

MEMORANDUM

Date: May 27, 2020

Project #: 24848

To: Andrea Gardner, Port of Oakland
Alicia Parker, City of Oakland

From: Aaron Elias, Alex Garbier, and Kittelson & Associates, Kittelson & Associates, Inc.
Subject: **Truck Management Plan Implementation:** Proposed Updates to Truck Routes and Truck Prohibited Streets

INTRODUCTION

The West Oakland Truck Management Plan (TMP) is an action-based plan that identifies a number of strategies to reduce the effects of transport trucks on local streets in West Oakland. The TMP includes ten strategies to implement over a five-year period. The memorandum summarizes analysis conducted by the TMP team to implement *Strategy 3: Update the Network of Truck Routes and Truck Prohibited Streets*. The TMP team includes staff from the City of Oakland (City), Port of Oakland (Port), and Kittelson & Associates, Inc. (Kittelson). The goal of the strategy is to update the network of roads used by trucks to help minimize truck travel in areas with residential uses while providing clearer and more effective routing for truck operators. The memorandum (memo) summarizes analysis conducted by the TMP team to review existing conditions and identify proposed updates to the Truck Routes and Truck Prohibited Streets in West Oakland.

The document is organized into five sections:

- *Overview* – Provides background information and summary of memo findings
- *Oakland Truck Route and Truck Prohibited Streets* – Describes regulation and enforcement of truck movement as well as how Truck Routes and Truck Prohibited Streets are communicated
- *Evaluation Process* – Outlines process used to identify and evaluate potential changes to Truck Routes and Truck Prohibited Streets, including data collection
- *Proposed Changes* – Identifies proposed changes to Truck Route and Truck Prohibited Streets in the Oakland Municipal Code (OMC) and desired outcomes
- *Next Steps* – Describes next steps for Strategy 3 implementation

It also includes appendices with supporting documentation:

- *Appendix A: Proposed Changes to Oakland Municipal Code* – Draft changes to the OMC to implement the proposed changes to Truck Routes and Truck Prohibited Streets
- *Appendix B: Supporting Frontage Road Documentation* – Includes historical documentation regarding transfer of Frontage Road Truck Route to the City

OVERVIEW

Definitions

Truck Routes and *Truck Prohibited Streets* describe specific classification of streets as defined in the OMC¹ and California Vehicle Code (CVC)². Oakland uses these designations as a primary method for regulating truck movement. Truck Routes are the designated routes for commercial vehicles to travel through and within the city. Truck Prohibited Streets are streets, or parts of streets, that are designated as prohibited to trucks. The specific definitions for Truck Routes and Truck Prohibited Streets are defined in the OMC Section 10.52, as summarized below:

- *Prohibited Streets* (10.52.060) – Specific streets, or parts of streets, are designated as prohibited to vehicles exceeding four and one-half tons. Under the CVC 15.5.4.35703, commercial vehicles can deviate onto prohibited roads only for the purpose of loading or unloading. The City places signs indicating the streets that are prohibited.
- *Local Truck Routes* (10.52.120) – Truck Routes in Oakland are the designated routes for commercial vehicles to travel within the City of Oakland. Operators are required to stay on these routes unless it is necessary to deviate to reach a destination for loading or unloading.

Trucks as described in this memo refers to heavy duty drayage and semi transport trucks that are used to move cargo on chassis or to pull semi-trailer as well as any other vehicle with five or more axles. The definition used for this memo includes both trucks with and without an attached trailer. In this memo, *truck* does not include smaller commercial vehicles, sometimes called box trucks, that are used for small deliveries. This memo focuses on larger vehicles that can have greater effects on local streets.

¹ OMC 10.52: Commercial Vehicles and Vehicle Size and Weight Limits are available at:
https://library.municode.com/ca/oakland/codes/code_of_ordinances?nodeId=TIT10VETR_CH10.52COVEVESIWEL

² CVC 15.5.4: Regulations for local authorities governing vehicle size, weight, and load are available at:
https://leginfo.ca.gov/faces/codes_displayText.xhtml?lawCode=VEH&division=15.&title=&part=&chapter=5.&article=4

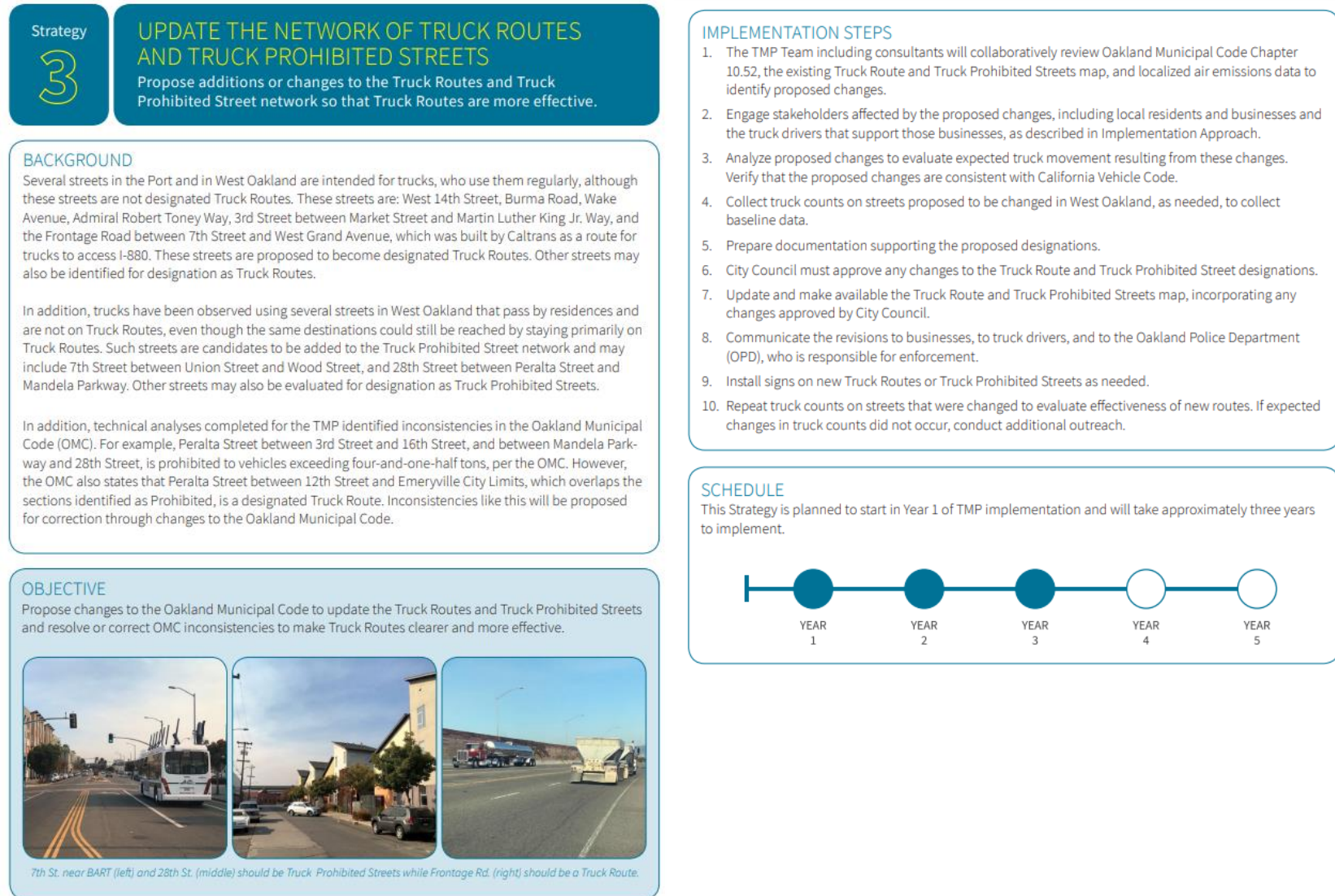
TMP Findings

During the development of the TMP, the TMP team of Port, City, and Kittelson staff obtained feedback from residents and businesses and examined data on truck movement and likely truck destinations in West Oakland. The information was used to review existing Truck Routes and Truck Prohibited Streets in West Oakland and the Port to determine potential improvements. The review found that:

- Several streets that are intended for and used regularly by transport trucks are not designated Truck Routes.
- Trucks have been observed using streets in West Oakland that pass by residences and are not on Truck Routes.
- State law allows trucks to deviate from a route to complete a delivery (CVC 15.5.4.35703 and OMC 10.52.110); however, in some cases, delivery routes were available that would avoid residences.

As a result, Strategy 3 was developed for the TMP to update the network of Truck Routes and Truck Prohibited Streets to improve communication and use of preferred routes of travel to both truck operators and residents. Strategy 3 is shown in Figure 1.

Figure 1: TMP Strategy 3 - Update the Network of Truck Routes and Truck Prohibited Streets



Source: West Oakland Truck Management Plan

OAKLAND TRUCK ROUTES AND TRUCK PROHIBITED ROUTES

Regulation and Enforcement

Truck Routes and Truck Prohibited Streets are regulated according to the OMC and CVC. The regulations governing these roads are defined in sections 10.52.060 and 10.52.120 of the OMC as described in the introduction. Each of these two sections of the OMC includes a table with a list of the roads in Oakland that are defined as either a Truck Route or Truck Prohibited Street. For each street, the OMC identifies the street name and the extent of the section of road defined as either a Truck Route or Truck Prohibited Street; see the example in Table 1.

Table 1: Selection from Oakland Municipal Code Truck Routes (10.52.120)

Street	From	To
Martin Luther King Jr. Way	8 th Street	Port of Oakland
Nelson Mandela Parkway	8 th Street	7 th Street
Peralta Street	12 th Street	7 th Street

Source: Extract from Oakland Municipal Code, Section 10.52.120 – Local Truck Routes

During the development of the TMP, one of the important observations was that the CVC includes an exception that allows vehicles to deviate from Truck Routes. The exception is also reflected in the OMC (10.52.110). The exception allows truck operators to “leave [Truck Routes] for the purpose of loading and unloading such vehicle or vehicles at a point off of said route; provided that such deviation for the purpose of loading or unloading shall be taken over a route which keeps at a minimum the distance traveled off of the truck route involved.” Feedback from the Oakland Police Department (OPD) is that the exception makes it difficult and resource-intensive to enforce compliance with Truck Route regulations.

