



SAN DIEGO AND IMPERIAL COUNTIES SUSTAINABLE FREIGHT IMPLEMENTATION STRATEGY

FINAL BENEFITS AND FEASIBILITY SCORING MEMORANDUM

September 2023

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1. PURPOSE AND SCOPE

As part of the San Diego and Imperial Counties Sustainable Freight Implementation Strategy, this Scoring memorandum documents the methodology and assumptions made to evaluate strategies for implementation. Strategies under consideration include projects, programs, and policies in San Diego and Imperial Counties. Each strategy was evaluated according to anticipated benefit and feasibility criteria outlined in the Existing Conditions and Sustainable Freight Best Practices memorandum. The criteria are described in Tables 1 and 2.

Table 1: Scoring of Benefits

Areas	Criteria	Scoring	Weighting
Environment	Impact on reducing emissions of GHGs	1 - 3	35%
	Impact on reducing emissions of criteria pollutants (particulate matter, NO _x , VOC, etc.)	1 - 3	
Equity	Degree to which benefits accrue to most vulnerable communities (Top 25% of CalEnviroScreen 4.0 scores, or AB 617), and vulnerable communities (Top 50% of CalEnviroScreen 4.0 scores, or Tribal Land), including safety considerations	1 - 3	35%
Economy	Improves efficiency (speeds and reliability) of freight transportation system	1 - 3	30%
	Improves capacity of freight system to accommodate expected increases in freight	1 - 3	

Table 2: Scoring of Feasibility

Areas	Criteria	Scoring	Weighting
Costs	Approximate implementation costs	1 - 3*	35%
Funding	Availability of funding	1 - 3	25%
Stakeholder Support	Support for implementation from stakeholders and legislative bodies	1 - 3	15%
Technological Complexity	Readiness of the required technology, including testing, development, and regulatory compliance	1 - 3	15%
Planning Continuity	Consistent with local or regional plans or programs and/or in alignment with other transportation modes	1 - 3	10%

**Costs scoring will be such that low-cost strategies are assigned a high score and high-cost strategies will receive a low score.*

A baseline score was determined for each project type, and scoring was then adjusted according to the location of the proposed project and other contextual details. Proposed policies and programs not defined by geographic locations were evaluated based on documented implementation outcomes in other cities, if available, and the best available information. Scores may change as more information is gathered and strategies are further defined in advance of implementation.

Scoring the benefits and feasibility of each strategy has resulted in an interactive tool that can be used to sort and filter them according to different priorities. Scores can be updated to respond to changing conditions. For example, new funding programs or technological improvements could elevate strategies that may not currently rise to the top of the priority list.

2. SCORING OF BENEFITS

2.1 Environment

Environment scores for proposed strategies were determined based on the potential to reduce emissions of greenhouse gases and criteria pollutants based on a typical application of the project as currently defined. A proposed project to provide zero-emissions charging/fueling infrastructure for trucks was given a baseline environment score of 3, given its potential to reduce emissions by supporting the transition of fossil fuel-powered trucks to zero-emission trucks. A proposed project with an uncertain net impact on emissions, such as changes to commercial port of entry processing technology, was given a baseline environment score of 2. Finally, a proposed project anticipated to increase emissions, such as a highway widening, was given a baseline environment score of 1.

2.2 Equity

Equity scores for proposed strategies were determined based on the degree to which benefits accrue to vulnerable communities. These communities were determined according to the top 25% (most vulnerable) and top 50% (vulnerable) of communities, as defined by [CalEnviroScreen 4.0](#). CalEnviroScreen 4.0 is also used for the evaluation of equity in SANDAG's 2021 Regional Plan. The definitions of most vulnerable and vulnerable also include communities designated through the [Assembly Bill \(AB\) 617 Community Air Protection Program](#) and tribal lands. Safety was also considered in this area of evaluation, with proposed strategies that improve safety resulting in higher scores.

