



## Upcoming Deliverables for Multimodal Analysis (Task 5) Downtown Oakland Specific Plan – Transportation Analysis

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November 2, 2017

The current task for the transportation element of the Downtown Oakland Specific Plan (DOSP) is to ensure that the mobility concepts for the DOSP align with the policy framework and needs identified in the Existing Conditions Report. Work performed under this task must also confirm that the DOSP provides comprehensive multimodal solutions for Downtown Oakland.

Many transportation projects and policies for Downtown Oakland have been identified through multiple planning and public outreach efforts, including:

- Social Equity Meetings (August 2017)
- Transportation Technical Advisory Committee meetings (July and October 2017)
- Transportation Advocates meetings (September 2017)
- Oakland Walks! 2017 Pedestrian Plan Update (June 2017)
- Equity in Oakland's Strengths, Weakness, Opportunities, and Threats Analysis (May 2017)
- Downtown Parking Management Report (June 2016)
- Downtown Oakland Plan Alternatives Report (March 2016)
- Alameda County Goods Movement Plan (February 2016)
- Comprehensive Circulation Study for Downtown Oakland and Access to/from West Alameda (October 2015)

These projects are reflected in the draft network maps and project lists.<sup>1</sup> While some projects have been fully vetted and adopted, others require further technical analysis to ensure that they meet the DOSP goals, especially the equity goals, and align with other modal priorities.

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<sup>1</sup> The initial pedestrian network map can be found here:

<https://drive.google.com/open?id=1xeoFXbNR3LHyh1C6pfQ-dRPE8Dc&usp=sharing> The initial bicycle and transit network map can be found here:

<https://drive.google.com/open?id=1WFa2VEoJ2O4LjZD9b8UCka561CA&usp=sharing>

This memo summarizes the process to identify and refine projects in collaboration with stakeholders and the community and to determine any additional analysis necessary to evaluate equity issues and modal conflicts.

## Pedestrian Projects

Initial pedestrian network ideas have been collected from existing plans, City and community input, and best practices in pedestrian planning. Projects shall be vetted and analyzed based on the following process:

1. Any projects that are not included in adopted plans will be presented at the upcoming neighborhood meetings and the technical meeting for the public's input on priorities, issues and opportunities. The level of project detail provided to the general public and technical working group needs to be determined with City staff and Dover-Kohl. Also, additional projects may be identified as part of these conversations. In particular, further consideration and input on pedestrian improvements within and connecting to Jack London District is needed.
2. Projects will be vetted by Toole Design Group to ensure they directly meet one or more of the DOSP transportation goals.
3. The Equity Team will be consulted in the evaluation of all transportation projects. The following metric is proposed as a starting point:
  - **Comparative quality and density of pedestrian amenities and infrastructure by neighborhood.**

Projects bundled within each project type (see Table 1 below) will be qualitatively evaluated to confirm that they are equitably distributed in and around neighborhoods with underserved residents (e.g. low income, communities of color, seniors, etc.). Further discussion with the Equity Team and City staff is needed to identify these geographic areas. *This task is not included in the transportation scope; we will need to identify the level of effort and who will lead it.*

4. Any potential modal conflicts resulting from proposed pedestrian projects will be identified. In general, pedestrian projects are not anticipated to have modal conflicts. Public realm projects that restrict access for other modes may be the exception. Such projects will be flagged for further analysis, which may be completed subsequent to this DOSP planning process.
5. Pedestrian projects will not require any additional analysis unless equity issues are identified.

Table 1 summarizes the additional analysis that is needed.

