Congestion Policy Framework

CCRPC TAC Meeting

January 5, 2021

Why Change the LOS Policy?

- Allow for more congestion in villages, downtowns, growth centers and other areas planned for growth
- Shift emphasis from road capacity to mutilmodal improvements and TDM strategies
- Volume to Capacity (v/c) ratio is a more effective measure to assess roadway capacity than LOS
- Simplify the traffic impact assessment process – especially for small developments

Act 250 Criterion 5 - Transportation

10 VSA § 6086. Issuance of permit; conditions and criteria

(a) Before granting a permit, the District Commission shall find that the subdivision or development:

5(A) Will **not cause unreasonable congestion or unsafe conditions** with respect to use of the highways, waterways, railways, airports and airways, and other means of transportation existing or proposed.

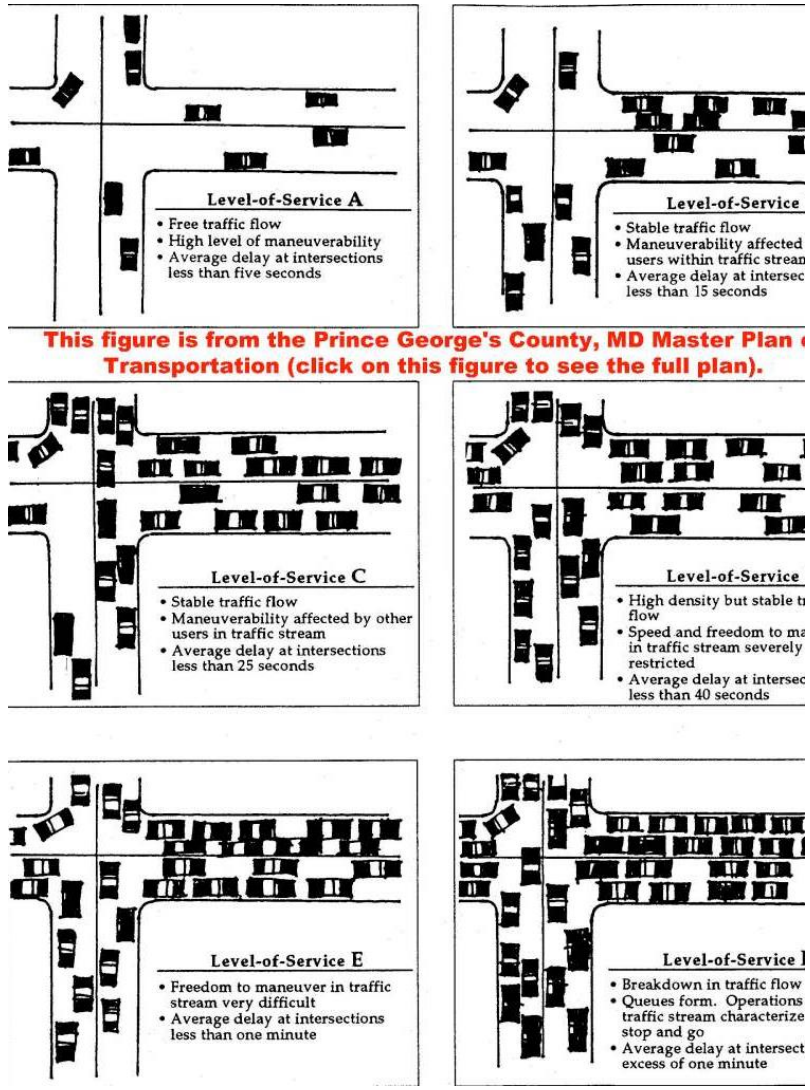
5(B) As appropriate, **will incorporate transportation demand management strategies and provide safe access and connections to adjacent lands and facilities and to existing and planned pedestrian, bicycle, and transit networks and services**. In determining appropriateness under this subdivision (B), the District Commission shall consider whether such a strategy, access, or connection constitutes a measure that a reasonable person would take given the type, scale, and transportation impacts of the proposed development or subdivision.

