

West  
Oakland

TRUCK  
MANAGEMENT  
PLAN

APPENDIX C

**Signs and Communication  
Technical Memorandum**

A joint plan by the  
City of Oakland and  
Port of Oakland



**PORT OF OAKLAND**



**CITY OF  
OAKLAND**

## SIGNS AND COMMUNICATION TECHNICAL MEMORANDUM

### West Oakland Truck Management Plan

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Date: November 1, 2018 Project #: 21790

To: Andrea Gardner, Port of Oakland

From: Aaron Elias and Alex Garbier, Kittelson & Associates, Inc.

Subject: **Signs and Communication Technical Memorandum  
for the West Oakland Truck Management Plan**

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This memorandum summarizes analysis and findings regarding truck signage and communication in West Oakland, the Port of Oakland, and industrial Jack London Square. The information presented is based on a review of rules and regulations, community input, and a survey of parking signs in West Oakland and the industrial area of Jack London Square. The information was used to inform future actions identified in the final Truck Management Plan (TMP).

The memo is organized into five sections:

1. Findings and Recommendations
2. Types of Signage and How it is Implemented
3. Community Input
4. Existing Signage and Communication Strategies
5. Conclusions

### 1. FINDINGS AND RECOMMENDATIONS

Based on community input, field observations, and discussions with City and Port staff (described herein), the following was found related to truck signage and communication with truck drivers:

- Signs and communication systems at the Port of Oakland and in West Oakland are operated by multiple agencies – City of Oakland, Port of Oakland, and Caltrans – making it difficult to maintain a unified communication strategy.
- Many roadway signs in West Oakland for trucks are not clear due to damage, age, or the small size of the signs.

- Routes to truck services located at the Port and at the Oakland Army Base (OAB) could be more clearly identified.
- Parking restrictions in the industrial and commercial parts of West Oakland are dependent on signs being posted indicating the restriction. These signs are often vandalized or missing which makes the parking restriction unenforceable.
- The Port of Oakland is pursuing alternative communication strategies to complement roadway signage, including online resources and mobile applications.

***Recommendations to address these findings***

- Improve communication of Truck Routes by ensuring there are signs at regular intervals and posting larger truck route signs at critical intersections serving many trucks.
- Insure that freeways signs and entry/exit ramp signs directing trucks to/from the Port of Oakland are installed and maintained.
- Replace damaged or faded signs and add new prohibited street signs at critical locations.
- Replace vandalized or missing signs indicating parking restrictions. This is critical as long as parking restrictions in non-residentially zoned areas require posting of signs stating restrictions.
- Reduce dependence on parking signs by changing the City parking restrictions to prohibited parking of trucks and unattached trailers without the requirement for signs to be posted in commercially and industrially-zoned areas and other sensitive locations, such as adjacent to parks.
- Identify locations to add signage that communicates the location of truck facilities and services at the Port and OAB, such as fuel and parking, to minimize truck travel on in West Oakland.
- Continue efforts to build and evaluate effectiveness of online and mobile communication strategies.
- Identify and implement other ways of communicating the location of truck routes and parking restrictions, in addition to signage.

## 2. TYPES OF SIGNAGE AND HOW IT IS IMPLEMENTED

Roadway signage is used to communicate with roadway users as they navigate the transportation infrastructure. Communications range from pointing out directions to regulating the speed limit and identifying vehicle restrictions. The Federal Highway Administration (FHWA) regulates signage on roadways with details documented in the Manual on Uniform Traffic Control Devices (Manual). Signage in the Manual is generally classified into three categories including:

- Regulatory – Signs usually have white background with black text. Examples include speed limit and parking signage.
- Warning – Include signs with a yellow background and black text. Examples include warnings about roadway curvature or speed bumps.
- Guide – Signs usually have a green background with white lettering. Examples include freeway signage to identify the off-ramp road and directional signage to specific locations such as marine terminals.

Typical signage related to trucks from the Manual are shown in Exhibit 1. While signage is generally regulated by FHWA, it is up to the local jurisdiction to determine where and when signage should be installed. For roadways under the jurisdiction of the City of Oakland, the Oakland Department of Transportation (DOT) is responsible for this determination. The City of Oakland’s primary goal is to maintain signage that clearly indicates preferred truck routes and parking restrictions. The process DOT uses includes:

- The City Engineer determines the location and size of signs to be installed in Oakland.
- The installation of these signs is undertaken by City DOT staff or by private contractors working at the direction of the City.
- Ongoing maintenance of these signs is undertaken by the DOT.

Some roadways in Oakland are state facilities meaning they fall under the California Department of Transportation (Caltrans). Their process for installing signage includes:

- Caltrans staff conducts a formal inspection of all signs once each year between April 1<sup>st</sup> and May 15<sup>th</sup>.
- Caltrans staff conducts informal sign inspections on an informal basis and “as-needed”, or under the general guideline of twice a year.
- Signs are generally replaced to coincide with other maintenance work.