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The draft project list can be found here:

<https://docs.google.com/spreadsheets/d/1a1XeCEIDQ0ujF2WMdTefaiRV3K8SVgiJvXbUdLZ1bmo/edit?usp=sharing>

**Table 1: Pedestrian Network**

<b>Project Type</b>	<b>In a previously adopted City document? Is further project development or evaluation needed?</b>	<b>Public Input Needed</b>	<b>Equity Issues?</b>	<b>Any potential modal conflicts?</b>	<b>Recommended for further analysis?</b>
<b>High-Injury Network Safety Projects</b>	<ul style="list-style-type: none"> <li>• Yes, Citywide Pedestrian Plan</li> <li>• Some HIN segments and intersection still need programmatic-level recommendations (ex: Broadway from 11th Street to 15th Street)</li> </ul>	<ul style="list-style-type: none"> <li>• Are there any areas that feel unsafe to walk around?</li> <li>• What is needed to help you feel safe to walk around downtown Oakland?</li> </ul>	To be discussed with Equity Team	Not anticipated	No, unless equity issues arise
<b>Connectivity &amp; Access Improvements</b>	Some projects are in adopted or ongoing plans/projects, others were identified in Plan Alternatives Report & Comp Circulation Study	<ul style="list-style-type: none"> <li>• Projects that have not been publicly vetted need community input on priorities, issues &amp; opportunities</li> <li>• What is the greatest challenge/barrier for walking in Downtown Oakland?</li> </ul>	See above...	Not anticipated	See above...
<b>Freeway crossings not yet studied</b>	Programmatic-level recommendations needed	<ul style="list-style-type: none"> <li>• Are there certain underpasses or overpasses that should be prioritized for improvements?</li> </ul>	...	Not anticipated	...
<b>Public Realm</b>	Some projects are in adopted or ongoing plans/projects, others were identified in Plan Alternatives Report, Comp Circ. Study, and by City staff	<ul style="list-style-type: none"> <li>• Projects that have not been publicly vetted need community input</li> <li>• What improvements would you like to see in public spaces?</li> <li>• What is lacking? What can be enhanced?</li> <li>• What is your biggest challenge/barrier to spending time outside in Downtown Oakland?</li> </ul>	...	TBD	...
<b>Other Issues</b>	Jack London District needs additional focus, particularly along Embarcadero	<ul style="list-style-type: none"> <li>• General questions about access, safety and comfort walking in JLS</li> </ul>	...	TBD	...

## Bikeway Network

Initial ideas for the proposed bikeway network were based on the existing conditions analysis that evaluated safety, demand, level of comfort and other considerations. The proposed network also builds on the existing network by identifying opportunities for enhancements and filling network gaps through downtown. These concepts are based on best practices in bicycle planning.

Much of the proposed bikeway network has not been identified in any previous planning document or vetted by the public. Therefore, bikeway projects shall be assessed based on the following process:

1. Initial bikeway network ideas will be presented at the upcoming neighborhood meetings and the technical meeting for the public's input on priorities, issues and opportunities. The level of project detail provided to the general public and technical working group needs to be determined with City staff and Dover-Kohl. Changes and refinements to the network alignments may be identified as part of these conversations.
2. All identified bikeway projects will be vetted by Toole Design Group to ensure they directly meet one or more of the DOSP transportation goals.
3. The Equity Team will be consulted in the evaluation of all transportation projects. The following metric is proposed as a starting point:

- **Comparative quality and density of the bikeway network by neighborhood.**

The bikeway network will be qualitatively evaluated to confirm that it is equitably distributed in and around neighborhoods with underserved residents (e.g. low income, communities of color, seniors, etc.) Further discussion with the Equity Team and City staff is needed to identify these geographic areas. *This task is not included in the transportation scope; we will need to identify the level of effort and who will lead it.*

4. Any potential modal conflicts resulting from proposed bikeway projects will be identified. Any bikeway project proposed along a transit corridor will be evaluated further by TDG and Fehr & Peers to identify trade-offs and possible alternatives. Other projects that may require the removal of a travel lane or parking will be flagged for future evaluation, subsequent to this DOSP planning process. Evaluation criteria for bikes along proposed transit corridors will include the following:
  - **Level of comfort:** Stress levels for bicyclists (segments & intersections)
  - **Access to destinations:** Network density; gap analysis; access to bike share stations
  - **Safety:** Number and severity of bicycle collisions

Evaluation criteria for transit service along these corridors is discussed in the following section.