Communicating Routes

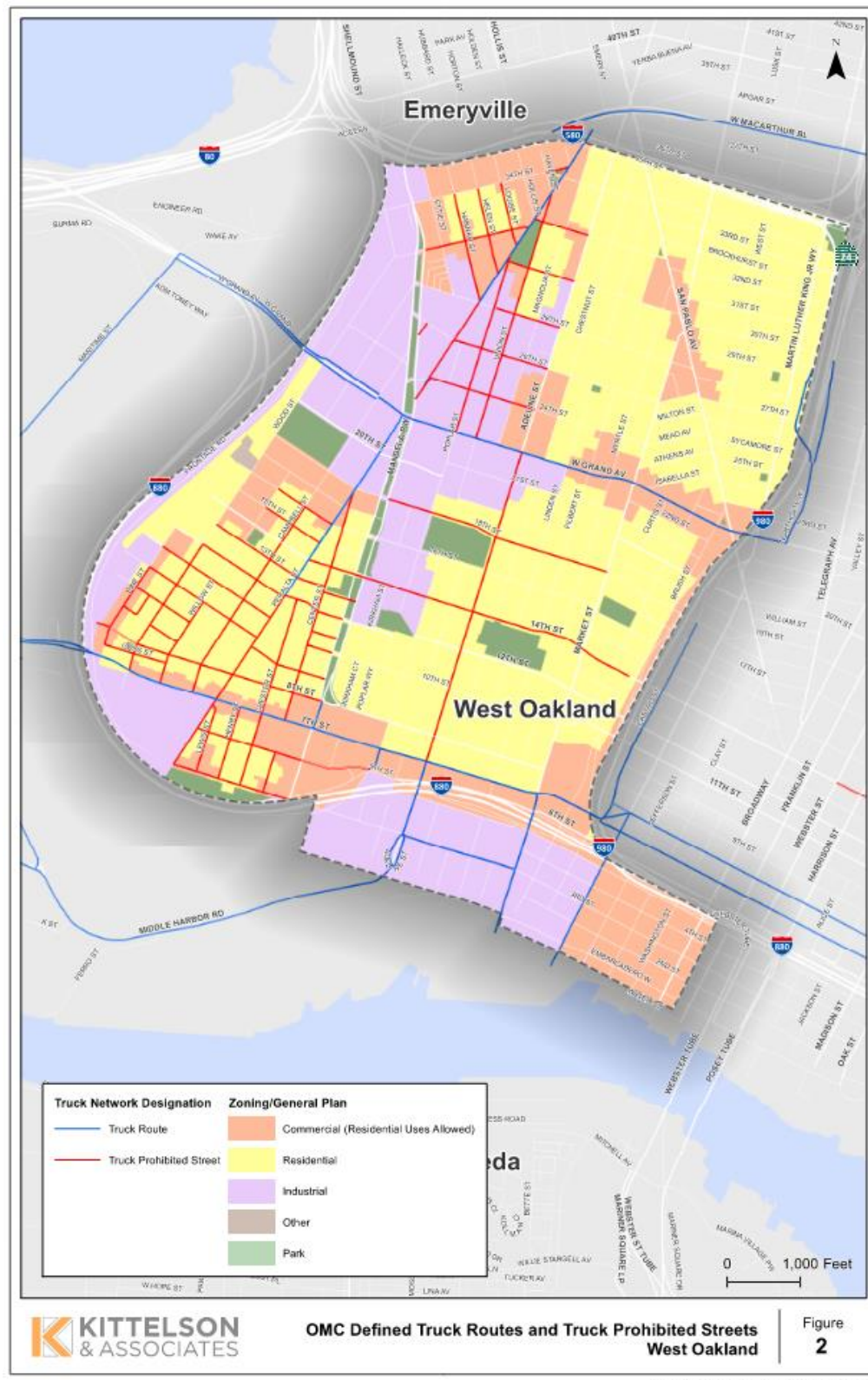
The Truck Routes and Truck Prohibited Streets are identified in three different data sources: the OMC, City-published maps, and signs. The tables in the OMC officially designate the Truck Routes and Truck Prohibited Streets; however, as part of the City’s lengthy municipal code it is relatively difficult for residents and truck operators to consult. Instead, residents and truck operators are more likely to consult Oakland published maps of Truck Routes and Truck Prohibited Streets and signage posted on city streets. The TMP team reviewed each data source to identify any discrepancies among roads identified as Truck Routes and Truck Prohibited Streets in the different data sources. Changes to resolve these discrepancies are listed in the *Proposed Changes* section of this memo.

Oakland Municipal Code

The tables in OMC that identify Truck Routes and Truck Prohibited Streets were translated into a map shown in Figure 2. Of note:

- ***Peralta Street*** is defined in the OMC as both a Truck Route and Truck Prohibited Street in some sections, which is clearly an error.
- ***7th Street between Union Street and Wood Street***, although shown as a Truck Route on Figure 2 per the OMC, it is not indicated as a Truck Route on the City's public map nor are there posted Truck Route signs.

Figure 2: OMC Defined Truck Routes and Truck Prohibited Streets

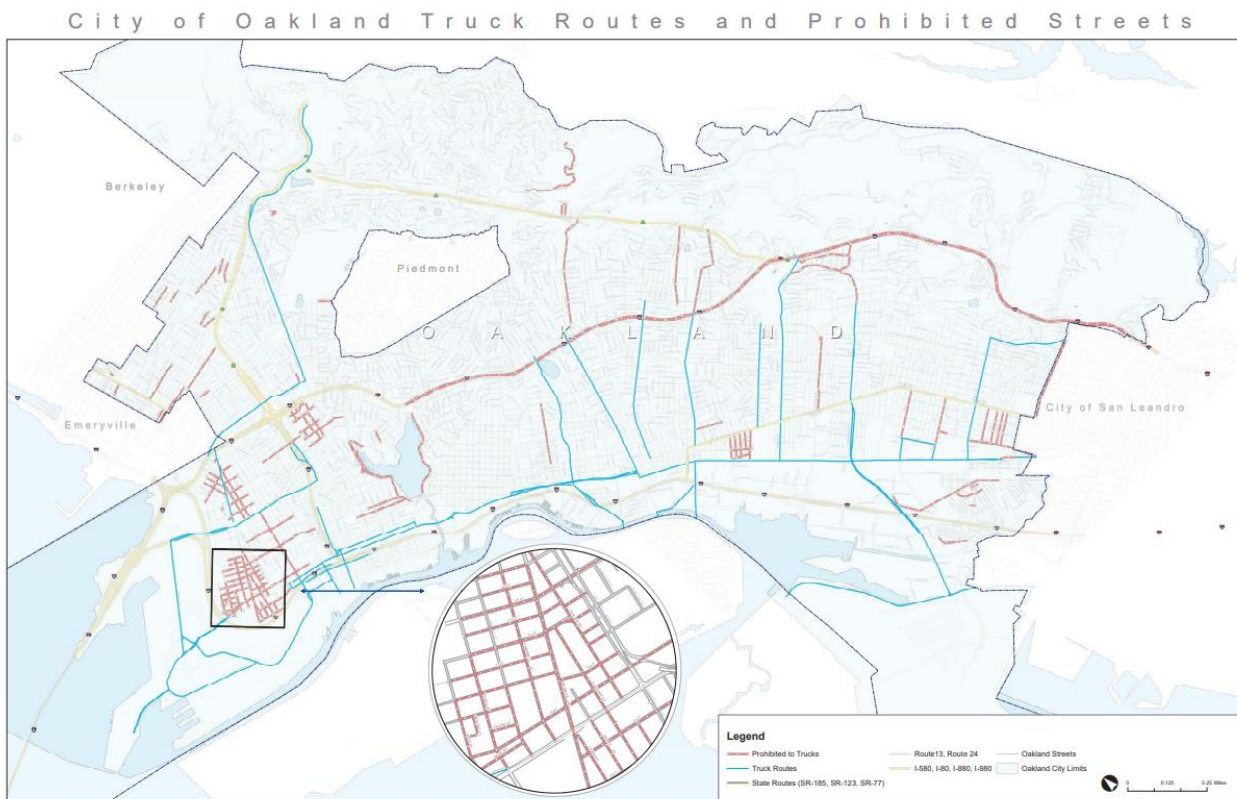


Source: Kittelson & Associates, Inc.

Oakland Public Map of Truck Routes and Truck Prohibited Streets

The City public map showing Truck Routes and Truck Prohibited Streets is displayed on the city website and shown in Figure 3.³ The map was published in February 2018. While the public map is intended as a representation of the legally defined Truck Routes and Truck Prohibited Streets, it includes variations from the OMC. The City website also includes links to shapefiles for the Truck Routes and Truck Prohibited Streets.⁴ The shapefiles are consistent with the public map in West Oakland; a screenshot is shown in Figure 4.

Figure 3: Public Map of Truck Routes and Truck Prohibited Streets

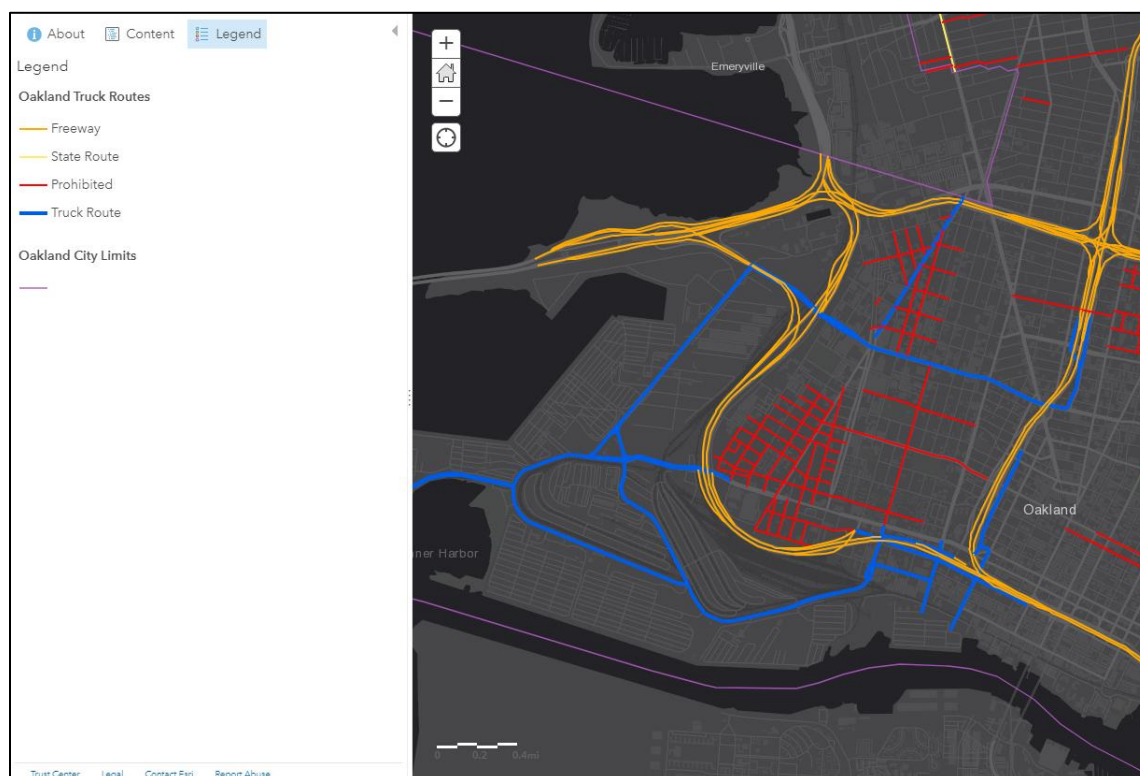


Source: City of Oakland, Truck Routes and Prohibited Streets

³ Oakland Map of Truck Routes and Truck Prohibited Streets: <https://cao-94612.s3.amazonaws.com/documents/oak063236.pdf>

⁴ Oakland Truck Route Map: <https://www.arcgis.com/home/webmap/viewer.html?webmap=8cd63bb6e50042d994d2e29e8308c950&extent=-122.3566,37.6323,-122.0192,37.9202>

Figure 4: Online Interactive Map Showing City Maintained Shapefiles



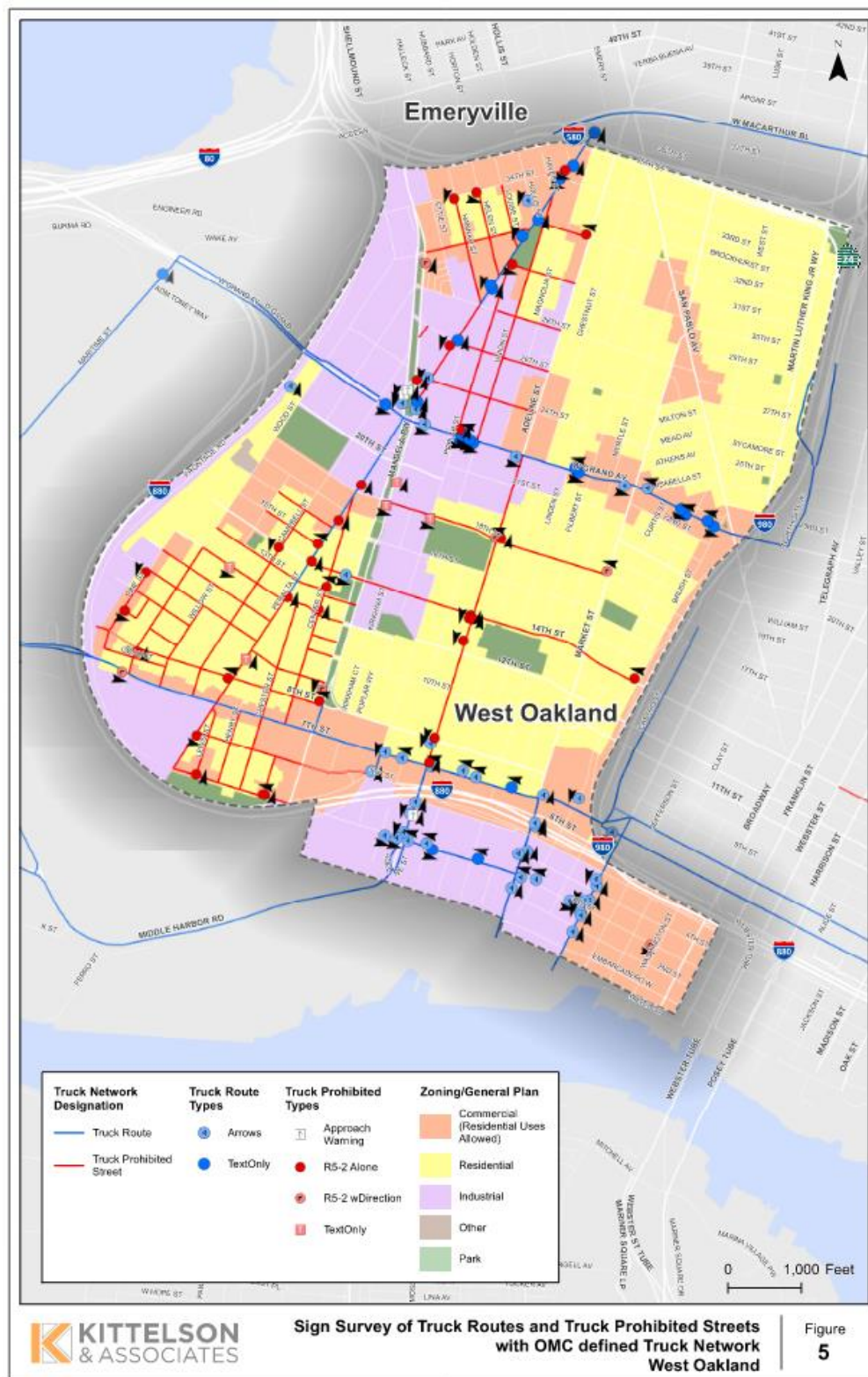
Source: City of Oakland, Oakland Truck Route Map

