



MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
Prince George's County Planning Department



Multimodal Transportation and Street Safety

Session 6

Prince George's County
Neighborhood Planning Academy

March 14, 2026

SESSION 5



AGENDA

● Introductions

● Lecture

- County Transportation Facts
- Transportation Themes and Examples
- Master Plan of Transportation
- Safe Street Design
- Adequacy

INTRODUCTIONS

GUEST SPEAKERS



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TRANSPORTATION AND MOBILITY

IN PRINCE GEORGE'S COUNTY



15
Metro
Stations



11
Purple Line
Stations



7
Marc Stations



Nation's most
important
passenger
rail system
(NE Corridor)



Major east
coast freight
rail line

BUS SERVICE



24

Prince George's
County TheBus routes



>1,400

TheBus stops



58

Metrobus routes

TRANSPORTATION AND MOBILITY

IN PRINCE GEORGE'S COUNTY



Nation's most
important
interstate
highway (I-95)



Region's most
important
highway
(Capital
Beltway)



Region's
primary east-
west highway
(US 50)



Primary
alternates to I-95
(BW Parkway and
US 301)



4,100 MILES OF ROADWAYS AND STREETS





163 MILES OF BIKE LANES

Capital Bike Share:
Docking stations - 27

Other Systems:
Veo – City of College Park



College Park
BikeShare Station



139 MILES OF BIKEABLE SHOULDERS





39 MILES OF SHARROWS





31 MILES OF SIDE PATHS



OTHER TRANSPORTATION SERVICES



College Park
Airport



Ferry
Service
proposed



Rideshare



MagLev

One Integrated System, Many Players

MDOT SHA manages most major roads and main streets in the County.

Two of the three major vehicular routes into DC are National Parks.

MdTA manages the Intercounty Connector

WMATA manages heavy rail and a significant bus network.

DPW&T manages the remainder of the road network and The Bus

M-NCPPC manages most of the trail network.

One Integrated System, Many Players

Sidewalks are managed by a hodgepodge of property owners.

MTA operates MARC, commuter buses, and the Purple Line.

Amtrak owns the Northeast Corridor/ Penn Line.

CSX owns the Camden Line.

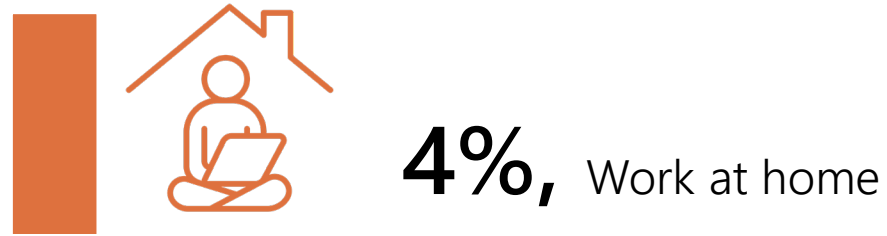
DPIE has final say on what types of roads and streets are constructed as part of new development projects.

DDOT manages Southern Avenue and Eastern Avenue.

A significant portion of our traffic comes from other counties, drives through Prince George's County, en route to other counties.

HOW WE COMMUTE TO WORK

Workers 16 years and over, 2019



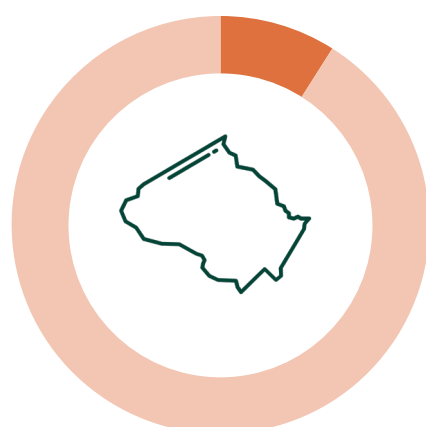
WHERE WE COMMUTE TO WORK?

2016-2020



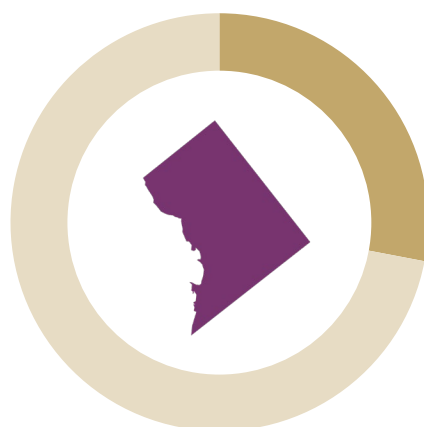
42%

Prince George's
County



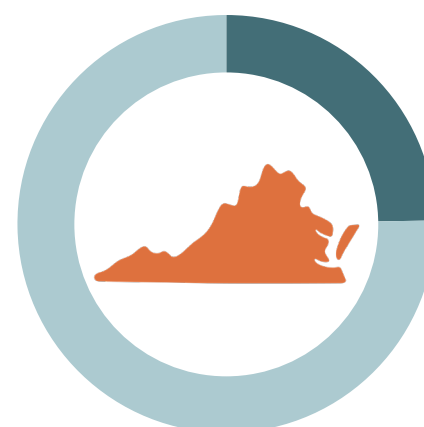
9%

Montgomery
County



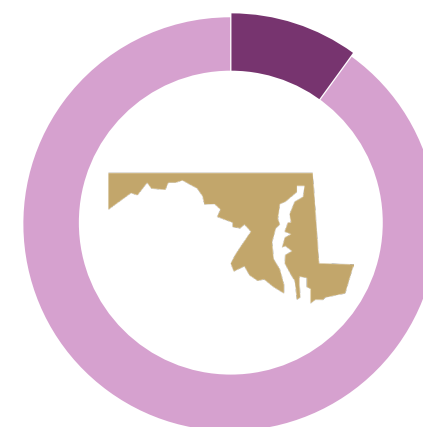
28%

Washington, D.C.



11%

Virginia



10%

Rest of Maryland

EQUITY

Equality



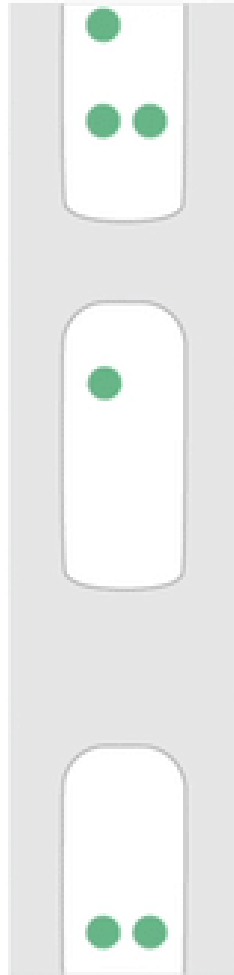
Equity



EQUITY

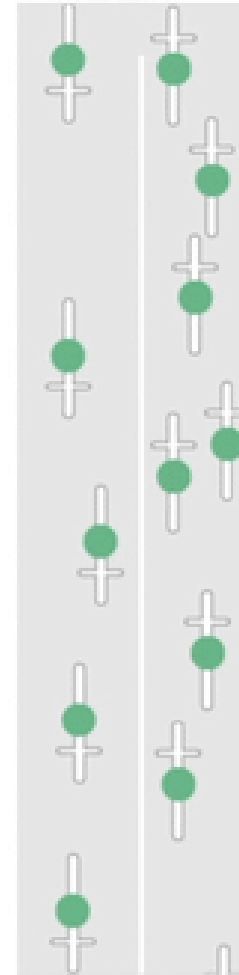
Source: National Association
of City Transportation
Officials

