

Report R27-08: Best Practices for Local Reviews of Industrial Developments

Background

Undesignated truck parking is one of the consequences of the growth in industrial freight activity. Truck drivers frequently park on roadway shoulders, off-ramps, vacant lots, and local streets near industrial and commercial facilities because truck stops are full, onsite staging is prohibited, and long delays at the facilities consume available hours-of-service time. Although Virginia legislation has encouraged jurisdictions to identify freight corridors in their comprehensive plans, knowledge of proactive policies is limited for industrial developments at the local level.

Research Objectives

The purpose of this research was to develop guidance for local reviews of industrial developments that will enable localities to support VTrans goals in the areas of industrial land use, truck parking, and freight mobility. Specific objectives were to (1) evaluate the level of detail in Virginia practices compared with best practices in respect to accommodating truck parking needs, (2) assess how these practices influence undesignated parking, and (3) identify locations where the greatest amount of undesignated truck parking occurs.

Approach

To achieve the study objectives, a literature review was performed that revolved around the topic of industrial development as it relates to (1) land use, (2) traffic impacts, (3) truck parking, and (4) mobility innovations. Next, a review of Virginia locality (city and county) ordinances was undertaken to examine the scope and breadth of clause language related to industrial and freight activity. On completing the ordinance review, the next task was to analyze truck parking near industrial developments and to examine the correlation between ordinance quality and the number of undesignated parking events. Best practice guidance was then developed to be based on findings from the previous tasks, with a focus on ordinance language that VDOT can share with localities.

Outcomes

Best practices in respect to local reviews of industrial developments include a detailed review process, with expectations for the traffic impacts, parking, routing, and amenities, and a set of supporting local ordinances for each of these areas. The Virginia review of ordinances indicates that localities exhibit uneven treatment of freight-related land use ordinances, and the moderate correlation of locality ordinance quality in Virginia and industrial site presence suggests that more industrialized localities are more likely to adopt detailed freight provisions in their zoning ordinances. Undesignated parking in Virginia is not uniformly distributed and clusters around three roadway contexts: industrial queue, interchanges, and rest areas, with interchange locations noted as the highest priority clusters based on the components of safety, and undesignated parking instances and durations.

Research Benefits

For the purposes of determining the estimated benefits of eliminating undesignated truck parking in localities throughout Virginia (with emphasis of those along the freight corridors) the total average yearly benefit per locality is estimated at \$17,654 for crashes and \$1,387 for a 1-unit increase in ordinance quality score.

Authors

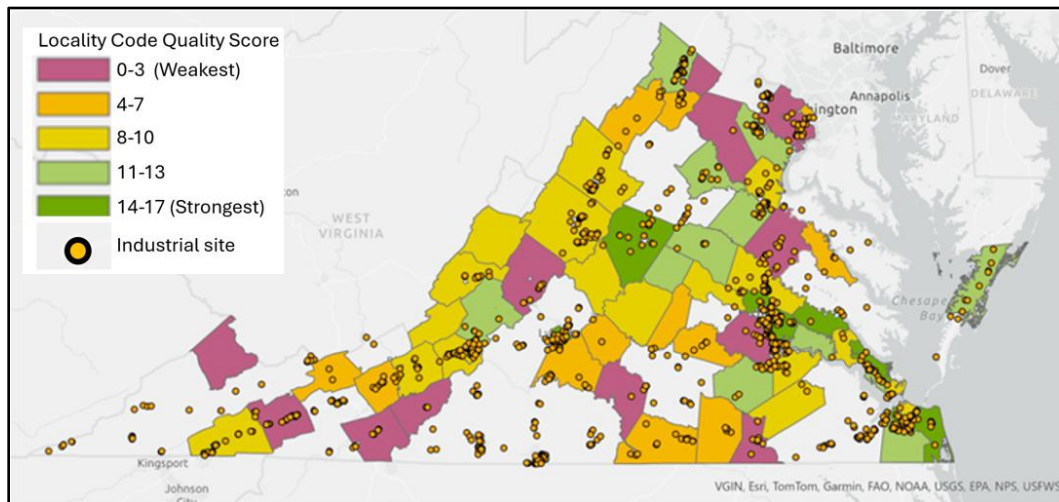
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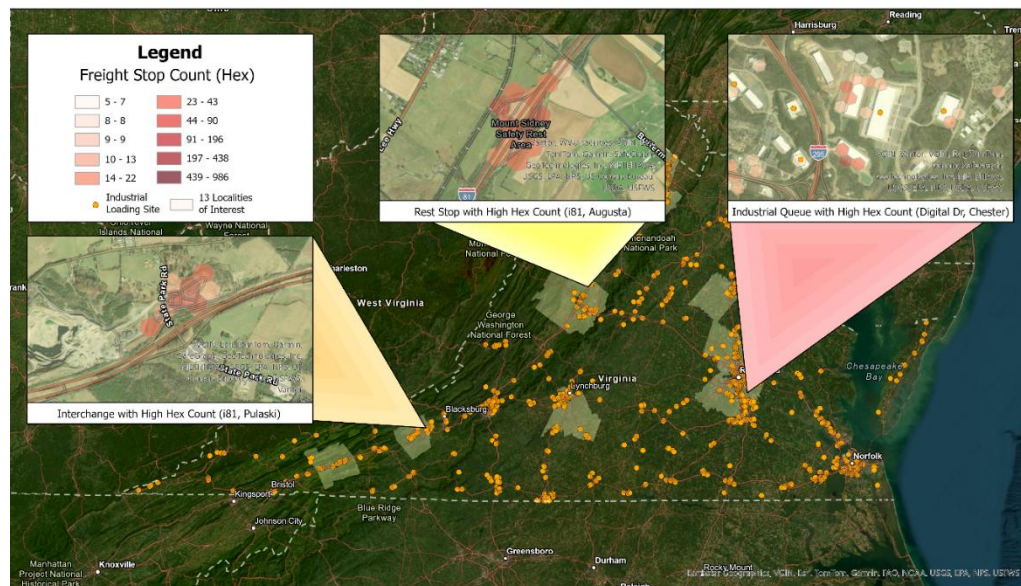
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Research Findings



Ordinance Quality

Localities exhibit uneven treatment of freight-related land use ordinances, even those with many industrial sites. Within these ordinances, topics of loading and parking tended to receive more attention, with less emphasis placed on distribution, storage, and congestion.



Undesignated Parking

Undesignated parking in Virginia clusters around industrial queues, interchanges, and rest areas. The largest clusters are in Warren, Augusta, and Henrico Counties. The customized cluster analysis for Virginia, based on duration, safety, and frequency, can help determine truck parking needs statewide.