A proposed project to provide zero-emissions charging/fueling infrastructure for trucks was given a baseline score of 3 for equity, given that reductions in emissions likely benefit vulnerable communities. If that zero-emissions charging/fueling infrastructure project were located close to sensitive land uses, its equity score was reduced to 2, as the project could attract more trucks than would otherwise be in that area. Converting existing trucks to zero-emissions would have a clear benefit to equity, but increasing the number of trucks in a vulnerable community could still contribute to noise and safety concerns from residents. A proposed project that would increase traffic speeds or volumes near most vulnerable and vulnerable communities would likely negatively impact those communities and be given a baseline score of 1.

2.3 Economy

Economy scores for proposed strategies were determined according to their potential to increase freight efficiency and capacity. Road widening, expansions of truck parking

facilities, and technology to reduce truck delays are example strategies assumed to have a strong economic benefit and be given a baseline score of 3. Proposed strategies with an uncertain economic benefit, such as temporary truck climbing lanes that do not significantly increase road capacity, were given a baseline score of 2. Proposed projects that would detour trucks around communities and increase the time or distance of travel would likely reduce freight efficiency and assigned a baseline score of 1.

3. SCORING OF FEASIBILITY

3.1 Cost

The proposed strategy list contains many projects that are conceptual in nature and have not been developed enough to have detailed cost estimates. However, the cost of a project is a significant factor when considering feasibility of implementation. Costs developed for this evaluation are high-level and based on available information, such as similar implementation in other cities. Similarly, costs for different strategies may vary for both capital costs or operations and maintenance costs. High level cost estimates were developed for all the strategies. The thresholds for high-, medium-, and low-cost strategies were then determined based on the distribution cost estimates. Approximately one-third of strategies were allocated into each scoring category. In general, strategies were considered low-cost and given a score of 1 if they cost up to \$10 million, medium-cost and given a score of 2 if they cost between \$10 and \$100 million, and high-cost and given a score of 3 if they cost greater than \$100 million to implement. These scores were used to avoid confusion. It should be noted that when determining overall weighted feasibility, the inverse scores were used in the calculation.

3.2 Funding Availability

SANDAG and ICTC monitor and evaluate numerous state and federal discretionary grant programs for their applicability to strategies that the agency is likely to pursue. Many of these programs are recurring, with new funding cycles being announced regularly. The project team assumed that these programs would continue to be available to fund proposed strategies. Grant program summaries were evaluated to determine at a high level if proposed strategies matched grant program eligibility requirements. If a strategy could be considered an eligible use of the funds according to the grant program summary, that was considered a match. Strategies with more matches were considered to have greater availability of discretionary funding than those strategies that had fewer matches. In total, 72 grant programs were evaluated. Strategies with 30 or fewer matches were considered to have low availability of funding and received a score of 1; strategies with 31 to 35 matches were considered to have medium availability of funding and received a score of 2, and strategies with 36 or more matches were considered to have high availability of funding and received a score of 3. As with the cost criteria, these thresholds were determined to result in a distribution of scores such that approximately one-third of the strategies would fall into each scoring category.

3.3 Stakeholder Support

Stakeholder support for proposed strategies was determined based on the outreach conducted throughout the project. The project team conducted interviews, focus groups, presentations, and surveys with a variety of stakeholders throughout San Diego and Imperial Counties. Qualitative feedback from the interviews and focus groups was evaluated in the context of proposed strategies, with dialogue supportive of a proposed strategy resulting in a score of 3, dialogue moderately supportive of a proposed strategy resulting in a score of 2, and dialogue unsupportive of a proposed strategy resulting in a score of 1. The online survey conducted in Spring 2023 also asked respondents to rate their approval or disapproval of proposed projects. This quantitative feedback was used to determine scores.

