



# Town of Vienna

## Town Council Meeting

### January 6, 2020

Comprehensive Plan Edit – Level of Service (LOS) Requirement for Maple Ave.

Staff to provide overview of LOS and adding LOS requirements to the Comprehensive Plan

# Presentation Agenda

- What is Level of Service (LOS)?
- Background:
  - ▣ County's Comp Plan
  - ▣ FCDOT and VDOT MOU
  - ▣ NHS Roadways
  - ▣ Tysons Design Standards
- Town Comp Plan
- Adding LOS Requirements
- Current LOS of Maple Ave
- Pros and Cons
- Questions

# Level of Service (LOS) – What is it?

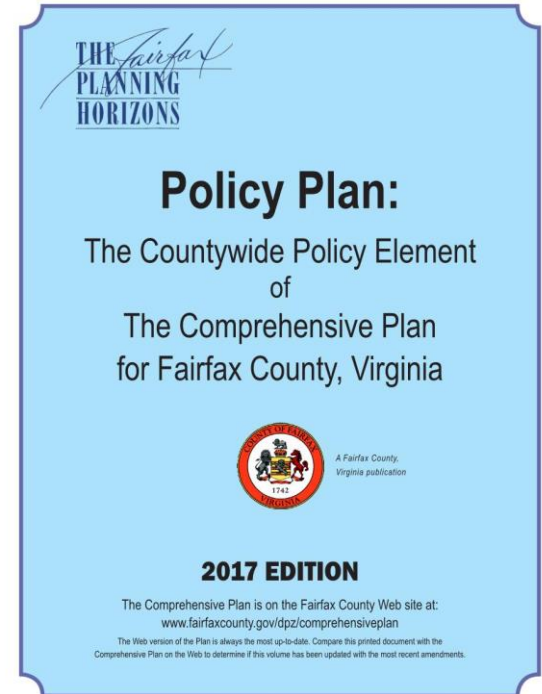
- LOS is a qualitative measure used to rate the quality of vehicle flow.
- Freeway/Roadway Corridors/networks LOS
  - Calculated using: free flow speed, actual speed, heavy vehicle factor, roadway configuration, number of access points (driveways).
  - LOS A: Free Flow - LOS F: Breakdown of Flow (gridlock: stop and go)

# Level of Service (LOS) – What is it?

- LOS is a qualitative measure used to rate the quality of vehicle flow.
- Intersection LOS
  - Calculated using average control delay (seconds/vehicle)
  - LOS A: Free Flow - LOS F Force Flow (congested and queues fail to clear)

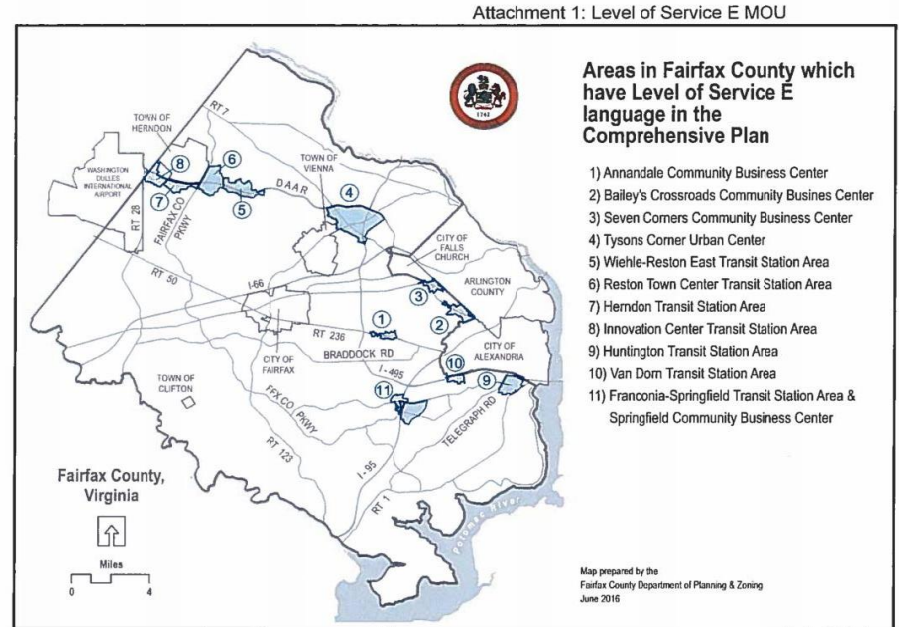
# Fairfax County's Comp Plan – LOS

- From 2017 Edit of the Policy Plan – Transportation:
  - ▣ Objective 3, Policy b: “Provide a **street network** level of service as high as practical, recognizing the social, environmental, and financial constraints associated with the diverse areas of the county. **At a minimum, level of service D should be provided, except where a lower level of service has been determined acceptable.**”
- No specific LOS standard for intersections. Rule of thumb is to target intersection LOS D.