Truck Routes and Truck Prohibited Signage

Truck Routes and Truck Prohibited Streets are identified for drivers using street signs. The signs are key markers for the public as the signs are the only physical identifiers observable while driving of where Truck Routes and Truck Prohibited Streets are in West Oakland. As part of the TMP implementation, Kittelson conducted a survey of signs in West Oakland in Fall 2019 and compared the location of signs to Truck Routes and Truck Prohibited Streets.

Figure 5 shows the results of the survey. The analysis found that Truck Route signs are generally in good condition and visible and, with only a few exceptions, align with the OMC's defined Truck Routes. Truck Prohibited Signs are placed accurately but are more likely to be in poor condition. The arrows in the map indicate the direction of traffic when the vehicle is visible.

Figure 5: Truck Route and Truck Prohibited Street Signs



Source: Kittelson & Associates, Inc.

EVALUATION PROCESS

The process used to identify and evaluate proposed changes to the Truck Routes and Truck Prohibited Streets consisted of identifying potential changes, collecting additional information, and then recommending changes.

Step 1: Identify Potential Changes

The TMP team started with the recommendations in the approved TMP for potential changes to the OMC to update Truck Routes and Truck Prohibited Streets in West Oakland. The list was confirmed and updated by a review of:

- **Discrepancies identified between the OMC and other data sources** – Identify where the OMC does not agree with public documentation of Truck Routes and Truck Prohibited Streets or with posted signage.
- **Stakeholder feedback collected during the TMP development** – Consider locations, such as 28th Street, where residents identified truck traffic on local streets where residents live.
- **Localized air emission data** – Identify streets not critical to the Truck Route network where poor air quality was recorded to identify where changes could discourage truck traffic. Data was provided by the West Oakland Environmental Indicators Project.⁵
- **Industrial Use** – Consider changes to streets that are used almost exclusively by trucks and industrial traffic.

Step 2: Collect Additional Information

After creating the list of potential changes, the TMP team identified a set of locations in West Oakland to collect vehicle counts by vehicle type and speed data. The team primarily chose locations along and near 7th Street, Frontage Road, and the industrial area north of West Grand Avenue along Peralta Street to collect data on current truck use of certain roadways to better understand how proposed changes may shift trucks to other streets and to evaluate effectiveness of Strategy 3 after implementation.

The data were collected over a week period (Sun. -Sat.) at each location during November and December 2019. Counts were not collected during the week of Thanksgiving. Data on the number of vehicles with 5 or more axles is shown in Figure 6 with the existing Truck Routes and Truck Prohibited Streets. The data collection used tube counters to identify the number of vehicles at each location,

⁵ Data is available at <https://www.edf.org/airqualitymaps/oakland/pollution-and-health-concerns-west-oakland>

the speed distribution of the vehicles, and their classification (e.g. automobile, box truck, semi-truck, etc.).

Note that tube counters have difficulty identifying vehicle classification when vehicle speeds are relatively low (< 15 miles per hour [mph]). Locations where more than 10 percent of the vehicles were unclassified are noted with an asterisk in Figure 6. Unclassified vehicles are not included in the count of trucks. Locations such as the industrial area north of West Grand Avenue and west of Peralta Street had high unclassified percentages, which likely results in an underestimation of the total number of trucks.

In addition, the team completed a detailed visual survey of streets in industrial areas of West Oakland to support implementation of *Strategy 8: Change Parking Regulations* and identify locations appropriate for truck parking and expected to remain industrial. This work was also used to revise proposed changes, especially in the area north of West Grand Avenue and west of Peralta Street.

Step 3: Recommend Changes

The team then confirmed the proposed changes based on the results of Step 2 and developed a set of proposed changes. The results on this work are shown in the next section, *Proposed Changes*.

Truck Network Designation

- Truck Route
- Truck Prohibited Street

Avg. Daily Truck Count (Su - Sa Collection)

- 0 - 5
- 6 - 10
- 11 - 50
- 51 - 200
- 201 - 940

Zoning/General Plan

- Commercial (Residential Uses Allowed)
- Residential
- Industrial
- Other
- Park

**Average Daily Truck Volumes
7-day Collection Period (Su - Sa)
West Oakland**

Figure 6

Kittelson & Associates, Inc.

Oakland, California

PROPOSED CHANGES

This section identifies draft proposed changes to the list of Truck Route and Truck Prohibited Streets in West Oakland in the OMC. For each change, justification is provided for why the change is proposed. The proposed changes are listed in Table 2 and shown in Figure 7. The recommended changes to the OMC text are shown in redline in Appendix A: Proposed Changes to Oakland Municipal Code.

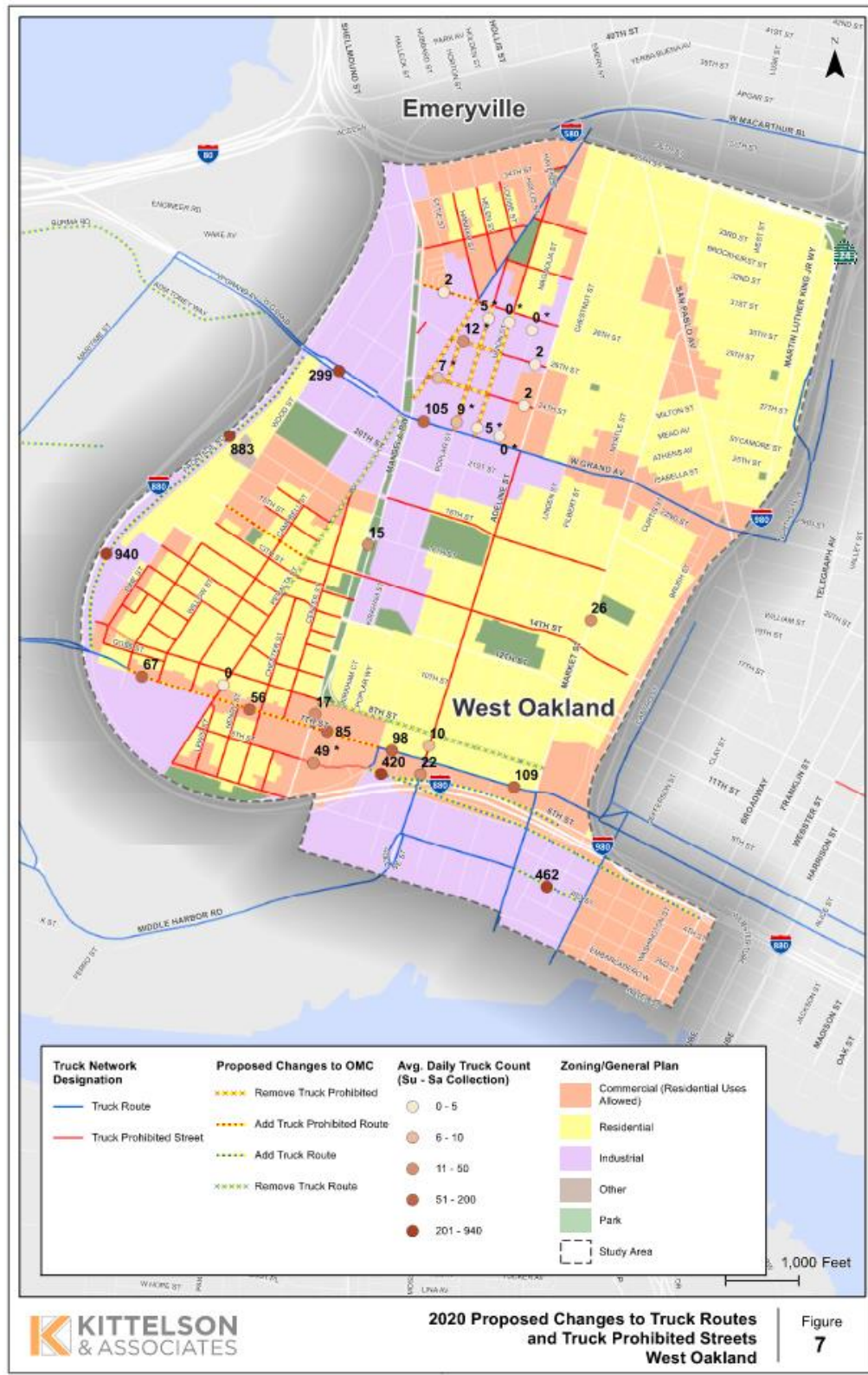
Table 2: Proposed Changes to Truck Routes and Truck Prohibited Streets

Proposed Changes to Truck Routes in OMC		
Add Truck Routes	From	To
Frontage Road	7 th Street	West Grand Avenue
Burma Road	Maritime Street	West End of Berth 7
Admiral Toney Way	Maritime Street	End of Road
West 14 th Street	Maritime Street	I-880 Freeway
3 rd Street	Market Street	MLK Way
5 th Street	Broadway	Union Street
6 th Street	Brush Street	Union Street
Remove Truck Routes	From	To
Peralta Street	12 th Street	West Grand Avenue

Proposed Changes to Truck Prohibited Streets in OMC		
Add Truck Prohibited Streets	From	To
28 th Street	Mandela Parkway	Poplar Street
14 th Street	Wood Street	Peralta Street
7 th Street	Wood Street	Union Street
Remove Truck Prohibited Streets	From	To
Kirkham Street	West Grand Avenue	26 th Street
Poplar Street	West Grand Avenue	28 th Street
Union Street	West Grand Avenue	28 th Street
Peralta Street	West Grand Avenue	28 th Street

Source: Kittelson & Association, Inc.

Figure 7: Proposed Changes to Truck Routes and Truck Prohibited Streets



Source: Kittelson & Associates, Inc.

