



Florida Department of  
**TRANSPORTATION**

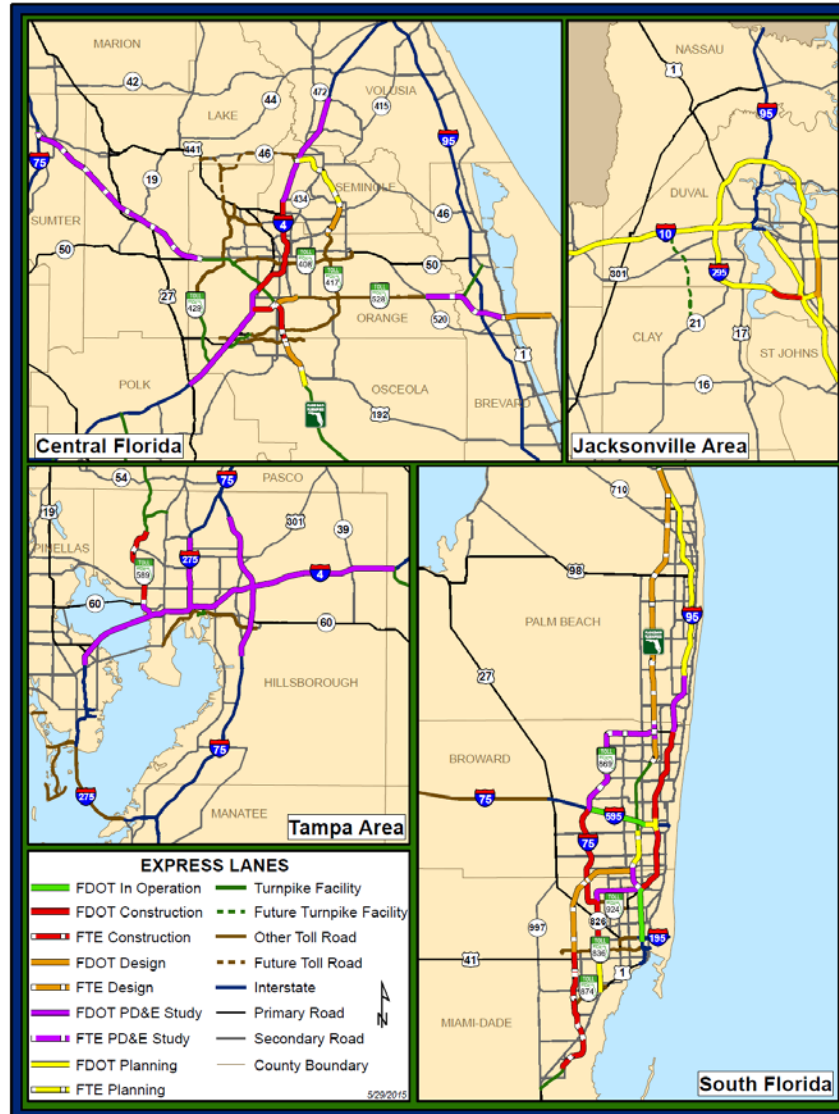


# Tolling and Operational Aspects for Express Lane Projects

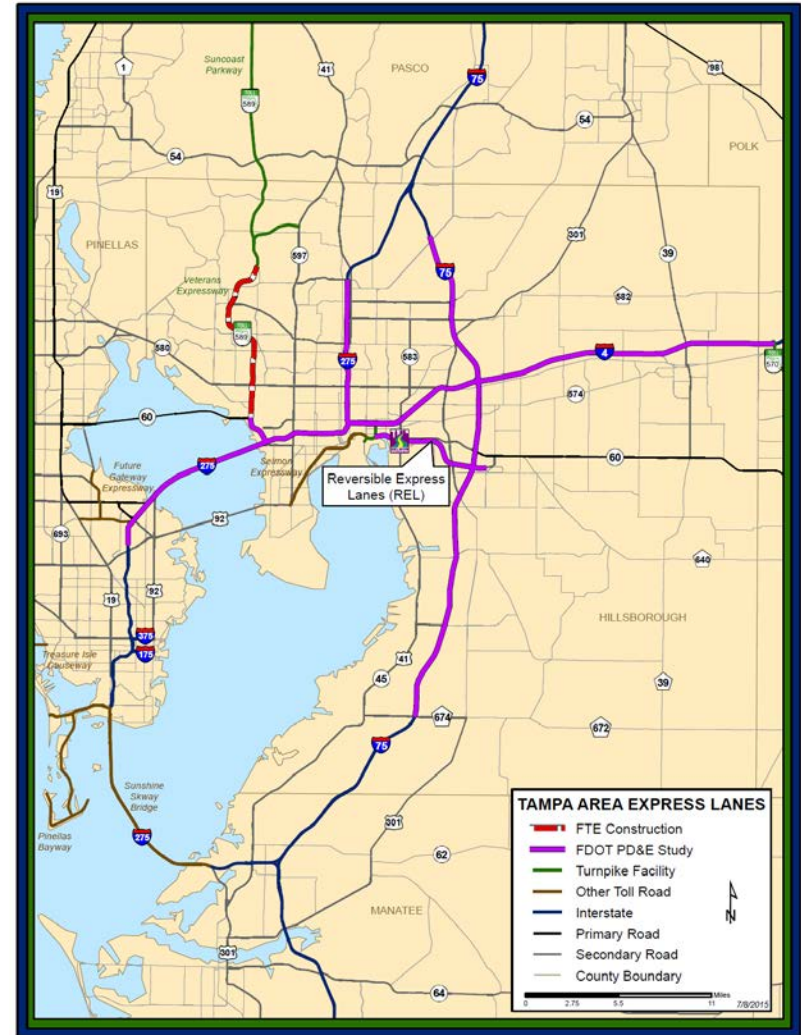
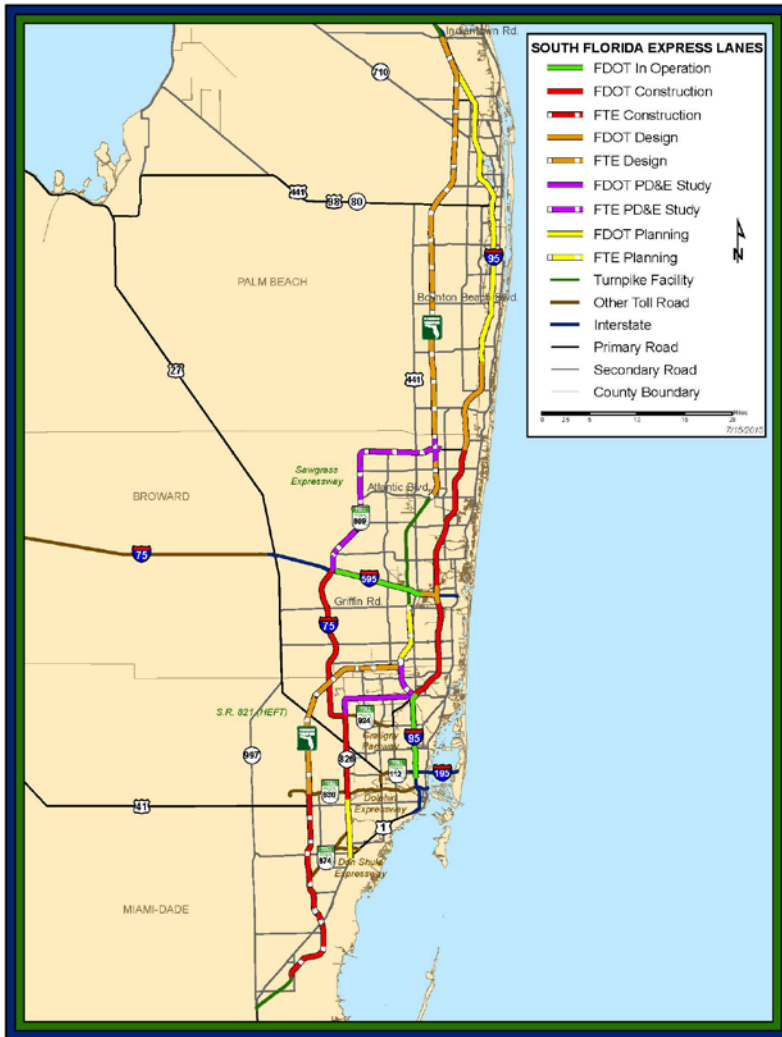
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- Florida Overview
- Operational Goals
- Concept of Operations
- Signing and Tolling Requirements
- Operational Planning
- Incidents and Enforcement

