

# Newark Transportation Improvement District (TID) Continuation of Service Standards

Presented to  
Newark TID Committee

February 19, 2020



# Service Standards – DeIDOT Regulations

- ① Section 2.4.2.6 of Development Coordination Manual
- ① “Service standards must be established for the TID, in the creation of the LUTP, to specify what is considered adequate transportation infrastructure. Service standards may include Levels of Service but shall also include desired typical sections for local, collector and arterial streets, and standards for the presence and frequency of transit service. Typically one standard will apply throughout the TID but there may be locations where a different standard is specified. The standards should be set collaboratively by DeIDOT and the local governments involved, with some measure of public involvement. Review and approval of the standards by a local government committee at a public meeting constitutes public involvement.”



# Service Standards – What is “success” ?

- ◎ Defined in terms of
  - Lane widths (required)
  - Shoulder widths (required)
  - Transit service (required)
  - Aesthetics (optional)
  - Other Considerations (optional)
  - Sidewalks and shared-use paths (optional)
  - Levels of Service/delay/travel time (optional)
  
- ◎ How? A public process
  
- ◎ When? After initial agreement, and again after 2045 traffic analysis if modifications needed



# Optional– Other Geometric Standards

- ① Use of posted speed limits is assumed (all). The City (Newark) requests consideration of reducing posted speed limits on the following roads:



# Optional– Other Geometric Standards

- ◎ The DeIDOT Functional Classification Map, applicable DeIDOT design standards and DeIDOT's Complete Streets Policy are assumed (all).
- ◎ Minimum sidewalk or shared-use path widths different from DeIDOT's? (5 ft and 8 ft respectively)



# Optional – Aesthetic Standards

- Scenic Byways- none in or adjacent to TID
- Historic Districts?- To the extent that it is fiscally and environmentally feasible, transportation improvements identified in the TID's LUTP will maintain or replace existing brick sidewalk, landscaping, lighting, street furniture, signal poles and sign posts with like materials, and reset granite curb, within the limits of the City's Historic District. This brick sidewalk and granite curb may exclude areas where curb ramps are being (re)constructed. Such curb ramps and their transition areas may be Portland cement concrete. Where either the City or DeIDOT determine that it is not fiscally or environmentally feasible, both parties agree to work together to reach consensus on alternative aesthetic treatments.



# Optional – Aesthetic Standards

- ⦿ Traffic signal type?- Where traffic signals are to be installed or modified, span wires shall be replaced with mast arms.



# Optional – Drainage

- Where new road construction is proposed to address otherwise substandard conditions, adequate drainage shall be provided as part of that construction. In the following locations, inadequate drainage is known to exist and shall be addressed as part of this effort: (locations in Newark?)





# Optional – Access and Intersection Control

- DeIDOT's Development Coordination Manual shall apply to access on State-maintained roads. Subdivision streets within the City limits will be built to City standards and for private or municipal maintenance.
- On state maintained roads roundabouts shall be considered first as a means of intersection control in accordance with DeIDOT Design Guidance Memorandum Number 1-26, incorporated here by reference. This consideration shall be part of a larger intersection control evaluation. In the assessment of the proper intersection control several factors are to be considered, including but not limited to, safety, capacity, and right-of-way need and property impacts.
- Proposed changes to intersection control shall be based on evaluation of crash data and designed in accordance with the Delaware Manual on Uniform Traffic Control Devices and other criteria as may be adopted by DeIDOT for that purpose.



# Optional – Pedestrian and Bicycle Facilities

- ⦿ The City's Bike Plan should be referenced when making design decisions related to bike facilities.
- ⦿ Existing and proposed pedestrian crossing treatments (at intersections and/or mid-block) should be evaluated and designed using national and local research. Preferred design is to incorporate a median refuge island to create a two-stage crossing.



# Optional– Pedestrian and Bicycle Facilities

- ⦿ Below are a list of proposed improvements or known areas of concern related to bike and pedestrian facilities;
  - List locations for Newark



# Optional– Capacity and Levels of Service Standards

- To account for seasonal variations in traffic, DeIDOT shall adjust weekday traffic counts to approximate annual average volumes.
- DeIDOT may further adjust specific volumes to account for errors in the counted volumes where such errors become apparent and for instances where it is apparent that traffic has increased since the counts were done.
- The same standards for all roads in the study area shall be assumed except:
  - a. any locations for Newark?