Policies and programs were less emphasized in the online survey conducted in Spring 2023. However, the project team conducted additional surveying during a presentation in July 2023 to the AB 617 Portside Community Steering Committee, a standing committee identified during the development of the Public Outreach Plan for project engagement. Quantitative and qualitative feedback from this presentation was used to score policies and programs, with supportive comments and scores resulting in a score of 3, moderately supportive comments and scores resulting in a score of 2, and unsupportive comments and scores resulting in a score of 1.

3.4 Technological Complexity

The technological complexity scoring category includes two primary components: the availability of required technology and the regulatory context. Many of the strategies considered for the Sustainable Freight Implementation Strategy are innovative and would rely on emerging technologies that may not yet be available for commercial use. The Existing Conditions and Sustainable Freight Best Practices memorandum and Innovative Strategies Screening memorandum describe numerous strategies being planned in peer cities to take advantage of new fuel types and increasingly sophisticated intelligent transportation systems, for example. The project team included such innovative concepts as appropriate for the regional context. However, strategies dependent on as-yet unproven technologies will likely require additional time or expense for implementation. Similarly, regulation relevant to strategy implementation was considered. Changing state or federal regulations and legislation requires time, expense, and political capital. Accordingly, strategies that require significant changes are considered to have an uncertain path toward implementation.

The two primary components of technological complexity were given equal weight in scoring. If a proposed strategy uses technology that is currently available and could be

implemented based on existing regulations and legislation, it received a score of 3. If one of those components is satisfied, the strategy received a score of 2. If the proposed strategy required both technology development and regulatory change, it received a score of 1.

3.5 Planning Continuity

Prioritizing consistency with adopted plans underscores the importance of prior planning work and supports the implementation of established goals, objectives, and implementation actions. To determine the consistency of proposed strategies, the project team reviewed numerous plans identified in the Project Management Plan Scope of Work, the Existing Conditions, and Sustainable Freight Best Practices memorandum. These documents were selected as being especially relevant to the development of a Sustainable Freight Implementation Strategy for San Diego and Imperial Counties and thus reflect a mix of overlapping geographies and focus areas. Documents considered include the following:

- California Sustainable Freight Action Plan
- California Statewide Truck Parking Study
- California Freight Mobility Plan 2020
- California-Baja California Border Master Plan 2021
- Port of San Diego Maritime Clean Air Strategy
- Portside Environmental Justice Neighborhoods Community Emissions Reduction Plan
- Calexico-El Centro-Heber Community Emissions Reduction Plan
- San Diego Regional Medium- and Heavy-Duty Zero-Emission Vehicle Blueprint Near- and Long-Term Implementation Strategies
- SANDAG/Caltrans District 11 South Bay to Sorrento, San Vicente, and North County Comprehensive Multimodal Corridor Plans
- SANDAG 2021 Regional Plan
- Southern California Association of Governments Connect SoCal 2020 Regional Transportation Plan/Sustainable Communities Strategy

These plans were reviewed to determine at a high level if the proposed strategies were consistent with documented goals, objectives, and implementation actions. A proposed strategy consistent with those documents was considered a match. Strategies with more matches were considered to have a greater level of planning continuity than those strategies that had fewer matches. In total, 11 documents were evaluated. Strategies with 2 or fewer matches were considered to have a low level of planning continuity and received a score of 1; strategies with 3 to 6 matches were considered to have a medium level of planning continuity and received a score of 2, and strategies with 7 or more matches were considered to have a high level of planning continuity and received a score of 3. As with the

cost and funding availability criteria, these thresholds were determined to result in a distribution of scores such that approximately one-third of the strategies fell into each scoring category.

As many of these planning documents are updated periodically, planning continuity is certain to change over time. This criterion, like the others, will be reevaluated as updated planning documents are published.