# FCDOT and VDOT: MOU

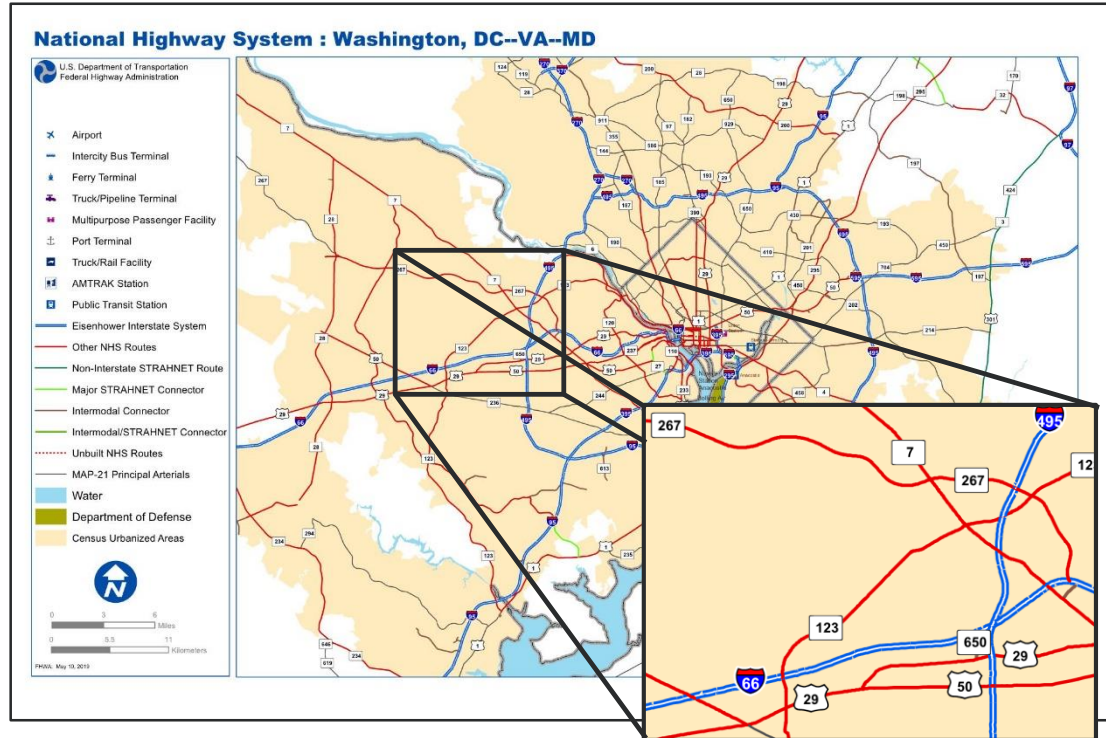
- County and VDOT share a Memorandum of Understanding:
  - For LOS in multimodal mixed use areas (activity centers).
  - Instead of LOS D they have agreed that LOS E would be acceptable for non-NHS roadways within activity centers.



# NHS Roadways

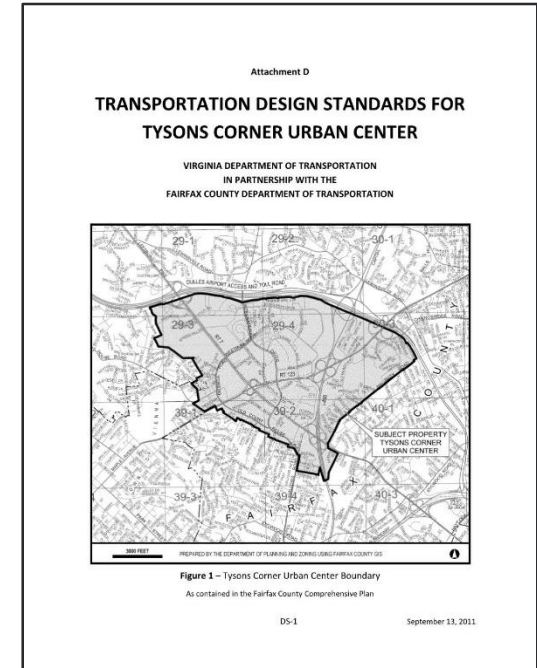
- **Maple Avenue (Route 123) is a NHS Roadway**

- NHS – National Highway System: roadways deemed by the FHWA (Federal Highway Admin) as important to the nation's economy, defense, and mobility.
- Typically the minimum standard for NHS roadways is LOS D, but there is flexibility.....



