SUBCHAPTER 4.9

TRANSPORTATION AND TRAFFIC

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4.9 TRANSPORTATION AND TRAFFIC

4.9.1 Introduction

This subchapter examines impacts on the potential transportation and traffic impacts associated with implementation of the proposed control measures in the 2012 AQMP.

4.9.2 2012 AQMP Control Measures with Potential Traffic Impacts

All of the proposed control measures in the 2012 AQMP were evaluated and only three control measures, ONRD-05, ADV-01, and ADV-02, were found to potentially impact traffic.

ONRD-05 identifies as compliance options zero-emission container movement technologies (e.g., no creation of tailpipe emissions) for vehicles or systems that transport containers between marine ports and near-dock railyards[1]. Zero-emission container movement systems include, but are not limited to, on-road technologies such as battery-electric trucks, fuel cell trucks, hybrid-electric trucks with all-electric range and zero-emission hybrid or battery-electric trucks with "wayside" power (such as electricity from overhead wires). The measure could also be implemented by constructing zero-emission fixed guideway systems in the roadway such as electric, maglev or linear synchronous motor propulsion. If implemented, ONRD-05 would require an additional demand for electricity to be powered by grid electricity stored in a battery, by electricity produced onboard the vehicle through a fuel cell, or by "wayside" electricity from outside sources by constructing new overhead catenary lines or wires on roadways between the marine ports and the near-dock railyards.

ADV-01 identifies as compliance options advance on-road freight transport equipment that is powered by clean energy technologies, such as advanced engine controls for more efficient combustion, electric hybrid systems and zero-emission technologies such as electric, battery-electric, and fuel cells, and a greater use of alternative and renewable fuels. Under ADV-01, an additional demand for electricity is also likely and could be supplied by the construction of overhead catenary electrical lines adjacent to and within existing streets and roadways. Lastly, implementation of ADV-01 could also result in the construction of "wayside" electric or magnetic power built into the existing roadway infrastructure to boost the pulling capacity or range of the heavy-duty vehicles as well as battery changing or fueling infrastructure.

ADV-02 focuses on deploying zero- and near-zero emission locomotives. The following technologies could be applied toward achieving zero emissions from freight and passenger locomotives: overhead catenary electrical lines, "wayside" electric or magnetic power built into the existing railway infrastructure, linear synchronous motor technology, battery-hybrid systems, fuel cells, and alternative fuels such as LNG.

Table 4.9-1 contains a summary of these control measures and their corresponding potential traffic impacts.

[1] Near-dock railyards are railyards located less than five miles from marine terminals.

TABLE 4.9-1

Control Measures with Potential Traffic Impacts

CONTROL MEASURE	CONTROL MEASURE DESCRIPTION (POLLUTANT)	CONTROL METHODOLOGY	TRAFFIC IMPACT
ONRD-05	Further Emission Reductions from Heavy-Duty Vehicles Servicing Near-Dock Railyards (NOx, PM)	Incentives to replace up to 1,000 heavy-duty vehicles with low-emitting vehicles or zero-emission container movement systems.	Potential traffic impacts due to the construction of overhead catenary lines and fixed guideway systems. Potential traffic impacts associated with operation activities associated with transportation infrastructure improvements (e.g., dedicating an existing truck lane exclusive to vehicles using the overhead catenary electrical lines or fixed guideway systems).
ADV-01	Proposed Implementation Measures for the Deployment of Zero- and Near-Zero Emission On-Road Heavy-Duty Vehicles (NOx)	Construct "wayside" electric or magnetic infrastructure; construct battery charging and fueling infrastructure. Alternatively, if battery, fuel cell or other zero/near zero emission technologies progress sufficiently, the need for wayside power for rail or trucks may be diminished or eliminated.	Potential traffic impacts associated with construction activities to develop electrical-support systems (e.g., overhead catenary electrical lines and battery charging stations) and fueling infrastructure adjacent to and within existing streets and roadways. Potential traffic impacts associated with operation activities associated with transportation infrastructure improvements (e.g., dedicating an existing truck lane exclusive to vehicles using the overhead catenary electrical lines).
ADV-02	Proposed Implementation Measures for the Deployment of Zero- and Near-Zero Emission Locomotives (NOx)	Construct "wayside" electric, magnetic, battery-hybrid system, or fuel cell infrastructure, construct battery charging or fueling infrastructure.	Potential traffic impacts from construction of overhead catenary electrical lines, "wayside" electric or magnetic infrastructure.

