Table 4-6 Project List & Evaluation Matrix

Map ID	Description	Status
55	24th St/Bay Marina Dr: Class II bike lanes connecting NCMT, 24th St Transit Center and National City communities. Pedestrian upgrades including rail crossing gates and curb ramps. Wayfinding facilities.	New/Enhanced
106	24th Street: Pedestrian bridge across I-5 to the 24th Street Trolley Station.	New/Enhanced
19	Pepper Park: Bike/pedestrian connections to Pepper Park extension proposed in *National City Marina District Balanced Land Use Study (2016).*	Assumed
50	Bayshore Bikeway, National City: Relocation from Tidelands Ave to Marina Way and McKinley Ave.	Assumed
51	Cleveland Ave-Marina Way connection across Bay Marina Dr.	Assumed
103	Blue Line Express Lane from San Ysidro to Downtown.	Assumed

Evaluation Matrix

Goal	Performance Metric		Evaluation
I. Improve Community Safety, Mobility & Health	1	Quantitative reduction in pollution levels	◔
	2	Quantitative increase in bicycle, pedestrian and first/last mile connections, facilities, and amenities	◑
	3	Qualitative decrease in pedestrian and cyclist injuries	◑
	4	Quantitative vehicle miles traveled	◑
II. Improve Goods Movement	1	Quantitative travel times, roadway level of service	○
	2	Qualitative roadway condition assessment	○
	3	Quantitative vehicle miles traveled	○
III. Improve Naval Base Access & Circulation	1	Quantitative travel times, roadway levels of service	○
	2	Qualitative assessment of multimodal access	◑
IV. Improve Shipyard Access & Parking	1	Optimize parking	○
	2	Qualitative assessment of multimodal access	○
V. Cost Effectiveness	1	Quantitative capital cost	◔

Legend

Evaluation symbols represent the potential to fulfill each performance metric, using the following scale:

Low: ○

Low to Moderate: ◔

Moderate: ◑

Moderate to High: ◕

High: ●

4.10 EFFICIENT GOODS MOVEMENT

The projects in this section pertain to projects specific to the improvement of goods movement throughout the corridor, including maritime projects. A map of the area and related projects is found in Figure 4-8. The comprehensive list of projects for Efficient Goods Movement and the corresponding evaluation matrix are found in Table 4-7.

There are currently no assumed projects specific to goods movement in the area. As such, the project team developed the project list to integrate the latest in ITS technology, including Freight Signal Priority (FSP) (project #90), Freight Truck Geofencing (project #91), a Navy and Freight Community Web Portal (#92), and a host of others. Many of these projects are intended to be applied directly onto the designated truck route along Harbor Drive and the primary ingress and egress arterials. In addition to projects with an ITS component, several pertain to truck parking and resting facilities (projects #93, #94, and #96) including a potential P3 opportunity in National City (project #95). This project list also features a potential Truck Marshalling Yard (project #104) to facilitate the expansion of the San Diego Convention Center, the opening of the new convention center in Chula Vista, and a potential Marine Highway (project #97).

HARBOR DRIVE 2.0

The featured project within this group is Harbor Drive 2.0 (HD 2.0), a connected, flexible corridor, with the capability to also provide other connected capabilities along the corridor (i.e. Transit Signal Priority, etc.). The designation of a through truck route between NCMT and TAMT will provide more efficient movement of freight while maintaining the quality of life for neighborhood residents and improving public safety. The features of the designated freight route will include the following infrastructure and transportation engineering improvements along the corridor and intelligent transportation system (ITS) technologies:

- Infrastructure and transportation engineering improvements.
  - Truck queue jumps: Queue jumps are proposed for several intersections along the corridor so trucks can bypass other vehicles at these intersections. This not only allows the trucks to avoid queue formations, it also segregates trucks from other vehicles, increasing safety. Conceptual locations for these queue jumps can be found in the exhibits found in Appendix H.
  - Off-peak dedicated truck lanes: During non-personal vehicular peak hours, regular through lanes will be re-designated as truck only lanes utilizing ITS technology and wayfinding gantries. Conceptual locations for these queue jumps can be found in the exhibits found in Appendix H.
  - Physical improvements: Where the right-of-way is feasible, the HD 2.0 will have separated, dedicated truck lanes at all times of day, which can also be used for transit and military vehicles. These proposed locations are shown in greater detail in the exhibits found in Appendix H.
- ITS technologies
  - Freight Signal Priority (FSP): Technology that evaluates real-time traffic conditions for a specific vehicle type, in this case trucks, and gives signal priority to these freight vehicles traveling along the designated freight route. This will build upon the District tenants' current California Energy Commission Freight Signal Prioritization project.
  - Gate Operating System (GOS): Once the Port requires queue management at the gate, the port can install a GOS that connects with its Terminal Operating System (TOS) to manage the flow of trucks through the terminals' gates. The GOS provides truck drivers at the gate with accurate automated work assignments which reduces wait times outside the gate and truck cycle times within the terminal.
  - Truck Reservation System (TRS): A TRS can be combined with a GOS to allow freight trucks to make appointments for cargo delivery or receipt within specific time windows. This system automatically disperses truck reservations over a range of time to reduce the peaking of truck traffic at the gate and avoid queuing along the designated freight route.
  - Geofencing: Geographic positioning system (GPS) and geographic information system (GIS) data, vehicle telematics and other ITS technologies can be used to track the location and path of freight vehicles prior to entering or after exiting the port. Geofencing can be used to monitor and incentivize trucks to follow designated freight routes and provide disincentives, such as limited access to the TRS, to trucks that use local residential roads.

MARINE HIGHWAY SERVICE

An alternative transportation option using the region's maritime assets is also recommended to reduce truck traffic on the corridor. The team evaluated various marine highway service options and identified a potential for specific lumber cargos to be shifted from truck to ocean-going vessel and transported from NCMT to facilities in the Pacific Northwest. U.S. vessel and barge operating companies serving the Port have expressed interest in the opportunity. Next steps include:

- Port staff coordinating with the identified carrier and shipper(s) to determine the service factors including vessel itineraries, service frequency, terminal requirements and special handling needs.
- Applying for a marine highway project designation through the America's Marine Highway (AMH) program through the U.S. Department of Transportation (USDOT), Maritime Administration (MARAD).
- Apply for AMH Program grants when the Notice of Funding Opportunity is announced, if the proposed marine highway service receives designation as a qualified marine highway project under the AMH program. The grant funds can be used to support the development and expansion of documented vessels or port and landside infrastructure.

For this group of projects, the project team determined the project would provide moderate benefits to community safety, mobility and health; significant improvements to goods movement, and at a cost-effective rate because of the ITS components.

INLAND PORT FACILITY

A portion of the Port of San Diego's cargo movements do not require any maritime assets. The movement of this cargo only requires train and truck movements that could be shifted inland away from the Port's land-constrained marine terminals. An inland port facility has the potential to provide a more efficient inland-based supply chain activity away from current coastal congestion points in and around the facilities along Harbor Drive and enhance the logistics options that increase productivity of existing maritime and road and rail infrastructure assets.

The viability of a Port of San Diego inland facility is dependent, in part, on the volume of freight which it would attract. Demand for an inland facility in San Diego would primarily originate from Mexico and U.S. intermodal markets. One difficulty in estimating potential traffic is that the amount of traffic depends on rates and service levels, and these are unknown for a new facility. A feasibility study could identify cargo flows between the San Diego region and other global partners that could be serviced at an inland facility and evaluate whether the cost, transit, and service conditions are in place to make the inland port viable for the shippers, trucking companies, and railroads. The SANDAG 2016 Freight Gateway Study Update contains valuable information on baseline and future freight volumes out to 2050.