Table 2 summarizes the additional analysis and input that is needed.

**Table 2: Bikeway Network**

<b>Project Type</b>	<b>In a previously adopted City document? Is further project development or evaluation needed?</b>	<b>Public Input Needed</b>	<b>Equity Issues</b>	<b>Any potential modal conflicts?</b>	<b>Recommended for further analysis?</b>
<b>Proposed Low-Stress Network</b>	<ul style="list-style-type: none"> <li>Protected bikeway network builds on 2007 Bike Plan, but has not been fully studied</li> <li>Analysis needed to further hone the initial bicycle network ideas/identify redundancies</li> </ul> <p>Possible next steps as part of DOSP or Bike Plan update:</p> <ul style="list-style-type: none"> <li>Assess road widths to determine which bikeway facilities could be accommodated</li> <li>ID opportunities for intersection improvements, especially for high-crash intersections</li> </ul>	<ul style="list-style-type: none"> <li>Provide options for streets to accommodate bikeway facilities, then ask: Which streets should be prioritized for bike improvements?</li> <li>Would you ride on Webster/Franklin as an alternative to Broadway?</li> <li>What is your biggest challenge/barrier to biking in Downtown Oakland?</li> </ul>	To be discussed with Equity Team	Yes, specific corridors have competing needs	Alternatives analysis for Broadway, 7 <sup>th</sup> , 8 <sup>th</sup> , 11 <sup>th</sup> , 12 <sup>th</sup> , 20 <sup>th</sup> streets, San Pablo Avenue, W. Grand Ave?
<b>Other Issues</b>					

## Transit Network

Initial ideas for the proposed transit network were based on the existing conditions analysis that evaluated transit service and access, travel times, ridership data, and other considerations. The proposed network identifies enhancements to existing transit service and addresses service gaps through downtown. In general, these ideas have not yet been discussed with the public. Therefore, any proposed changes to transit routing and service shall be vetted and analyzed based on the following process:

1. Initial transit network ideas will be presented at the upcoming neighborhood meetings and the technical meeting for the public's input on priorities, issues and opportunities. The level of project detail provided to the general public and technical working group needs to be determined with City staff and Dover-Kohl. Changes and refinements to the transit network may be identified as part of these conversations.
2. All identified transit projects will be vetted by Fehr & Peers to ensure they directly meet one or more of the DOSP transportation goals.
3. The Equity Team will be consulted in the evaluation of all transportation projects. The following metric is proposed as a starting point:
  - **Comparative quality and density of the transit network by neighborhood.**

The transit network will be qualitatively evaluated to confirm that it is equitably distributed in and around neighborhoods with underserved residents (e.g. low income, communities of color, seniors, etc.). Further discussion with the Equity Team and City staff is needed to identify these geographic areas. *This task is not included in the transportation scope; we will need to identify the level of effort and who will lead it.*

4. Any potential modal conflicts resulting from proposed transit projects will be identified. Any transit project proposed along a corridor with competing modal needs, such as parking or protected bike facilities, will be evaluated further to identify trade-offs and possible alternatives.
5. The assessment of transit performance will include the following:

### **Determine Baseline Levels**

Baseline levels for current transit travel speeds, delay and number/types of conflicts and conflicting movements will be identified.

### **Assess Transit Performance**

- Change in transit travel speeds and delay
  - For transit priority streets, transit travel speeds should increase and delays should decrease.
  - For other transit streets, there should be no decline in transit travel speeds or increase in delay over baseline.
- Potential for increasing transit frequency
  - For transit priority streets, we will utilize the assessment on improvements in transit travel speeds and delay combined with the type of proposed infrastructure improvements (dedicated bus lane v. queue jump lane v. other transit priority treatment) to assess the capacity for increasing transit frequency

(e.g., the number of buses per hour that can be accommodated on a corridor or roadway segment without a degradation in speed).