CAR LANE



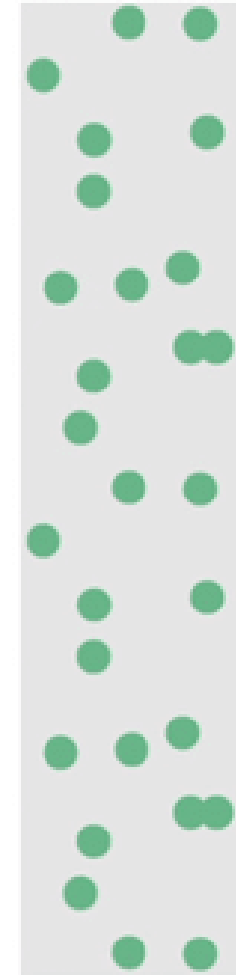
600 -
1,600
people
per hour

BIKE LANE



7,500
people
per hour

SIDEWALK



9,000
people
per hour

TRANSITWAY



10,000 -
25,000
people
per hour

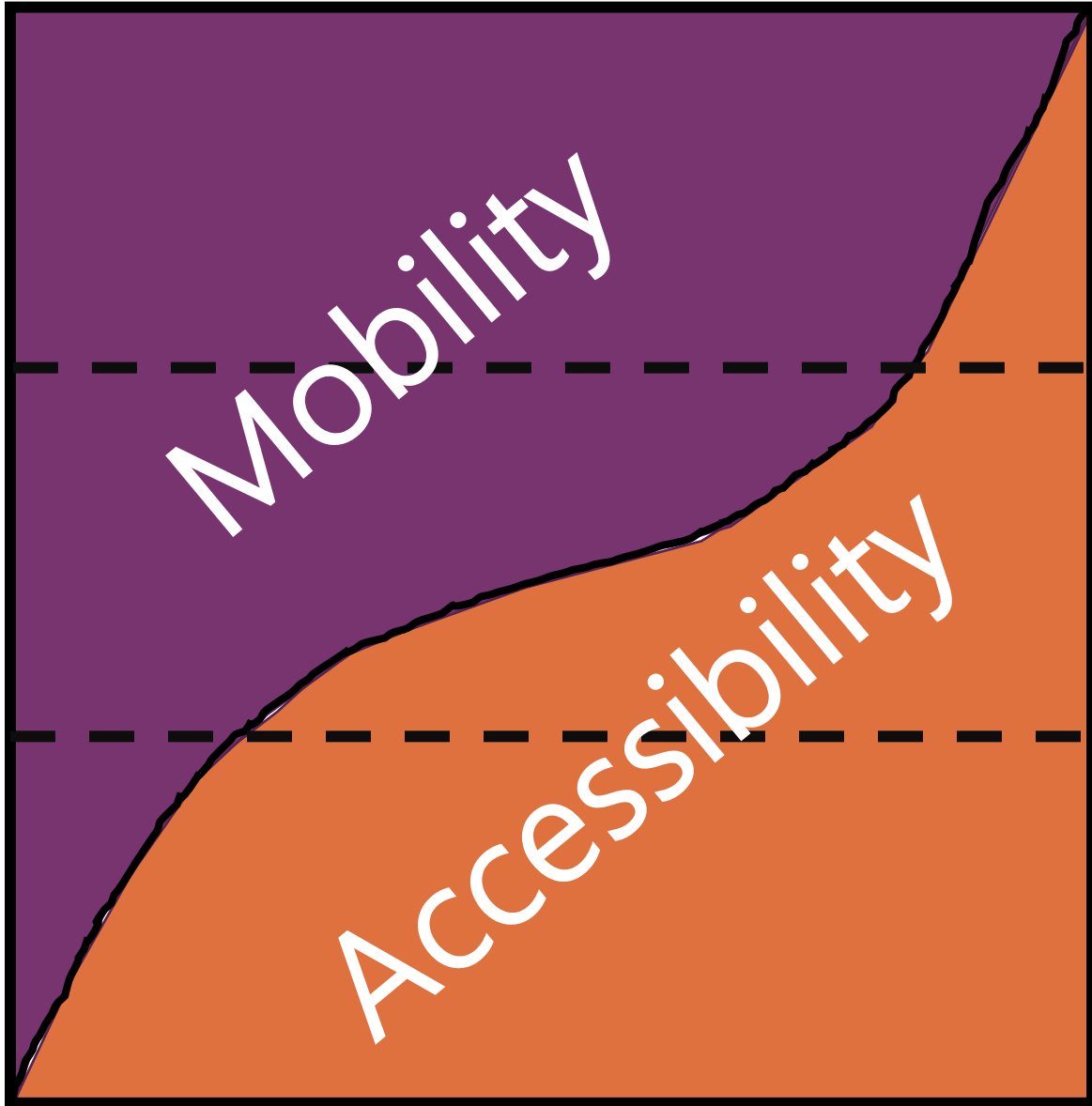
MOBILITY VS. ACCESSIBILITY

MOBILITY vs ACCESSIBILITY

- Mobility – Ability to move
- Access – Ability to enter/exit

No right answer

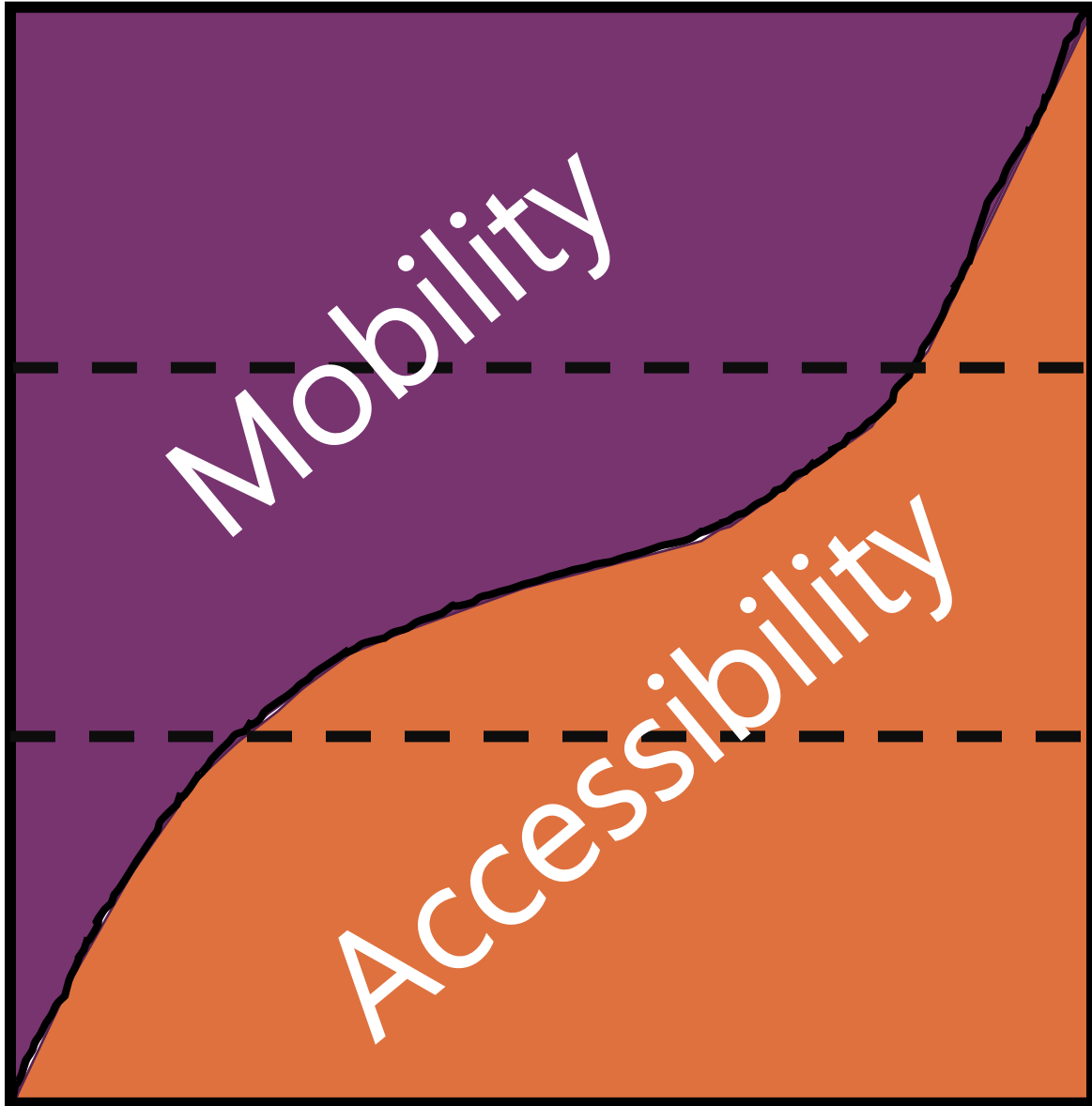




Arterial / Highway /
Freeway

Collector / Major
Collector

Urban Center / Local /
Residential



Automobile / Some
Transit

Automobile / Transit

Automobile /
Pedestrian / Bicycle /
Some Transit

Safety
Access
Multimodal

Throughput
Mobility
Separate Modes

People

Cars



Street –
Platform for building Place
and economic activity; low
speeds; prioritize
pedestrian movements



Road –
Attempt to balance
adequate vehicle capacity,
high speeds, and access;



Highway –
Efficient connections
between productive
places; high speeds;
prioritize vehicle
movements

QUESTIONS?

TRADEOFFS

TRANSPORTATION TRADE-OFFS



As the
economic
success and
opportunity
of a place
increases

Demand for access increases

More people walk

More people bike

More people take transit

More people want to travel to that place

Many people still must travel through that place.

TRANSPORTATION TRADE-OFFS

Prince George's County is dominated by people who drive single-occupant vehicles

Prince George's County has developed in ways that require people to drive.



Employers do not locate in areas without strong walking, biking, and transit infrastructure.

Most young people and many empty nesters do not want to live or work in locations without strong walking, biking, and transit infrastructure

MASTER PLAN OF TRANSPORTATION



- Articulates the County's vision for transportation and mobility.
- Establishes the County's policies for the movement of people and goods.
- Recommends new or improved streets, services, and bike/ped facilities.





PRIORITIZING PEOPLE

Successful communities
are built at the human
scale

CREATING GREAT PLACES

The County's success
depends on a high-quality
public realm

PRINCE GEORGIANS COME FIRST

Decisions are made to
the benefit of Prince
Georgians

EQUITY MEANS SAFE ACCESS FOR ALL

An equitable network
provides safe and
equitable access to the
most opportunities

SUSTAINABILITY IS PARAMOUNT

Climate-smart travel
options sustain the County
and the planet

Challenges to Tackle

Achieving the vision of Plan 2035 requires a fresh look at how Prince George's County approaches mobility and accessibility.



Placemaking

Building places where people want to live, work, study, and play



Sustainability

Increasing opportunities for car-free and car-light living



Equity

Improving accessibility in transit-deficient communities



Safety

Making streets safe for all users



Streets vs. Roads

Differentiating commuter routes from Main Streets



Information

Increasing knowledge on tradeoffs and options

SAFE STREET DESIGN



Eliminate roadway fatalities and serious injuries by 2040.

Addressing the 6 E's:

- Engineering
- Enforcement
- Education
- Emergency Response
- Equity
- Evaluation



Data helps us identify dangerous roadways and
implement roadway safety improvements.