Highlights of Current VTrans LOS Policy

- It is the Agency's policy to **design** its highways and to require **others accessing** its facilities to effect improvements that will **maintain a LOS "C" for the prescribed design period**.
- Reduced LOS may be acceptable, when approved by the Secretary of Transportation or designee on a case-by-case basis, especially within densely settled areas.
- In **extreme circumstances**, where the existing LOS is less than desired and where the necessary geometric improvements are not feasible, a lower LOS may be acceptable, as long as the safety and mobility of the traveling public is improved.

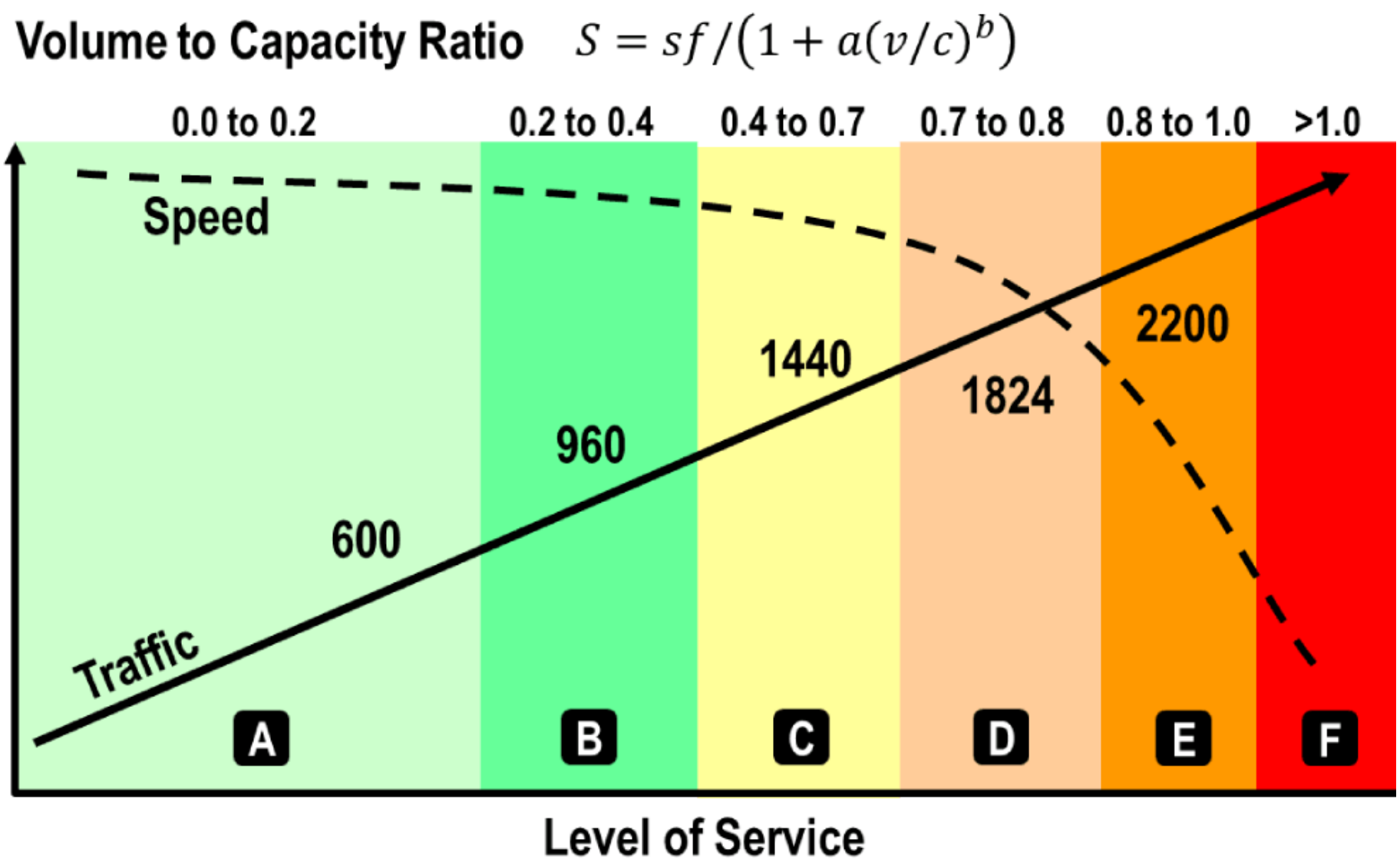
Intersection Level of Service

	Traffic lights	Stop signs /roundabout
Level of service	Delay (s/veh)	Delay (s/veh)
A	0-10	0-10
B	10-20	10-15
C	21-35	16-25
D	36-55	26-35
E	56-80	36-50
F	>80	>50



Issues with Emphasis on LOS in Development Review Process

- Tends to encourage highway improvements over other modes
- Leads to the incremental upsizing of intersections
- LOS C may not be an appropriate standard in built-up areas
- Can sometimes focus discussion on small changes in delay while missing the big picture
- Need to distinguish between design and development transportation impacts


Volume to Capacity Ratio $S = sf/(1 + a(v/c)^b)$
0.0 to 0.2
0.2 to 0.4
0.4 to 0.7
0.7 to 0.8
0.8 to 1.0
>1.0
Speed
Traffic
600
960
1440
1824
2200
A
B
C
D
E
F
Level of Service

Proposed New Congestion Policy

- Establishes the Volume/Capacity (v/c) as the Congestion Measure
- Proposes v/c thresholds for three different land use area types
- Proposes different mitigation strategies for the three areas
- A more detailed traffic operational analysis will be required ***only if*** the existing v/c ratio exceeds the threshold or there are safety issues to address

High Access Areas

Characteristics

- Downtowns and village centers
- Prioritizes Access to adjacent land and local circulation over through traffic
- Short trip distances
- Walking and biking are common
- Most frequent transit service and stops, may have multiple routes
- Slowest traffic speeds (25-30 mph)
- Highest traffic congestion

Designations

- State designated centers
- Class 1 Town Highways?
  (how to handle Class 2 and 3 THs?)
- **Could these be identified in Regional Plans**

