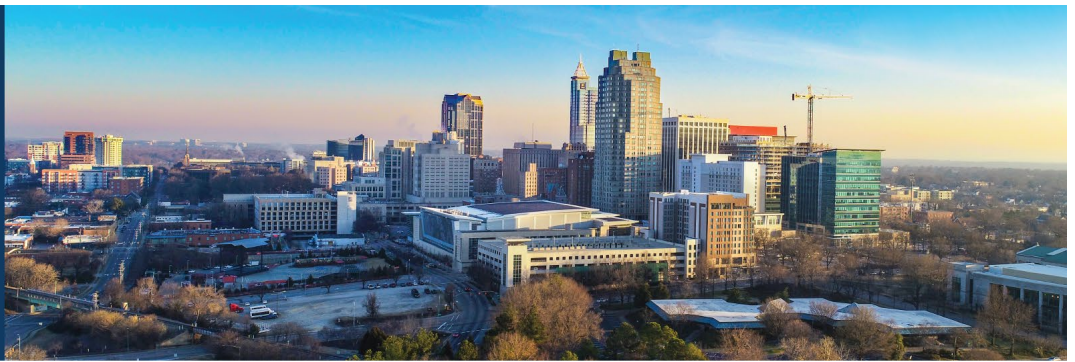


# Manager's Update

[raleighnc.gov](http://raleighnc.gov)



Issue 2022-11

March 18, 2022

## IN THIS ISSUE

**2021-2022 Seasonal Loose Leaf Collection Program – Second Pass Completed**  
**TOD Mapping: Rezoning Application Submittal and Upcoming Neighborhood Meetings**  
**FY2021 Progress Report and Omnibus Comprehensive Plan Amendment Review**  
**Weekly Digest of Special Events**

## Council Follow Up Items

**Use of a Vehicle Miles Traveled Metric for Traffic Analysis (Mayor Pro Tem Stewart)**  
**Greenway Master Plan**

## INFORMATION:

### **2021-2022 Seasonal Loose Leaf Collection Program – Second Pass Completed**

*Staff Resource: Jason Holmes, Transportation, 996-6446, [jason.holmes@raleighnc.gov](mailto:jason.holmes@raleighnc.gov)*

Loose leaf collection began on November 8, 2021, and the first pass was completed on January 19, 2022. During the first pass 2,540 loads of leaves were collected which is approximately 49,247 cubic yards. After significant weather delays, the second pass began on January 24, 2022, and was completed on March 16, 2022. During the second pass crews collected 1,480 loads equating to an additional 29,475 cubic yards of leaves. Collections totaled over 4000 loads equating to over 78,700 cubic yards.

Beginning today, residents can complete the [Missed Leaf Collection form](#) for any leaf piles that may have been missed during the second collection pass. Missed collections service will continue through April 8.

The Missed Leaf Collection form and additional information about loose leaf collection can be found at [raleighnc.gov/leaf](http://raleighnc.gov/leaf).

*(No attachment)*



**TOD Mapping: Rezoning Application Submittal and Upcoming Neighborhood Meetings**

*Staff Resource: John Anagnost, Planning and Development, 996-2638, [john.anagnost@raleighnc.gov](mailto:john.anagnost@raleighnc.gov)*

Planning and Development staff have initiated the rezoning process for mapping the TOD overlay on the Western and Southern BRT corridors. The two separate rezoning applications were formally submitted on Wednesday, February 15, 2022. They have been assigned case numbers Z-18-2022 for the western corridor and Z-19-2022 for the southern corridor.

Staff have scheduled a set of public meetings to be held in the last two weeks of March. The public meetings will serve as the second neighborhood meetings that are required by the UDO as part of the rezoning process. A virtual and in-person meeting opportunity will be offered for each corridor:

- Western Corridor (Downtown Raleigh to Cary)  
Virtual meeting: Wed., March 23, 2022, 6 p.m.  
In-person: Method Community Park, Thurs., March 24, 2022, 3-6 p.m.
- Southern Corridor (Downtown Raleigh to Garner)  
Virtual meeting: Tues., March 29, 2022, 6 p.m.  
In-person: Peach Road Community Center, Wed., March 30, 2022, 3-6 p.m.

Links for the virtual meetings are on the [city website](#).