GREEN AND COMPLETE STREETS



GREEN AND COMPLETE STREETS

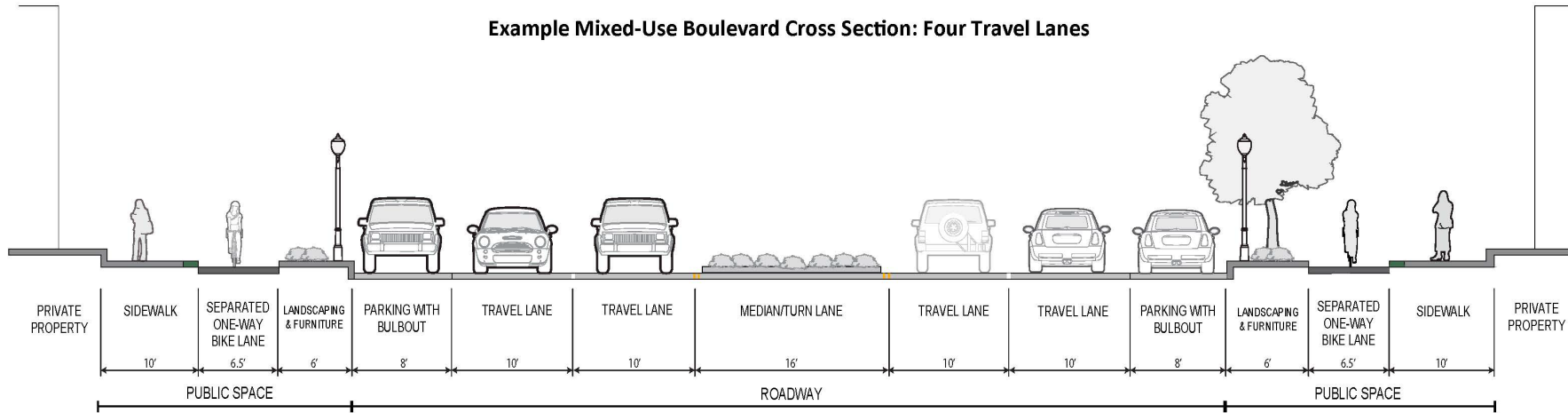


GREEN AND COMPLETE STREETS

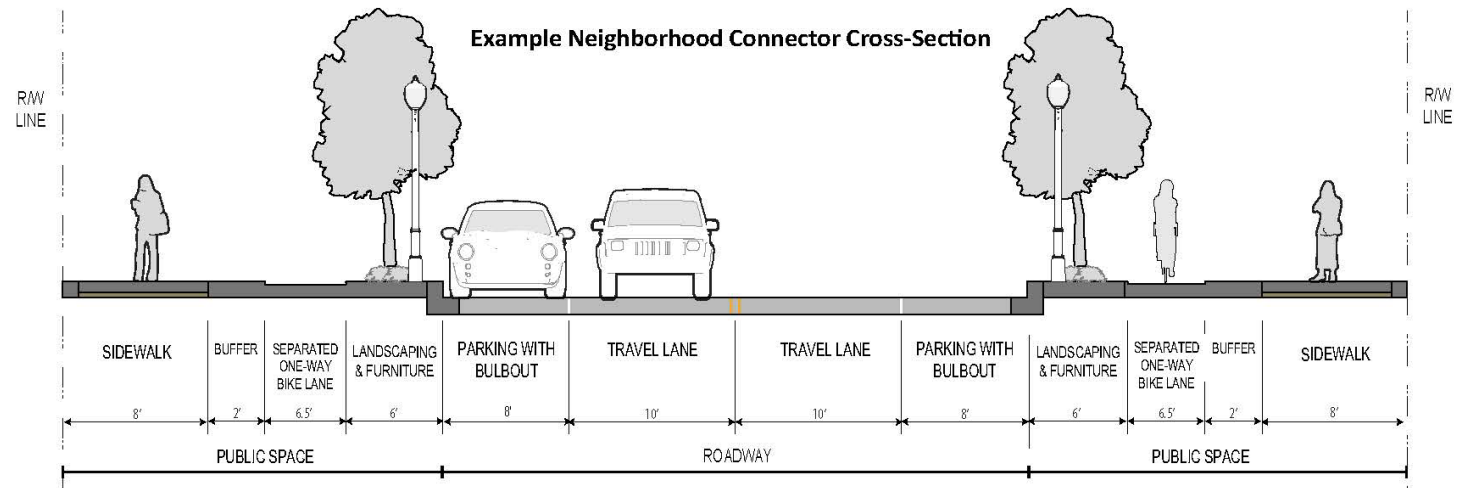


GREEN AND COMPLETE STREETS

Example Mixed-Use Boulevard Cross Section: Four Travel Lanes



Example Neighborhood Connector Cross-Section



ADEQUACY



Adequate Public Facilities Ordinance (APFO)

- APFO ensures the adequacy and concurrency of public facilities.
- APFO identifies ways a development application can contribute to achieving adequacy.

Concurrency means that adequate public facilities are in place when the impact of a development occurs.

Usually, the standards that define *adequacy* are expressed in measures that are appropriate to the facilities.

APFO REGULATIONS

- **APFO** regulations are contained within the Subdivision Ordinance, Section 24-4500.
- **APFO** applies to all preliminary plan of subdivision and plat applications.

Subtitle 24-4500(b)(2): An application listed in Section 24-4502(a) shall not be approved until a certificate of adequacy or conditional certificate of adequacy is approved in accordance with the procedures and standards of this Section. No certificate of adequacy or conditional certificate of adequacy shall be approved unless and until it is reviewed and approved in conjunction with one of the applications or subdivision reviews identified in Section 24-4502(a) above and Section 24-4503(a).

APFO REGULATIONS

The current Ordinance requires adequacy to be approved prior to the approval of a Preliminary Plan of Subdivision through the review and issuance of a **Certificate of Adequacy**

APFO applies to:

- Police
- Fire/EMS
- Schools
- Transportation (traffic, bicycle, pedestrian)
- Parks and Recreation





TRANSPORTATION ADEQUACY

- Traffic impacts
 - Traffic Impact Study (TIS)
 - Data Collection
 - Proposed Trips
 - De Minimis
 - Mitigation

TRANSPORTATION ADEQUACY



24-4505 (a)(2) At the time of Preliminary Plan of Subdivision (PPS), the proposed development shall demonstrate compliance with the Level of Service (LOS) standards of Section 24-4505(b), provides mitigation if applicable, and complies with the other relevant requirements.

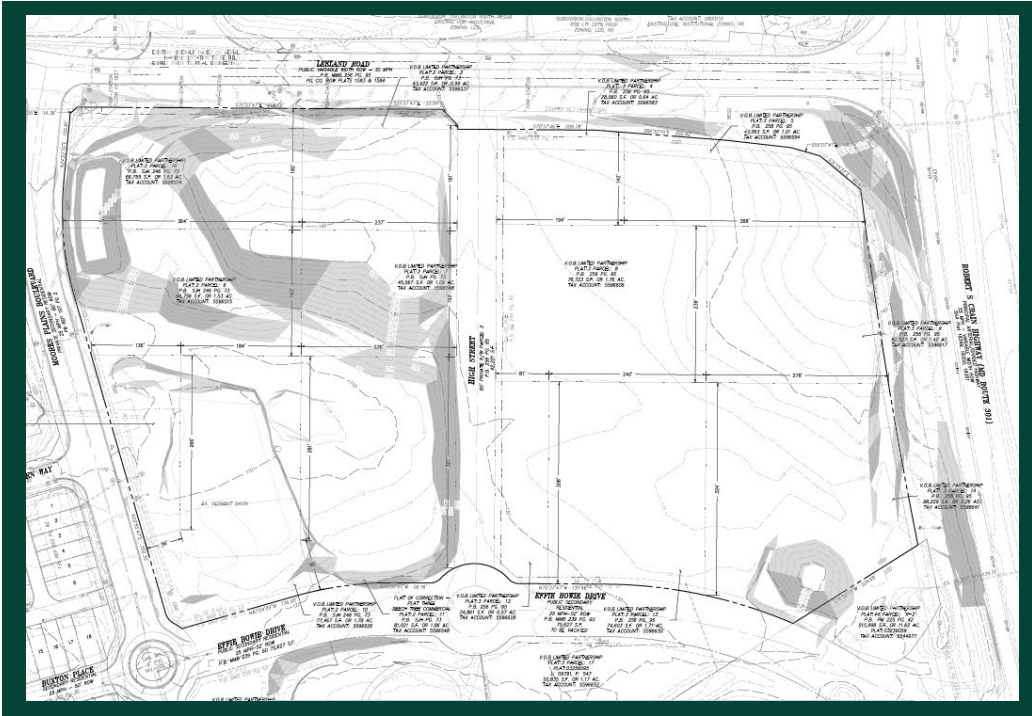


24-4505 (b) Adequate transportation facilities shall be available to accommodate or offset (through alternative trip capture) the vehicular trips within the Transportation Impact Area surrounding the development subject to the requirements of this Section, as defined by the *Transportation Review Guidelines*

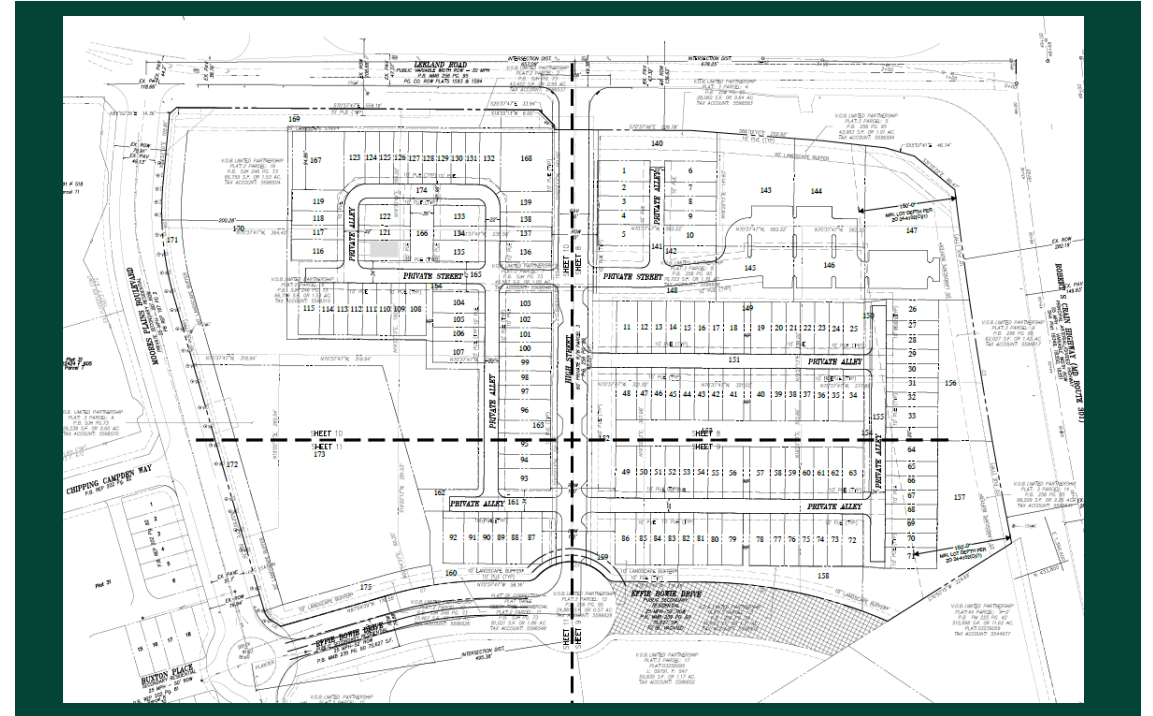
- ✓ **Preliminary Plan of Subdivision:** The preliminary detailed drawing (to scale) of a tract of land, depicting its proposed division into lots, blocks, streets, or other designated areas within a proposed subdivision
- ✓ **Transportation Level of Service:** A qualitative measure applied that uses a sequence of letters from A through F to describe the quality of operational conditions within an intersection or a roadway link.
- ✓ **Transportation Review Guidelines:** The guidelines for the analysis of the traffic, pedestrian, or bicycle impact of development proposals.