# Florida Network Overview



# Regional Networks



# Operational Goals



- Maximizing overall throughput
- Serving peak demands/special events
  - Minimum 45 MPH in Express Lanes
- Segregate longer trips
- Special vehicle eligibility/requirements
  - HOT conversion (95 Express)
  - Other exemptions & registrations
  - Truck restrictions
- Travel choice when incidents occur

# Concept of Operations (ConOps)



- Regional level (Regional Concept for Transportation Operations – RCTO)
  - High level regional connectivity
- Corridor level
  - Major system to system connectivity
  - Phasing of projects & implementation plans
- Project level
  - Operations plan for phasing during construction
    - Incremental implementation/Go-live
  - Incident management planning

# Concept of Operations (ConOps)



## Regional EL ConOps

- High level network map
- Stakeholders
- Roles and responsibilities
- Traffic characteristics
- Existing systems
- Future systems
- Operational scenarios

## Corridor(s) EL ConOps

- Ingress/egress points
- Toll points
- System to system connections
- Signing concept
- Project phasing and interim operations of projects
- Telecommunications concept
- ITS concepts
- Responsibility matrix
- Cross section

## Project(s) EL ConOps

- Refines corridor ConOps for specific project(s) as necessary
- Implementation plan and Go-live
- Interim operations within projects
- Incident management plan of operations

# Rules and Tolling Procedures



## 14-100.003 Express Lane Tolling.

- (1) Purpose. The intent of this rule is to establish criteria for express lane tolling by the Florida Department of Transportation.
- (2) Definitions. Unless defined below, words, phrases, or terms contained herein shall have the definitions set forth in Chapters 316, 334 and 338, F.S. As used in this rule the following words, phrases, or terms shall mean:
  - (a) "Authorized user" means any person operating a motor vehicle in an express lane with an active SunPass transponder or interoperable transponder-based pre-paid account having sufficient funds to pay the applicable toll, or operating a motor vehicle which is exempt from payment of the applicable toll pursuant to Rule 14-100.004, F.A.C.
  - (b) "Department" means Florida Department of Transportation.
  - (c) "Electronic toll collection point" means the physical location at which a SunPass transponder or interoperable transponder is read and a separate toll assessed for operation of a motor vehicle in an express lane or general toll lane.
  - (d) "Express lane" means a travel lane delineated or physically separated from a general use lane or general toll lane within a roadway corridor in which toll amounts are set based on traffic conditions.
  - (e) "Free-flow" means conditions under which travel is unimpeded and motor vehicles are able to safely operate at speeds of at least 45 miles per hour in the express lanes.
  - (f) "General toll lane" means a tolled roadway lane within a toll facility that is not an express lane and for which the applicable toll amount for its use is not established by variable tolling.
  - (g) "General use lane" means an untolled roadway lane.
  - (h) "Multi-axle" means a vehicle with three or more axles.
  - (i) "Point of entry" means either the location at which a vehicle enters an express lane, or the location at which a vehicle on an express lane passes an electronic message sign where toll amount information is displayed.
  - (j) "Point of exit" means either the location at which a vehicle exits an express lane, or the location at which a vehicle on an express lane passes an electronic message sign where toll amount information is displayed.
  - (k) "Trip" means that portion of an express lane travelled by a vehicle between the point of entry and the point of exit from an express lane.
  - (l) "Variable tolling" means the setting of toll amounts in an express lane for authorized users based on the toll amount criteria set forth in this rule.
  - (m) "Violator" means the registered owner of a motor vehicle operated in an express lane without being an authorized user.
- (3) Toll Rate Criteria for Variable Tolling:
  - (a) Toll amounts for authorized users in an express lane will be established and adjusted through the collection and analysis of traffic data such as traffic volume, operating speeds, level of service, and trend data in the express lane, general use lanes, general toll lanes, or a combination thereof, to promote free-flow traffic conditions.
  - (b) The minimum toll amount for authorized users of an express lane that is not on the Turnpike System will be \$0.50. The minimum toll amount for authorized users of an express lane on the Turnpike System will be at least \$0.25 greater than the SunPass toll amount for the general toll lane.
  - (c) The maximum toll amount for authorized users of the express lanes on Interstate 95 between Mile Marker 4 and Mile Marker 12 will not exceed \$1.50 per mile. If those express lanes reach the maximum toll amount on any 45 days in a six month period, the maximum toll amount will increase by \$0.50 per mile effective the first day of the following month. The maximum toll amount for authorized users of those express lanes will increase by \$0.50 in any subsequent six month period meeting the same condition.
  - (4) Payment of express lane tolls is performed electronically through the SunPass transponder and associated pre-paid account or interoperable transponder and associated pre-paid account.
  - (5) Multi-axle vehicles are not allowed to operate on an express lane unless otherwise indicated by regulatory signage. If the Department allows multi-axle vehicles on an express lane, the multi-axle toll amount will be equal to the applicable two-axle toll amount divided by two, multiplied by the number of axles.
  - (6) Display of Toll Amounts:
    - (a) To the extent feasible, an electronic message sign in advance of each point of entry to an express lane from a general use lane will display the current toll amount from the point of entry to one or more exit locations. The current toll amount also will be displayed for one or more additional exit locations if travel is continued in the express lanes beyond the exit locations displayed on the signage prior to the point of entry.