4.9.3 Significance Criteria

Implementation of the 2012 AQMP will be considered to have significant adverse transportation and traffic impacts if any of the following conditions occur:

- Peak period levels on major arterials are disrupted to a point where level of service (LOS) is reduced to D, E or F for more than one month.
- An intersection's volume to capacity ratio increase by 0.02 (two percent) or more when the LOS is already D, E or F.
- A major roadway is closed to all through traffic, and no alternate route is available.
- The project conflicts with applicable policies, plans or programs establishing measures of effectiveness, thereby decreasing the performance or safety of any mode of transportation.
- There is an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.
- The demand for parking facilities is substantially increased.
- Water borne, rail car or air traffic is substantially altered.
- Traffic hazards to motor vehicles, bicyclists or pedestrians are substantially increased.
- The need for more than 350 employees.
- An increase in heavy-duty transport truck traffic to and/or from the facility by more than 350 truck round trips per day.
- Increase customer traffic by more than 700 visits per day.

4.9.4 Potential Impacts and Mitigation

Potential traffic impacts associated with the 2012 AQMP during construction relate primarily to the construction of the following support systems: 1) catenary overhead electrical lines; 2) battery charging stations; 3) fueling infrastructure; 4) "wayside" electric; and, 5) magnetic infrastructure. Potential traffic operational impacts associated with the 2012 AQMP relate primarily to dedicating an existing truck lane exclusive to vehicles using the overhead catenary electrical lines. For purposes of evaluating potential traffic impacts, it has been assumed herein that no new rail or roadways will be constructed, but rather some of the existing routes/corridors may be modified.

PROJECT-SPECIFIC IMPACTS: The existing rail and truck routes/corridors likely to be modified are located primarily in commercial and industrial zones within the Southern California area. Examples of these areas include, but are not limited to, the Port of Los Angeles, Port of Long Beach, and industrial areas in and around container transfer facilities (rail and truck) near the Terminal Island Freeway, along the Alameda Corridor, as well as inland facilities. Since only existing transportation routes would be modified, no new roadways or railways are anticipated as part of the proposed project.

Construction Activities: Implementation of Control Measures ONRD-05 and ADV-01 could require the installation of catenary overhead electrical lines and fixed guideway systems, battery charging stations, and fueling infrastructure within or adjacent to existing roadways, streets, freeways, and/or transportation corridors. Implementation of Control Measure ADV-02 could require the installation of catenary overhead electrical lines or electrical or magnetic infrastructure along rail lines. Construction activities would generate traffic associated with construction worker vehicles and trucks delivering equipment, materials and supplies to the project site during the duration of the construction activities. Heavy construction equipment such as backhoes, cranes, cherry pickers, front end loaders and other types of equipment would be used to carry-out the aforementioned construction activities. Construction activities would be expected to occur within or adjacent to existing roadways which could require lane closures to protect construction workers and avoid traffic conflicts. These construction activities are expected to occur along heavily travelled roadways (e.g., roads near the ports, such as Sepulveda Boulevard, Terminal Island Freeway, on Navy Way at the Port of Los Angeles, and Alameda Street). Construction traffic could potentially result in increased traffic volumes on heavily traveled streets and require temporary lane closures. Construction activities may result in the following impacts:

- Temporary reduction in the level of service on major arterials.
- Temporary closure of a roadway or major arterial.
- Temporary closure of a railroad line.
- Temporary impact on businesses or residents within the construction area.
- Removal of on-street parking.
- Conflicts with public transportation system (e.g., temporary removal of bus stops).

Construction activities necessary to modify existing rail and truck routes/corridors would vary depending on the location, and the specific traffic impacts are unknown. As such, to identify any impacts at this time without knowing the specific design features would be speculative. When the details become available, project-specific impacts would require a separate CEQA evaluation. However, the above listed construction traffic impacts, although temporary in nature, could be significant and result in a reduction of LOS at local intersections and potentially impact roadways within the applicable county's congestion management plan.

Operational Activities: Because Control Measures ONRD-05, ADV-01, and ADV-02 would apply to existing transportation corridors, no new streets, roads, freeways, or rail lines are expected to be needed as part of implementing the 2012 AQMP. However, implementation of Control Measures ONRD-05 and ADV-01 may contribute to significant adverse operational traffic impacts on roadways because transportation infrastructure improvements pertaining to overhead catenary electrical lines could require the dedication of an existing lane exclusive to vehicles using the overhead catenary electrical lines or fixed guideway systems. The dedication of an existing lane would mean that other vehicles would have reduced access to available driving lanes. Thus, a reduction in the number of

available lanes on a roadway to accommodate vehicles using the overhead catenary electrical lines could adversely affect traffic and congestion for all other vehicles on the road.