TRANSPORTATION ADEQUACY

Existing Subdivision



Proposed Subdivision



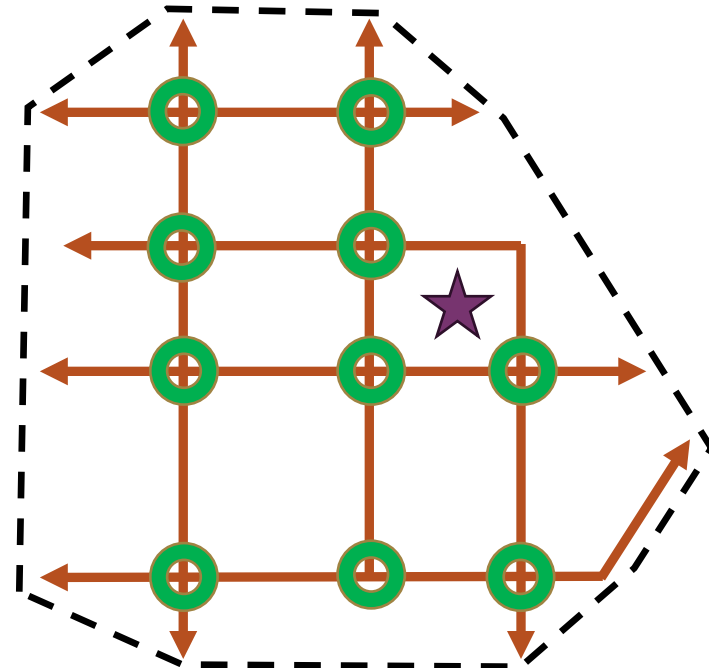
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TRANSPORTATION ADEQUACY - Traffic

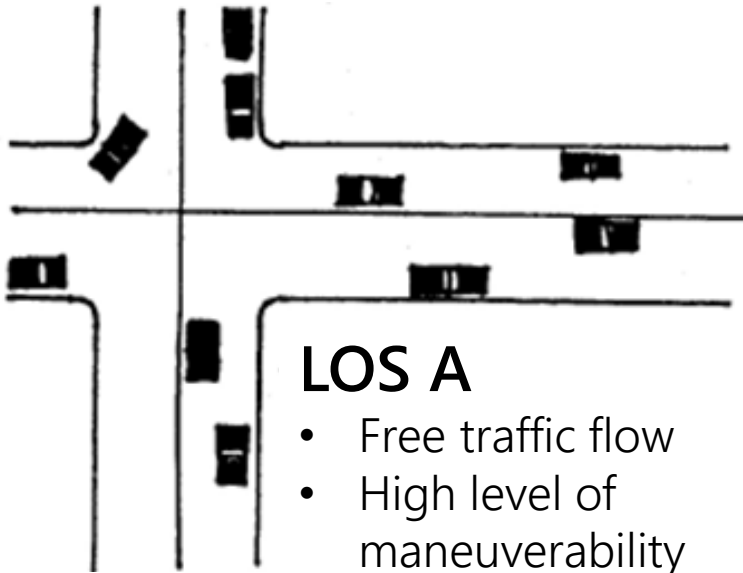


Traffic Assessment Each intersection within a defined study area must be evaluated to determine if the intersection operates at an acceptable Level of Service (LOS) standard.

- ★ Site Proposed Site Location
- ⊕ Nodes Intersection Operations Evaluated
- ↔ Links Roadways
- ⬡ Study Area Agreed area to study intersections

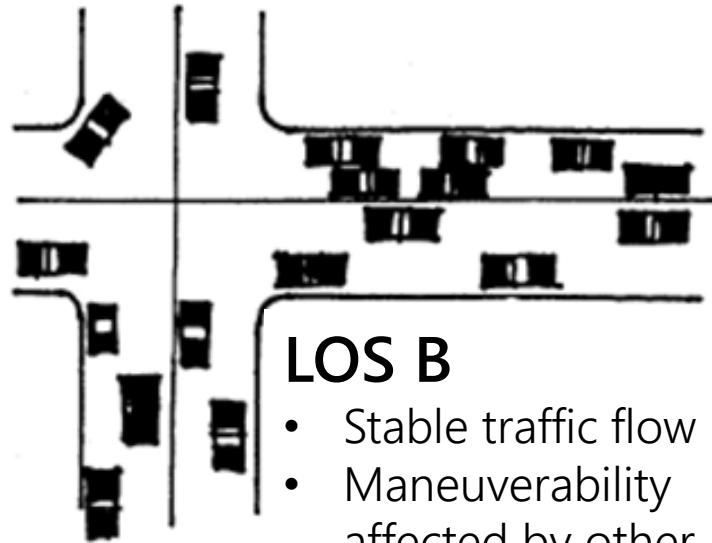


VEHICLE LEVEL OF SERVICE



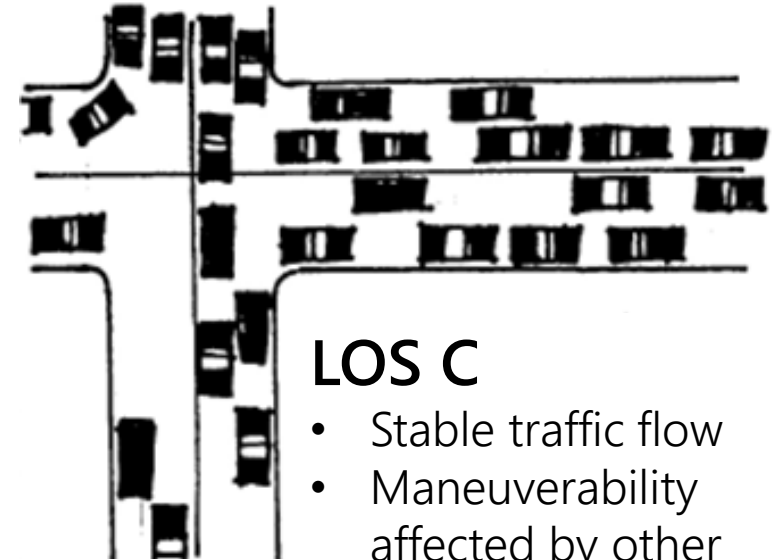
LOS A

- Free traffic flow
- High level of maneuverability
- Average delay at intersections less than five seconds



LOS B

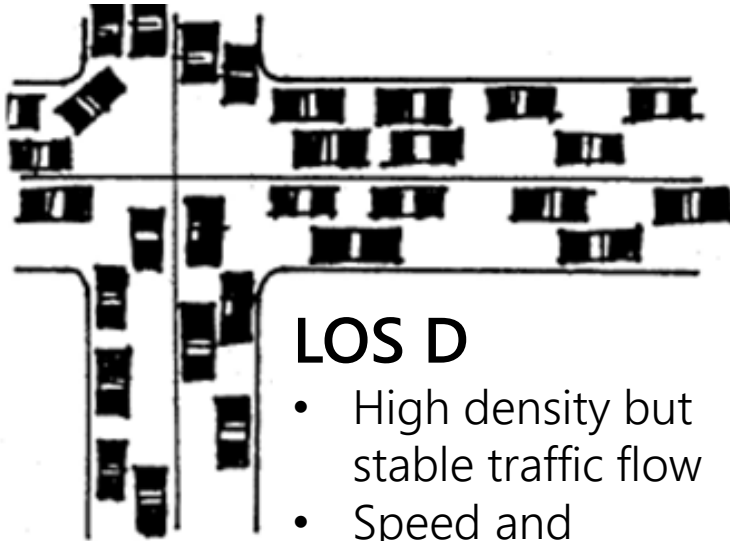
- Stable traffic flow
- Maneuverability affected by other uses within traffic stream
- Average delay at intersections less than 15 seconds



