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# Assessing Transportation Impacts Using Vehicle Miles Traveled Rather Than Level of Service Can Incentivize Infill Development

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## Issue

Local governments have long relied on Level of Service (LOS), a measure of automobile congestion, as the basis for assessing transportation impacts of land use development projects. Using this metric means that development on the urban fringe where baseline traffic congestion tends to be low is generally seen as having fewer transportation impacts and thus fewer impacts to mitigate. In reality, development at the urban fringe often increases driving and the associated congestion and emissions more than comparable projects in urban areas. Meanwhile, projects proposed in urban areas with greater baseline congestion often require a higher degree of analysis and mitigation to compensate for their contribution to the existing congestion. Thus, use of the LOS metric creates an incentive for projects that contribute to urban sprawl while penalizing denser development projects that could allow people better accessibility to jobs and services through alternate modes like walking, bicycling, or transit.

Starting July 1, 2020, local governments in California are required to use vehicle miles traveled (VMT) rather than LOS to measure land use projects' transportation impacts. The state updated the regulations that implement its environmental disclosure law, the California Environmental Quality Act (CEQA), to address its housing supply and affordability crisis and meet its climate goals. California's government has recognized that reducing VMT will be necessary to meet its long-term greenhouse gas reduction targets.

Researchers at UC Davis studied how this change affects the approval process for urban development. Because most

agencies have not yet switched to using VMT in their analyses, the researchers looked back at environmental documents for 153 development projects in the City of Los Angeles between 2001 and 2016 and determined whether these projects could have benefited from using a VMT metric instead of LOS for measuring their transportation impacts. The 153 projects comprise all the residential, office, and retail development projects in Los Angeles for which an environmental impact report (EIR) was prepared between 2001 and 2016 and for which the researchers were able to obtain a copy.

## Key Research Findings

**Basing transportation impact analyses on VMT rather than LOS could streamline the permitting process for development in urban areas.** The researchers found that 96 of the 153 projects could have benefited from some degree of streamlining of the environmental review process (Figure 1a). Each of those 96 projects was required to conduct a detailed transportation analysis under the LOS standard, and 62 of them were required to implement mitigation measures like through-lane additions, signalization, and transportation demand management programs to reduce LOS-related impacts. For four of the projects, LOS-related impacts were the only significant impacts requiring a full EIR. Using the state-suggested VMT screening criteria, none of the 96 projects would have required detailed transportation impact analysis or related mitigation measures under CEQA. And those four projects for which the only significant impacts were related to LOS might have avoided a costly EIR entirely had the analysis been based on VMT instead of

LOS. A caveat to this finding is that local governments may continue to require LOS-related analyses and exactions outside of the CEQA process, which would reduce the streamlining benefits of the switch to a VMT standard.

**Replacing LOS with VMT could help reduce delays and costs for housing development.** Nearly two-thirds (99 of 153) of the studied projects contained residential units. The researchers found that most of those residential-containing projects (75 of the 99) likely could have benefited from streamlined environmental review under a VMT-based framework (Figure 1b). Those 75 potentially streamlined projects proposed nearly 40,000 housing units, more than a quarter of the total housing units produced in Los Angeles during the study period. These results indicate that replacing LOS with VMT could provide at least some of the relief from permitting time and costs commonly cited as necessary to reduce housing

costs and increase housing production in California.

**Most local planners do not view measuring a project’s impacts to VMT as being any more costly than a LOS analysis.** In a separate survey of 77 experienced city and county planners in California by some of the same researchers, 81% reported that VMT analyses would not cost more than LOS analyses. Indeed, 66% reported that they personally thought switching to VMT in their respective jurisdictions would be “appropriate” or “somewhat appropriate.” These findings indicate that using a VMT-based standard likely will not be an undue burden to local governments.

### More Information

This policy brief is drawn from “Streamlining the Development Approval Process in a Post-Level of Service Los Angeles,” a paper in the Journal of the American Planning Association by Jamey M.B.

Volker, Amy E. Lee, and Dillon T. Fitch of the University of California, Davis. This policy brief also includes information from “A New Metric in Town: A Survey of Local Planners on California’s Switch from LOS to VMT,” a paper in Transport Findings by Jamey M.B. Volker and Amy Lee of the University of California, Davis, and Joe Kaylor of Arup. Both reports can be found on the NCST website at <https://ncst.ucdavis.edu/project/streamlining-development-process-post-los-los-angeles>.

For more information about the findings presented in this brief, please contact Jamey Volker at [jvolker@ucdavis.edu](mailto:jvolker@ucdavis.edu).

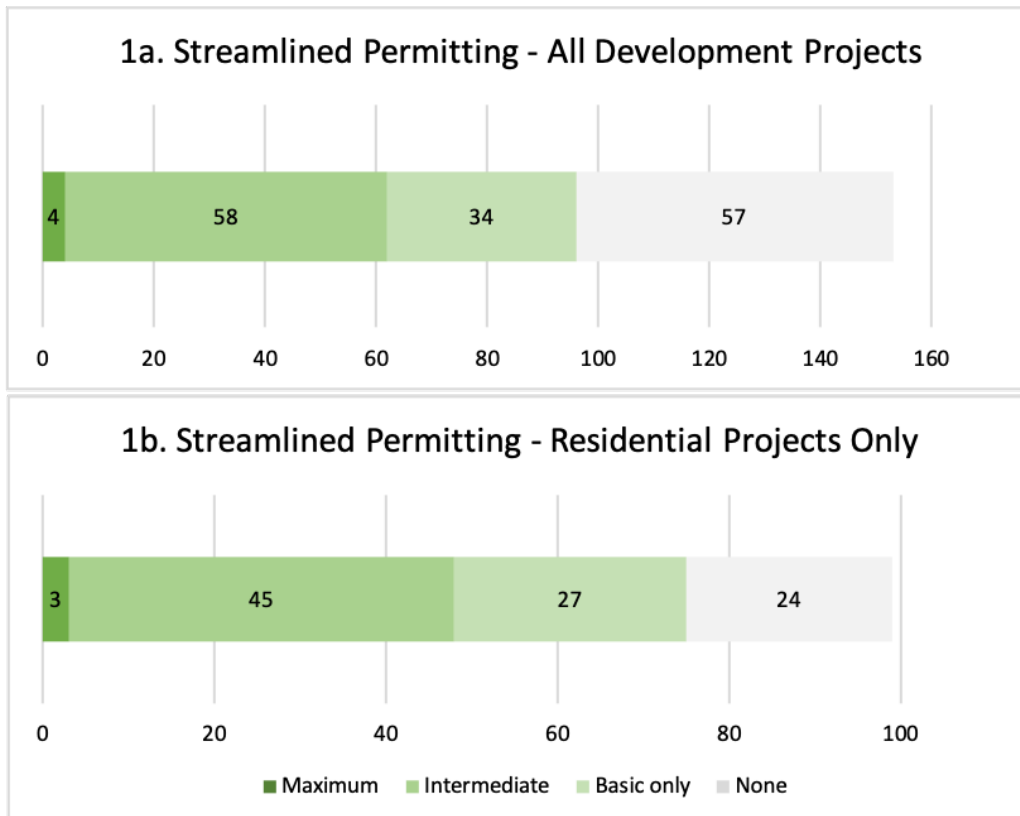


Figure 1a and 1b. Development projects in Los Angeles from 2001-2016 that would have benefited from a streamlined permitting process with a switch from LOS to VMT

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