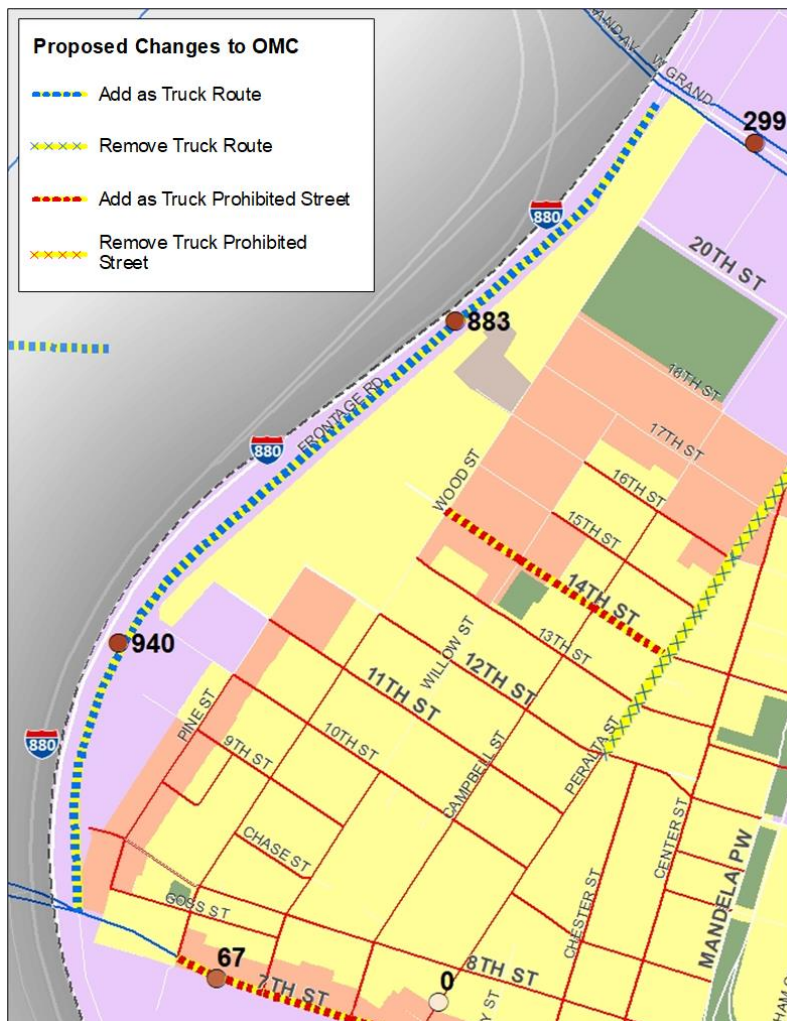
Discussion of Proposed Changes to Truck Routes

The proposed updates refine the network of Truck Routes in West Oakland to make the preferred network of roads clearer for Truck Operators. It is important that Truck Routes are appropriate and relatively easy for operators to follow.

Add Truck Route – Frontage Road between 7th Street and West Grand Avenue

Frontage Road is parallel to I-880 between 7th Street and West Grand Avenue. The cross-section is roughly 80 feet and includes four travel lanes, a center lane striped as a median, and shoulders. The road is largely separated from the West Oakland road network. There are two access points along the segment at 14th and 16th Street, both of which serve the Station House residential development. The section proposed for addition is shown in Figure 8.

Figure 8: Proposed Change to Frontage Road



Source: Kittelson & Associates, Inc.

Source: Kittelson & Associates, Inc.

The proposed change is based on the following.

- ***Designed for Truck Traffic:*** Following the collapse of the Cypress Freeway in 1989, the freeway was rerouted around West Oakland. As part of the reconstruction, Frontage Road was built as an access road for trucks to merge onto I-880 and minimize trucks driving north-south through West Oakland on local roads. As a result, it was designed with few intersections and no on-street parking, thereby reducing stopping and potential conflicts. The wider cross-section also provides greater space for trucks and other vehicles to maneuver around one another.
- ***Reflect Existing Truck Use:*** The tube counts reported that about 900 trucks use the road daily, which is around 10 percent of the total daily count of vehicles observed on the road.
- ***Preferred North-South Truck Route:*** The other north-south routes in West Oakland (Market Street, Adeline Street, and Mandela Parkway) are fronted by schools, parks, and housing and include bike lanes, making them less appropriate for truck travel than the Frontage Road. Although there is a residential development adjacent to Frontage Road, driveways do not connect directly to Frontage Road and the properties are separated from the sidewalk on Frontage Street by a continuous wall. Station House residents can enter Frontage Road at 14th and 16th Streets.
- ***Historical Support for Truck Route Designation:*** Frontage Road was originally a Caltrans roadway and as part of I-880 it was designated a Truck Route. In 2005, most of the Frontage Road was transferred to the City. City staff prepared a Council Report to confirm Frontage Road as a truck route (see Appendix B: Supporting Frontage Road Documentation). However, the recommendation was not implemented, which appears to have been an oversight.⁶

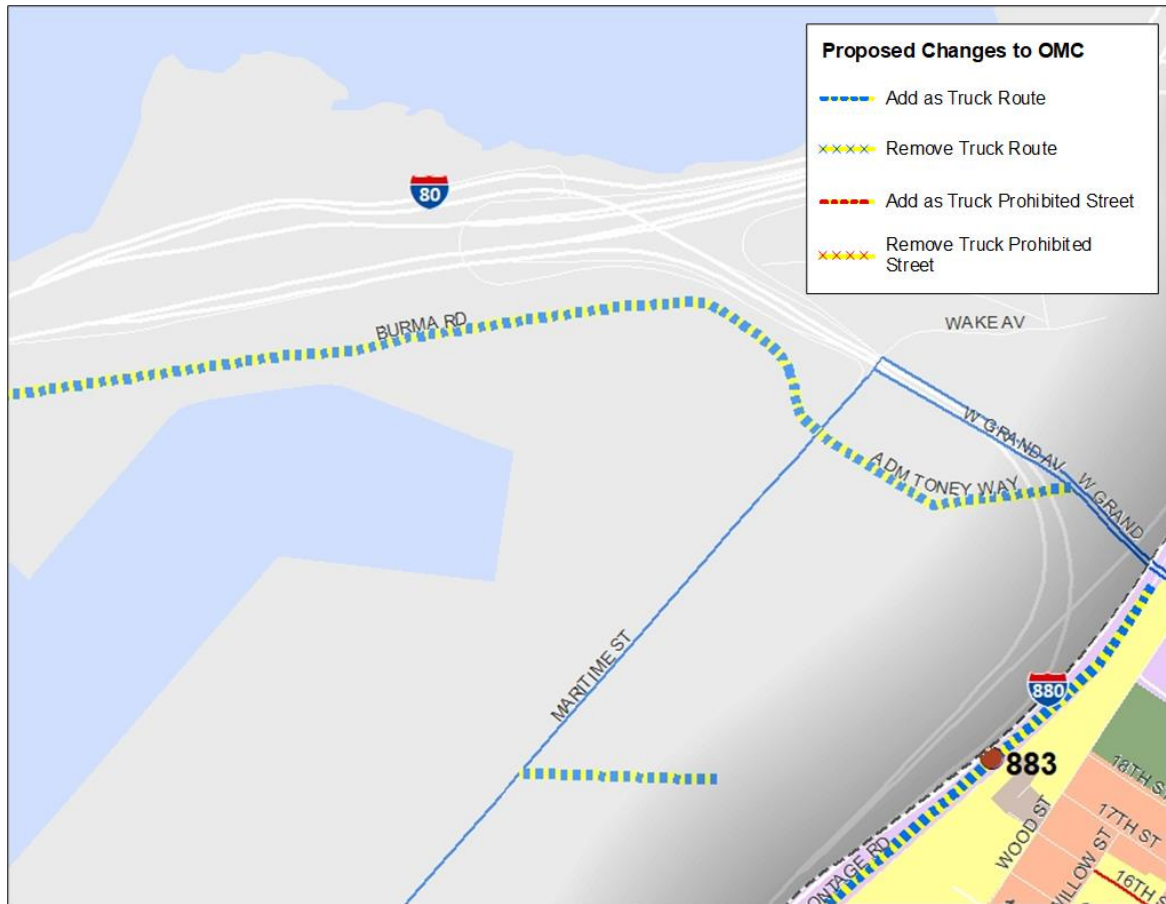
Formalizing the designation of Frontage Road is not anticipated to change its current use as a truck route and therefore is not expected to noticeably alter the volume of trucks on the road.

⁶ The recommended change was not implemented.

Add Truck Routes – Burma Road, Admiral Toney Way, and West 14th Street

Burma Road, Admiral Toney Way, and West 14th Street are streets located west of I-880 in the Port and at the former Oakland Army Base (see Figure 9). The roads are used by truck drivers to access businesses in the Port and at the former OAB. The roads each connect to Maritime Street, the primary north-south street in the former Oakland Army Bases section of the Port.

Figure 9: Proposed Changes West of I-880



Source: Kittelson & Associates, Inc.

The proposed changes will increase clarity for truck operators and officially recognize that these roads at the Port and within the former Oakland Army Base are part of the approved truck network.

No changes in the current use of these roads by trucks is anticipated by designating these roadways as part of the truck network. The roads connect only to existing Truck Routes.

Add Truck Route – 3rd Street between Market Street and MLK Way

The proposed three block section is located in the Acorn Industrial area west of Jack London Square. The street is two lanes wide with a cross-section of around 55 feet with on-street parking, including pull-in parking on some block faces. The section is part of Oakland's Overweight Vehicle Corridor, which OPD has designated for use by approved overweight vehicles to travel between the Port of Oakland and East Oakland. The land uses along the road segment include light industry and storage buildings. The existing and proposed truck routes and average daily count of trucks are shown in Figure 10.

Figure 10: Proposed Change to 3rd Street



Source: Kittelson & Associates, Inc.

The proposed change is based on the following.

- **Improve Clarity for Truck Operators:** 3rd Street is defined in the OMC as a Truck Route west of this segment. The proposed change would connect the segments, making a clear route that also overlaps with the Overweight Vehicle Corridor. The change would also make the OMC consistent with City signs, which identify the segment as a Truck Route.

- **Reflect Existing Truck Volumes:** The tube counts reported that more than 450 trucks use the road daily. They are around 10 percent of the total daily count of vehicles observed on the road. It was the second highest count of trucks observed during data collection after those on Frontage Road.
- **Reflect Adjacent Land Uses:** The land uses along the road segment include light industry and storage buildings, both used regularly by trucks.

Designating this section of 3rd Street as a Truck Route is not anticipated to change use of the roads or truck volumes because it is currently signed and used as a truck route.

Add Truck Routes – 5th Street between Broadway and Union Street and 6th Street between Brush Street and Union Street

5th and 6th Street are one-way streets that run adjacent to I-880. 5th Street is one-way in the eastbound direction and 6th Street is one-way westbound. The streets provide access to the on and off ramps to I-880, and trucks that access the Port via Adeline Street generally must use these streets to go to and from I-880. Both streets intersect Adeline Street near the west end of the proposed segments, where they provide access to I-880 at Union Street. On the east end, the 6th Street segment extends to Brush Street to accommodate trucks exiting southbound I-980 and northbound I-880, and the 5th Street segment extends to Broadway to the on ramp to southbound I-880.

Figure 11: Proposed Change to 5th and 6th Street



Source: Kittelson & Associates, Inc.

The proposed changes are based on the following.

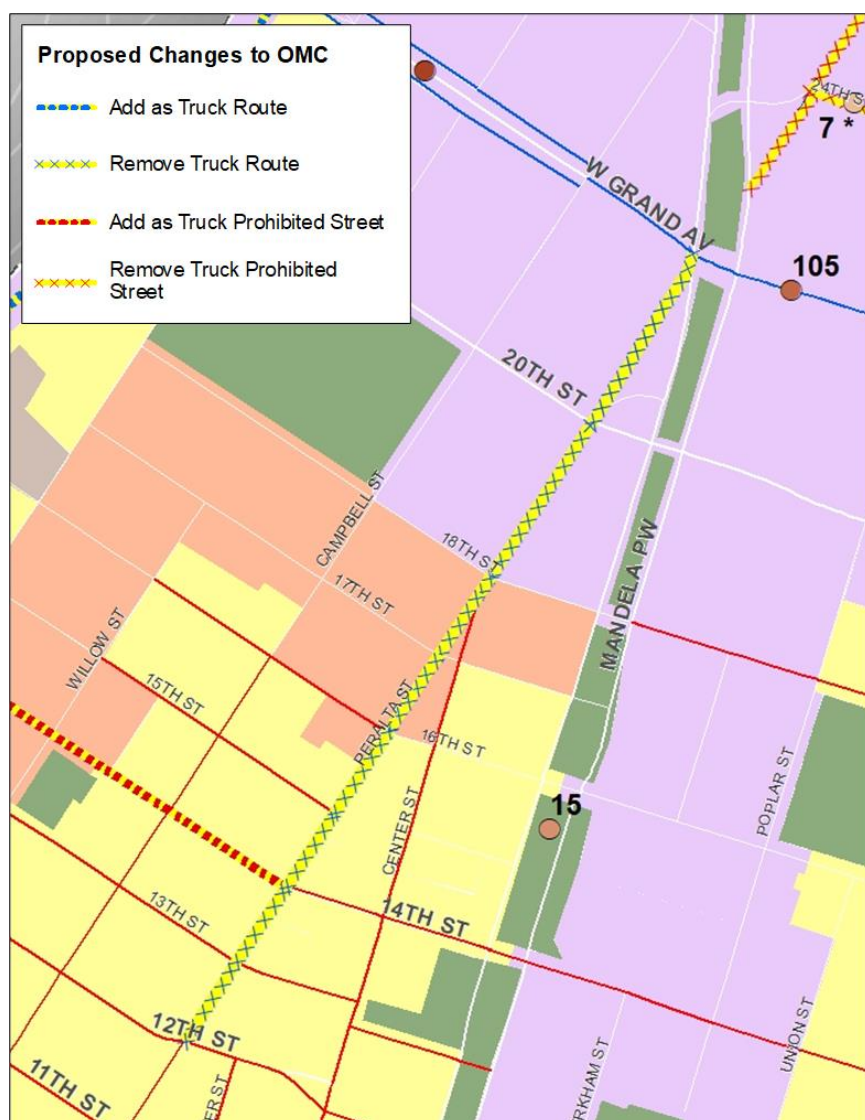
- **Improve Clarity for Truck Operators:** The proposed changes would make the OMC consistent with the City public map, which already shows these two roads as Truck Routes. Designating them as Truck Routes recognizes trucks must use these routes to minimize driving on local street when traveling between the Port's Adeline Street access and I-880.
- **Reflect Existing Truck Volumes:** Data collection for eastbound truck traffic on 5th Street confirmed that the corridor is already functioning as truck routes. The tube count identified an average of 420 trucks with five or more axles per day. The count is similar to that observed on 3rd Street and more than all other roads except for Frontage Road.
- **Reflect Adjacent Existing Land Uses:** The roads are primarily fronted by industrial land-uses, including a truck fueling station at 5th Street and Chestnut Street.