LOS C

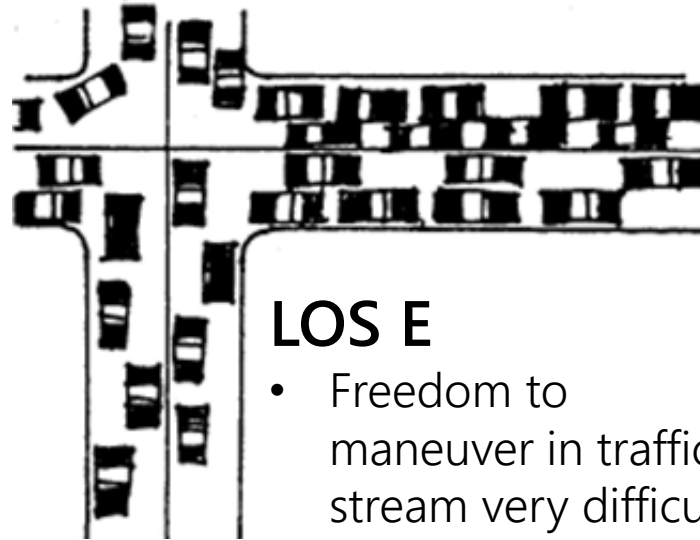
- Stable traffic flow
- Maneuverability affected by other uses within traffic stream
- Average delay at intersections less than 25 seconds

VEHICLE LEVEL OF SERVICE



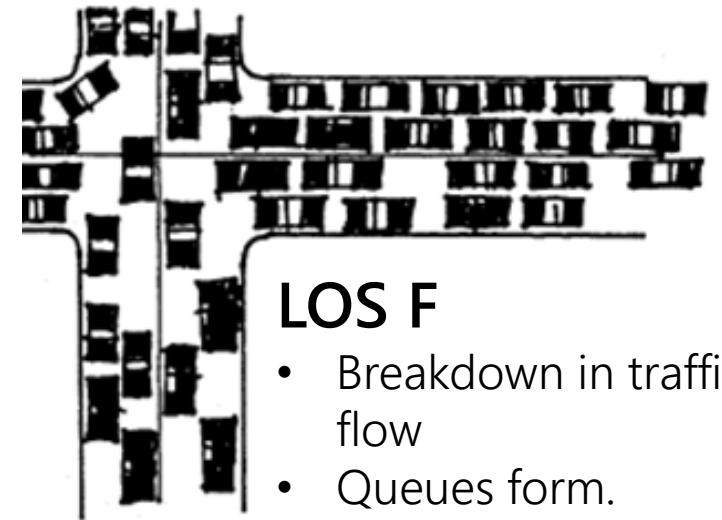
LOS D

- High density but stable traffic flow
- Speed and freedom to maneuver in traffic stream severely restricted
- Average delay at intersections less than 40 seconds



LOS E

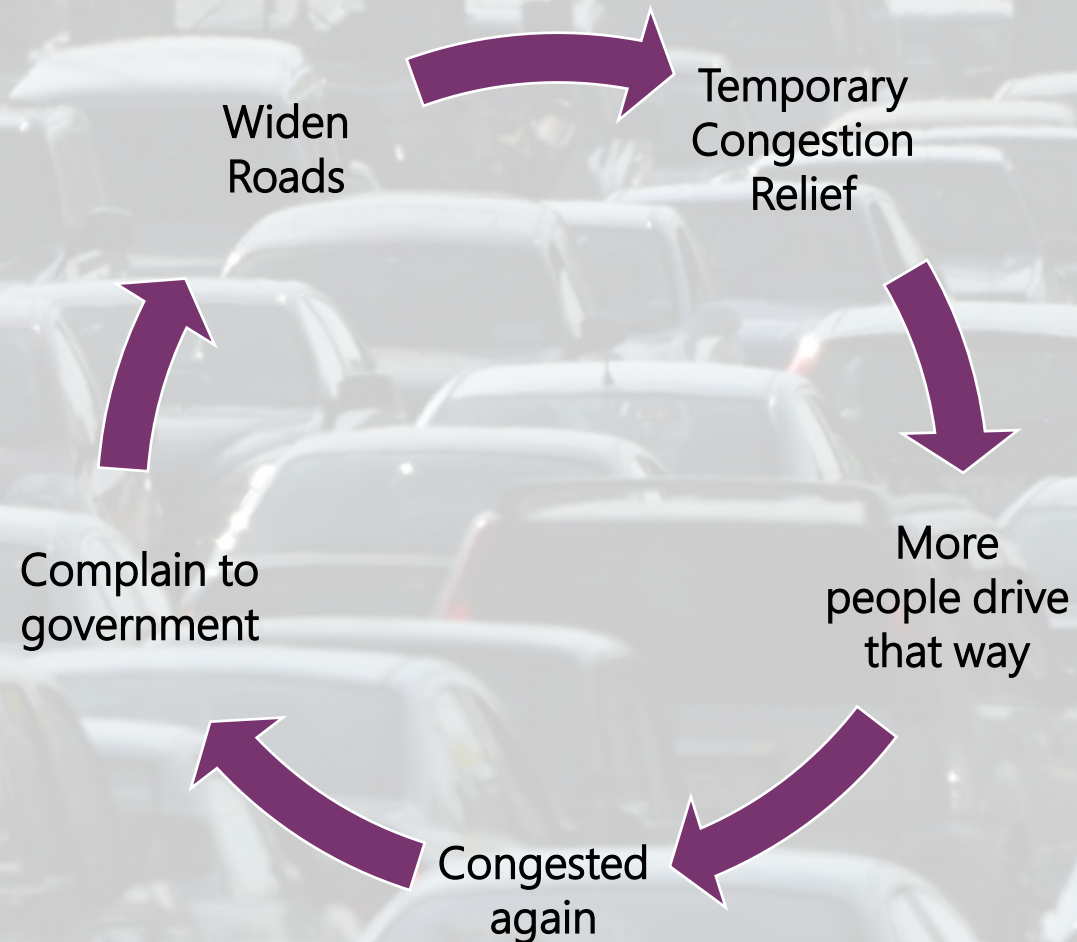
- Freedom to maneuver in traffic stream very difficult
- Average delay at intersections less than one minute



LOS F

- Breakdown in traffic flow
- Queues form. Operations within traffic stream characterized by stop and go
- Average delay at intersections in excess of one minute

VEHICLE LEVEL OF SERVICE: HOW IT WORKS



TRANSPORTATION ADEQUACY



Policy Level of Service
Prince George's 2035
Approved General Plan
(Plan 2035)



Regulatory LOS standards:
Subdivision Regulations

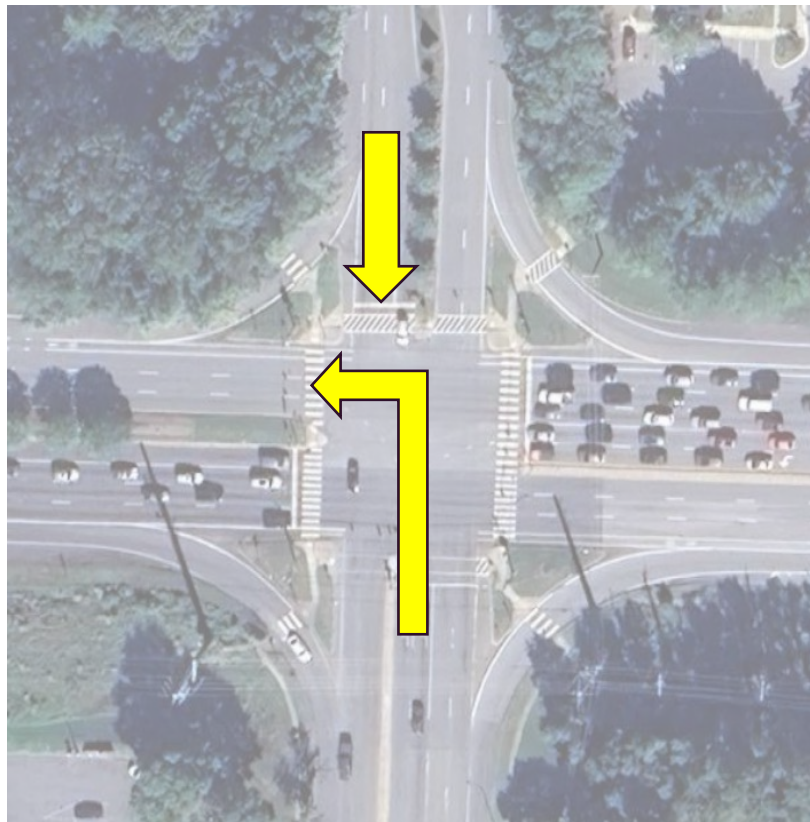


LOS standards vary
geographically by:

- Transportation Service Area (TSA)
- Regional Transit Districts
- Local Centers

TRANSPORTATION LEVEL OF SERVICE (LOS)

Critical Lane Volume Planning-level process developed by the Transportation Research Board to determine the LOS