Legal notice will be provided as required by the UDO; additional outreach will be conducted through GovDelivery emails and social media posts. The Planning Commission is anticipated to begin deliberation of these rezoning applications during their Committee of the Whole meeting in April.

In addition, staff have organized a special in-person meeting with residents of the Heritage Park neighborhood, to be held at the Heritage Park Community Center, 416 Dorothea Drive, on Thursday, April 7, 2022 at 6 p.m. This meeting will provide information about the TOD mapping that is specific to the Heritage Park property, which is owned and managed by the Raleigh Housing Authority (RHA). Separately from the TOD mapping process, RHA has initiated a plan to redevelop Heritage Park to provide additional affordable housing units. RHA staff will be present at the meeting to answer questions about the redevelopment plan.

*(No Attachment)*

**FY2021 Progress Report and Omnibus Comprehensive Plan Amendment Review**

*Staff Resource: John Anagnost, Planning and Development, 996-2638, [john.anagnost@raleighnc.gov](mailto:john.anagnost@raleighnc.gov)*

The annual Progress Report compiled by the Planning and Development Department has three general purposes. First, it serves as an inventory of the legislative actions of the City Council for the previous year. Second, the Progress Report gives city departments the opportunity to document completion or request modification of action items within the 2030 Comprehensive Plan. The requested changes take the form of:

- Removal of implemented or obsolete action items.
- Replacement of an action with a policy.
- Change in content (title, description, time frame, or responsible agency).

Actions proposed to be changed are then compiled into an omnibus Comprehensive Plan amendment for review and adoption by the City Council. Finally, trends that may lead to future legislative actions – such as amendments to the 2030 Comprehensive Plan or Unified Development Ordinance – are identified in a section entitled Emerging Issues.

Staff intends to place the omnibus amendment (CP-2-22) on the April 28 agenda of the Planning Commission Committee of the Whole. The omnibus amendment will undergo the normal statutory review process for Comprehensive Plan amendments including review by the Planning Commission, a City Council public hearing, and all associated legal notice. If the City Council would like to conduct a preliminary review of the omnibus amendment before it begins the UDO-required review, the Council may direct staff to provide a presentation at an upcoming City Council meeting.

*(No Attachment)*

#### **Weekly Digest of Special Events**

*Staff Resource: Sarah Heinsohn, Special Events Office, 996-2200, [sarah.heinsohn@raleighnc.gov](mailto:sarah.heinsohn@raleighnc.gov).*

Included with the *Update* materials is the special events digest for the upcoming week.

*(Attachment)*

## Council Member Follow Up Items

### Follow Up from the February 15 Meeting

#### **Use of a Vehicle Miles Traveled Metric for Traffic Analysis (Mayor Pro Tem Stewart)**

*Staff Resource: Anne Conlon, Transportation, 996-2160, [anne.conlon@raleighnc.gov](mailto:anne.conlon@raleighnc.gov)*

During the meeting, Council requested a report from staff describing how the City could transition away from the 'level of service' metric currently used to assess infrastructure sufficiency for new development and instead move towards the 'vehicle miles traveled' metric. The request asked staff to include a consideration of how rezoning requests are evaluated and changes to any of the City's existing rules or processes for evaluating potential new development. Transportation and Planning and Development staff have coordinated to develop a staff memorandum on the next steps that would be appropriate for such a transition. This memorandum is enclosed with this *Update*.

*(Attachment)*

### Follow Up from the March 15 Meeting

#### **Greenway Master Plan**

*Staff Resource: Kris Nikfar, Parks, Recreation & Cultural Resources, 996-4786, [Kris.Nikfar@raleighnc.gov](mailto:Kris.Nikfar@raleighnc.gov)*

*The following information was submitted for inclusion in a Manager's Update last month following discussion of the Greenway Master Plan item by Council during the February 15 work session; due to extenuating circumstances this information was not included in a Manager's Update in advance of the March 15 City Council meeting.*

Prior to the Parks, Recreation and Greenway Advisory Board's consideration of the draft Greenway Master Plan, there were conversations between Meredith College and city staff regarding the College's concerns about the level of outreach to the College, unclear phrasing in the plan's recommendations regarding lighting and hours of operations, and impacts of some recommendations, if applied to the section of greenway adjacent to Meredith's campus. In response to that communication, staff and the City's consultants proactively updated the draft plan to address many of the concerns presented by Meredith College. Staff committed to more intentional direct outreach to Meredith College as plan recommendations are evaluated. Below are specific changes that were made to the plan based on the feedback from Meredith:

- Amended text related to trail lighting recommendations that provides clarity that greenway trail lighting will be evaluated for specific sections (existing and new projects) of the Capital Area Greenway System on a case-by-case basis and that lighting along trails will be site specific;
- Amended the Oak City Trail cross section graphic and associated text to eliminate lighting as an expectation for this classification. Lighting will not be an expectation for

this classification and lighting will be evaluated on need and appropriateness on a case-by-case basis; and

- Amended text to provide clarity that the extension of operational hours of the Capital Area Greenway System will be “evaluated” as part of next steps. The adoption of the Plan Update does not officially extend operational hours and the evaluation of greenway system operational hours will be addressed as part of a future public process.

The City Council and staff received a letter from Meredith College President Jo Allen on February 11, 2022 with additional recommendations for consideration. While staff is happy to facilitate additional changes to the plan, many of the items are much more detailed, place-specific considerations than the general planning principles found throughout the document. Staff believes that they can be better addressed as staff works with stakeholders to evaluate feasibility; address concerns and refines objectives for consideration in an implementation plan.

Staff from the City Manager’s Office and Parks have scheduled a meeting with Meredith College for Wednesday, March 30 to discuss concerns and edits that have been made to the draft plan to address these concerns. In light of this scheduled meeting, City Council directed staff at the March 15 meeting to bring the Greenway Master Plan to a future Council meeting, after the meeting with Meredith College. Council adoption of the plan will be considered at that time.

*(No Attachment)*

## Weekly Events Digest

Friday, March 18 – Thursday, March 24

City of Raleigh Office of Emergency Management and Special Events  
[specialevents@raleighnc.gov](mailto:specialevents@raleighnc.gov) | 919-996-2200 | [raleighnc.gov/special-events-office](http://raleighnc.gov/special-events-office)

---

### Permitted Special Events

#### [Ella's Race](#)

North Ridge Country Club & Route

Saturday, March 19

Event Time: 7:00am - 10:00am

Associated Road Closures: Hunting Ridge Road between Falls of Neuse Road and Buckhead Drive will be closed from 5:00am until 11:00am. Race routes will be closed from 7:50am until 10:00am. Note that all cross-streets will be detoured during the event, [view routes here](#) for more information, and see below for turn-by-turn details:

Start on Hunting Ridge Road east of Falls of Neuse Road intersection; Right onto N. Ridge Drive; Left onto Rainwater Road; Left onto Spyglass Way; Right onto Bay Hill Court; U-turn at the end of Bay Hill Court; Right onto Spyglass Way; Left onto Wingfoot Drive; U-turn at intersection of Wingfoot Drive and Haymaker Lane; Right onto Spyglass Way; Right onto Rainwater Road; Right onto N. Ridge Drive; Left onto Hunting Ridge Road; Finish on Hunting Ridge Road east of Falls of Neuse Road intersection

#### [Lift Me I'm Irish – Strongman & Strongwoman Competition](#)

City Plaza

Saturday, March 19

Event Time: 9:00am - 5:00pm

Associated Road Closures: Fayetteville Street between Davie Street and the south end of City Plaza will be closed from 6:00am until 8:00pm. Note that local traffic will have access to the 500 block of Fayetteville Street.

#### [JY Joyner 5K](#)

Noble Road & Crabtree Creek Trail

Sunday, March 20

Event Time: 2:00pm - 3:00pm

Associated Road Closures: Noble Road between Lowden Street and Hawes Court will be closed from 1:50pm until 3:00pm, and Crabtree Creek Trail between the Noble Road greenway entrance and Capital Boulevard will be used from 2:00pm until 3:00pm. [View route here](#) for more details.