Updating the OMC to reflect these segments of 5th Street and 6th Street as Truck Routes is not anticipated to change use of the roads or truck volumes because they are currently shown on the City's public map as Truck Routes and are already in regular use by trucks.

Remove Truck Route – Peralta Street between 12th Street and West Grand Avenue

Peralta Street is a two-lane road that is approximately one-third mile east of I-880 and Frontage Road. The road is split at West Grand Avenue, such that vehicles must turn briefly onto West Grand Avenue and Mandela Parkway to connect between the north and south sections of the road. Just south of West Grand Avenue, the existing land use is industrial; however, from 18th Street south the land uses change to residential and commercial. Raimondi Park is located one block west of Peralta Street between 18th and 20th Streets. Between 12th and 16th Streets, the OMC designates Peralta Street as both a Truck Route and a Truck Prohibited Street. South of 12th Street, the OMC designates Peralta Street as Truck Prohibited. The proposed change is shown in Figure 12.

Figure 12: Proposed Change to Peralta Street



Source: Kittelson & Associates, Inc.

The proposed change is based on the following.

- **Eliminate Internal Conflict in OMC:** The OMC lists the segment as both a Truck Route and a Truck Prohibited Street. The proposed change would improve administrative clarity by removing the internal conflict.
- **Clarify Preferred Routing:** Designating the north end of the segment as a Truck Route may attract trucks looking for parking or for a north-south route through West Oakland. The change emphasizes that Peralta Street is not appropriate for trucks traveling between West Grand Avenue and 7th Street.

It is anticipated that the change will encourage trucks to avoid Peralta Street to traverse north-south in this part of West Oakland. The change is not expected to affect truck-using businesses north of 18th Street because trucks are allowed to diverge from Truck Routes to complete deliveries. In this case, trucks can access Peralta Street north of 18th Street from West Grand Avenue, a designated Truck Route.

Discussion of Proposed Changes to Truck Prohibited Streets

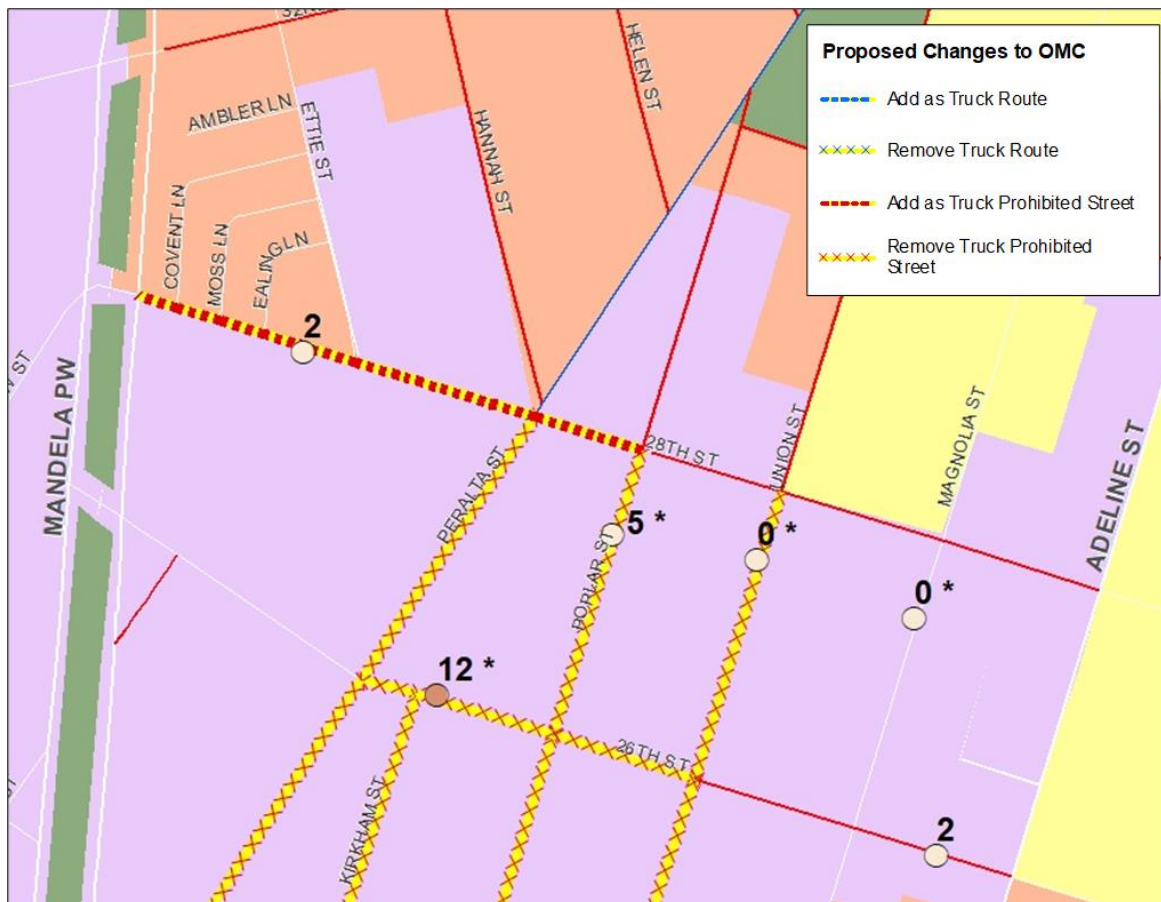
Designating streets as Truck Prohibited indicates streets for truck drivers to avoid. It prohibits drivers from using streets to travel through neighborhoods; however, drivers are allowed to use all streets, including Truck Prohibited Streets, to make local deliveries. According to OPD, this makes it difficult to enforce prohibitions on Truck Prohibited Street, which can lead to confusion for residents.

The City is open to moving away from using Truck Prohibited Street designations to manage truck movement. Nonetheless, if the City, after public outreach on these proposals, desires to keep the Truck Prohibited Street designation, then the associated recommendations are below.

Add Truck Prohibited Street – 28th Street between Mandela Parkway and Poplar Street

28th Street is a two-lane road with on-street parking on both sides. The segment proposed for addition is shown in Figure 13 and is a dividing line between more industrial areas to the south and residential areas to the north. Housing is located on the north side of the block between Ettie Street and Mandela Parkway. The remainder of the street contains industrial uses. The tube counts identified an average of two trucks with five or more axles per day, which is about eight percent of the vehicles observed each day during data collection (56/day). Traffic speeds on the road are relatively low with an 85th percentile speed of 24 mph.

Figure 13: Proposed Change to 28th Street



Source: Kittelson & Associates, Inc.

The proposed change is based on the following.

- **Reduce Impacts on Residents:** During the TMP development, residents in the area identified truck use of this portion of 28th Street as a noise and safety concern.
- **Discourage Cut-Through Traffic near Residences:** Establishing 28th Street as a Truck Prohibited Street indicates that it should not be used as an east-west route by trucks coming

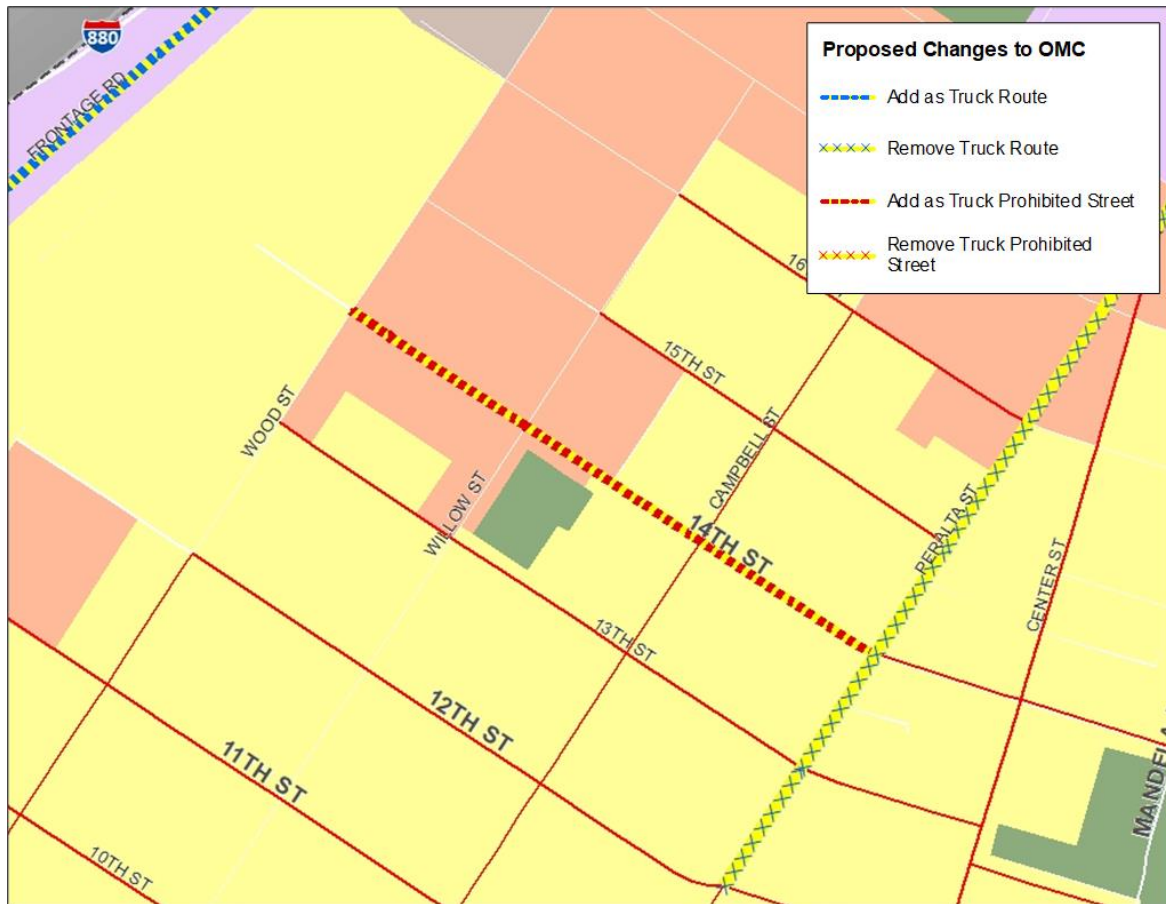
from nearby industrial businesses. This change is proposed in conjunction with the removal of Truck Prohibited designation along 24th and 26th Street (see below) to reinforce that 24th and 26th Streets are the preferred east-west Truck Routes between Mandela Parkway and the industrial area north of West Grand Avenue.

However, it is possible that this change would not be noticeable to residents on 28th Street. The tube counts identified relatively few trucks at two per day, although residents on 28th Street reported during community outreach activities that trucks are frequently using 28th Street. Trucks completing deliveries to businesses on 28th Street, including those on the south side of 28th Street opposite the residents, could continue to use the Street. Regardless, City and Port staff will be contacting the industrial businesses on this segment of 28th Street to encourage them to use other streets away from residences to reach their businesses. In addition, Port and City staff will engage with these residents to inform them why occasional trucks may still be seen.