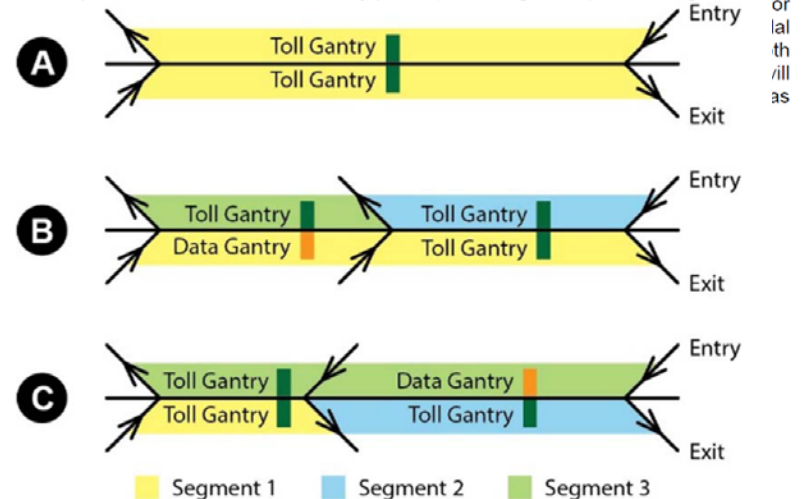
## EXPRESS LANES FOR NON-TURNPIKE LIMITED ACCESS FACILITIES ON THE STATE HIGHWAY SYSTEM

### 1.3.1 EXPRESS LANES SEGMENT

An express lane segment is the distance between an entry point to the express lanes and the next point of exit (example A). If there are multiple entry points before an exit point, the segment is defined to be the distance between the first entry point and the exit point (example B). If there are multiple exit points following an entry point, the segment represents the distance between two successive exit points (example C).

Gantries shall be placed between successive entry points, between an entry point and an exit point, and between successive exit points, unless the entry or exit points are spaced less than one mile apart or physical constraints prevent the placement of such structures.