4. APPENDIX: SCORING MATRIX

Corridor	County	Start	End	Project Description	Project Type	Scoring of Benefits				Scoring of Feasibility					
						Environment	Equity	Economy	Benefits Weighted	Cost	Funding	S. Support	Tech Complexity	Planning Cont.	Opportunities/ Feasibility Weighted
Harbor Drive	SD	National City Marine Terminal		NCMT Truck Parking/ Staging - Truck parking and staging alternatives for NCMT, including but not limited to EV charging infrastructure	Marine, Truck Parking, ZEV	3	3	3	3	1	3	3	2	3	2.85
I-8	SD	Greenfield Dr	Forrester Rd	Golden Acorn Casino & Travel Center: Expand truck parking, add amenities, ZE charging, onsite electric generation and storage. Supports I-8 Alternative Fuel Corridor	Truck parking, ZEV	3	3	3	3	1	3	3	2	3	2.85
I-8	SD	Greenfield Dr	Forrester Rd	Buckman Springs Safety Roadside Rest Area: Expand truck parking, add amenities, ZE charging, onsite electric generation and storage. Supports I-8 Alternative Fuel Corridor	Truck parking, ZEV	3	3	3	3	1	3	3	2	3	2.85
I-8	IC	Greenfield Dr	Forrester Rd	Sunbeam Safety Roadside Rest Area: Expand truck parking, add amenities, ZE charging, onsite electric generation and storage. Supports I-8 Alternative Fuel Corridor	Truck parking, ZEV	3	3	3	3	1	3	3	2	3	2.85
I-8	IC	SR 7	State Line	Sand Hills Safety Roadside Rest Area: Expand truck parking, add amenities, ZE charging, onsite electric generation and storage. Supports I-8 Alternative Fuel Corridor	Truck parking, ZEV	3	3	3	3	1	3	3	2	3	2.85
SR 7	IC	International Border	SR 98	Calexico East POE/Gateway of the Americas Specific Plan Area: Support for private development of ZE truck charging/parking/staging	Truck parking, ZEV	3	3	3	3	1	3	3	2	3	2.85
SR 78	IC	SR 115	Riverside County line near Palo Verde	ZE infrastructure/truck parking/staging to support SR 78 Alternative Fuel Corridor	Truck parking, ZEV	3	3	3	3	1	3	3	2	3	2.85
SR 86	IC	SR 78 S	SR 78 N	Support for private ZE infrastructure/truck parking/staging. Add ZE charging to existing Love's Travel Stop in Westmorland	Truck parking, ZEV	3	3	3	3	1	3	3	2	3	2.85
SR 188	SD	International Border	SR 98	Tecate POE: Border Wait Times - Install the remaining border wait times equipment (northbound) at all CA-BC land POEs, and Regional Border Management System	POE, ITS	3	3	3	3	1	2	3	3	3	2.75
SR 905	SD	SR 11	International Border	Otay Mesa POE: Border Wait Times and Regional Border Management System	POE, ITS	3	3	3	3	1	2	3	3	3	2.75