### Other Events This Weekend

#### [Hurricanes vs. Capitals](#)

Friday, March 18

PNC Arena

#### [The Best of Broadway – North Carolina Symphony](#)

Friday, March 18 & Saturday, March 19

Meymandi Concert Hall

#### [Time Out for Women](#)

Friday, March 18 & Saturday, March 19

Raleigh Convention Center

#### [Winter Jam 2022](#)

Saturday, March 19

PNC Arena

**KinderVillage Teddy Bear Picnic**

Saturday, March 19  
Dorothea Dix Park, Chapel Event Lawn

**Raleigh Roasts**

Saturday, March 19  
Moore Square

**Stream Monitoring Workshop**

Saturday, March 19  
Walnut Creek Wetland Park

**Explore Dix Park: Guided Walking Tour**

Saturday, March 19  
Dorothea Dix Park, Chapel

**Brentwood Park Celebration**

Saturday, March 19  
Brentwood Park

**Playthrough Gaming Convention**

Saturday, March 19 & Sunday, March 20  
Raleigh Convention Center

**Trolls LIVE!**

Saturday, March 19 & Sunday, March 20  
Memorial Auditorium

**Snow White – Carolina Ballet**

Saturday, March 19 – Sunday, March 27  
Fletcher Opera Theater

**Hurricanes vs. Rangers**

Sunday, March 20  
PNC Arena

## **Public Resources**

**Pilot Text Alert Program**: Sometimes spontaneous events happen downtown and in other areas that could affect local businesses. If you'd like to receive notifications when those events happen, including unpermitted ones, sign up for text alerts.

**Event Feedback Form**: Tell us what you think about Raleigh events! We welcome citizen and participant feedback and encourage you to provide comments or concerns about any events regulated by the Office of Emergency Management and Special Events. We will use this helpful information in future planning.

**Road Closure and Road Race Map**: A resource providing current information on street closures in Raleigh.

**Online Events Calendar**: View all currently scheduled events that impact City streets, public plazas, and Dorothea Dix Park.

# Council Member Follow Up



To	Marchell Adams-David, City Manager
Thru	Michael Moore, Director
From	Anne Conlon, PE – Senior Transportation Engineer
Department	Transportation
Date	March 3, 2022
Subject	City Council Follow Up – Vehicle Miles Traveled Metric

---

#### Existing Use of Level-of-Service Metric

The Transportation Department currently uses the LOS metric as part of Traffic Studies, whose purpose as defined in the *Raleigh Street Design Manual* is:

- To provide reliable guidance on short- and long- range planning of site access and off-site improvements;
- To assist developers and property owners in making critical land use decisions regarding traffic and other modal needs;
- To provide government review agencies with recommendations for achieving responsive and consistent transportation and access policies;

The *Raleigh Street Design Manual* further specifies that “the standard to provide mitigation is when overall intersection or approach level-of-service degrades from LOS-E to LOS-F. Another standard to provide mitigation is when arterial level-of-service degrades from LOS-E to LOS-F.”

LOS is defined in the *Highway Capacity Manual*, a standard practice traffic engineering resource, as a “qualitative measure describing operation conditions within a traffic stream, and their perception by motorists and/or passengers”. LOS varies from A, which is described as “free flow”, to LOS F, which is described as “forced flow (congested and queues fail to clear)”.

Traffic studies are typically used by staff in the following three contexts:

- To estimate the transportation impacts of rezoning cases and forecast whether programmed or planned infrastructure will be sufficient to serve the entitlement requested;

- To identify the impacts of site plan and subdivision submittals on the transportation system and determine whether developers should provide mitigations to address impacts; and
- To project future intersection and corridor performance of public street and road projects and to select appropriate laneage and traffic control to be implemented.

There are two typical responses to address the localized traffic impacts identified in LOS analysis. Capacity can be added to intersections in the form of additional lanes or traffic control devices. Capacity improvements tend to increase the width of roadways and intersections and therefore lengthen crossing distances. Alternatively, the development can be downsized to reduce vehicular trip projections.

The use of traffic studies based on LOS as described above is standard practice across North Carolina and much of the United States and is also used by the North Carolina Department of Transportation as a requirement for obtaining a Driveway Permit to gain new or modified access to the state transportation system.

### Shortcomings of the LOS Metric

There is increasing awareness and discussion across the transportation and planning professions of the shortcomings of this analysis framework. Recent decades have shown that congestion-focused mitigations tend not to decrease congestion but rather to maintain or increase it through the mechanisms of induced demand and other unintended consequences. Critiques of the LOS analysis framework includes the following:

- LOS analysis reduces the costs associated with development on the outskirts of cities where existing traffic is low and excess roadway capacity is available. This leads to low-density development that is spread out around City edges, which tends to increase the distances between destinations. Global VMT is correspondingly increased.
- LOS analysis does not consider the alternative to any particular development. If the development is not placed on a constrained congested corridor due to capacity concerns, where will that development locate? The longer trips that result from alternative placement may increase travel demand on the corridor rather than reducing it. Will the development replace existing longer trips with shorter trips, rather than generating new trips? The result is that LOS analysis tends to overpredict the impacts of infill development. A 2015 study found that the *Trip Generation Manual*, which is the industry standard resource for traffic studies, overestimates trips by 55 percent<sup>1</sup>. This is consistent with local experience, where subsequent traffic counts taken by NCDOT show lower (or no) growth in volumes compared with model predictions.
- The mitigations typically identified by LOS analysis tend to improve conditions for driving in the right-of-way during the peak hour while degrading conditions for all other users. These responses also tend to reduce the viability of all land uses and architecture types outside of the right-of-way except those explicitly built around the automobile, such as big box stores supported by large parking lots. These development patterns

---

<sup>1</sup> Millard-Ball, A. (2015). Phantom trips: Overestimating the traffic impacts of new development. *Journal of Transport and Land Use*, 8(1), 31-49.

- further degrade the comfort and practicality of alternative modes in a reinforcing cycle that reduces mode choice and locks in the automobile as the only viable way to travel.
- LOS analysis fails to incorporate how changes in capacity and ease of travel affect travel behavior. These analyses assume previous trends in traffic growth and mode share will continue whether or not capacity is provided, land use patterns change, or street design changes. The research shows that travel behavior is responsive in the short- and long-term to the local built environment and congestion<sup>2</sup>.
- The increase in vehicular miles travelled resulting from each of the points above generates a variety of environmental and public health impacts.

In summary, traffic studies based on LOS analysis tend to assume a future where all travel is completed by single occupancy vehicles and then lock in that future by requiring the transformation of both the right-of-way and surrounding developments into environments hostile to all other modes. This increases the VMT generated by each city resident and visitor, which requires more transportation infrastructure to maintain per person in an era of over-stretched City and NCDOT budgets.

### Industry Trends with the VMT Metric

Some industry groups and organizations have sought to reform LOS analysis to address the concerns noted above. The Transportation Research Board, for example, updated the *Highway Capacity Manual* in 2010 to include service standards for bicyclist and pedestrians. The collection of metrics that resulted are termed ‘multimodal level of service’ or MMLOS. While this metric considers impacts to other modes, it doesn’t address the underlying assumptions built into LOS analysis described above or get to the root of the shortcomings identified.

California has led the way in a larger shift in practice with the 2013 adoption of Senate Bill 743 (Steinberg, Chapter 386, Statutes of 2013). Senate Bill 743 mandated the update of state environmental review of transportation impacts to “promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses”<sup>3</sup>. State agencies responded by identifying VMT as the most appropriate metric to evaluate transportation impacts and changing the rules to remove LOS as a relevant metric. That change went into effect on July 1, 2020.

California’s Governor’s Office of Planning and Research (OPR) summarizes the benefits and use of VMT analysis on their FAQ page<sup>4</sup>, which includes links to key resources and technical advisories. In a key consideration of the shift in practice, this webpage notes “decades ago, it was believed that increased driving was necessary for economic growth. However, we now know that economic growth does not require an increase in driving. Further, recent research has shown that the old system based on LOS actually slowed economic growth by creating development patterns that limited residents’ ability to get to their daily destinations.”

---

<sup>2</sup> Noland, R. B., & Lem, L. L. (2002). A review of the evidence for induced travel and changes in transportation and environmental policy in the US and the UK. *Transportation Research Part D: Transport and Environment*, 7(1), 1-26.

<sup>3</sup> Cal. Pub. Res. Code § 21099(b)(1).

<sup>4</sup> <https://opr.ca.gov/ceqa/sb-743/faq.html>

The OPR summarizes VMT in the context of a transportation impact analysis as “the amount and distance of automobile travel attributable to a project”.<sup>5</sup> The OPR’s Technical Advisory directs the VMT generated by office and residential uses, or those components of mixed-use projects, to be compared to the city-wide or regional average. If the project generates VMT at a rate that is 15% or more below the average rate, no mitigation is required. If projected VMT is higher, a significant impact is found, and mitigations must be provided. Retail components of projects are studied to determine if they are likely to increase or decrease VMT and must be mitigated if any increase is projected. A city or regional map of average VMT across the community must be developed and maintained to support VMT evaluation.