Balanced Access and Mobility Areas

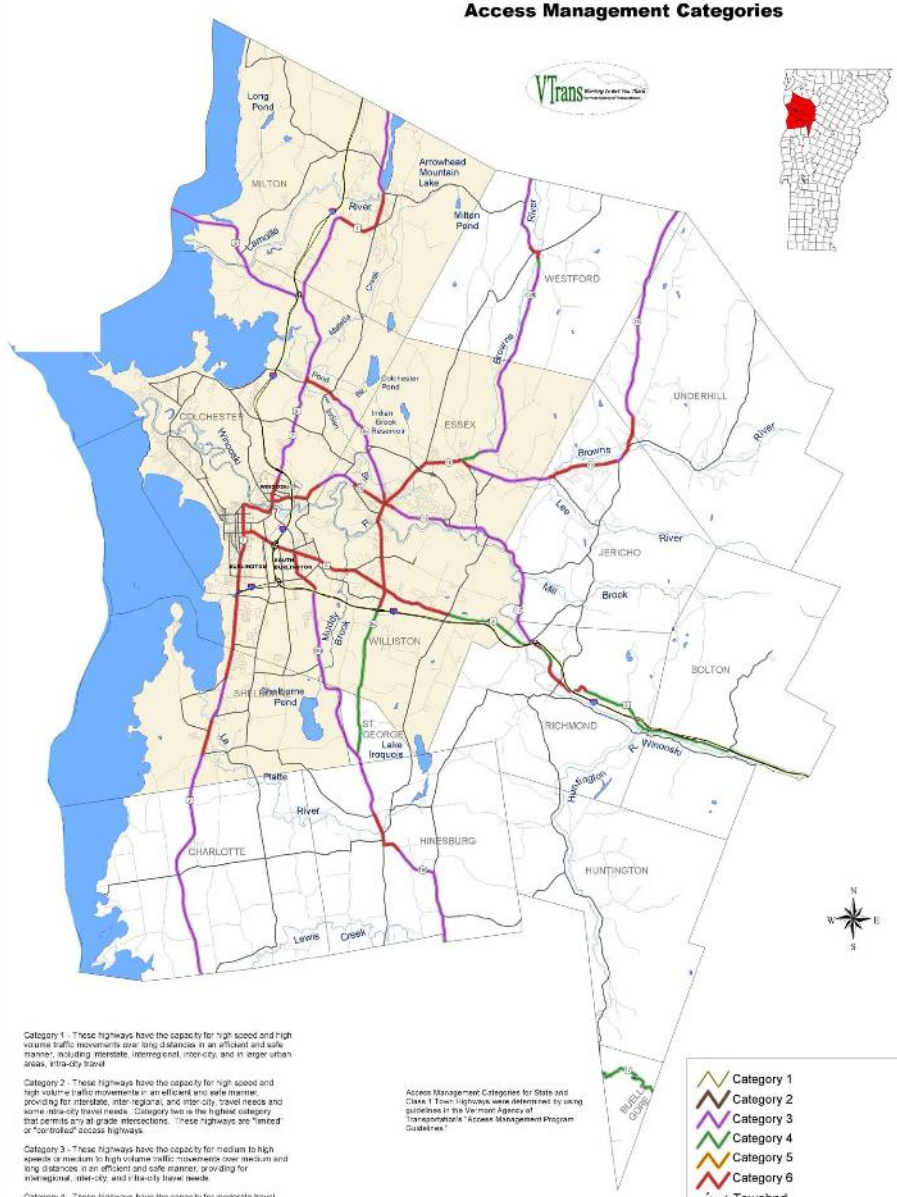
Characteristics

- Commercial corridors and arterials
- Balances local access/circulation and throughput
- Medium (Regional) trip distances
- LU mix and density sufficient/borderline for walking and biking
- Trunk line transit service, fewer routes
- Moderate traffic speeds (35-40)
- Moderate traffic congestion

Designations

- VTrans Access Management Category 6 outside of State Designated Centers on State Highways
- Could be identified in Regional Plans (Would need to be established in collaboration with VTrans if state highway)

Chittenden County Metropolitan Planning Organization
Access Management Categories



Category 1 - These highways have the capacity for high speed and high volume traffic movements over long distances in an efficient and safe manner, including interstate, interregional, inter-city, and in larger urban areas, intra-city travel.

Category 2 - These highways have the capacity for high speed and high volume traffic movements in an efficient and safe manner, providing for interstate, inter-regional, and inter-city, travel needs and some intra-city travel needs. Category two is the highest category that permits any at grade intersections. These highways are "limited" or "controlled" access highways.

Category 3 - These highways have the capacity for medium to high speeds or medium to high volume traffic movements over medium and long distances in an efficient and safe manner, providing for inter-regional, inter-city, and intra-city travel needs.

Category 4 - These highways have the capacity for moderate travel speeds and moderate traffic volumes over medium and short travel distances providing for inter-city, intra-city, and intra community travel needs.

Category 5 - Category five shall be assigned only to roadways that are designated as frontage or service roads where there is no intended purpose of providing for long distance or high volume traffic movements. Access needs will take priority over through traffic movements without compromising the public health, welfare, or safety.

Category 6 - These highways have the capacity for moderate to low travel speeds and moderate to high traffic volumes over medium to short travel distances providing for inter-city, intra-city, and intra-community travel needs.

Access Management Categories for State and Class 1 Town Highways were determined by using guidelines in the Vermont Agency of Transportation's "Access Management Program Guidelines."