Add Truck Prohibited Street – 14th Street between Wood Street and Peralta Street

The proposed section of 14th Street is a two-lane residential street that dead ends just after Wood Street. Historically, the street provided a connection to industrial businesses that were located at the west end of the segment adjacent to Frontage Road. Recently, residential construction replaced the industrial land uses. The segment is already shown as a Truck Prohibited Street in the City's public map of Truck Routes and Truck Prohibited Streets.

Figure 14: Proposed Change to 14th Street



Source: Kittelson & Associates, Inc.

The change is proposed to make the OMC consistent with the City's public map. It also creates consistency in the neighborhood by giving the road the same designation as the roads to the north and south (13th Street and 15th Street).

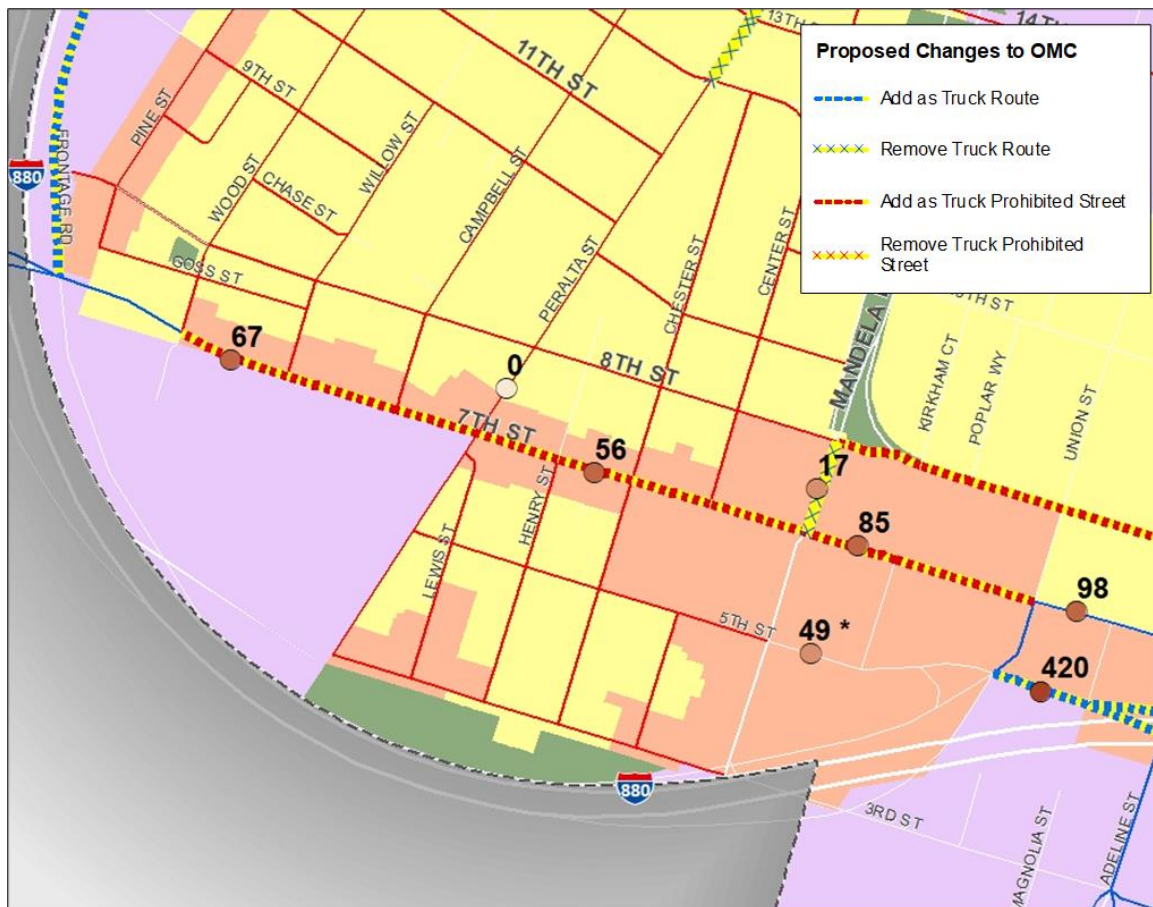
Potential Impacts

No change in road use is expected as a result of the proposed change. The road has minimal value for trucks as the industrial businesses that previously used the road have been replaced.

Add Truck Prohibited Street – 7th Street between Wood Street and Union Street

The proposed section of 7th Street between Union Street and Wood Street, shown in Figure 15, is one of the primary commercial corridors in West Oakland and is lined by a mix of commercial and residential land uses. The OMC lists 7th Street as a Truck Route between the Port and Fallon Street; however, the City public map does not define 7th Street as a Truck Route between Wood Street and Union Street. The road is four lanes east of Mandela Parkway and two lanes west of Mandela Parkway, including the portion adjacent to the West Oakland BART Station. There are proposed and approved residential projects near the BART station that will significantly increase residential density on the east end of the corridor. The City is in various stages of implementing bike lane and pedestrian improvements along this segment of 7th Street.

Figure 15: Proposed Change to 7th Street



Source: Kittelson & Associates, Inc.

7th Street west of Wood Street and east of Union Street is part of the Truck Route network and would remain as a Truck Route. The segment west of Wood Street would be maintained as a Truck Route to provide access to I-880 and Frontage Road for trucks traveling to and from the Post Office distribution center at 1675 7th Street. 7th Street continues as a Truck Route west of I-880 into the Port.

The proposed change is based on the following.

- **Land Use Changes and Transportation Projects may Conflict with Use as a Truck Route:** The corridor is characterized by residential and commercial land uses as well as the West Oakland BART Station. These land uses are all associated with a higher proportion of walking, biking and transit volumes, which can create safety concerns related to truck traffic.
- ***Better Alternative for Trucks:*** Trucks on 7th Street east of Union Street can easily access the Port by entering I-880 at 7th and Union Streets and then existing immediately at 7th Street, where trucks can turn into the Port west of Wood Street. In addition, there are few truck-oriented businesses on this section of 7th Street. Other industrial areas of West Oakland can be reached without using this section of 7th Street.

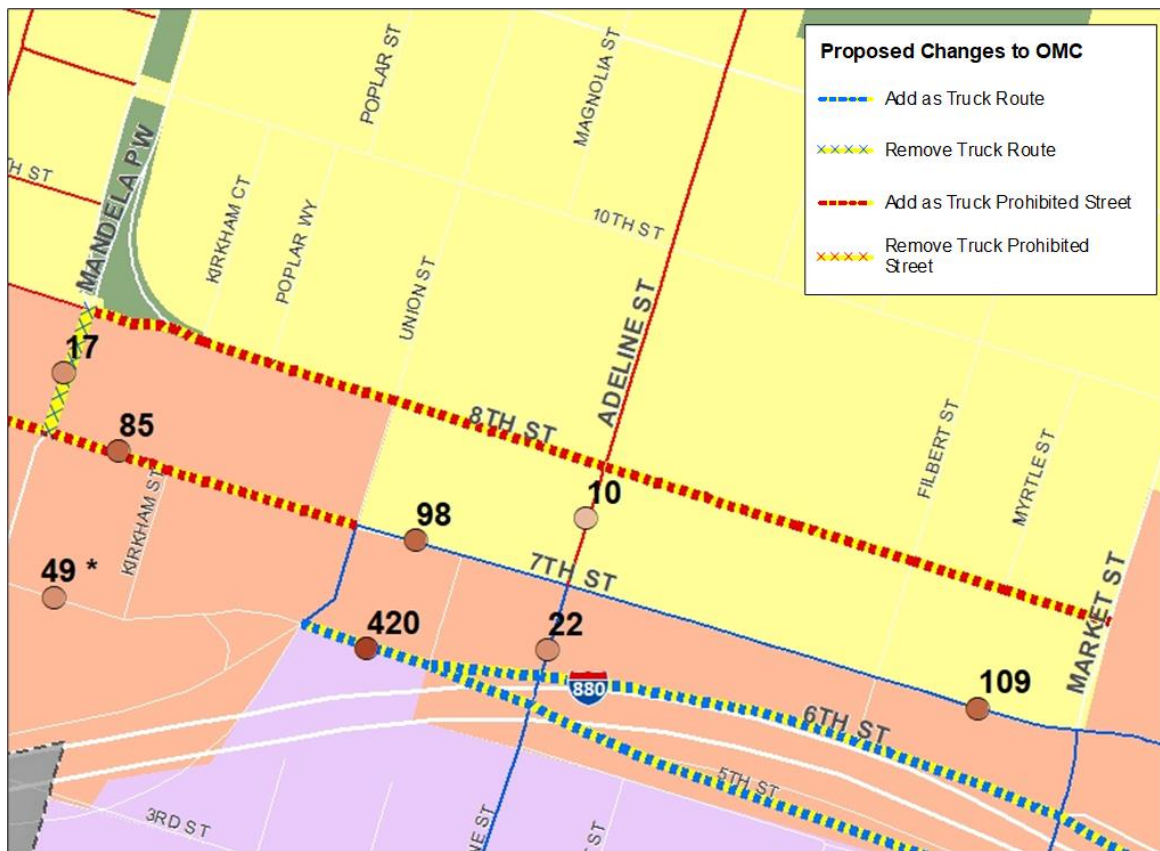
The tube counts identified 50 to 100 truck a day on this section of 7th Street. It appears that the trucks are generally associated with the Post Office Distribution Center, based on an intersection count collected at the distribution centers' driveway. It is not expected to affect truck access to local businesses on this section of 7th Street.

Add Truck Prohibited Street – 8th Street between Mandela Parkway and Market Street

The segment of 8th Street between Mandela Parkway and Market Street is a two-lane local road fronted by residential buildings. It is parallel to 7th Street which is a Truck Route between Market Street and Union Street. There is parallel parking on both sides of the street and a bike lane on the westbound side of the street. To the west of Mandela Parkway, 8th Street is designated as a Truck Prohibited Street.

The OMC designation is not consistent with the City public map for the segment. The City public map shows the 8th Street as a Truck Prohibited Street between Wood Street and Filbert Street (Filbert is one block west of Market Street). The proposed change would make the OMC consistent with the City public map and would add the block from Filbert to Market Street. The block between Filbert and Market Street is consistent in character with the rest of the segment.

Figure 16: Proposed Changes to 8th Street



Source: Kittelson & Associates, Inc.

The proposed change is based on the following.

- **Encourage Use of Truck Route on 7th Street:** Designating this section of 8th Street as a Truck Prohibited Street reinforces that 7th Street is the preferred route for trucks to travel in the area. In contrast to 8th Street, 7th Street is wider with fewer conflicting land uses. In addition,

adding the segment to Market Street is recommended to discourage trucks from entering 8th Street at Market Street to reach Mandela Parkway.

