in early stages of consideration, but no official study has begun	Active
Planned	The project is in early stages of consideration, possibly with a study underway. FDOT Step 1 Initial Meeting has taken place	Planned	The project is in early stages of consideration, possibly with a study underway	Active
Under Review	An LE request and concept report have been submitted to FDOT and the LE is being reviewed by FDOT. FDOT Step 2 Interim Meeting and Concept Report are complete	In Coordination	Currently in MPO/Local LE Coordination Process	Active
Approved	LE request has been reviewed by FDOT and is approved, but no project has been programmed yet. FDOT Step 3 Final Review is complete and the LE was approved	Approved	Completed MPO LE Coordination Process and is approved	Active
Programmed	LE is approved and funds have been allocated for the design and/or construction of the project	Funded	Project has been planned, coordinated, approved and a funding source has been identified for the entire project	Active
All LE Projects	Design	The project is currently being designed		Active
	Under Construction	The project is currently being constructed		Active
	Construction Complete	Project has been constructed and finalized		Inactive
	Withdrawn	The project was once under consideration and has been temporarily withdrawn from consideration		Inactive
	Cancelled	The project was once under consideration and has been permanently withdrawn from consideration		Inactive

Potential Challenge of Lane Elimination

Prior to proposing a lane elimination, practitioners should focus on the community’s goal for the lane elimination and build community support with early stakeholder engagement. Each corridor is unique and should be analyzed on a case-by-case basis.

A frequent point of misconception from members of the public or business owners is the belief that eliminating lanes will result in an increase in traffic congestion, causing motorists to avoid the area, and potentially hurting businesses. Lane elimination projects are often targeted for roadways with more capacity than needed to accommodate the existing traffic volumes, resulting in potentially a reduction of overall traffic speeds along a corridor and lower percentages of crashes. Impacts to traffic volumes and potential traffic diversion onto parallel facilities are analyzed as part of the review process for all proposed lane elimination projects prior to approval.

Figure 1 is an example of a lane elimination along a four-lane undivided roadway. Originally, the roadway included two travel lanes in each direction separated by a double solid yellow line. In 1991, the same corridor was reduced to one travel lane in each direction with the addition of a bike lane on each side and a dual left turn lane. Utilizing the same right-of-way, in 2011 the dual left turn lane was removed and a separated bike lane added. Each design functioned successfully carrying volumes of over 17,000 vehicles per day. Pilot projects or trial periods can also be a tool utilized to validate studies and analyses and uncover unidentified issues before full implementation.

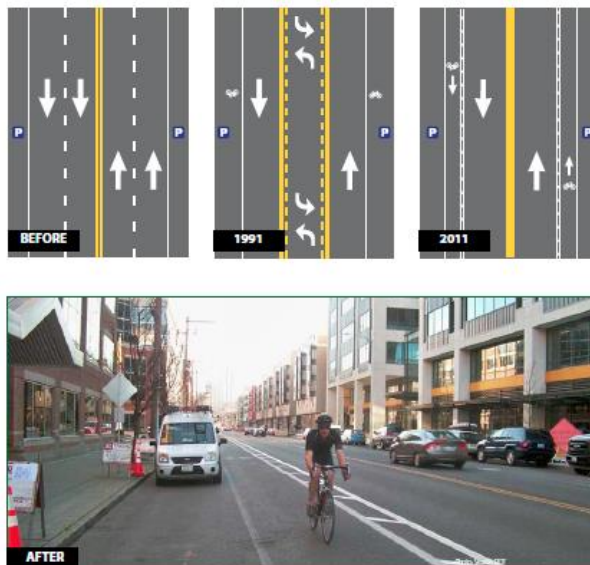


Figure 1. FHWA Office of Safety

Lane Elimination Coordination Efforts

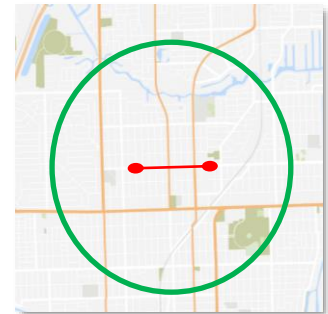
Transportation systems work as a network for their structure and flow. Changes to one part of the transportation system can have impacts to the network. Awareness and evaluation of these impacts is important in having a comprehensive approach to programming lane elimination projects.