Gantries placed between successive entry points (i.e. data gantries) don't charge a toll





# Signing and Tolling Requirements



- Toll Amount DMS
  - 3 destinations or less
  - All destinations must be signed
- Signing vs. Toll Point
  - Within 1 mile or less from ingress
  - Data gantry if further
  - Verification of toll amount sent to the sign
- Needs for redundancy of toll amount DMS



# Operational Planning/Resources



- Incident Management Plans
  - Additional field resources
    - Safety service patrols
    - Staging of responders
    - Access points
  - TMC staffing
  - Additional TMC protocols
- Emergency Response Protocols
  - Full closures or detours
  - Evacuations



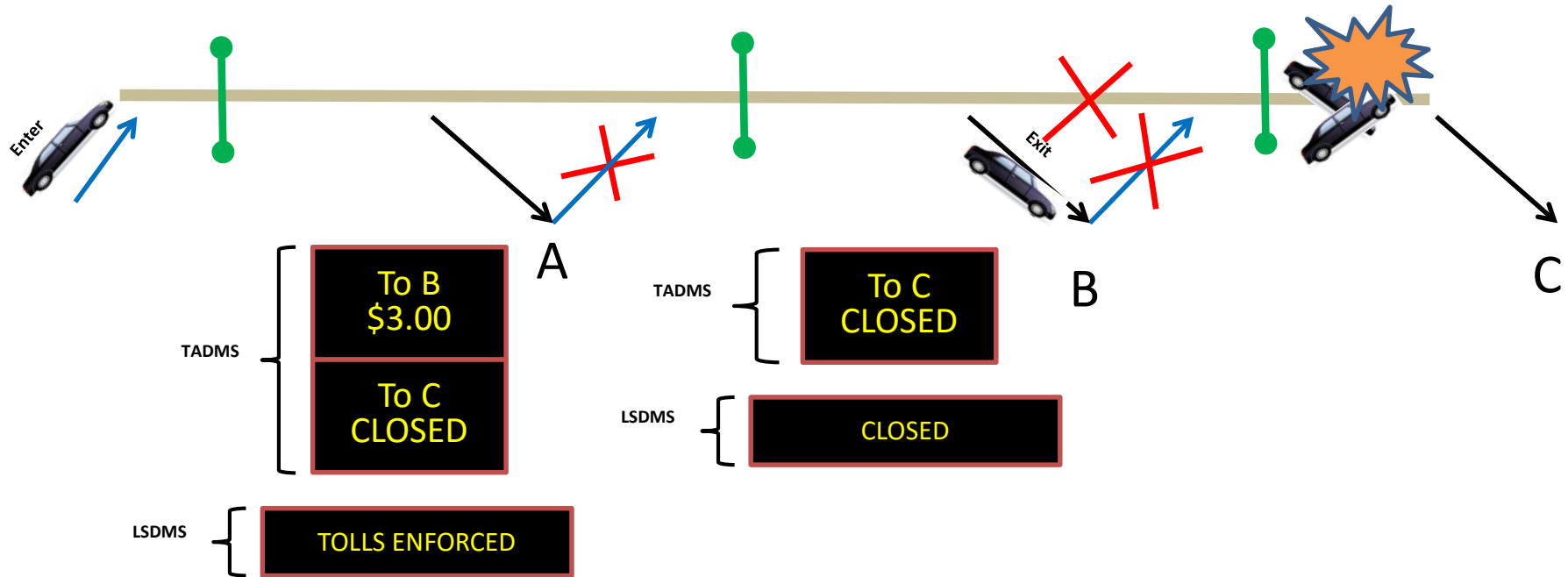
# Enforcement and Incidents



- Buffer/Separation Considerations
  - Requirements to enforce
  - Traffic enforcement schemes
  - Shoulder limitations/rubber-necking
- Incident Challenges
  - Routing traffic into or out of Express Lanes
  - Full closures and tolling
  - Dedicated Law Enforcement



# Incident Management Example



# In Conclusion...



- Detailed Implementation plans prior to each expansion
- Traffic Operations reviews prior to major changes
- Consistent incident management procedures
- Customer service resolution
- Quality Assurance/Quality Control processes