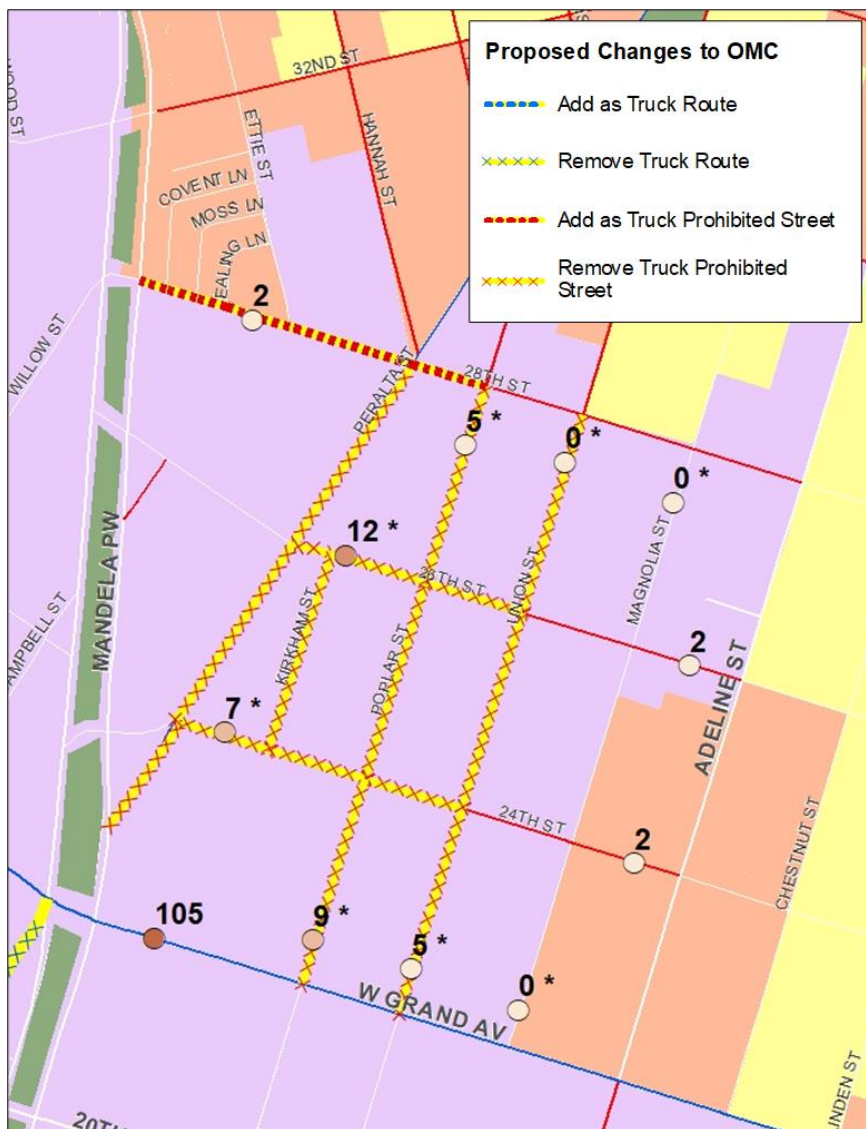
- **Improve Consistency in City Documents:** Removing the Truck Prohibited Street designation will make the OMC consistent with the City public map.

The proposed change is not anticipated to affect truck movement in West Oakland because 8th Street is already communicated as a Truck Prohibited Street on the City public map of Truck Routes and Truck Prohibited Streets.

Remove Truck Prohibited Streets - Kirkham, Poplar, and Union Streets between 28th Street and West Grand Avenue and 24th and 26th Streets between Peralta Street and Union Street

These streets are located in the industrial area north of West Grand Avenue as shown in Figure 17. The roads are two-lane local roads fronted by industrial businesses that do not contain residences and are expected to remain industrial due to the industrial zoning. The roads connect to Peralta Street, West Grand Avenue, and Market Street, which are more significant collectors. Daily traffic along the roads is relatively low, collectively less than 1,000 vehicles a day. The areas west and south of the streets are primarily industrial, and the areas north and east of the streets are primarily residential and commercial land uses.

Figure 17: Proposed Change to area North of West Grand Avenue and East of Peralta Street



Source: Kittelson & Associates, Inc.

More trucks were counted traveling to and from Peralta Street and West Grand Avenue than north and east towards 28th Street and Adeline Street. These figures may underestimate counts of trucks because a significant share of vehicles was unclassified due to the low speeds on the roads.

The proposed changes are based on the following.

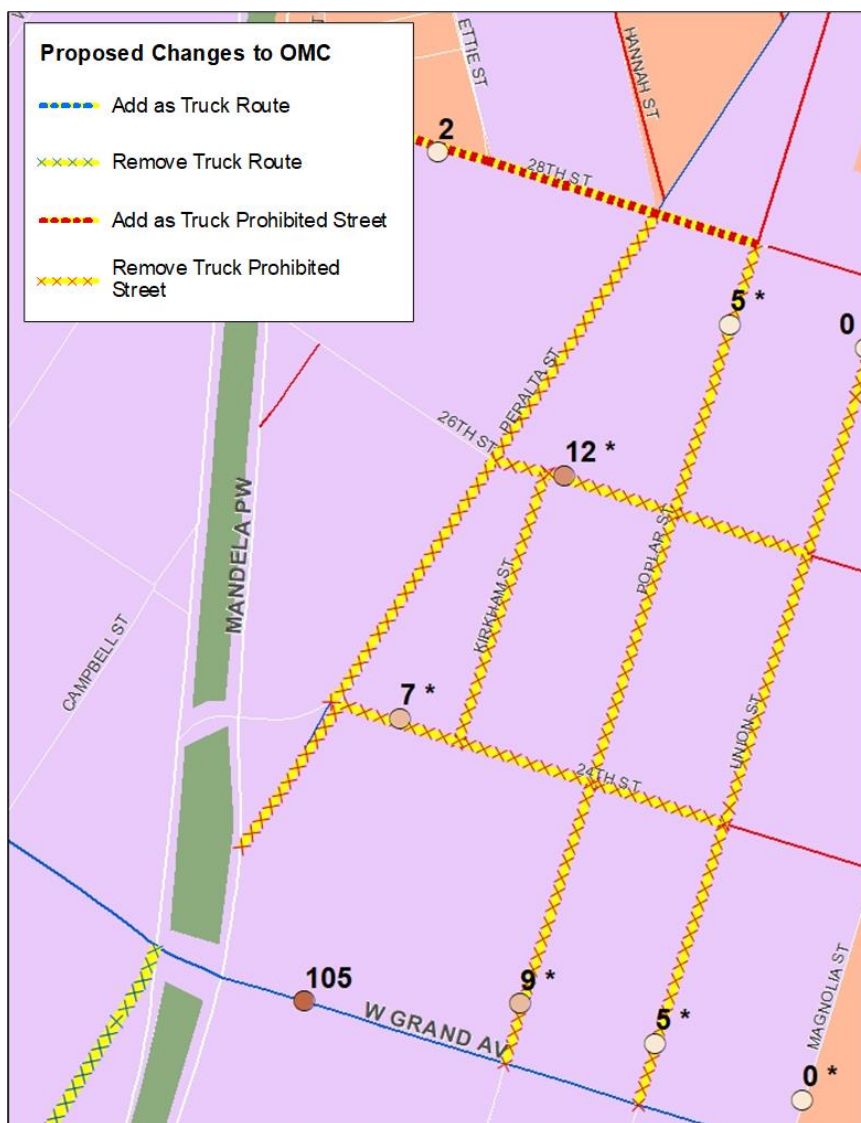
- **Clarify Preferred Routing:** Removing the Truck Prohibited designations will more clearly indicate that trucks are supposed to access businesses in this area using Peralta Street or West Grand Avenue, rather than traveling further east to Adeline Street.
- **Make Designations Consistent with Land Uses:** The streets are in an industrial area where truck movement is allowed for accessing the industrial businesses located on those streets. Designating the streets as Truck Prohibited Streets is inconsistent with their use and may create confusion for truck operators.

It is anticipated that the proposed change could reduce the number of trucks driving through residential areas to the east and north of the industrial area by clarifying the preferred approach for trucks to access businesses. The proposed changes are not expected to create any new truck trips in the area because the changes do not create any new or faster through routes. Peralta Street and West Grand Avenue are existing Truck Routes and faster routes for trucks traveling in West Oakland.

Remove Truck Prohibited Street – Peralta Street between West Grand Avenue and 28th Street

Peralta Street is a two-lane road located east of I-880. As noted above, the road is split at West Grand Avenue and Mandela Parkway. North of West Grand Avenue, traffic enters Peralta Street via Mandela Parkway. Between West Grand Avenue and 28th Street, Peralta Avenue is surrounded by industrial land uses. Currently, the OMC designates Peralta Street as a Truck Route between West Grand Avenue and the Emeryville Border and as a Truck Prohibited Street between Mandela Parkway and 28th Street. Therefore, the segment between West Grand Avenue and 28th Street is listed in the OMC as both a Truck Prohibited Street and a Truck Route. The proposed change would remove the Truck Prohibited Street designation and maintain the segment as a Truck Route.

Figure 18: Proposed Change to Peralta Street



Source: Kittelson & Associates, Inc.

The proposed changes are based on the following.

- **Preferred North-South Truck Route:** Peralta Street provides direct access for trucks traveling south to West Grand Avenue and north towards I-580 and Emeryville. While this section of Peralta includes residential land-uses, it was selected over parallel routes, such as Adeline Street and Market Street, to avoid greater conflict with residences along Adeline and Market Street and to reduce total miles traveled by trucks in West Oakland. It also provides connections to the north-south Truck Routes in Emeryville on Hollis Street and San Pablo Avenue.⁷
- **Maintain Clear and Consistent Communications:** Removing the Truck Prohibited Street designation will make the OMC consistent internally and with existing signage. The segment is already marked as a Truck Route with north and southbound signs at Peralta Street and Mandela Parkway and a sign for northbound trucks at 26th Street. There is one Truck Prohibited Sign posted on the segment at 26th Street for southbound traffic that would need to be removed.

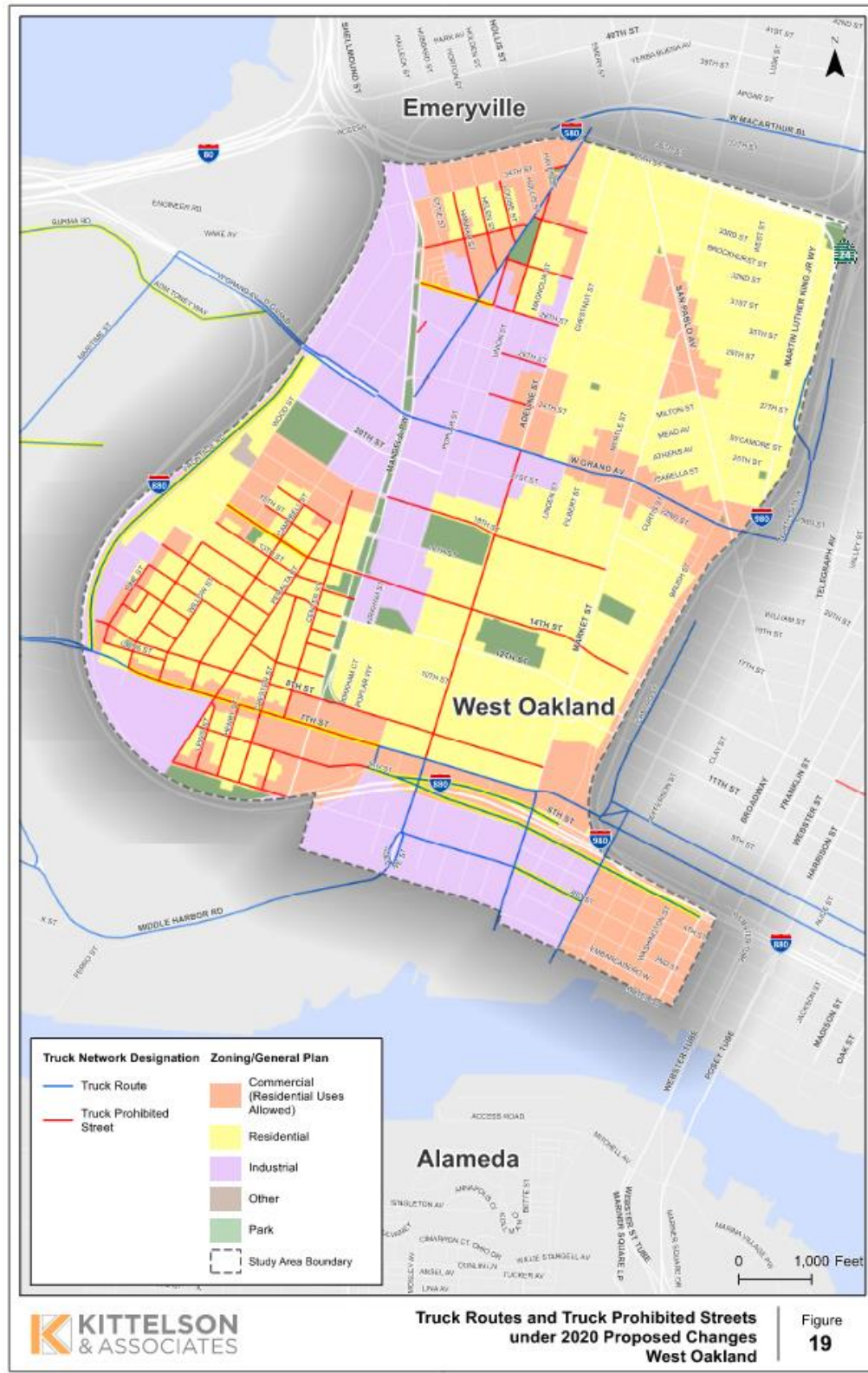
The proposed change would confirm the existing conditions and eliminate conflicts in City documents and therefore no changes in truck movement or volumes are anticipated.