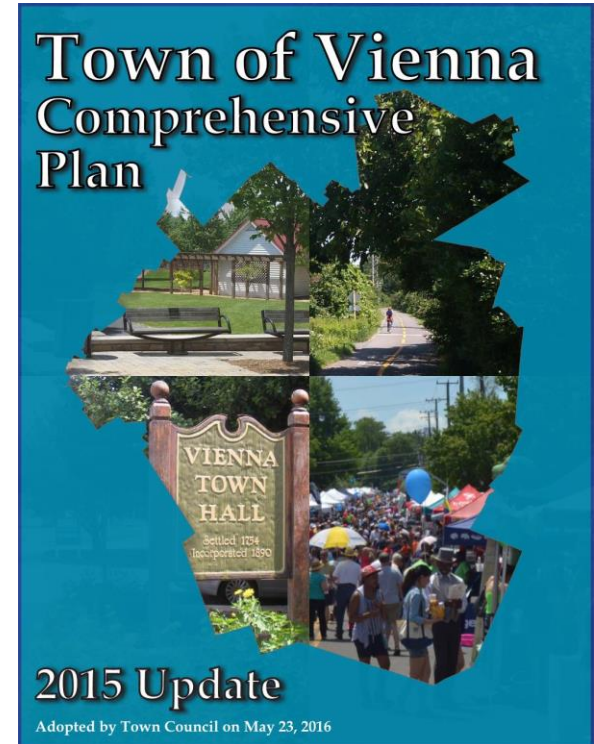
# Fairfax County's Tysons Design Standards

- The Tysons Comp Plan (Fairfax County): LOS minimum standard Level of Service is LOS E.
- VDOT District Administrator may accept LOS E upon review of an Operational Analysis. **Even on NHS roadways.**
- A LOS waiver for NHS roadways would be required for LOS E.
- Where LOS D/E standard cannot be achieved, mitigation measures must be considered.



# Town Comp Plan - LOS

- Currently there is no LOS requirement in the Town's Comprehensive plan.
- If a LOS requirement is desired then it could be added to the Town PIM (Public Infrastructure Manual) now. (staff recommends discussing with VDOT/County before adding a LOS requirements).
- A requirement could be added to the Comp Plan in 2021 (current Comp Plan was adopted on May 23, 2016).



# Adding LOS Requirement for Maple Ave

- Town of Vienna Comprehensive Plan:
  - ▣ Planning Commission is required to review the Comp Plan every 5 years (last reviewed 2015-2016).
  - ▣ The plan is generally long-term and looks around 15 years ahead in time.
  - ▣ For amendments to the Comp Plan, state code requires that the Town Council directs Planning Commission to review the amendments and makes a recommendation to Town Council.
  - ▣ Council then needs to approve the amendments. Before doing so however, VDOT also must review any amendments to the Transportation Plan portion of the Comp Plan.

# Current LOS of Maple Ave

- From the Maple Avenue Multimodal Study:
  - “Despite the congestion, overall maple avenue functions well at arterial LOS D, with travel times 8-10 minutes across the corridor in the peak direction”.
  - During the AM and PM peak hours most signalized intersections along Maple Ave are operating at LOS D or better. (The Maple Ave and Nutley St intersection is the only exception).
  - Left turns (both on to Maple Ave and on side streets) at some intersections (both signalized and unsignalized) operate with LOS E or F.
    - This is due to heavy left turn volumes and lack of gaps in the opposing traffic flow.
    - The number of commercial entrances also causes congestion (negatively impacts LOS).

# Pros and Cons/Questions

## Pros

- Provides LOS standard (target) for roadway improvements and developments.
- Establishes a LOS for Maple Ave and will force mitigations if requirements are not met.
- May improve future traffic flow along Maple Ave.

## Cons/Questions

- Could be an extensive process. Will require coordination with County and VDOT.
- What level to establish? LOS D or E?
- What if the corridor naturally fails to meet the requirement?  
(meaning outside influences cause Maple Ave to no longer meet the LOS requirements. Example: Tysons growth)

# Questions and Comments?

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