The proposed lane elimination process should encompass a review of potential impacts in close proximity to the proposed project including planned projects, street network impacts and planning impacts. This review may cross municipality and county boundaries. Key coordination partners for these efforts include the following:

- Metropolitan Planning Organization (MPO)
- Florida Department of Transportation (FDOT)
- Broward County Traffic Engineering Division (BCTED)
- Broward County Transit (BCT)
- Broward County Schools
- Neighboring Cities
- Local Emergency Services

Within a 2-mile buffer of proposed lane elimination projects, projects that may create street network impacts should be reviewed. These projects may include the following.

- Other Lane Elimination Projects
- MPO/FDOT roadway projects
- Planned developments
- Projects in the current Capital Improvement Plan (CIP)



In closer proximity, within a half-mile buffer, the following should be reviewed.



- Existing, planned or ongoing traffic calming studies
- Planned access management changes
- Bus stops
- Projects in the Transit Development Plan (TDP)
- One-way streets

Existing Broward Lane Elimination Projects

An inventory of existing lane elimination projects within Broward County was completed. Information was collected from municipal Capital Improvement Plans, Comprehensive Plans, Transportation Plans, Bicycle & Pedestrian Plans, Complete Streets Plans, Redevelopment Plans, and other available resources with reference to potential Lane Elimination projects within the County. Not all municipalities specified “Lane Elimination” within their plans as some plans referred to relevant projects as “lane repurposing” or “road diet”. A total of 34 projects within nine (9) municipalities were identified, with 31 active projects having a status as either planned, programmed, in coordination, or under construction.

The nine municipalities with identified projects were: Dania Beach, Deerfield Beach, Fort Lauderdale, Wilton Manors, Hollywood, Oakland Park, Pompano Beach, Sunrise, and Weston. A summary of the projects identified are provided in [Table 2](#) and [Figure 2](#).



Photo Credit: Catherine Prince, City of Fort Lauderdale

Table 2. Summary of Lane Elimination Projects in Broward County

City	Road Name	Project Limits	Length (miles)	Description	Status
Dania Beach	Dania Beach Blvd	NE 1 st Ave to Gulfstream Rd	0.71	6L to 4L	Withdrawn
Deerfield Beach	SW MLK Jr. Ave/ SW 3 rd Ave	SW 9 th St to SW 1 st St	0.84	4L to 2L	Under Consideration
	Hillsboro Blvd	Dixie Hwy to US 1	0.67	6L to 4L	Funded
Fort Lauderdale	Birch Rd	Bayshore Dr to Vista Mar Dr	0.00	4L to 2L	Under Consideration
	NW 27 th Ave	Broward Blvd to Sunrise Blvd	1.02	4L to 2L	Under Consideration
	NW 27 th Ave	Davie Blvd to Broward Blvd	1.04	4L to 2L	Design
	Las Olas Blvd	SE 11 th Ave to SE 15 th Ave	0.23	4L to 2L	Construction Complete
	NE 13 th St	NE 4 th Ave to NE 9 th Ave	0.39	4L to 2L	Under Construction
	A1A	Oakland Park Blvd to Flamingo Rd	1.04	4L to 2L	Under Construction
	A1A	Sunrise Blvd to NE 18 th Street	0.97	4L to 2L	Construction Complete
	SE 3 rd Ave	SE 17 th St to SE 6 th St	0.96	4L to 2L	Under Consideration
	Cypress Creek Rd	Powerline Rd to Andrews Ave	0.45	6L to 4L	Planned