Resulting Truck Routes and Truck Prohibited Street Network

Implementing the proposed changes would result in the updated Truck Routes and Truck Prohibited Street network shown in Figure 19. Proposed changes that add streets to the list of Truck Routes or Truck Prohibited Streets in the OMC are identified with highlighting. In total, the changes create a network that clarifies movement for trucks and reaffirms community priorities to reduce the effects of transport trucks on local streets in West Oakland. The full list of changes for implementation in the OMC is included in Appendix A: Proposed Changes to Oakland Municipal Code.

⁷ Emeryville's Truck Routes are presented on page 3-19 of the transportation element of the City General Plan: <https://www.ci.emeryville.ca.us/DocumentCenter/View/1010/30-Transportation?bidId=>

Figure 19: Proposed Truck Routes and Truck Prohibited Streets Network



Source: Kittelson & Associates, Inc.

NEXT STEPS

The analysis in this memo is a summary of the work conducted by the TMP team to complete implementation steps 1, 3, 4 and 5 of Strategy 3. The City and Port will be collecting feedback on the proposed changes to the Truck Routes and Truck Prohibited Streets during spring and summer 2020. In person meetings are not planned out of consideration for avoiding spread of the Covid-19 virus. Instead, the City and Port will be conducting virtual meetings and collecting feedback via an online survey, by email, and through virtual meetings with community-based organizations and industry organizations. Information about meetings and how to provide feedback are available at the project website: <https://www.oaklandca.gov/topics/west-oakland-truck-management-plan>. Upon completion of public outreach regarding these recommendation (step 2), the TMP Team will finalize the recommendations and update the OMC.

Appendix A: Proposed Changes to Oakland Municipal Code

10.52.060 - Vehicles exceeding four and one-half tons prohibited use on certain streets.

When such streets are appropriately sign posted, the use of the hereinafter described portion of the hereinafter named streets by any motor vehicle (other than passenger buses and passenger stages referred to in Section 50-1/4 of the Public Utilities Act of the state of California), when the total weight of the vehicle and load exceeds four and one-half tons, except for the purpose of loading and unloading thereon, is prohibited.

The streets are portions thereof referred to in the preceding paragraph are:

Street	From	To
21st Avenue	Foothill Boulevard	East 27th Street
39th Avenue	MacArthur Boulevard	Mountain Boulevard
50th Avenue	East 12th Street	East 14th Street
50th Avenue	International Boulevard	East 12th Street
51st Avenue	San Leandro Street	East 14th Street
52nd Avenue	San Leandro Street	East 14th Street
53rd Avenue	East 12th Street	East 14th Street
54th Avenue	San Leandro Street	East 14th Street
73rd Avenue	MacArthur Boulevard	Hillmont Drive
85th Avenue	International Boulevard	G Street
92nd Avenue	International Boulevard	G Street
100th Avenue	East 14th Street	E Street
102nd Avenue	East 14th Street	E Street
103rd Avenue	East 14th Street	E Street
104th Avenue	East 14th Street	E Street
3rd Street	Peralta Street	Mandela Parkway
5th Street	Peralta Street	Mandela Parkway Union Street
7th Street	Wood Street	Union Street
8th Street	Nelson Mandela Parkway Filbert Street	Wood Street Pine Street
9th Street	Pine Street	Willow Street
9th Street	Peralta Street	Mandela Parkway
10th Street	Center Street	Mandela Parkway

10th Street	Peralta Street	Pine Street
11th Street	Pine Street	Peralta Street
11th Street	Center Street	Mandela Parkway
12th Street	Wood Street	Mandela Parkway
13th Street	Wood Street	Center Street
14th Street	Brush Street	Union Street
14th Street	Union Street	Mandela Parkway Wood Street
15th Street	Willow Street	Peralta Street
16th Street	Willow Street	Peralta Street
18th Street	Market Street	Mandela Parkway
24th Street	Peralta Street Union Street	Adeline Street
26th Street	Peralta Street Union Street	Adeline Street
28th Street	Poplar Street Mandela Parkway	Adeline Street
28th Street	Telegraph Avenue	Webster Street
29th Street	Broadway	Harrison Street
29th Street	Telegraph Avenue	Broadway
30th Street	Peralta Street	Adeline Street
30th Street	San Pablo Avenue	Telegraph Avenue
30th Street	Telegraph Avenue	Broadway
32nd Street	Mandela Parkway	Peralta Street
32nd Street	Peralta Street	Adeline Street
34th Street	Telegraph Avenue	Webster Street
45th Street	Linden Street	Market Street
45th Street	Market Street	Linden Street
53rd Street	Emeryville City Limit	Lowell Street
53rd Street	Market Street	Martin Luther King Jr. Way
54th Street	Emeryville City Limit	San Pablo Avenue
56th Street	Telegraph Avenue	Shattuck Avenue
57th Street	Gaskill Street	Lowell Street
57th Street	San Pablo Avenue	Gaskill Street
57th Street	Lowell Street	Adeline Street
57th Street	Shattuck Avenue	Telegraph Avenue

58th Street	Telegraph Avenue	Shattuck Avenue
60th Street	Telegraph Avenue	Canning Street
63rd Street	Shattuck Avenue	Racine Street
63rd Street	Vallejo Street	San Pablo Avenue
65th Street	Berkeley City Limit	Shattuck Avenue
East 10th Street	50th Avenue	54th Avenue
East 12th Street	50th Avenue	54th Avenue
Adeline Street	7th Street	West Grand Avenue
Aileen Street	Shattuck Avenue	Telegraph Avenue
Andover Street	34th Street	Northerly terminus at MacArthur Freeway
Apricot Street	San Leandro City Limits	107th Avenue
Argyle Avenue	Dublin Avenue	Kearney Avenue
Bond Street	46th Avenue	Havenscourt Boulevard
Campbell Street	7th Street	16th Street
Campbell Street	Mandela Parkway	28th Street
Carso Street	Tompkins Avenue	Aliso Avenue
Center Street	3rd Street	12th Street
Center Street	7th Street	Peralta Street
Central Avenue	Summit Street	Webster Street
Chabot Road	Claremont Avenue	College Avenue
Chase Street	Pine Street	Willow Street
Chester Street	3rd Street	12th Street
Denslowe Street	Caswell Avenue	Darien Avenue
Dublin Avenue	Mountain Boulevard	Argyle Avenue
Durant Avenue	International Boulevard	MacArthur Boulevard
E Street	98th Avenue	105th Avenue
E Street	92nd Avenue	94th Avenue
Edwards Avenue	Sunkist Drive	Eastbound I-580 Offramp
Elm Street	Hawthorne Avenue	Northerly terminus at MacArthur Freeway
Empire Road	Cairo Road	98th Avenue

Fitzgerald Street	Peralta Street	Haven Street
Goss Street	Pine Street	Willow Street
Hannah Street	Peralta Street	34th Street
Havenscourt Boulevard	East 14th Street	Bancroft Avenue
Hawthorne Street	Telegraph Avenue	Broadway
Helen Street	Peralta Street	34th Street
Henry Street	3rd Street	7th Street
High Street	MacArthur Boulevard	Tompkins Avenue
Hillmont Drive	Sunnymere Avenue	73rd Avenue
Kearney Avenue	Mountain Boulevard	Argyle Avenue
Lee Street	Grand Avenue	Van Buren Avenue
Lewis Street	3rd Street	Peralta Street
Lincoln Avenue (Southbound)	Monterey Boulevard	MacArthur Boulevard
Louise Street	Peralta Street	34th Street
Lyndhurst Street	98th Avenue	Stoneford Avenue
Maddux Drive	Edes Avenue	Stoneford Avenue
Manila Avenue	MacArthur Boulevard	38th Avenue
McClude Street	29th Street	30th Street
McElroy Street	Chase Street	9th Street
Napier Avenue	Piedmont Avenue	Richmond Boulevard
Oak Grove Avenue	College Avenue	Forest Street
Peralta Street	3rd Street	16th Street
Peralta Street	Mandela Parkway	28th Street
Pine Street	Goss Street	10th Street
Poplar Street	West Grand Avenue 28th Street	Peralta Street
Ramona Avenue	Piedmont Avenue	Moraga Avenue
Salem Street	Alcatraz Avenue	Northerly terminus of Salem Street
San Leandro Tunnel	Moorpark Street	Stone Street
Shorey Street	Wood Street	Pine Street
Summit Street	28th Street	Central Avenue
Sunkist Drive	Hillmont Drive	Edwards Avenue

Sunnymere Avenue	Seminary Avenue	Edwards Avenue
Tompkins Avenue	High Street	Carson Street
Union Street	West Grand Avenue 28th Street	Peralta Street
Webster Street	27th Street	34th Street
Willow Street	7th Street	13th Street
Wood Street	7th Street	12th Street

(Ord. No. 13528, § 1, 4-16-2019; Ord. No. 13323, § 1, 7-21-2015; Ord. No. 13070, § 1, 6-21-2011; Ord. 12206 § 1, 2000; Ord. 12173 § 1, 1999; Ord. 12125 § 1, 1999; Ord. 12109 § 1, 1999; Ord. 12068 § 1, 1998; Ord. 12053 §§ 1, 2, 1998; Ord. 12018 § 1, 1997; Ord. 11791 § 1, 1995; prior traffic code § 192)

10.52.120 - Local truck routes.

The following truck routes are established for the movement of motor trucks and trucking combinations as defined in Section 10.52.070:

Street	From	To
23rd Avenue	East 12th Street	29th Avenue
29th Avenue	23rd Avenue	Alameda City Limits
85th Avenue	San Leandro Street	G Street
92nd Avenue	San Leandro Street	G Street
3rd Street	Market Street Martin Luther King Jr. Way	Adeline Street
5th Street	Broadway	Union Street
6th Street	Brush Street	Union Street
7th Street	Fallon Street	Port of Oakland Union Street
7th Street	Wood Street	Port of Oakland
8th Street	Fallon Street	Nelson Mandela Parkway Castro Street
East 8th Street	Fallon Street	14th Avenue
East 12th Street	14th Avenue	Fruitvale Avenue
West 14 th Street	Maritime Street	End of Road
Adeline Street	8th Street 7th Street	Middle Harbor Road
Admiral Toney Way	Maritime Street	End of Road
Alameda Avenue	High Street	Fruitvale Avenue
Burma Road	Maritime Street	West End of Berth 7
Castro Street	7th Street	12th Street
Doolittle Drive	County Line	Alameda City Limits
Frontage Road	7th Street	West Grand Avenue
Fruitvale Avenue	Alameda Avenue	Alameda City Limits
G Street	85th Avenue	92nd Avenue
Hegenberger Road	East 14th Street	Doolittle Drive
High Street	San Leandro Street	Alameda City Limits
MacArthur Freeway	Distribution Structure	Grand Avenue
Macarthur Freeway	Edwards Avenue Interchange	Warren Freeway (State Route 13 Interchange)

MacArthur Freeway	Warren Freeway (State Route 13 Interchange)	Edwards Avenue Interchange
Maritime Street	7th Street	West Grand Avenue
Martin Luther King, Jr. Way	8th Street	Port of Oakland
Middle Harbor Road	Adeline Street	Naval Supply Depot 7 th Street/Maritime Street
Nelson Mandela Parkway	8th Street	7th Street
Northgate Avenue	West Grand Avenue	27th Street
Peralta Street	12th Street West Grand Avenue	Emeryville City Limits
San Francisco-Oakland Bay Bridge and Approach	Distribution Structure	Oakland-San Francisco Boundary
San Pablo Avenue	Berkeley City Limits	Emeryville City Limits
West Grand Avenue	Maritime Street	Northgate Avenue

When authorized signs are in place giving notice thereof, the operator of any motor truck or trucking combination as defined in Section 10.52.070, shall drive on such route or routes and none other except when necessary to traverse another street or streets to a destination for the purpose of loading or unloading, but only then by such deviation from the nearest truck route as is reasonably necessary.

(Ord. No. 13323, § 4, 7-21-2015; Ord. 12701 §§ 2—3, 2005; Prior traffic code § 205)

Append B: Supporting Frontage Road Documentation