SR 11	SD	SR 125	International Border	Otay Mesa East POE: ZE truck charging/parking/staging	POE, ZEV, Truck Parking	3	3	3	3	1	3	3	1	3	2.7
SR 11	SD	SR 125	International Border	Otay Mesa East POE: wireless electric charging for trucks in queue	POE, ZEV	3	3	3	3	1	3	3	1	3	2.7
SR 188	SD	International Border	SR 98	Tecate POE: wireless electric charging for trucks in queue	POE, ZEV	3	3	3	3	1	3	3	1	3	2.7
SR 7	IC	International Border	SR 98	Calexico East POE: wireless electric charging for trucks in queue	POE, ZEV	3	3	3	3	1	3	3	1	3	2.7
SR 905	SD	SR 11	International Border	Otay Mesa POE: ZE truck charging/parking/staging	POE, ZEV, Truck Parking	3	3	3	3	1	3	3	1	3	2.7
SR 905	SD	SR 11	International Border	Otay Mesa POE: wireless electric charging for trucks in queue	POE, ZEV	3	3	3	3	1	3	3	1	3	2.7
SR 11	SD	SR 125	International Border	Otay Mesa East POE: Preclearance to accelerate processing time for trucks in coordination with other agencies/law enforcement per Border Master Plan white paper	POE	3	3	3	3	1	2	3	2	3	2.6
SR 188	SD	International Border	SR 98	Tecate POE: commercial vehicle appointment window system	POE, ITS	3	3	3	3	1	2	3	2	3	2.6
SR 188	SD	International Border	SR 98	Tecate POE: Preclearance to accelerate processing time for trucks in coordination with other agencies/law enforcement per Border Master Plan white paper	POE	3	3	3	3	1	2	3	2	3	2.6
SR 7	IC	International Border	SR 98	Calexico East POE: commercial vehicle appointment window system	POE, ITS	3	3	3	3	1	2	3	2	3	2.6
SR 905	SD	SR 11	International Border	Otay Mesa POE: commercial vehicle appointment window system	POE, ITS	3	3	3	3	1	2	3	2	3	2.6
SR 905	SD	SR 11	International Border	Otay Mesa POE: Preclearance to accelerate processing time for trucks in coordination with other agencies/law enforcement per Border Master Plan white paper	POE	3	3	3	3	1	2	3	2	3	2.6
Harbor Drive	SD	Tenth Avenue Marine Terminal		Tenth Avenue Marine Terminal Redevelopment Plan: Enhanced electrical infrastructure/equipment and enhanced and additional on-dock rail	Marine, Rail	3	3	3	3	2	3	3	3	2	2.55
SR 111	IC	SR 78	County Line	Two Rivers Safety Roadside Rest Area: Reopen, expand truck parking, add amenities, ZE charging, onsite electric generation and storage. This particular site may be infeasible to reopen in the near term, per Caltrans	Truck parking, ZEV	3	3	3	3	1	3	1	2	3	2.55

