Case Study Report for the I-15 Freight Mobility Enhancement Plan

Source: National Economic Partnerships Grant I-15 Freight Mobility Enhancement Plan

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U.S. Department of Transportation
Federal Highway Administration

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Prepared by ICF with support from CPCS
1. Background and Overview of the Case Study

The I-15 Corridor is a vital link in the economies of the western U.S. and the entire nation, connecting San Diego and the Inland Empire of California with the Las Vegas metropolitan area of Nevada and several points further inland. The corridor portions located in California and Nevada carry an estimated 30 million tons of cargo each year, primarily by truck. These corridor portions frequently experience truck parking shortages that are exacerbated by the lack of affordable and available land, community opposition, and other factors.

Both Caltrans and the Nevada Department of Transportation (NDOT) have identified truck parking as a high priority need, and the gaps in available truck parking have been well-documented in previous studies in both States. The I-15 Freight Mobility Enhancement Plan (MEP) builds on the efforts of Caltrans, NDOT, regional and local agencies, the freight community and other public and private partners from the I-15 Mobility Alliance. The overall objectives of the I-15 Freight MEP are to:

- **Address the critical issue of lack of truck parking on the I-15 Corridor.** Improved outcomes include an increased number of locations available for truck parking, reduced unauthorized truck parking, and improved air quality.

- **Improve transportation system performance.** This can be accomplished through reduced congestion, improved safety, and improved infrastructure conditions in the corridor.

- **Replicate this planning approach in other key corridors.** The I-15 Corridor is developing resources that are scalable and transferable to freight corridors in other megaregions.

This project was completed in November 2020 and is documented on the [I-15 Mobility Alliance website](https://www.i15mobilityalliance.com).

2. Methods, Procedures and Processes

The plan was managed through the activities of three distinct work streams over the course of a 14-month timeline.

![Project Timeline and Stakeholder Workshops](image)


**Partnerships and stakeholder engagement.** Caltrans and NDOT led the MEP effort, and over 30 partners were engaged to conduct study updates, webinars, and meetings, which were held at six key points in the MEP development process. Stakeholders included metropolitan planning organizations (MPOs), local cities and towns, technology providers and vendors, freight organizations, and logistics companies. At each milestone, stakeholders had the opportunity to provide input and feedback, inform study goals, review policy and technology options, recommend policy and technology initiatives, and develop consensus around a multi-organizational implementation framework.
Research and literature review. State and regional freight planning documents were reviewed to understand projects, policies, or other recommendations related to truck parking needs. Recently completed freight studies and plans from Caltrans, NDOT, regional studies, national best practices, and peer State and region research yielded important feedback that helped to inform potential solutions and recommendations in later tasks. State and regional planning studies helped to identify current and future projections for heavy truck trips through the different regions on the I-15 Corridor, notably through the Inland Empire (Riverside, CA), San Diego, and in the Las Vegas metropolitan area.

Technology assessment. The study team researched existing and emerging technologies related to truck parking approaches and logistics. To supplement this research, in February 2020, NDOT published a request for information (RFI) seeking input about emerging technologies that could be considered for the MEP from a wide range of technology providers and developers, implementing agencies, researchers, academia, and trucking associations.

3. Research Findings, Outcomes and Products

The stakeholder input, literature review, and technology research resulted in the development of a range of strategies needed to address the unique truck parking needs of communities along the I-15 Corridor. The 23 strategies were organized into four categories: supportive policies (10), infrastructure strategies (4), technology strategies (5), and supportive programs (4). The supportive policies are shown in Table 1 as an example of the range of strategies that were examined.

<table>
<thead>
<tr>
<th>Policy</th>
<th>Relative Cost ($ to $$$$)</th>
<th>Lead</th>
<th>Partner</th>
<th>Relative Ease (1 = easy, 3 = hard)</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expand existing and develop new commercial truck stops</td>
<td>$$</td>
<td>DOT, local agency</td>
<td>Property owner</td>
<td>2</td>
<td>3-5 years</td>
</tr>
<tr>
<td>Require shippers/receivers to provide on-site truck parking</td>
<td>$</td>
<td>Local agency</td>
<td>MPO, DOT</td>
<td>2</td>
<td>3-5 years</td>
</tr>
<tr>
<td>Allow property owners to provide truck parking on unused portions of property</td>
<td>$</td>
<td>Local agency</td>
<td>MPO, DOT</td>
<td>1</td>
<td>0-2 years</td>
</tr>
<tr>
<td>Allow truck parking at public facilities during off-hours</td>
<td>$</td>
<td>Local agency, MPO or DOT</td>
<td>2</td>
<td>3-5 years</td>
<td></td>
</tr>
<tr>
<td>Allow emergency truck parking at private facilities</td>
<td>$</td>
<td>Property owner</td>
<td>Local agency, MPO or DOT</td>
<td>2</td>
<td>3-5 years</td>
</tr>
<tr>
<td>Integrate truck parking into roadway project development process</td>
<td>0</td>
<td>Local agency, MPO or DOT</td>
<td>1</td>
<td>0-2 years</td>
<td></td>
</tr>
<tr>
<td>Consider truck parking needs prior to right-of-way purchases or sales</td>
<td>0</td>
<td>Local agency, DOT</td>
<td>MPO</td>
<td>1</td>
<td>0-2 years</td>
</tr>
<tr>
<td>Reassess public facility closures in high demand areas</td>
<td>$</td>
<td>DOT</td>
<td>Local agency, MPO</td>
<td>1</td>
<td>0-2 years</td>
</tr>
<tr>
<td>Include amenities at publicly owned truck parking facilities</td>
<td>$</td>
<td>Local agency, DOT</td>
<td>MPO</td>
<td>2</td>
<td>0-2 years</td>
</tr>
<tr>
<td>Increase enforcement of unauthorized parking</td>
<td>$$</td>
<td>Local agency, State police</td>
<td>MPO, DOT</td>
<td>2</td>
<td>0-2 years</td>
</tr>
</tbody>
</table>

