

TECHNICAL MEMORANDUM

DATE: May 21, 2021

TO: Larisa Varela, City of Eugene

FROM: Reah Flisakowski, PE

SUBJECT: Recommendations for the City of Eugene's Traffic
Impact Analysis Guidelines Process

Project # 20159-000

The City of Eugene will be updating its traffic impact analysis (TIA) processes and requirements to support multimodal network and safety needs associated with new development. This multimodal focus is promoted by several local plans. The Eugene 2035 Transportation System Plan (TSP) sets an ambitious goal to triple the number of biking, walking, and transit trips by 2035. The Vision Zero Action Plan and Community Climate Action Plan 2.0 also document the City's commitment to safety improvements for the most vulnerable travelers and a reduction in transportation-related greenhouse gas emissions. This memorandum presents a summary of issues and preliminary recommendations to address how/where TIAs are triggered, trips are measured, and mitigations are identified. The memo also provides areas that should be explored further with action items.

KEY ISSUES

Today, Eugene's TIA process is focused on vehicle trips and intersection level of service (LOS). LOS is a measure of motor vehicle operations at intersections that assigns letter grades A-F in order of increased vehicle delay. These vehicle performance measures generally result in mitigations with traffic signal and intersection improvements. In many cases, no improvements are required because of the City's LOS E standards. The City is interested in making the policy more effective in supporting multimodal network needs and safety improvements to support development and associated travel demand.

The current TIA process has deficiencies in the types of triggers used, the metrics used to assess impact, and in the mitigations that can be required. Key issues to be addressed with the recommendations include:

- TIA process is focused only on motor vehicle performance.
- The current process is not clear and objective, which can require extra staff time, result in appeals, and affect the applicability of TIA for certain projects.
- The current development code language is unclear and leads to confusion for how the code should be applied.
- Often no mitigations are triggered due to City's LOS E standard.

- New development can avoid the 100-vehicle per peak hour trip trigger if the development area is broken into separate applications or phases.
- Mitigations rarely include off-site improvements and developers do not always contribute to broader systems and safety needs.
- Mitigations typically address intersection or signal needs, and do not adequately address multimodal access and safety.
- Developments in the building permit process are not conditioned to provide frontage improvements, though land use applications do. Both building permit and land use processes require providing adequate on-site transportation improvements.
- TDM is not currently an approved TIA mitigation strategy.
- Eugene has no fee-in-lieu option for mitigating trip impacts.
- TIAs should not disincentivize development in locations where the City wants it to occur.
- The City does not have a useful inventory of gaps in the multimodal network that could be used to condition improvements.
- The City does not have local multimodal trip generation data available to support a new methodology to estimate trips for a development.

PRELIMINARY RECOMMENDATIONS

Potential updates to the TIA processes and requirements were evaluated to address the identified issues. The following preliminary recommendations are based on input from City staff and stakeholders.

MULTIMODAL TRIP TRIGGER

The number of trips generated should be used to help define the TIA need and methodology.

- Continue to use 100 vehicle trips as the trigger for a TIA.
- In addition to the vehicle trip trigger, determine the appropriate number of pedestrian, bicycle and transit trips as the trigger for requiring a TIA.

GEOGRAPHIC AREA TRIGGER

The location of development should be used to help define the TIA need and methodology.

- Identify an urban core area and/or neighborhood greenways and/or key corridors where vehicle capacity projects are not needed or wanted. Motor vehicles would not be included in the analysis. Pedestrian, bicycle and transit projects would be the focus for potential mitigations.

- Outside the identified urban core area and/or key corridors, the TIA methodology would include multimodal analysis of impacts (motor vehicle, pedestrian, bicycle and transit).

MULTIMODAL ANALYSIS METHODOLOGY

A new multimodal TIA methodology is needed that considers each travel mode individually and off-site deficiencies.