- Number of types and character of conflicts, volume of conflicting movements involving transit.
  - These should be minimal for transit priority streets, and no further degradation for other transit streets.
- Changes in transit access shed
  - This will be evaluated for the overall changes in the transit network. Racial equity (in terms of access to transit service to/from Downtown Oakland for Oakland residents) can also be analyzed with this metric.

Evaluation criteria for bikes and vehicles along these corridors is discussed in the previous and following sections.

Table 3 summarizes the additional analysis and input that is needed.

**Table 3: Transit Network**

Project Type	In a previously adopted City document? Is further project development or evaluation needed?	Public Input Needed	Equity Considerations?	Any potential modal conflicts?	Recommended for further analysis?
<b>Transit Network</b>	F&P	<ul style="list-style-type: none"> <li>• F&amp;P</li> </ul>	To be discussed with Equity Team	Yes, specific corridors have competing needs	Alternatives analysis for Broadway, 7 <sup>th</sup> , 8 <sup>th</sup> , 11 <sup>th</sup> , 12 <sup>th</sup> , 20 <sup>th</sup> streets, San Pablo Avenue, W. Grand Ave?
<b>Other Issues</b>					

## Vehicle Analysis and Roadway Network Changes

Fehr & Peers will lead the vehicular analysis of the planned land use changes for Downtown Oakland. As part of this analysis, any changes to the roadway network will need to be determined. Examples include the removal of I-980 to create a multimodal boulevard, and the restoration of several one-way to two-way streets as identified in the DOSP Plan Alternatives Report. The Oakland-Alameda Access Project is another parallel effort that will change the configuration of the roadway network. These projects are not only about vehicular circulation; several focus on Complete Streets and restoring the urban fabric of Downtown Oakland.

Planned growth and circulation changes to the roadway network shall be vetted and analyzed based on the following process:

1. Question for City staff: How do you want to engage the public in this element of the transportation network?

### 2. Vehicular Analysis Evaluation Approach and Metrics

#### *Future Vehicle Traffic Forecasts*

As a first step, future vehicle traffic forecasts will be developed. The downtown buildout traffic volume growth factor will be developed and applied to the existing traffic volumes to establish traffic forecasts for downtown. The growth factor will be based on land use forecasts provided Dover Kohl, and will account for mode shift trends for Downtown Oakland as quantified by the county and regional travel demand models.

#### *Volume-to-Capacity Analysis*

The volume-to-capacity (V/C) ratio for the roadway network at buildout will then be analyzed. For each road segment, the forecast traffic volume will be compared to its capacity in order to calculate the segment volume-to-capacity ratio at buildout of Downtown Oakland. The results will be categorized as: a) less than capacity, b) approaching capacity, or c) exceeding capacity and presented both in a tabular format and graphically.

Fehr & Peers will conduct this analysis for the existing roadway circulation system and for one reconfigured road network. Traffic volume shifts associated with a reconfigured road network will be based on engineering judgement taking into account access to the surrounding local and regional road system.

3. All circulation changes will be vetted by Fehr & Peers to ensure they directly meet one or more of the DOSP transportation goals.
4. The Equity Team will be consulted in the evaluation of these projects, with the methodology and lead TBD.
5. F&P: How will impacts or additional analysis needs be handled?

Table 4 summarizes the additional analysis and input that is needed for the roadway network changes.

**Table 4: Roadway Network Changes**

Project Type	In a previously adopted City document? Is further project development or evaluation needed?	Public Input Needed	Equity Issues	Any potential modal conflicts?	Recommended for further analysis?
<b>One-way to Two-Way Street Conversions</b>	<ul style="list-style-type: none"> <li>Some candidate streets were identified in Lake Merritt/Chinatown SP.</li> <li>Further refinement of criteria for candidate streets is needed</li> <li>Consider which streets are under-capacity</li> <li>Consider signal timing; possible bicycle and transit improvements</li> </ul>	<ul style="list-style-type: none"> <li>Analyze which roads could be converted, then ask: Which streets should be prioritized for conversions?</li> <li>Ask businesses: how might this impact you?</li> </ul>	To be discussed with Equity Team	Yes, specific corridors have competing needs	Yes
<b>I-980 Teardown</b>	To be discussed with City staff	To be discussed with City staff	See above	Yes	Yes
<b>Oakland-Alameda Access Project</b>	A separate, parallel study process is currently underway that will perform the analysis and public outreach for this project.				
<b>Other Issues</b>					