The number of plug-in hybrid vehicles, battery electric vehicles, and fuel cell vehicles that will be driving on district roadways are projected to substantially increase between year 2013 and year 2025, because Control Measure ONRD-03 would accelerate the penetration of zero emission vehicle trucks (1,000 zero emission vehicle trucks by 2023). This means from 2013 to 2023 there would be approximately 91 more zero emission vehicle trucks per year (e.g., 1,000 trucks per year divided by 11 years equals 91 trucks per year). In addition, Control Measure ONRD-05 calls for 1,000 more zero emission vehicle trucks by 2020. This means approximately 167 additional zero emission vehicle trucks per year from 2015 to 2020. (As a reminder, ONRD-05 only affects trucks going from the ports to near-dock transfer nodes. By definition near-dock means within five miles of the ports.) Table 4.9-2 contains a summary of the projected increases over the baseline of near-zero and zero emission vehicles that may result from implementing Control Measures ONRD-03 and ONRD-05.

TABLE 4.9-2

Projected Increases Near-Zero and Zero Emission Vehicles
from ONRD-03 and ONRD-05

YEAR	BASELINE NEAR-ZERO & ZERO EMISSION VEHICLES	ADDITIONAL NEAR-ZERO & ZERO EMISSION VEHICLES FROM ONRD-03	ADDITIONAL NEAR-ZERO & ZERO EMISSION VEHICLES FROM ONRD-03	TOTAL ADDITIONAL VEHICLES FROM ONRD03 + ONRD-05
2013	23,055	91	--	23,146
2014	31,160	91	--	31,251
2015	45,146	91	167	45,404
2016	59,976	91	167	60,234
2017	74,839	91	167	75,097
2018	105,211	91	167	105,469
2019	147,767	91	167	148,025
2020	201,256	91	167	201,514
2021	262,241	91	--	262,332
2022	332,639	91	--	332,730
2023	412,355	91	--	412,446
2024	500,607	--	--	500,607
2025	595,397	--	--	595,397

Source: Communication with ARB Staff, Mobile Source Division, August 14, 2012.

Similarly, implementation of ADV-02 may alter railway traffic due to infrastructure improvements pertaining to overhead catenary electrical lines. However, specific design features are unknown at this time. As such, to identify any impacts at this time without knowing the specific design features would be speculative. Nonetheless, when details of the

project become available, any proposed modifications to an existing rail or truck traffic route/corridor will require a separate CEQA evaluation to analyze specific traffic impacts and identify appropriate mitigation measures. Never-the-less, a reduction in the number of available lanes on a roadway to accommodate vehicles using the overhead catenary electrical lines could adversely affect traffic and congestion for all other vehicles on the road.

PROJECT-SPECIFIC MITIGATION: The impact of the proposed project on traffic and circulation during construction, although temporary in nature, could be significant. In addition, the impact of the proposed project on traffic and circulation during operation, could be significant if an existing roadway is dedicated exclusively as a truck lane for vehicles using the overhead catenary electrical lines or fixed guideway systems because traffic patterns and congestion may be altered. In order to mitigate potential construction and operation traffic impacts, project-specific information would be necessary in order to first identify the specific impacts (e.g., project location, distance of roadway to be altered, etc.) to develop appropriate mitigation measures.

Ultimately, mitigation measures, both for construction and operation, would need be identified on a project-by-project basis and would be the responsibility of the lead agencies based on their underlying legal authority to mitigate project impacts. For example, in the Draft Program EIR prepared for SCAG's 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy, mitigation measure TR29 (MM-TR29) identifies mitigation measures for traffic congestion management during construction as follows:

TT-1: Project sponsors and construction contractors can and should meet with the appropriate Lead Agency (or other government agency) to determine traffic management strategies to reduce, to the maximum extent feasible, traffic congestion and the effects of parking demand by construction workers during construction of this project and other nearby projects that could be simultaneously under construction. The project sponsor should develop a construction management plan for review and approval by the Lead Agency (or other government agency as appropriate). The plan should include at least the following items and requirements:

- A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes.

- Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur.

- Location of construction staging areas for materials, equipment, and vehicles at an approved location.

- A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an onsite complaint manager. The manager should determine the cause of the complaints and should take prompt action to correct the problem. The Lead Agency should be informed who the Manager is prior to the issuance of the first permit.

- Provision for accommodation of pedestrian flow.