**Exhibit 1: Types Signage Related to Truck Movement**

<b>Example Services Signs</b>			
Type	Example	Type	Example
Truck Parking		Diesel Fuel	
Information		Trash	
Maintenance		Restroom	
<b>Movement Signs</b>			
Type	Example	Type	Example
Truck Route		Truck Route Alternative	
No Idling		Truck Prohibited Street	

Source: Kittelson and Associates, 2018

### 3. COMMUNITY INPUT

Community input was collected continuously during the formulation of the TMP. This included multiple community outreach events and direct emails to the Port of Oakland and the City of Oakland. The community input received is documented in more detail in the Stakeholder Comments Spreadsheet contained in the Appendix. However, the highlights of the input related to signage and communication include:

- Signs in West Oakland are commonly faded or damaged making them difficult to see.
- Truck Route signs are generally small and insufficient in number to effectively communicate Truck Routes and Truck Prohibited Streets.
- There is limited signage identifying the location of truck services, particularly the services located at the Port and Oakland Army Base, making the services more difficult to find and increasing the distance truck drive to reach them.
- Existing signage was implemented in a piecemeal process over many years. A systematic approach to updating the signage at the Port and in West Oakland would improve efficient communication with drivers.
- Signs which indicate parking regulations of specific blocks in commercial and industrial zones areas are often missing, resulting in the parking restriction being unenforceable.

## 4. EXISTING SIGNAGE AND COMMUNICATION STRATEGIES

### ***Survey of Truck Parking Signs***

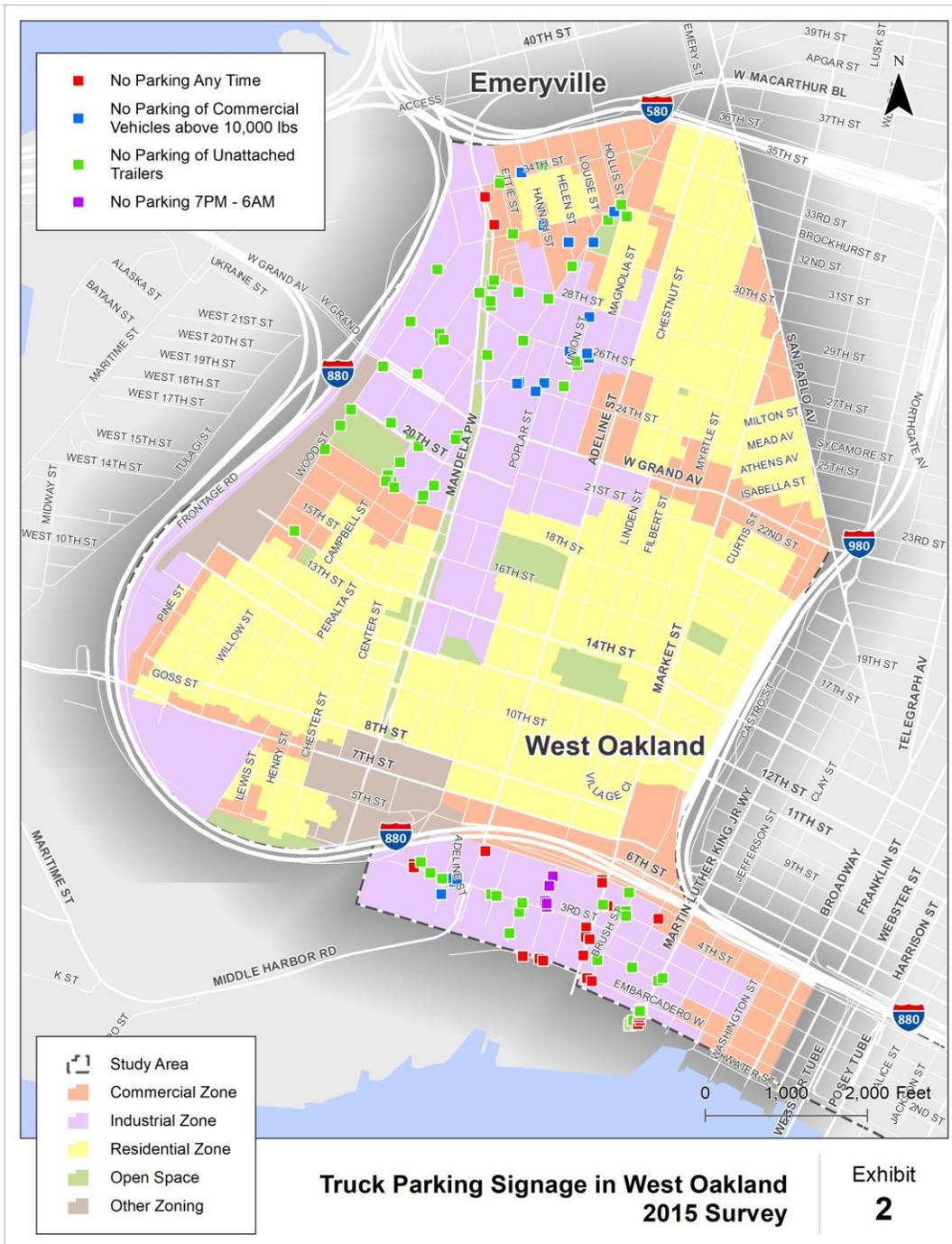
In 2015, a survey was conducted of restricted parking areas in West Oakland. The survey area included all public streets in an area bounded by I-580 to the north, the Estuary on the south, San Pablo Avenue and I-980 and Brush Street to the east, and I-880 to the west, as well as an additional area around the northern part of Jack **London** Square bounded by Union Street, Embarcadero West, Franklin Street, and I-880.