- Develop a trip generation estimate methodology for pedestrian, bicycle and transit use. This would require collecting local trip data and establishing a trip generation rate for each mode. The trip generation rates for pedestrian, bicycle and transit use may vary by location within the city and proximity to associated network. ITE would continue to be the source for motor vehicle trip generation estimates.
- Develop a methodology to determine a reasonable trip generation adjustment resulting from implementing TDM measures promoting walking, bicycling, or taking the bus. Typically, the number of motor vehicle trips generated would decrease and other modes would increase as a result.
- Develop a trip distribution/assignment methodology for pedestrian, bicycle and transit use to guide how new trips would be assigned to the surrounding transportation network for impact analysis.
- Evaluate the completeness of the walking, biking and transit system within a defined area (e.g., quarter-mile walking shed from the development) and identify deficiencies to be considered for mitigation. This could be supported with a GIS inventory of multimodal system conditions and gap analysis that is maintained and available to City staff and development applicants.
- Develop a methodology to identify pedestrian, bicycle and transit impacts and need for mitigation. The analysis should consider the trip assignment and system completeness analysis for each mode to determine if the development would add a sufficient number of trips to a known deficiency.
- Develop a pedestrian crossing analysis methodology to identify a potential mid-block crossing deficiency and need for mitigation. The analysis trigger and methodology should consider the development location (fronting facility classification), distance to nearest controlled or enhanced pedestrian crossing and pedestrian trip generation estimate and assignment.
- Develop a transit analysis methodology to identify a potential deficiency and need for mitigation. The analysis trigger and methodology should consider the development location (key transit corridor?), distance to nearest transit route(s), existing amenities at nearest transit stops and transit trip generation estimate and assignment.
- Ensure the processes and requirements are clear and accessible for all potential users, including developers, transportation engineers, planners, and city staff. This should result in TIAs that are consistent, defensible and simple for city staff to review.

MITIGATION OPTIONS

New mitigation options should be developed to address multimodal and off-site deficiencies.

- The current methodology for motor vehicle impacts and mitigations would be retained.
- Develop a menu of mitigation options that the developer could choose from to simplify installation of multimodal improvements.
- Mitigate pedestrian, bicycle and transit impacts based on the trip generation and assignment for each model and the system completeness analysis. If the development adds trips to a system deficiency, a menu of system improvements and TDM measures could be applied:
 - **Transit:** If a transit analysis was conducted, review the findings to determine if a transit improvement is an appropriate mitigation for development generated transit trips. Consider installation or contribution of funds for transit speed and reliability improvements if project is located along key transit corridor. Improve bus stops and stop access within a set distance of site. Transit mitigations should be coordinated with pedestrian crossing mitigations near transit stops.
 - **Pedestrian:** If the pedestrian system completeness analysis identified deficiencies, determine if pedestrian improvements are an appropriate mitigation for development generated walking trips. Consider installation of pedestrian access and safety improvements within a set walkshed of the site (fill sidewalk gaps, upgrade curb ramps, etc.).
 - **Pedestrian Crossings:** If a pedestrian crossing analysis was conducted, review the findings to determine if an enhanced mid-block crossing is an appropriate mitigation for development generated pedestrian trips.
 - **Bike:** If the bike system completeness analysis identified deficiencies, determine if bike improvements are an appropriate mitigation for development generated bike trips. Consider installation of bike access and safety improvements within a set bikeshed of the site (fill bike facility gaps, etc.).
 - **TDM:** Include TDM as a mitigation option to give developers incentive to build an impactful TDM program. Use the adjusted multimodal trip generation to determine the appropriate mitigation measures.

OTHER

Revisions to the TIA process should be coordinated with system development charges (SDCs) and a fee-in-lieu when mitigation of trip impacts is not feasible.

- Ensure fee-in-lieu does not conflict with existing system development charge (SDC) requirements and methodology. Establish a fee-in-lieu system for situations where mitigation of trip impacts is not feasible (such as on corridors where no vehicle capacity will be added) or mitigation will be constructed in the future as part of a larger improvement project.

- Consider whether fee-in-lieu can be offered as direct replacement for TIA as an incentive for quicker land use application review and path to construct multimodal improvements more quickly. Dedicate fee-in-lieu revenue to fund list of established multimodal deficiencies.
- Establish a cost sharing system that allows developers to mitigate their impact by contributing a proportionate share fee for specific financially significant mitigations (such as roundabouts). The fee methodology should consider the number of development added trips, estimated future trips, and mitigation cost estimates.

NEXT STEPS

These preliminary recommendations are conceptual in nature and will require additional data collection, analysis, and stakeholder input to advance any updates to the TIA processes and requirements. Action items for the City of Eugene to consider to work towards implementation include:

- **Data Collection:** Significant local data will be needed to support a new multimodal methodology and be defensible.
- **Trip Data Reduction and Rates:** The data will be evaluated and refined to develop local trip rates for each mode.
- **TIA Analysis:** Once the modal trip rates are determined, the TIA analysis methodology options will be explored and defined.
- **TIA Mitigations:** With a set TIA analysis methodology, multimodal mitigation methodology options will be explored and defined.
- **Engagement and Outreach:** Continued meetings and workshops with key stakeholders and elected officials will be needed through the process to gain support.
- **Development Code:** Revise the current code language to implement new multimodal TIA standards and guidelines.