City	Road Name	Project Limits	Length (miles)	Description	Status
	NE 15 th Ave	NE 11 th St to NE 13 th St	0.25	4L to 2L	Under Consideration
	NW 19 th St	State Road 7 to Powerline Rd	2.18	4L to 2L	Withdrawn
	Cordova Rd	SE 15 th St to SE 17 th St	0.19	4L to 2L	Under Consideration
Fort Lauderdale / Wilton Manors	Powerline Rd	Sunrise Blvd to NW 29 th St	1.80	4L to 2L	Construction Complete
	NE 4 th Ave	Sunrise Blvd to NE 26 th St	1.83	4L to 2L	Design
Hollywood	N Dixie Hwy	Pembroke Rd to Sheridan St	2.54	3L to 2L-One-Way	Under Consideration
	N 21 st Ave	Pembroke Rd to Sheridan St	2.54	3L to 2L-One-Way	Under Consideration
	A1A	Hollywood Blvd to Sheridan St	1.52	4L to 2L	Cancelled
Oakland Park	Powerline Rd	Oakland Park Blvd to Commercial Blvd	1.54	6L to 4L	In Coordination
	Prospect Rd	Powerline Rd to Dixie Hwy	1.24	6L to 4L	Funded
Pompano Beach	Dixie Hwy	McNab Rd to SW 2 nd St	1.37	6L to 4L	Approved
	Pompano Park Place	Cypress Rd to Powerline Rd	2.08	6L to 4L	Under Consideration
Sunrise	Joshlee Blvd	Oakland Park Blvd to Nob Hill Rd	0.66	4L to 2L	Under Consideration
	New River Circle	Weston Rd to Weston Rd	1.28	4L to 2L	Under Consideration

City	Road Name	Project Limits	Length (miles)	Description	Status
	Springtree Dr	NW 44 th St to University Dr	0.81	4L to 2L	Under Consideration
	NW 94 th Ave	Oakland Park Blvd to Commercial Blvd	1.76	4L to 2L	Under Consideration
	Sunrise Blvd	Sawgrass Expressway Trail to Flamingo Rd	1.80	6L to 4L	Under Consideration
	Sunrise Lakes Blvd	NW 105 th Ln to University Dr	2.21	4L to 2L	Under Consideration
	Springtree Lakes Dr	Nob Hill Rd to Pine Island Rd	1.12	4L to 2L	Under Consideration
	Sunset Strip	Nob Hill Rd to Sunrise Blvd	2.74	4L to 2L	Under Construction
	Sunset Strip	NW 109 th Ave to Nob Hill Rd	0.63	4L to 2L	Under Construction
Weston	Saddle Club Rd	Lakeview Dr to Weston Rd	1.55	4L to 2L	Under Consideration

Broward Lane Eliminations










-  Approved
-  Constructed
-  Design
-  Funded
-  In Coordination
-  Planned
-  Under Consideration
-  Under Construction
-  Withdrawn



Figure 2. Broward Lane Eliminations

Model Analysis

The Southeast Florida Regional Planning Model version 7.071 (SERPM 7.071) was used to understand the network analysis of impact. Planned Broward lane elimination projects included in the analysis includes Approved, Constructed, Design, Funded, Planned, and Under Construction. There are a handful of recommended projects identified in the Master Plan that require a lane elimination to achieve the ultimate corridor. The projects were included in the analysis to truly understand the impact of the lane elimination projects. The summary of projects included in the model analysis are provided in [Table 3](#) and [Figure 3](#).

Table 3. Model Analysis Projects

Road Name	Project Limits	Source
NE 27 th Ave	Davie Blvd to Broward Blvd	Planned Broward Lane Elimination Projects
Las Olas Blvd	SE 11 th Ave to SE 15 th Ave	Planned Broward Lane Elimination Projects
NE 13 th St	NE 4 th Ave to NE 9 th Ave	Planned Broward Lane Elimination Projects
A1A	Oakland Park Blvd to Flamingo Rd	Planned Broward Lane Elimination Projects
A1A	Sunrise Blvd to NE 18 th Street	Planned Broward Lane Elimination Projects
Cypress Creek Rd	Powerline Rd to Andrews Ave	Planned Broward Lane Elimination Projects
Powerline Rd	Sunrise Blvd to NW 29 th St	Planned Broward Lane Elimination Projects
NE 4 th Ave	Sunrise Blvd to NE 26 th St	Planned Broward Lane Elimination Projects
Prospect Rd	Poweline Rd to Dixie Hwy	Planned Broward Lane Elimination Projects
Sunset Strip	Nob Hill Rd to Sunrise Blvd	Planned Broward Lane Elimination Projects
Sunset Strip	NW 109 th Ave to Nob Hill Rd	Planned Broward Lane Elimination Projects
NW 31 st Ave	Sunrise Blvd to NW 44 th St	Complete Streets Master Plan
NE 3 rd Ave/NW 4 th Ave	Broward Blvd to Sunrise Blvd	Complete Streets Master Plan
NW 6 th St	NW 15 th Ave to US 1/SR 5	Complete Streets Master Plan
SE/NE 1 st Ave/S/N 21 st Ave	County Line Rd to Sheridan St	Complete Streets Master Plan
US 1	Dixie Hwy to Old Griffin Rd	Complete Streets Master Plan
SE 3 rd Ave/NE 4 th Ave	SE 6 th St to Broward Blvd	Complete Streets Master Plan