# Optional– Capacity and Levels of Service Standards

- Use of the procedures in the 6<sup>th</sup> Edition of the Highway Capacity Manual and applicability only to the Automobile Mode are assumed except as specified in this document. Those standards are summarized in the tables below for reference.
- Control delay is the delay associated with vehicles slowing in advance of an intersection, the time spent stopped on an intersection approach, the time spent as vehicles move up in the queue, and the time needed for vehicles to accelerate to their desired speed.



# Optional – Capacity and Levels of Service Standards

Signalized Intersections		
Control Delay (sec/veh)	Volume-to-Capacity Ratio $\leq 1.0$	Volume-to-Capacity Ratio $> 1.0$
$\leq 10$	A	F
$>10-20$	B	F
$>20-35$	C	F
$>35-55$	D	F
$>55-80$	E	F
$>80$	F	F
Unsignalized Intersections		
Control Delay (sec/veh)	Volume-to-Capacity Ratio $\leq 1.0$	Volume-to-Capacity Ratio $> 1.0$
$\leq 10$	A	F
$>10-15$	B	F
$>15-25$	C	F
$>25-35$	D	F
$>35-50$	E	F
$>50$	F	F



# Optional – Capacity and Levels of Service Standards

- ◎ Minimum intersection Levels of Service (LOS) are as follows:
  - a. Overall Level of Service for Weekday (Monday through Friday) Morning and Evening Peak Hours at signalized, roundabout and all-way stop-controlled intersections: Newark standard?  
LOS for specific approaches and movements may be E or F.
  - b. Level of Service for Weekday (Monday through Friday) Morning and Evening Peak Hours at two-way stop-controlled intersections: Newark standard?  
for left turns from the major street. LOS for minor street approaches and movements may be E or F.



# Optional– Capacity and Levels of Service Standards

- ⦿ Minimum intersection Levels of Service (LOS) are as follows:
  - c. For all facilities, 95<sup>th</sup> percentile queue lengths should not exceed available turning lane lengths and through movements should not queue through adjacent intersections.
  - d. For unsignalized intersections where traffic on the major street does not stop or yield, an overall intersection LOS cannot be calculated. The minimum LOS standard for stop-controlled movements shall be ? However it is recognized that where traffic volumes are insufficient to warrant delaying the through traffic with an all-way stop, roundabout or signal, this standard may be unobtainable. In such situations DeIDOT and the City shall agree on what, if any, remedies are appropriate to mitigate congestion





# Optional– Capacity and Levels of Service Standards

- Facilities to be analyzed shall include all at-grade intersections of one or more State-maintained roads with:
  - a. Other State-maintained roads;
  - b. Rail lines
  - c. City-maintained streets, excluding alleys;
  - d. Commercial or institutional driveways served by traffic signals.



# Optional– Capacity and Levels of Service Standards

- In the following specific locations, DeIDOT and the City agree that improvements outside the existing right-of-way will not be required, regardless of intersection delay and queue lengths:
  - a. Newark locations?



# Examples – Capacity and Levels of Service Standards (Unique Elements in Dover)

- ⦿ Minimum overall LOS for signalized and all-way stop controlled intersections is broken down by weekday evening and morning
- ⦿ Also broken down by location relative to participant boundary
- ⦿ LOS D in morning peak everywhere
- ⦿ LOS D in evening outside, and F inside participant boundary



# Examples – Capacity and Levels of Service Standards (Unique Elements in Dover)

- ③ 3 corridors where above does not apply: minimum LOS for through traffic D in any peak hour
- ③ Outside participant boundary, facilities to be analyzed for capacity and LOS shall be limited to signalized intersections.



# Examples – Capacity and Levels of Service Standards (Unique Elements in Eastown)

- ⦿ The same standards for all roads in the study area shall be assumed except:
  - The intersection of SR299/Main St. and SR71/Broad Street, which shall have an overall intersection delay of no more than 110 seconds in the weekday evening peak hours.



# Required– Typical Sections

- ◎ With specific regard to typical sections on State-maintained roads, the following minimum widths are required:
  - a. 11-foot through lanes;
  - b. 10-foot turning lanes (12-foot for two-way left turn lanes, 15-foot for a right turn lane if a 5-foot bicycle lane is included);
  - c. 5-foot shoulders on local roads;
  - d. 8-foot shoulders on collector and minor arterial roads; and
  - e. 10-foot shoulders on principal arterial roads.



# Required— Fixed Route Transit

- ⦿ Existing DART First State bus service is assumed to continue. Addition of new stops and the amenities required at each stop shall be at the discretion of the Delaware Transit Corporation.
- ⦿ Changes/additions?
- ⦿ Specific locations?



# Questions?

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