Figure 4-8 Efficient Goods Movement

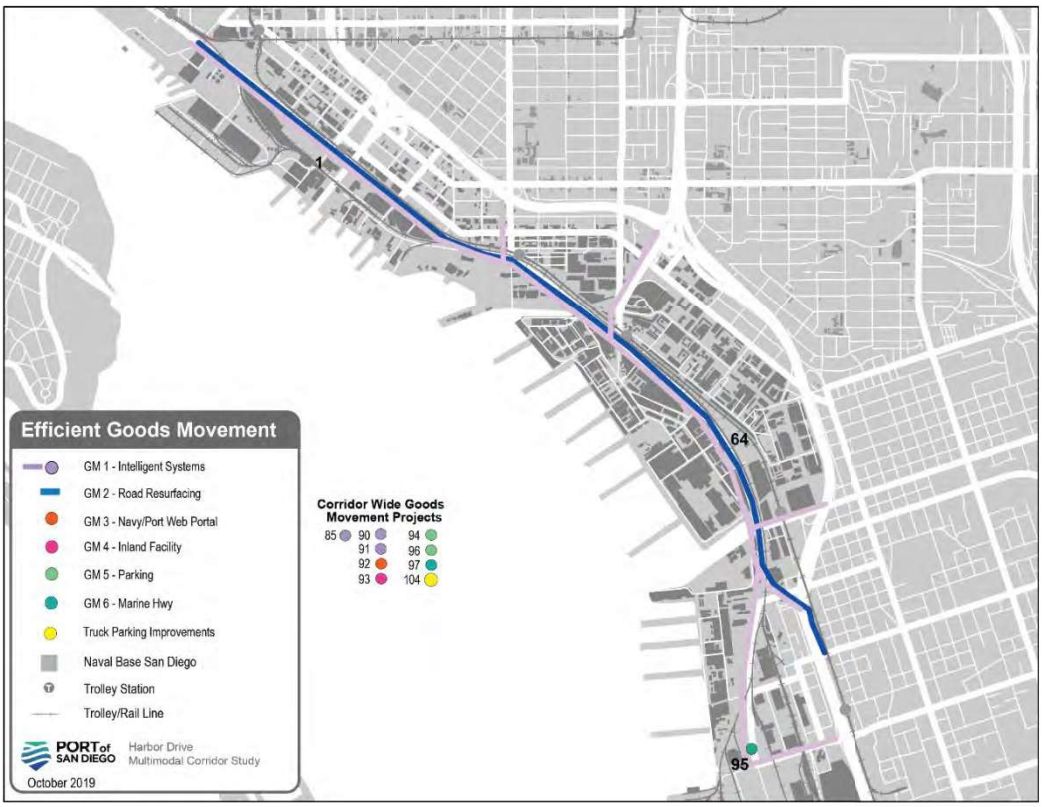

Table 4-7 Project List & Evaluation Matrix

Map ID	Description	Status
1	Harbor Drive 2.0 (HD 2.0): Dedicated lanes (where feasible) and signal priority for truck freight along Harbor Drive between TAMT/Cesar Chavez Pkwy, NCMT and connections to I-5. Includes freight signal priority (FSP), queue jumps, delineators and signage. Generally aligned in the #1 lanes and median.	New/Enhanced
64	Harbor Dr: Resurface to improve traffic and freight movements and enhance safety, preferably concurrent with other proposed roadway improvements.	New/Enhanced
85	Establishment of truck route and weight restrictions with appropriate load/weight maximums to improve goods mobility. May be combined with freight truck geofencing and/or FSP on preferred truck routes (see Goods Movement section) to provide additional incentives for compliance.	New/Enhanced
90	Freight Signal Priority (FSP): Facilities to provide priority to freight vehicles at signalized intersections. Can be specific to certain times or conditions. Demonstration project with 10 trucks in progress by Port Tenants.	New/Enhanced
91	Freight Truck Geofencing: Tracking mechanism to keep trucks within preferred routes and parking areas. Could be paired with incentives including freight signal priority (FSP) or access to proposed HD 2.0.	New/Enhanced
92	Port Freight & Navy Mobility Community Web Portal: Freight community web portal for Port tenants, Navy commands and other users to enhance efficiency and improve logistics. Could include scheduling system to reduce impacts from queuing and parking.	New/Enhanced
93	Inland Port Facility: Feasibility evaluation for an inland port facility outside the study area to facilitate train/truck movements currently occurring at the Port's marine terminals. Property in Otay Mesa is potential opportunity.	New/Enhanced
94	Regional Truck Parking Strategy: Identification of needs and potential facility locations to support truck movements, including into and out of the Working Waterfront.	New/Enhanced
95	Truck Parking & Rest Facilities: One or more facilities providing parking, rest and other services for truck drivers heading to/from the Working Waterfront, and other nearby industrial uses. May include innovative strategies such as on-street, overnight paid parking technology. Potential P3 opportunity. One potential location exists on Tidelands Avenue in National City. Details on the Tidelands Avenue Truck Parking project can be found in Appendix I.	New/Enhanced
96	Truck Parking Information Management System: Resource for tenants and truck operators to obtain information and potentially reserve parking resources. Could be tied to Port Freight Community Web Portal.	New/Enhanced