Road Name	Project Limits	Source
Dania Beach Blvd	US 1/SR 5 to Ocean Dr	Complete Streets Master Plan
NW 6 th St	NW 31 st Ave to NW 15 th Ave	Complete Streets Master Plan
Taft St	University Dr to S 56 Ave	Complete Streets Master Plan
SE 3 rd Ave	SE 17 th St to SE 6 th St	Complete Streets Master Plan
McNab Rd	NW 31 st Ave to Dixie Hwy	Complete Streets Master Plan
Dixie Hwy	Sheridan St to US 1	Complete Streets Master Plan
Dixie Hwy	McNab Rd to Atlantic Blvd	Complete Streets Master Plan
Prospect Rd	Commercial Blvd to Dixie Hwy	Complete Streets Master Plan
Dixie Hwy	McNab Rd to Pompano Park Pl	Complete Streets Master Plan

Model Analysis Projects









-  Proposed Projects
-  Programmed Projects
-  Approved
-  Constructed
-  Design
-  Funded
-  Planned
-  Under Construction



Figure 3. Model Analysis Projects

SERPM is a multimodal travel demand model that encompasses the three counties in Southeast Florida: Miami-Dade, Broward, and Palm Beach counties. The model was developed to ensure that the regional transportation planning process can rely on forecasting tools that will be adequate for new socioeconomic environments and emerging planning challenges. The modeling effort for this analysis utilized the Cost Feasible Plan 2040 and **Figure 4** displays the SERPM interface.

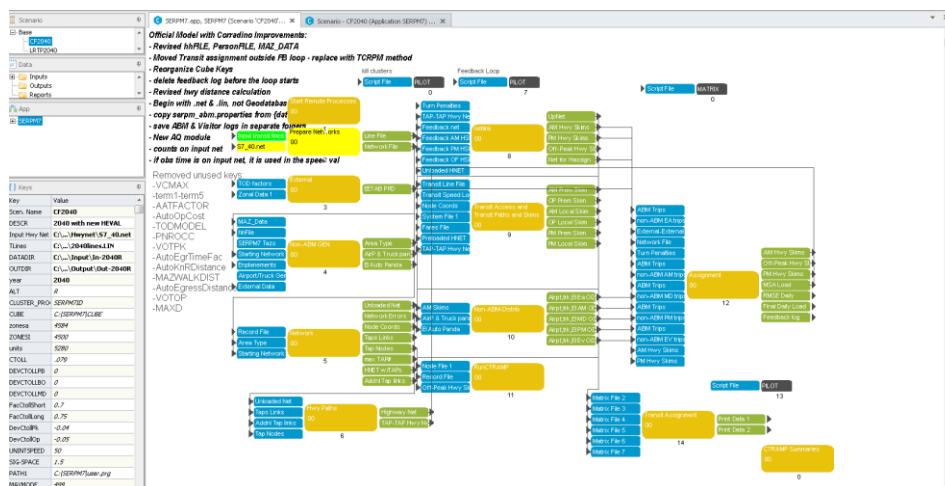


Figure 4. SERPM Interface

A comparison of the Cost Feasible Plan 2040 and the Cost Feasible Plan 2040 + Lane Elimination projects was analyzed. The analysis indicates if the lane elimination projects were to occur as shown on **Table 3** and **Figure 3**, there would be minimal impact to the transportation network. There would be a slight decrease in Vehicle Miles Traveled (VMT) and increase in Vehicle Hours Traveled (VHT) per day but overall, the total accident cost decreased meaning that the accidents are less severe. Accidents that occur more on congested roadways are more likely to happen at a lower level of severity.

METRICS	COST FEASIBLE PLAN 2040	COST FEASIBLE PLAN 2040 + LE	DIFFERENCE
 Vehicle Miles Traveled (VMT)	45,014,089	44,899,530	-0.254%
 Vehicle Hours Traveled (VHT)	1,258,690	1,265,380	0.532%
 Total Accident Costs	\$3,699,378.21	\$3,683,972.47	-0.416%