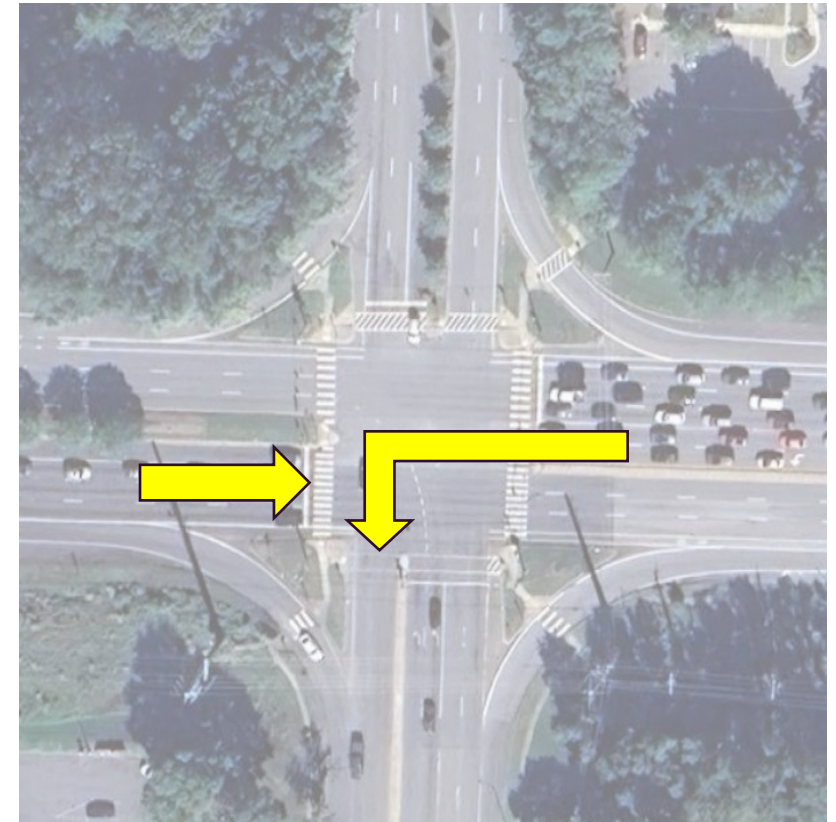


Adjusted for Number of Lanes

North-South



East-West

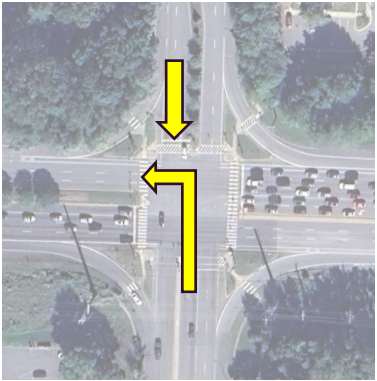


Adjusted for Number of Lanes

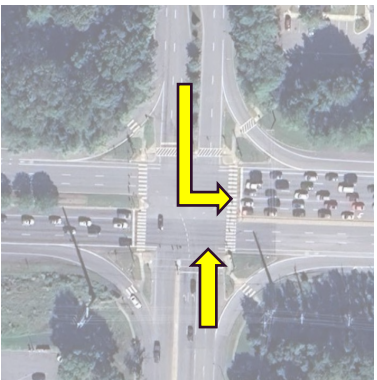
TRANSPORTATION LEVEL OF SERVICE (LOS)

Critical Lane Volume Planning-level process developed by the Transportation Research Board to determine signalized intersection LOS.

Choose Highest Volume

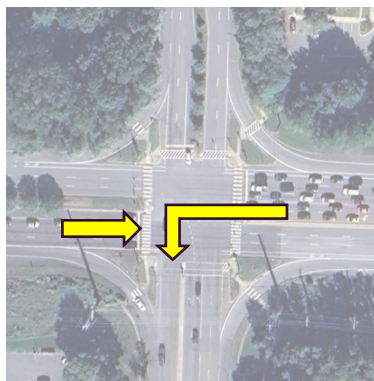


OR

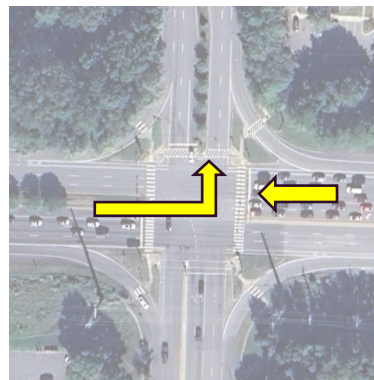


Adjusted for Number of Lanes

Choose Highest Volume



OR



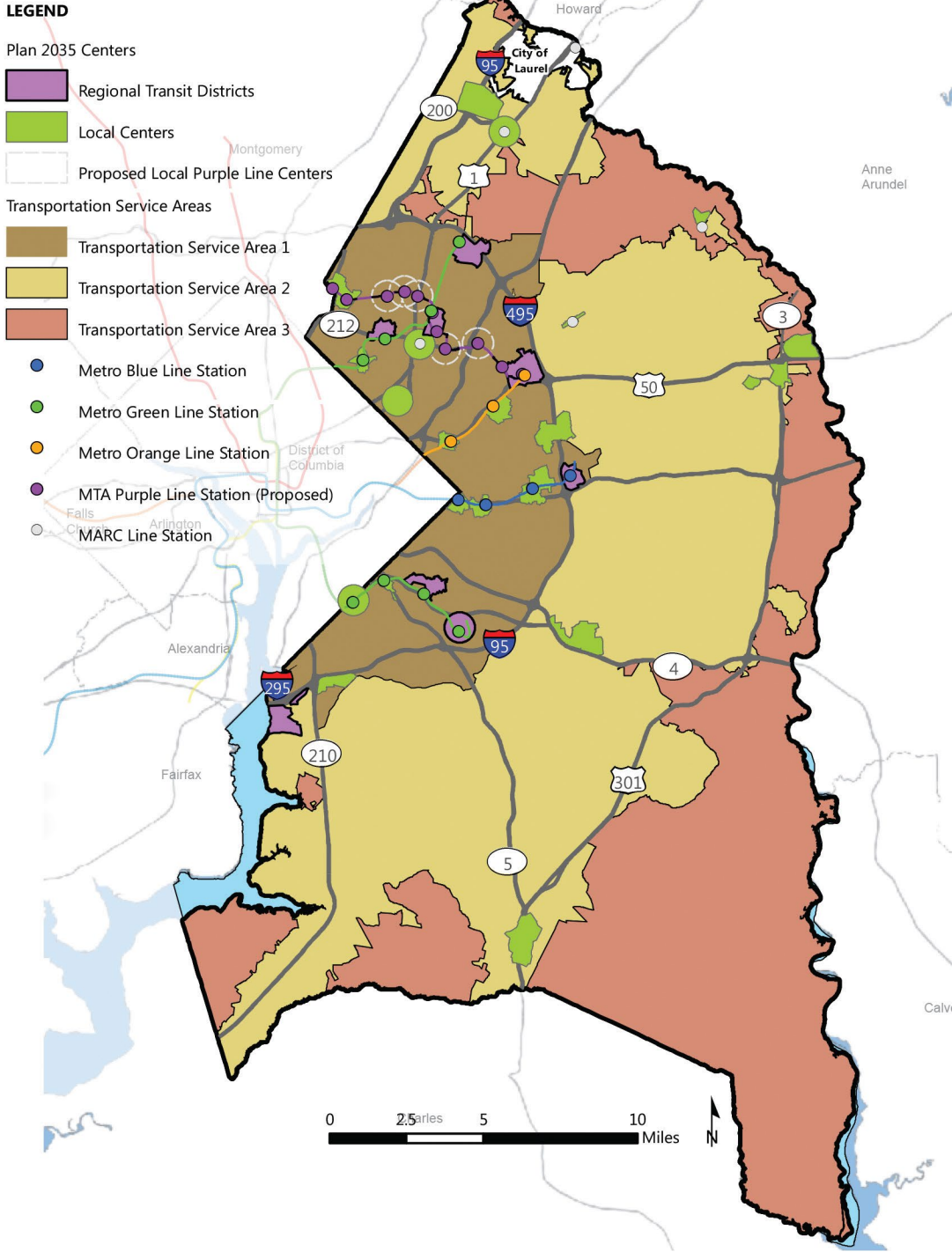
Adjusted for Number of Lanes

PLUS

Critical Lane Volume (CLV)	Level of Service (LOS)
0–1,000	A
1,001–1,150	B
1,151–1,300	C
1,301–1,450	D
1,451–1,600	E
1,600 and over	F ¹

ADOPTED LOS STANDARDS

Policy Area	LOS	CLV
TSA 1	E	1451-1600
TSA 1 Centers	E	1451-1600
TSA 2	D	1301-1450
TSA 2 Centers	E	1451-1600
TSA 3	C	1151-1300
TSA 3 Centers	E	1451-1600
RTO edge zones LTO edge zones PD zones	Transit Edge (F)	1601-1800
RTO core zones LTO core zones PD zones	Transit Core (F)	1801-2000



PROJECT SCOPING

Approved scoping agreement required for COA application



Meeting to discuss scoping

- Applicant
- County agencies
- Municipalities
- MDOT State Highway Administration



Elements Agreed:

- Study Area
- Intersections Analyzed
- Background Developments
- Growth Rate
- Future Conditions



The Planning Department has final approval of which elements are included in the scope



TRAFFIC IMPACT STUDY

A specialized engineering study, prepared by the applicant, that determines the potential traffic impacts of the proposed development on the existing traffic network.

Assess existing and future traffic scenarios both with and without the development.

Forecasts vehicle trip generation and distribution based on buildout conditions

Recommends mitigation measures.

TRAFFIC IMPACT STUDY (TIS)

Follows Transportation Review Guidelines



Data Collection:

- Traffic Counts
- Pedestrian Counts
- Bicycle Counts
- Truck Counts
- Observe Queues
- Collect intersection lane geometry and traffic signal operations



Develop Existing Conditions:

- Identify Peak Hour
- Prepare existing traffic volume network and lane geometry for study area intersections
- Assess CLV based on volumes, lane geometry and traffic signal operations



Develop Future Background Condition:

- Prepare future proposed project volume maps
- Prepare future background growth volume maps
- Update lane geometry with future roadway projects
- Create Total Background volume
- Assess CLV



Develop Future Total Condition:

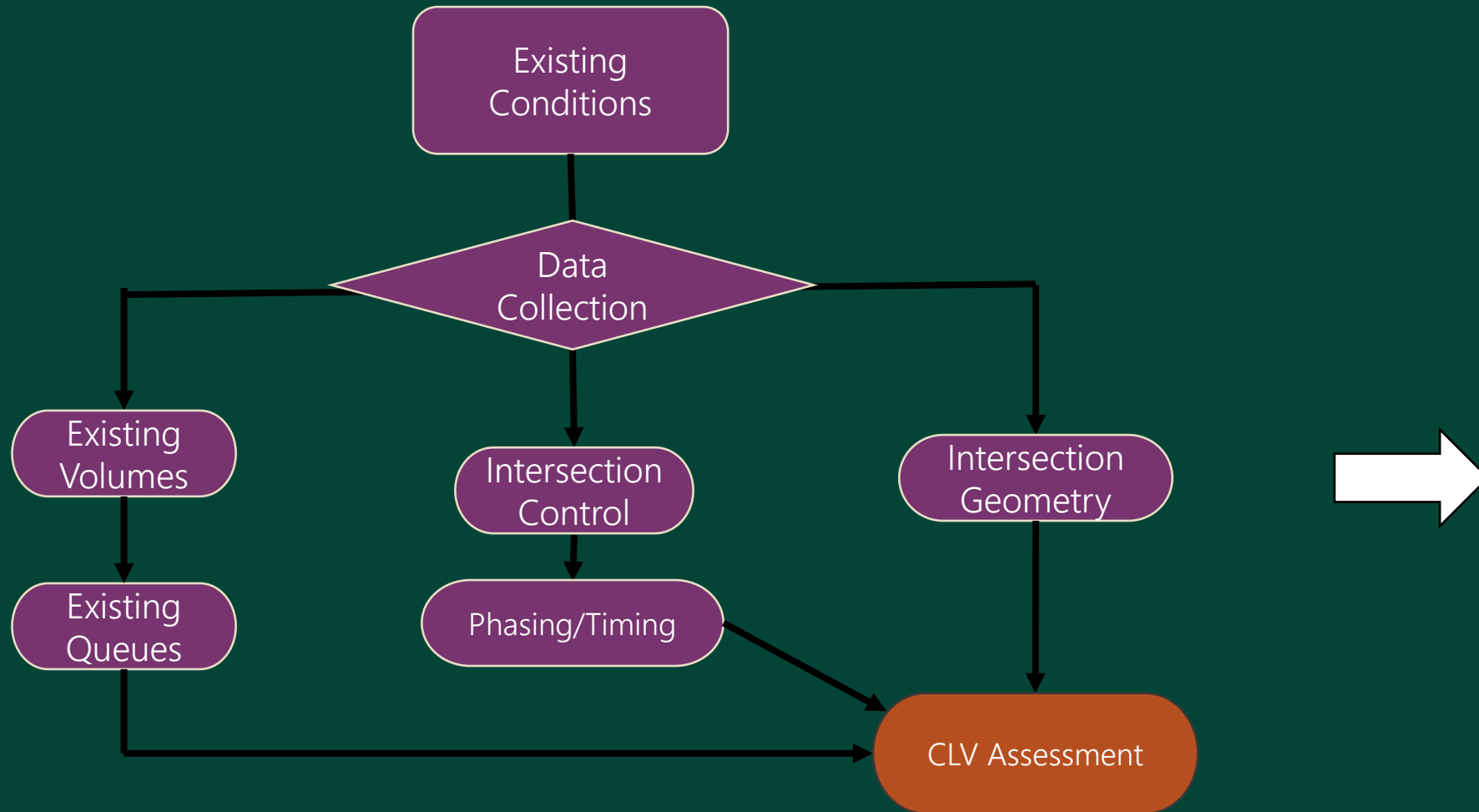
- Use scoping agreed trip generation, trip distribution, and trip assignment to prepare future proposed volume maps
- Assess CLV



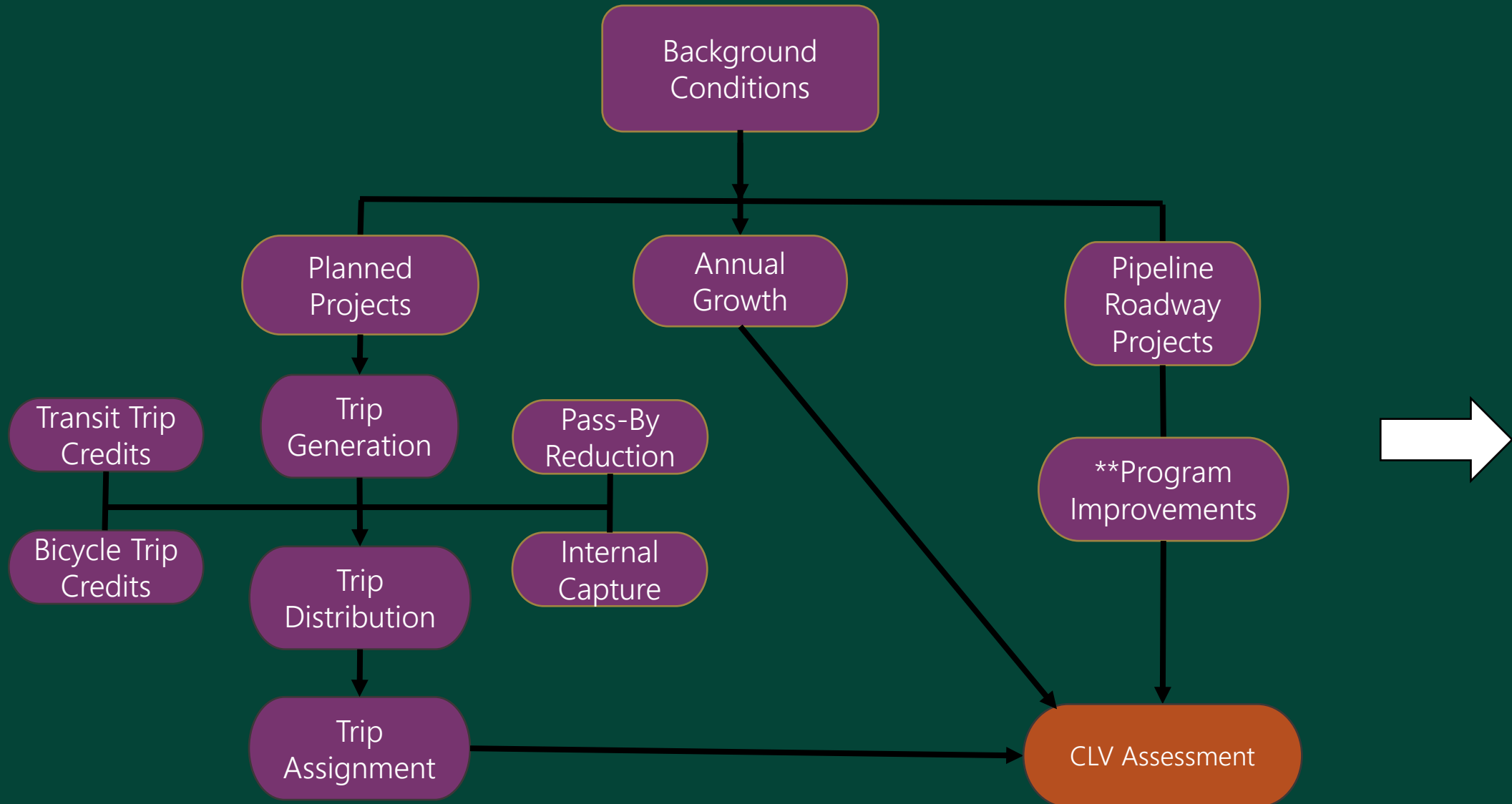
Mitigation (if necessary):

- Apply these methods
 - Revise lane geometry
 - Revise signal operations
 - Fund CIP
 - Reduce development size
 - Add bicycle or pedestrian facilities
 - Access CLV