Aside from the street-sweeping-related signs that are prevalent throughout the West Oakland, additional signage impacting truck parking were observed and documented. The signage was classified in the following four categories:

- “No Parking Anytime”
- “No Parking 7 p.m. – 6 a.m.”
- “No Parking of Trucks Over 10,000 lbs.”
- “No Parking of Unattached Trailers”

For these parking restrictions to be enforced, signs must be located at the beginning and end of each city block on which the parking restriction applies. Without a sign posted, the parking restriction is unenforceable. The locations of these parking restriction signs in West Oakland are shown Exhibit 2. Most of the areas where parking is restricted by signage is located near the industrial area south of I-880 near Jack London Square and in the industrial zone near Mandela Parkway and West Grand Avenue. During the observation period, Port-related and non-Port related vehicles were observed parked along streets that had these restrictions, as shown below in Exhibit 3 and Exhibit 4. For additional information on truck and trailer parking refer to the Truck Parking Technical Memorandum contained in the Appendix.

**Exhibit 2: Truck Parking Prohibition Signage in West Oakland**



Source: Kittelson and Associates, Signs data from survey 2015, figure updated 2018



### ***Signs indicating the truck routes and freeway entry/exit ramps***

Wayfinding signs are present in West Oakland and adjacent to the Port to indicate directions to the Port and freeways as well as which streets are Truck Routes and which are Truck Prohibited streets. During the TMP development, staff reviewed signage at major intersection and at locations identified in community input and confirmed that signage at multiple locations was difficult to read due to damage or to the relatively small size of signs. Exhibit 5 and Exhibit 6 show two examples of difficult to read City maintained signs and Exhibit 7 shows an indicative example of a Caltrans sign that is no longer legible.

#### **Exhibit 5: Small Truck Direction Sign Elevated above Street**



Source: City of Oakland, 2018

**Exhibit 6: Faded Truck Prohibited Street Sign (Circle and Cross was initially Red)**



Source: City of Oakland, 2018

**Exhibit 7: Vandalized Caltrans Sign**



Source: City of Oakland, 2018

The lack of clear visibility of signs is an issue for truck drivers who do not regularly travel to the area, or who have the ability to save time by diverging from required Truck Routes. In response, the Port of Oakland is investing in additional communication strategies beyond signage.

Specifically, the Port is developing:

- An online truck driver portal that include a range of information for operators, including truck routes and prohibited routes.
- A mobile application that can assist drivers to navigate schedules and routing.
- An updated road map that more clearly identifies Truck Routes, Truck Prohibited Streets and parking services at the Port of Oakland.

## 5. CONCLUSIONS

Based on a review of the existing signage, community input, and signage review, the following can be concluded:

- Many signs are damaged or difficult to read. As a result, they are often of limited use in communicating parking and wayfinding. This is problematic as the City relies on signs to communicate wayfinding and Truck Routes with truck drivers and requires signs be in a state of good repair to enforce truck and trailer parking restrictions on specific blocks in commercial and industrial areas. More information is available in the Enforcement of Parking Regulations and Truck Routes Technical Memorandum contained in the Appendix.
- There are opportunities for the City and Port to reduce reliance on signs for parking and wayfinding, such as by changing parking regulations.
- Where possible, the City and Port should reduce reliance on signage for parking and wayfinding. In particular, the City should avoid cases where enforcement depends on maintenance of signs.
- There is potential to add more wayfinding signs in West Oakland, adjacent to on- and off-ramps, to assist truck drivers efficiently accessing truck facilities located at the Port and at the OAB. Locating such signs on City of Oakland property would expedite implementation.

The TMP proposes three strategies to address concerns about signs and to improve communication with truck drivers:

- Strategy 4: Improve Truck Route Signage
- Strategy 6: Use Street Design to Promote Use of Truck Routes

- Strategy 8: Change Parking Regulations
- Ongoing Effort: Continue Truck Driver Outreach