97	Marine Highway: Marine-based services between Port and other locations (to reduce pressure on truck and rail corridors). Could also include passenger ferry service between key regional destinations.	New/Enhanced
104	Truck Marshalling Yard: Marshalling yard to facilitate goods movement between San Diego Convention Center and the future Convention Center in Chula Vista. Would replace the existing marshalling yard in Chula Vista.	New/Enhanced

Evaluation Matrix

Goal	Performance Metric		Evaluation
I. Improve Community Safety, Mobility & Health	1	Quantitative reduction in pollution levels	◑
	2	Quantitative increase in bicycle, pedestrian and first/last mile connections, facilities, and amenities	○
	3	Qualitative decrease in pedestrian and cyclist injuries	○
	4	Quantitative vehicle miles traveled	◔
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	2	Qualitative roadway condition assessment	◕
	3	Quantitative vehicle miles traveled	◔
III. Improve Naval Base Access & Circulation	1	Quantitative travel times, roadway levels of service	◔
	2	Qualitative assessment of multimodal access	◑
IV. Improve Shipyard Access & Parking	1	Optimize parking	○
	2	Qualitative assessment of multimodal access	○
V. Cost Effectiveness	1	Quantitative capital cost	◕

Legend

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Low to Moderate: ◔

Moderate: ◑

Moderate to High: ◕

High: ●

4.11 NAVAL BASE PROJECTS

The projects in this section are projects that directly impact Naval Base San Diego access and circulation. While many roadway, pedestrian, rail, and bicycle projects affect navy access, this selection of projects are adjacent to naval gates and/or directly affect the way in which navy personnel access the base. A map of the area and related projects is found in Figure 4-9. The comprehensive list of projects and the corresponding evaluation matrix are found in Table 4-8.

One specific subset of projects within this group pertain to the Vesta Street Bridge (Table 4-8 project #39), connecting the “Dry Side” of Naval Base San Diego to the “Wet Side.” The project was originally included as Phase 1 of the proposed TCIF Port Access Improvements and has a direct benefit to goods movement in the area as a result of the redistribution of traffic relating to Naval Base San Diego access. With the introduction of the Vesta Street Bridge, several other projects become necessary to handle the new distribution of traffic (Table 4-8 projects #74, #75, & #76). Some of the other projects relate to vehicular gate improvements (Table 4-8 projects #35, #77, & #81), while other projects improve multimodal access to the base (Table 4-8 projects #20 & #84). These proposed projects improve