Corridor	County	Start	End	Project Description	Project Type	Scoring of Benefits				Scoring of Feasibility					
						Environment	Equity	Economy	Benefits Weighted	Cost	Funding	S. Support	Tech Complexity	Planning Cont.	Opportunities/ Feasibility Weighted
Harbor Drive	SD	Tenth Avenue Marine Terminal		TAMT commercial vehicle appointment window systems	Marine, ITS	3	3	3	3	1	1	3	3	3	2.5
Harbor Drive	SD	Tenth Avenue Marine Terminal		TAMT gate operating system	Marine, ITS	3	3	3	3	1	1	3	3	3	2.5
Harbor Drive	SD	National City Marine Terminal		NCMT commercial vehicle appointment window systems	Marine, ITS	3	3	3	3	1	1	3	3	3	2.5
Harbor Drive	SD	National City Marine Terminal		NCMT gate operating system	Marine, ITS	3	3	3	3	1	1	3	3	3	2.5
Harbor Drive	SD	Tenth Avenue Marine Terminal		TAMT Wireless charging for trucks	Marine, ZEV	3	3	3	3	1	2	3	1	3	2.45
Harbor Drive	SD	National City Marine Terminal		NCMT Wireless charging for trucks	Marine, ZEV	3	3	3	3	1	2	3	1	3	2.45
SR 11	SD	SR 125	International Border	Otay Mesa East POE: commercial vehicle appointment window system	POE, ITS	3	3	3	3	1	1	3	2	3	2.35
SR 11	SD	SR 125	International Border	Otay Mesa East POE: Unified cargo processing	POE	3	3	3	3	1	1	3	2	3	2.35
SR 188	SD	International Border	SR 98	Tecate POE: Unified cargo processing	POE	3	3	3	3	1	1	3	2	3	2.35
SR 7	IC	International Border	SR 98	Calexico East POE: Unified cargo processing	POE	3	3	3	3	1	1	3	2	3	2.35
SR 905	SD	SR 11	International Border	Otay Mesa POE: Unified cargo processing	POE	3	3	3	3	1	1	3	2	3	2.35
Tidelands Avenue	SD	National City Marine Terminal	Civic Center Drive	On-street truck parking with reservations	Truck parking	3	3	3	3	1	1	3	2	3	2.35
Harbor Drive	SD	National City Marine Terminal	Tenth Avenue Marine Terminal	Continuation of San Diego Working Waterfront Freight Signal Prioritization project (California Energy Commission pilot)	ITS	3	3	3	3	2	2	2	3	3	2.25
Harbor Drive	SD	National City Marine Terminal	Tenth Avenue Marine Terminal	Designated Freight Route (Harbor Drive 2.0): Dedicated lanes (where feasible) and signal priority for truck freight, queue jumps, delineators and signage.	Highway, ITS	3	3	3	3	2	2	2	3	3	2.25
SR 11	SD	SR 125	International Border	Otay Mesa East POE: Expanded hours for CBP/CVEF inspections	POE, Off hours	3	3	3	3	1	1	3	2	2	2.25
Harbor Drive	SD	Tenth Avenue Marine Terminal		TAMT Cargo Staging - TAMT marine cargo staging and handling projects, including but not limited to enhanced open storage, cargo handling infrastructure improvements, rail track improvements, deployment of zero-emission infrastructure and equipment, wharf reinforcements, on-dock shorepower, improvements to facilitate "marine highway" cargo, and front gate operational and technology enhancements	Marine, Rail, ITS	3	3	3	3	3	3	3	2	3	2.15
Harbor Drive	SD	National City Marine Terminal		National City Marine Terminal (NCMT) Marine Cargo Staging and Handling Projects, including but not limited to: enhanced technology and infrastructure to facilitate roll-on/roll-off cargo storage, wharf extension to create two new berths, improvements to facilitate "marine highway" cargo, cargo handling and at-berth electrification infrastructure improvements.	Marine, ITS	3	3	3	3	3	3	3	2	3	2.15
SR 11	SD	SR 125	International Border	Otay Mesa East POE: Border Wait Times - SR-11 tolling equipment, and Regional Border Management System	POE, ITS	3	3	3	3	2	1	3	3	3	2.15
I-5	SD	SR 905	Harbor Drive	SR 11, SR 905, and I-5, and Harbor Drive enhanced truck route: truck only (toll) lanes conversion. "truck flex lanes" connecting OME to Port of SD, where feasible	Highway	3	3	3	3	2	2	2	2	3	2.1
Cole Boulevard	IC	Dogwood Road	SR 98	Grade separations for UP Railroad	Grade separations	3	3	3	3	3	3	2	3	2	2.05
SR 98	IC	I-8 W	SR 111	Grade separations for UP Railroad	Grade separations	3	3	3	3	3	3	2	3	2	2.05
SR 11	SD	SR 125	International Border	Otay Mesa East POE: Non-intrusive inspections into POE operations - Coordination with law enforcement and other agencies	POE	3	3	3	3	2	1	3	2	3	2
SR 188	SD	International Border	SR 98	Tecate POE: Non-intrusive inspections into POE operations - Coordination with law enforcement and other agencies	POE	3	3	3	3	2	1	3	2	3	2
SR 7	IC	International Border	SR 98	Calexico East POE: Non-intrusive inspections into POE operations - Coordination with law enforcement and other agencies	POE	3	3	3	3	2	1	3	2	3	2
SR 905	SD	SR 11	International Border	Otay Mesa POE: Non-intrusive inspections into POE operations - Coordination with law enforcement and other agencies	POE	3	3	3	3	2	1	3	2	3	2