4. Challenges

The I-15 Corridor study team faced two significant challenges: COVID-19 and local collaboration.

COVID-19. The most significant challenge in the study was the impact of the COVID-19 pandemic. The kickoff meeting was held at the onset of the study in Clark County, Nevada, and the first round of stakeholder engagement occurred in Southern California in November 2019. However, the second round of stakeholder engagement and all subsequent meetings were held virtually to eliminate any potential exposure to the virus during this study. These virtual meetings were implemented successfully and ultimately allowed for a greater degree of participation than in-person meetings would have permitted.

Local collaboration. Another challenge was the need to have close collaboration with many local agencies. Many of the strategies that were identified in this study require leadership or partnership from MPO, county, or city agencies. It is critical to include these partners in the process early and to understand how truck parking needs fall within their broader transportation goals.

5. Immediate and Long-term Anticipated Benefits

Immediate

The following four programmatic strategies can begin immediately:

- Create an awareness campaign for truck parking
- Create guidance to estimate truck parking demand
- Develop performance assessment and reporting strategy
- Establish a forum for ongoing collaboration and coordination

Long-term

In addition to specific strategy implementations, there are several programs that are recommended to help foster ongoing agency collaboration for truck parking initiatives on I-15, including promoting consistency among strategy implementations and facilitating information sharing among agencies on the I-15 Corridor. State DOTs would likely take a lead role in these supporting programs.

The long-term success of truck parking solutions will only be possible through an ongoing partnership of State, regional, local, and private sector stakeholders, along with securing funding benefits to implement the infrastructure and technology strategies identified in this study.

6. Ease of Replicability

The research conducted for this study is applicable to other freight-intensive, multi-State corridors. The importance of identifying partners and engaging other stakeholders is critical for the success for similar types of studies. The types of stakeholders identified and included in this study can be replicated for future studies.

Additionally, the information that was collected through the RFI captured technology options that were turned into the technology strategies that are shown in Table 2. These strategies can serve as a starting point for technology solutions that are examined in other regions. Furthermore, the structure of the RFI
can be used as a template for future studies when it is important to understand the range of technology solutions available.

Table 2. Technology Strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Cost</th>
<th>Lead</th>
<th>Partner</th>
<th>Ease</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop a truck parking availability system</td>
<td>$$</td>
<td>DOT</td>
<td>MPO, tech provider, truck stop</td>
<td>2</td>
<td>Mid</td>
</tr>
<tr>
<td>Install static signs for upcoming truck parking locations</td>
<td>$</td>
<td>DOT</td>
<td></td>
<td>1</td>
<td>Short</td>
</tr>
<tr>
<td>Deploy smart urban parking zones near logistics centers</td>
<td>$</td>
<td>Local Agency</td>
<td>Tech provider, DOT, MPO</td>
<td>1</td>
<td>Short</td>
</tr>
<tr>
<td>Truck Parking Marketplace mobile application</td>
<td>$</td>
<td>Tech Provider</td>
<td>Local agency, MPO, DOT</td>
<td>1</td>
<td>Short</td>
</tr>
<tr>
<td>Integrate truck parking locations with existing 511 systems</td>
<td>$$</td>
<td>DOT, MPO</td>
<td>Local agency, MPO, DOT</td>
<td>2</td>
<td>Mid</td>
</tr>
</tbody>
</table>

7. Lessons Learned

Lessons learned from the I-15 Freight MEP can be applied to other multiregion corridors that are dealing with truck parking shortages. The most significant lessons learned are related to exploring technology solutions and understanding policy influences.

Technology exploration. The industry RFI provided valuable information about recent implementations and emerging capabilities that might not be widely available in published literature. The team leveraged contacts in associations and research groups to spread the word of the RFI availability to their members. Because the RFI was released through NDOT’s Procurement office, the RFI posting also was picked up by several lead-sharing services. Eight responses were received, strengthening understanding of some known technologies and introducing new applications of technologies being deployed to solve related problems.

Policy influences at the local level. The responsibility for developing, implementing, and overseeing adherence to the policies recommended in this plan are largely the domain of local agencies. Local agencies will need to determine what support, if any, they need from regional and State agencies in developing these policies. While policies will be sensitive to the local political environment and influences, some level of policy consistency among I-15 peer agencies will be needed to benefit the broader corridor community. The ability for local agencies to develop and implement these policies will be determined by several factors and should include the active engagement of landowners and freight industry representatives.