Where a project is projected to have a significant impact on VMT, the OPR suggests potential mitigations such as “Tolling new lanes to encourage carpools and fund transit improvements, converting existing general-purpose lanes to HOV or HOT lanes, implementing or funding off-site travel demand management, implementing Intelligent Transportation Systems (ITS) strategies to improve passenger throughput on existing lanes”.

The OPR’s technical advisory also notes a key point for the City of Raleigh to consider:

“Because location within the region is the most important determinant of VMT, in some cases, streamlining...review of projects in travel efficient locations may be the most effective means of reducing VMT.”

Many communities in California use screening thresholds “to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study”. The OPR suggests thresholds based on size, access to transit, and the provision of affordable housing.

#### Action Items to Transition to the Use of VMT

If Council would like to pursue the use of VMT analysis, staff recommends the following steps:

1. Coordinate with CAMPO on the consultant-led development of a VMT analysis screening tool and methodology for VMT-based studies.
2. Submit a staff-initiated text change to the UDO and Raleigh Street Design Manual to modify the content and metrics required for traffic studies that support rezoning analysis.
3. Submit a Comprehensive Plan amendment to emphasize the existing policies relevant to VMT analysis and de-emphasize or remove conflicting policies.
4. Complete a review of best practices in integrating VMT analysis into the development review process.

Each step is described in more detail in the following section.

#### *Step 1: VMT Analysis Screening Tool and Methodology*

Before the City transitions to analyzing rezoning cases using VMT analysis, the City must establish appropriate VMT-based thresholds that trigger a traffic study. Current traffic study

---

<sup>5</sup> Governor’s Office of Planning and Research. (2018). Technical Advisory on Evaluating Transportation Impact in CEQA.

triggers are based on expected trip generation and existing tools have been developed to efficiently screen zoning cases based on this metric. A new tool or other screening criteria is needed to support determinations under the VMT framework. Submittal requirements must also be developed and written up to support the text change process in the following step.

Since CAMPO maintains the regional Travel Demand Model, which is an input into VMT analysis, CAMPO is a logical lead agency to develop tools for all municipalities in the region to utilize in traffic studies. CAMPO funds planning efforts through the *Unified Planning Work Program* (UPWP), which has been approved for FY23 (July 1, 2022 – June 30, 2023). Staff could submit to CAMPO for funding in FY24, which would delay the start of development to July 1, 2023.

Alternatively, Council could allocate funding to allow the City to work with a consultant on the development of this tool on its own in the near-term. The City could obtain consultant services through a standalone contract or through an on-call contract. Transportation Planning's current on-call expires in May, 2022 and staff intends to initiate a new on-call around that time to maintain on-call capacity.

#### *Step 2: Text Change Process*

Once screening criteria have been identified and a methodology established, staff can initiate a text change to relevant code requirements to support the use of VMT in rezoning traffic studies. Changes are needed to Section 8.2 Infrastructure Sufficiency in the *UDO* as well as Chapter 7 Traffic Impact Analysis in the *Raleigh Street Design Manual*. Following this text change, staff will be able to evaluate rezoning cases with VMT analysis.

#### *Step 3: Comprehensive Plan Amendment*

In parallel to the text change, staff recommends refinements to the text and policies in the *Comprehensive Plan* to ensure consistency with the updated approach to transportation impact review and the latest research on congestion. There are several policies in the Plan that directly support VMT reduction (RC 1.5, LU 4.4.) and other sections reference the connection between other policies and VMT outcomes. At the same time, there are multiple references through the Plan that speak about reducing congestion and describe it as “one of the biggest threats to the region’s quality of life”. This focus on congestion as the problem, rather than a lack of transportation choices and mobility, can tend to support localized mitigations that work against mode choice and walkable urban and suburban centers. This language and the other policies that speak directly to level of service should be reviewed and reconsidered to ensure they align with the City’s larger goals.

#### *Step 4: VMT in Development Review*

Once Step 1 is completed, staff recommends that the City develop an analysis approach to development review in parallel to the processing of the text change in Step 2. The revised approach to site plan review will be more time intensive and can be combined with a planned overall update to the *Raleigh Street Design Manual*. Many of the jurisdictions that have implemented the use of VMT analysis in California have retained LOS-based analysis for site plan review to address localized impacts and mitigations. The City could take a hybrid approach to development review that may depend on land use context, availability of transit, or other factors.