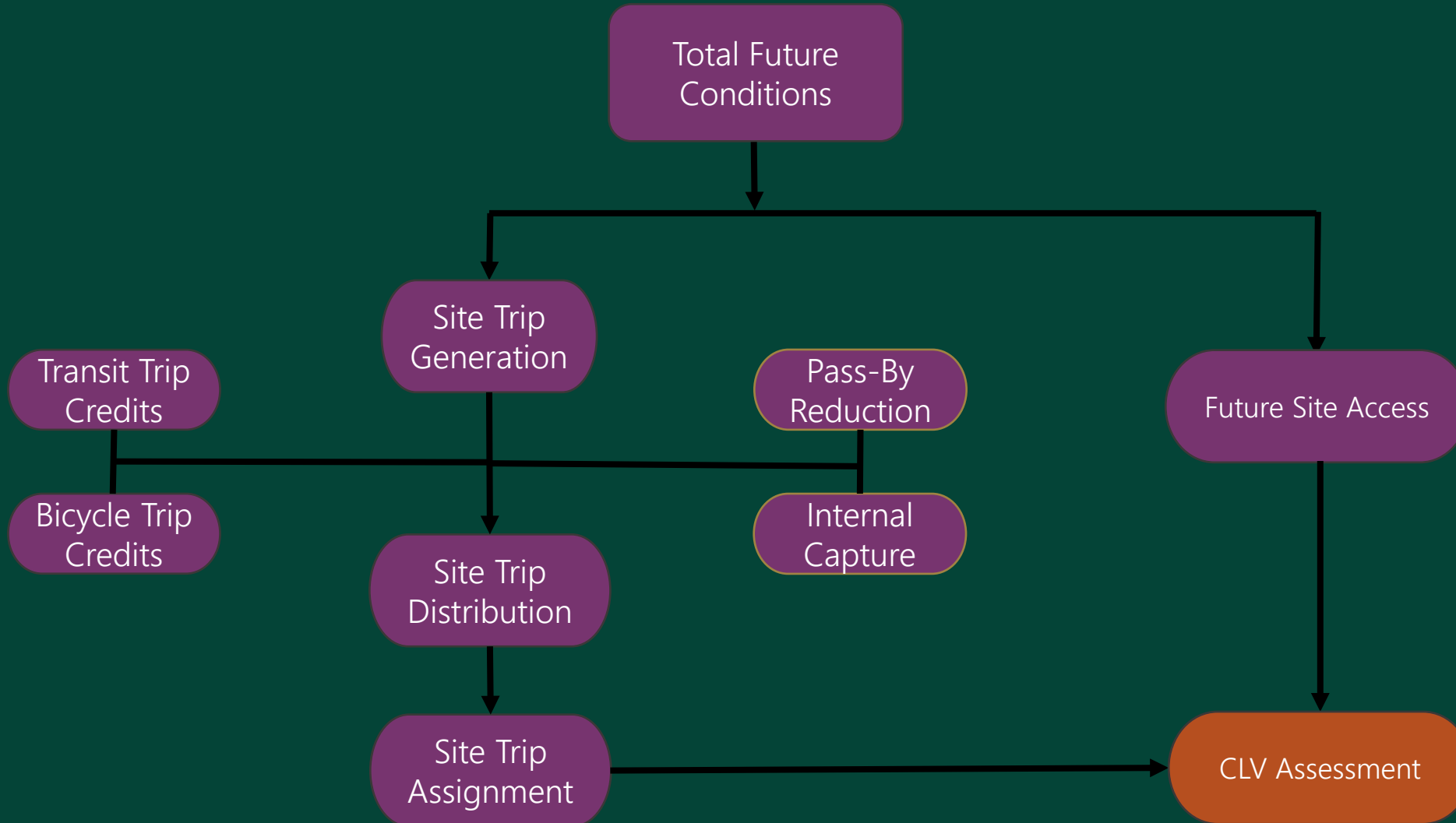
Traffic Impact Study



Traffic Impact Study



Traffic Impact Study



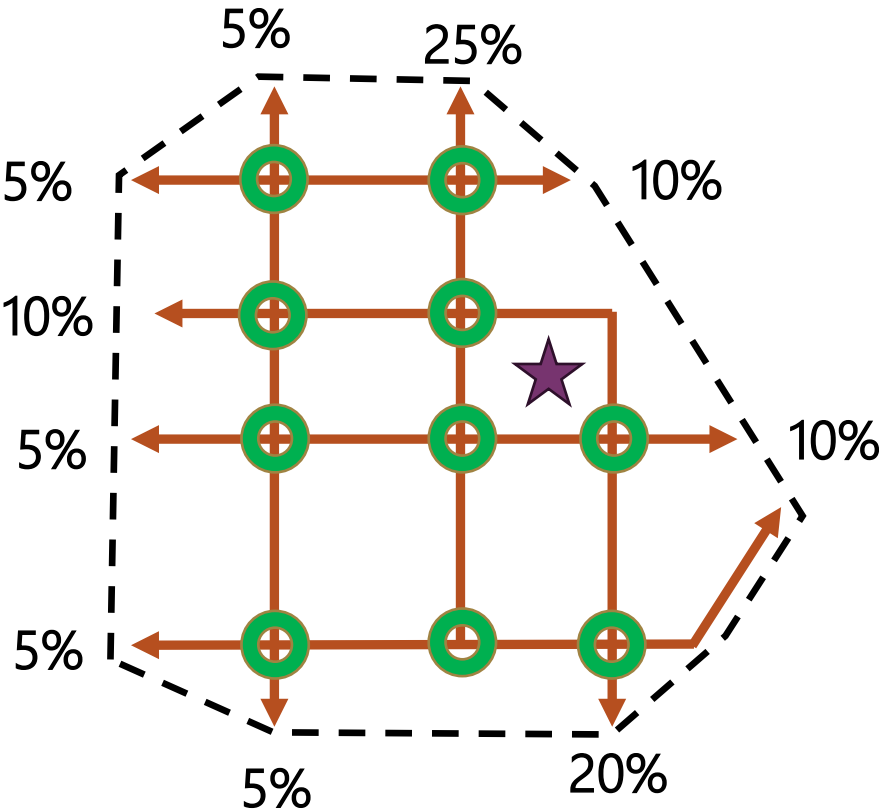
TRAFFIC IMPACT STUDY

Trip Generation Summary								
Land Use	Use Quantity	Metric	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Warehousing (0.3 FAR) (Previously Approved (4-19036)	324,480	Sq ft	104	26	130	26	104	130
General Office (0.4 FAR) (Previously Approved (4-19036)	38,400	Sq ft	69	8	77	13	58	71
Warehousing (0.3 FAR)	162,240	Sq ft	52	13	65	13	52	65
Total Trip Cap Recommendation				272		266		

TRAFFIC IMPACT STUDY

Trip Distribution

-  Site Proposed Site Location
-  Nodes Intersection Operations Evaluated
-  Links Roadways
-  Study Area Agreed area to study intersections



TRAFFIC IMPACT STUDY

TOTAL TRAFFIC CONDITIONS				
Intersection	Critical Lane Volume (AM & PM)		LOS/Pass/Fail (AM & PM)	
MD 4 and Westphalia Road / Old Marlboro Pike (no-build condition)	2260	2169	F	F
MD 4 SB Ramps and Old Marlboro Pike (build condition)	712	790	A	A
MD 4 NB Ramps and Westphalia Road (build condition)	752	811	A	A
Westphalia Road and Site Access	54.1 s*	433.9 s*	Fail	Fail
	>100 veh**	>100 veh**	Fail	Fail
	1080	1177	Pass	Fail
Westphalia Road and D'Arcy Road / Rock Spring Drive	>500 s*	>500 s*	Fail	Fail
	>100 veh**	>100 veh**	Fail	Fail
	1231	1214	Fail	Fail
MD 4 and Suitland Parkway / Presidential Parkway (no-build condition)	1830	2276	F	F
MD 4 SB Ramps and Suitland Parkway (build condition)	705	560	A	A
MD 4 NB Ramps and Presidential Parkway (build condition)	588	420	A	A

MEETING LEVEL OF SERVICE (MITIGATION)

24-4505 (b) 1-5 – Summary



Revise project to reduce impacts, such as:

- Reducing number of dwelling units
- Reducing floor area ratio
- Incorporate other uses or alternative trip



Transportation Improvements (funded by applicant), such as:

- Additional lane
- Turn lane
- Right-in and/or Right-out



Trip reduction program (funded by applicant)

Allows developments in certain parts of the county to provide roadway improvements that would improve traffic operations at nearby intersections



LTO or RTO – financial contribution for a Transportation Demand Management program (Section 20A) i.e. Geometric improvements



Other available capacity in lieu of improvements

- PFFIP (fee required)
- Brandywine Road Club (fee required)
- Capital Improvement Project (fully funded) ie Carrilon

PFFIP: WESTPHALIA

Public Facilities Financing and Implementation Program (PFFIP)

Program established by
the County Council

To implement/facilitate
construction and
maintenance of public
facilities

Can include financing
strategies such as
pro-rata contributions,
sale leasebacks, and
funding "clubs"



- **CR-66-2010** – Establishes PFFIP for the Westphalia PFFIP District (Sector Plan area).

- Created in 2010 and is the only PFFIP in the County.

- Funding for financing and construction of MD 4 and Westphalia Road Interchange

- Based on the percentage of average daily trips generated by each development

- Fee satisfies adequacy only for MD 4 and Westphalia Road Interchange applicant must address adequacy for all other roadways

BRANDYWINE ROAD CLUB



- CR-60-1993 created the Brandywine Road Club to **establish alternative mechanism consistent with the Subdivision Ordinance to alleviate traffic concerns**

- Allows payment into Brandywine Road Club to alleviate inadequacy of impacted intersections

- The applicant must enter into a Developer Participation Agreement with the County to share costs of improvements.

- The payment/fee fully satisfies the adequacy requirement

OTHER ADEQUACY



Adequacy provisions updated through a Master Plan Amendment will supersede the Subdivision Regulations for transportation adequacy

Central US 1 Corridor Area

- Limits study area to three road segments
- Other segments analyzed but not subject to adequacy (informational)



TRANSPORTATION ADEQUACY

- Pedestrian and Bikeway impacts
 - Bicycle Pedestrian Impact Statement (BPIS); or
 - Exempt; or
 - Not applicable

TRANSPORTATION ADEQUACY – Bicycle/Ped.



Bicycle and Pedestrian Assessment Section 24-4506 (c)(1)(B) Within one-half mile of the subdivision if the Board finds that there is a demonstrated nexus to require the applicant to connect a pedestrian or bikeway facility to a nearby destination, including but not limited to a public school, park, shopping center, multifamily residence, mixed-use activity centers, or line of transit within available public rights of way.



Cost Cap for Pedestrian/Bicycle Projects Section 24-4506 (c) (1) (B) The cost of the off-site pedestrian or bikeway facilities shall not exceed thirty-five cents (\$0.35) per gross square foot of proposed nonresidential development in the application and three hundred dollars (\$300.00) per unit of proposed residential development in the application, indexed for inflation annually from calendar year 2013.

PEDESTRIAN AND BIKEWAY ADEQUACY



24-4506 (a) Pedestrian and bikeway features include integrated sidewalk, trail, and bikeway facilities to divert automobile trips and increase the multimodal accessibility and attractiveness of trips to transit stops, schools, parks, libraries, stores, services, residences, and other destinations for all users. Pedestrian and bikeway facilities should be designed to increase safety for people walking, bicycling, and using transit, and offer the most direct routes to destinations for persons of all abilities.



Potential Projects Ordered by Priority (24-4506 (c))

- Installing and Improving Sidewalks
- Installing and Improving Bicycle facilities
- Streetlights
- Multiuse Trails
- Bulb-outs/ Refuge Medians, and HAWK signals
- Bikeshare Stations
- Covered Bicycle Parking
- Street Furniture
- Street Trees

PEDESTRIAN AND BIKEWAY ADEQUACY

HAWK Signal



Bulb Out



Refuge Median



Sidewalks



Multiuse Trails



Bicycle Facility



PROJECT SCOPING

Approved scoping agreement required for COA application



Meeting to discuss scoping:

- Applicant
- County agencies
- Municipalities
- MDOT State Highway Administration



Evaluate existing facilities and amenities:

- Review boundary
- Identify trip generators



The applicant provides improvements for approval by the operating agencies

YOUR ROLE IN PLANNING

HOW CAN I GET INVOLVED?

- Attend meetings
- Online notification
 - Mailing lists
 - Social media
 - PGAtlas notification
- Contact elected representatives
- Submit comments
- Share information!



QUESTIONS?

THE END

If you have additional questions, email us at
PGCNPA@ppd.mncppc.org