## Parking, Curbside Management, Trucks and Emergency Access Initiatives

Initial ideas for parking, curbside management, trucks, and emergency access were based on the existing conditions analysis that evaluated:

- Parking* - (Based on the findings in the 2016 Downtown Oakland Parking Management Report) Parking supply, demand, and signage.
- Curbside management* – (Based on the 2015 Comprehensive Circulation Study for Downtown Oakland and Access to/from West Alameda) General trends in unloading and loading of deliveries in Downtown.
- Trucks* – (Based on the 2016 Alameda County Goods Movement Plan) Regional goods movement and truck routes through Downtown.
- Emergency access* – Basic, qualitative information has been provided by OakDOT staff.

Some projects have been identified in adopted plans (e.g. parking projects) while others (e.g. curbside management and emergency access) have not. Therefore, ideas for each of these initiatives shall be vetted and further refined in consultation with City staff, and subsequently with the public.

Table 5 summarizes the additional analysis and input that is needed.

**Table 5: Parking, Curbside Management, Trucks and Emergency Access Initiatives**

Project Type	In a previously adopted City document? Is further project development or evaluation needed?	Public Input Needed	Equity Issues	Any potential modal conflicts?	Recommended for further analysis?
<b>Parking</b>	<ul style="list-style-type: none"> <li>• Yes, 2016 Downtown Oakland Parking Study. Key recommendations will be carried through and refined as needed.</li> <li>• This study did not include the Jack London District, which is a candidate location for future study.</li> </ul>	<ul style="list-style-type: none"> <li>• What is the community's experience with parking in Downtown Oakland?</li> <li>• Where would you like to park but have difficulties doing so?</li> <li>• Are there amenities (such as bike lanes, transit lane, wider sidewalks) for which you are willing to trade on-street parking?</li> </ul>	To be discussed with Equity Team	Yes	No
<b>Curbside Management</b>	<ul style="list-style-type: none"> <li>• Need to identify competing needs and priorities between different uses in hot spot areas of Downtown, to be identified through public engagement process and discussion with City staff.</li> <li>• Recommendation of a curbside management study subsequent to DOSP process.</li> </ul>	<ul style="list-style-type: none"> <li>• Which curbside uses need additional space?</li> <li>• What is your experience when using taxis or other shared mobility services in Downtown Oakland?</li> <li>• Ask businesses: how can curbside management be improved?</li> <li>• We understand that there is high loading/unloading activity in Jack London Square and Chinatown; is there high activity elsewhere, too?</li> </ul>	To be discussed with Equity Team	Yes	No
<b>Goods Movement</b>	<ul style="list-style-type: none"> <li>• Yes, 2016 Alameda County Goods Movement Plan.</li> </ul>	<ul style="list-style-type: none"> <li>• How are you impacted by freight traffic or by delivery trucks?</li> </ul>	To be discussed with	Yes	No

Project Type	In a previously adopted City document? Is further project development or evaluation needed?	Public Input Needed	Equity Issues	Any potential modal conflicts?	Recommended for further analysis?
	<ul style="list-style-type: none"> <li>High-level assessment of truck routes and ideas for managing delivery within downtown are needed.</li> </ul>	<ul style="list-style-type: none"> <li>Ask businesses: What is your greatest challenge/barrier to receiving and unloading deliveries in Downtown?</li> </ul>	Equity Team		
<b>Emergency Access</b>	To be discussed with City staff	<ul style="list-style-type: none"> <li>Question for emergency services staff (Police, Fire, etc.): What challenges/barriers do you have to providing emergency services in Downtown Oakland?</li> </ul>	No	Not anticipated	No
<b>Other Issues</b>					