DRAFT

0 1 2 3 4 5 Miles

N W E S

- Category 1
- Category 2
- Category 3
- Category 4
- Category 5
- Category 6
- Townbnd
- Federal Aid Highways
- Federal Aid Highways - Interstate
- Town Hwys
- Lakes
- River/Stream
- UrbanArea

High Mobility Areas

Characteristics

- Rural highways
- Prioritizes through traffic mobility over access and local circulation
- Longest trip distances (Intercity and State)
- Highest speeds (> 45 mph)
- Longer distance/intercity transit, few stops
- May have on-road bike facility
- Walking is rare

Designations

- All other highways not in previous areas

Area or Facility Type	VC Ratio (Existing or w/ development traffic) that Requires a Detailed Traffic Analysis.	When is Traffic Mitigation Required?	Mitigation Measures Prioritized

High Access	**> 1.0**	• **When vehicle queues:**
		  • Cause a safety issue
		  • Spill back and block (for specified time TBD) a downstream street or major driveway intersections; or
		  • Block access to other lanes (for specified time TBD)' or
		• If V/C Exceeds 1.0 for more than 2 hours
			1. TDM Programs
			2. Walking & Biking Facility Improvements
			3. Transit
			4. Traffic signal operational enhancements
			5. Highway capacity if no adverse impacts to context

Balanced Access and Mobility (BAM)	**> 0.90**	• **When vehicle queues:**
		  • Cause a safety issue
		  • Spill back and block (for specified time TBD) a downstream street or major driveway intersections; or
		  • Block access to other lanes (for specified time TBD); or
		• If V/C exceed 0.90 for more than one hour
			1. TDM Programs
			2. Walking & Biking Facility Improvements
			3. Transit
			4. Traffic signal operational enhancements
			5. Highway capacity if no adverse impacts to context

High Mobility	**>0.80**	• Vehicle queue issues as above; or • If V/C exceed 0.80 for more than one hour	**1. TDM Programs** **2. Transit** **3. Traffic signal operational enhancements** **4. Highway capacity if no adverse impacts to context**

Questions and Comments

Access Category	Highway Functional Class (AADT)	Degree of Access Control	Direct Property Access	Driveway Controls	Traffic Operations Allowed	Design Features
1	Principal Arterials (Interstate)	Full	No	NA	Access at Interchanges Only with Public Hwys	Grade-Separated Interchanges
2	[1] Principal Arterials (Non-Interstate – LA) [2] Other Principal Arterials (LA) [3] Limited Access (LA) Major collectors	Full to Partial	No-Except by Access Rights	NA or Location	Access at Intersections with Public Highways	At-Grade or Grade-Separated at 1/2 to 1 Mile Intervals
3	[1] Principal Arterials (Non LA) [2] Other Principal Arterials (Non LA) [3] Minor Arterials (>5000 AADT) [4] Non-Limited Access Major Collectors on State Hwy & Class I TH's (>5000 AADT)	[1] Mandatory Restrictions to operations [2] Design Features [3] Land Use Issues	Deny, Restrict or Allow	NA or Number, Spacing and Location	NA or May Limit Turning Movements	[1] Physical Barriers [2] Signal Spacing Requirements [3] Left and/or Right Turn Lanes Required [4] Spacing of Public Hwy Intersection (1/4 to ½ Mile)
4	[1] Minor Collectors [2] Minor Arterials on State Hwy or Class I TH's (<5000 AADT) [3] Non-Limited Access Major Collectors on State Hwy & Class I TH's (<5000 AADT)	[1] Design Features [2] Land Use Issues	Yes	Number, Spacing and Locations	[1] All Turns In & Out [2] May Limit Turning Movements	Spacing of Public Highway Intersection (1/4 to ½ Mile)
5	Frontage or Service Roads	[1] Design Features [2] Land Use Issues	Yes	Number & Location	All Turns In & Out	Signal Spacing (No Less Than 300 Feet)
6	"Urban" Sections of Highways	[1] Design Features [2] Land Use Issues	Deny, Restrict or Allow	Number, Spacing & Location	[1] All Turns In & Out [2] May Limit Turning Movements	Signal Spacing (No Less Than 500 Feet)

Table 1-1 Access Category Standards