- As necessary, provision for parking management and spaces for all construction workers to ensure that construction workers do not park in on street spaces.

- Any damage to the street caused by heavy equipment, or as a result of this construction, should be repaired, at the project sponsor's expense, within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair should occur prior to issuance of a final inspection of the building permit. All damage that is a threat to public health or safety should be repaired immediately. The street should be restored to its condition prior to the new construction as established by the Lead Agency (or other appropriate government agency) and/or photo documentation, at the sponsor's expense, before the issuance of a Certificate of Occupancy.

- Any heavy equipment brought to the construction site should be transported by truck, where feasible.

- No materials or equipment should be stored on the traveled roadway at any time.

- Prior to construction, a portable toilet facility and a debris box should be installed on the site, and properly maintained through project completion.

- All equipment should be equipped with mufflers.

- Prior to the end of each work-day during construction, the contractor or contractors should pick up and properly dispose of all litter resulting from or related to the project, whether located on the property, within the public rights-of-way, or properties of adjacent or nearby neighbors.

As a single purpose public agency responsible for adopting and enforcing air quality rules and regulations, the SCAQMD's authority to implement mitigation measures for traffic impacts is limited. CEQA is intended to be implemented in conjunction with discretionary powers granted to public agencies by other laws (CEQA Guidelines §14040(a)). Further, the CEQA Guidelines (§15040(b)) specifically state, "CEQA does not grant an agency new powers independent of the powers granted to the agency by other laws." Thus, it is not

feasible for the SCAQMD to identify appropriate project-specific mitigation measures for traffic and transportation impacts in this Final Program EIR.

Identification and adoption of mitigation of traffic and transportation impacts would primarily be the responsibility of the local general purpose public agency (e.g., city or county) or other agency that would typically serve as the lead agency on any given future project. Thus, appropriate project-specific mitigation measures would have to be identified by the applicable lead agency, such as SCAG's MM-TR29, in the CEQA document prepared for each future project that is proposed. Since MM-TR29 is currently an adopted mitigation measure from SCAG's 2012 – 2035 RTP/SCS, the SCAQMD recommends that it be implemented for all projects that have the potential to affect roadways, including 2012 AQMP Control Measures ONRD-05, ADV-01, and ADV-02.

In conclusion, the SCAQMD cannot predict how a future lead agency might choose to mitigate a particular significant traffic and transportation impact. Because the catenary lines are expected to be utilized in areas where truck traffic is concentrated and could occur in heavy traffic areas (e.g., Alameda Corridor and downtown Los Angeles) the potential exists for future traffic and transportation impacts to be significant and unavoidable (e.g., significant even after feasible mitigation measures are identified and imposed).

REMAINING IMPACTS – USE OF CATALYSTS: The impacts of the proposed project on traffic and transportation are expected to be significant prior to mitigation. While generally mitigation measures could help minimize some of the impacts, SCAQMD cannot predict how a future lead agency might choose to mitigate a particular significant traffic and transportation. Thus, the potential exists for future traffic and transportation impacts to be significant even after feasible mitigation measures are identified and imposed. Therefore, traffic and transportation impacts that may occur as a result of implementing the 2012 AQMP are expected to remain significant.

4.9.5 Summary of Traffic Impacts

The following is the summary of the conclusions of the analysis of the traffic impacts associated with implementation of the 2012 AQMP.

- Construction impacts, though temporary in nature, could be significant.
- Operational impacts could be significant.
- Any proposed modification to an existing rail or truck traffic route/corridor will require a separate CEQA evaluation to identify specific traffic impacts and mitigation measures for that project.

Summary of PM2.5 Control Measure Impacts: PM2.5 Control Measures were evaluated in the NOP/IS and it was determined that the PM2.5 Control Measures would not generate any potentially significant traffic impacts. Since no significant traffic impacts were identified for any of the PM2.5 Control Measures, no mitigation measures are required.

Summary of Ozone Control Measure Impacts: Three Ozone Control Measures (e.g., ONRD-05, ADV-01, and ADV-02) could result in traffic impacts due to construction and operation. The potential traffic impacts of these Ozone Control Measures were determined to be significant and mitigation measures would be required. However, it is not feasible to identify appropriate project-specific mitigation measures for traffic and transportation impacts in this Final Program EIR. Instead, appropriate project-specific mitigation measures will have to be identified in the CEQA document prepared for each future project that is proposed. The analysis concluded that the potential exists for future traffic and transportation impacts to be significant and unavoidable (e.g., significant even after feasible mitigation measures are identified and imposed).