Corridor	County	Start	End	Project Description	Project Type	Scoring of Benefits				Scoring of Feasibility					
						Environment	Equity	Economy	Benefits Weighted	Cost	Funding	S. Support	Tech Complexity	Planning Cont.	Opportunities/ Feasibility Weighted
I-805	SD	SR 905	Palm Avenue	SR 905/I-805 dedicated truck lanes at heavy interchanges. convert 1 of 2 existing lanes on ramps to truck only	Highway	3	3	3	3	2	1	2	2	3	1.85
SR 52	SD	I-805	I-15	SR 52/I-805 dedicated truck lanes at heavy interchanges. Converting 1 of 2 ramp lanes to truck only	Highway	3	3	3	3	2	1	2	2	3	1.85
SR 905	SD	I-5	SR 11	SR 11, SR 905, and I-5, and Harbor Drive enhanced truck route: truck only (toll) lanes conversion	Highway	3	3	3	3	2	1	2	2	3	1.85
SR 188	SD	International Border	SR 98	Tecate POE: Expanded hours for CBP/CVEF inspections	POE, Off hours	3	3	3	3	2	1	2	2	2	1.75
SR 905	SD	SR 11	International Border	Otay Mesa POE: Expanded hours for CBP/CVEF inspections	POE, Off hours	3	3	3	3	2	1	2	2	2	1.75
SR 78	SD	Oceanside	Escondido	SPRINTER - LRT 399: Double-tracking and Grade Separations at El Camino Real, Melrose Dr, Vista Village Dr/ Main St, North Dr, Civic Center, Auto Parkway and Mission Ave	Grade separations/Rail	3	3	2	2.7	3	3	3	3	2	2.2
SR 78	SD	Oceanside	Escondido	Grade separations for SPRINTER	Grade separations/Rail	3	3	2	2.7	3	3	3	3	2	2.2
Aten Road	IC	SR 86	SR 111	Grade separations for UP Railroad	Grade separations	3	3	2	2.7	3	3	2	3	2	2.05
Dogwood Road	IC	SR 98	Malan Street	Grade separations for UP Railroad	Grade separations	3	3	2	2.7	3	3	2	3	2	2.05
Evan Hewes Highway	IC	SR 86	I-8	Grade separations for UP Railroad	Grade separations	3	3	2	2.7	3	3	2	3	2	2.05
Heber Road	IC	SR 86	SR 111	Grade separations for UP Railroad	Grade separations	3	3	2	2.7	3	3	2	3	2	2.05
I-5	SD	San Ysidro	Downtown San Diego	LRT 510 Blue Line Trolley/SDIY Freight Rail. Grade Separations at 28th St, 32nd St, E St, H St, Palomar St, and Blue/ Orange Track Connections at 12th/ Imperial	Grade separations	3	3	2	2.7	3	3	2	3	2	2.05
I-5	SD	San Diego	Old Town	Grade separations for LOSSAN	Grade separations	3	3	2	2.7	3	3	2	3	2	2.05
Keystone Road	IC	SR 86	SR 111	Grade separations for UP Railroad	Grade separations	3	3	2	2.7	3	3	2	3	2	2.05
Malan Street	IC	SR 86	SR 111	Grade separations for UP Railroad	Grade separations	3	3	2	2.7	3	3	2	3	2	2.05
Mead Road	IC	SR 86	SR 111	Grade separations for UP Railroad	Grade separations	3	3	2	2.7	3	3	2	3	2	2.05
Harbor Drive	SD	National City Marine Terminal		NCMT Freight Rail Improvements, including but not limited to: additional rail storage facilities in the vicinity of the balloon track, realignment of Marina way to create cargo buffer areas.	Marine, Rail	3	2	3	2.65	1	3	3	3	2	2.9
SR 86	IC	El Centro	Brawley	UP Railroad: New or expanded rail spurs for UP service per Mesquite Lake Specific Plan Area	Rail	3	2	3	2.65	1	3	3	3	2	2.9
Harbor Drive	SD	Tenth Avenue Marine Terminal		TAMT ZE truck charging/parking/staging	Marine, ZEV, Truck parking	3	2	3	2.65	1	3	3	2	3	2.85
I-15	SD	SR 76	County Line	At I-15/SR 76 Park and Ride: Expand truck parking, add amenities, on site storage ZE infrastructure/truck parking/staging to support alternative Fuel Corridor on I-15	Truck parking, ZEV	3	2	3	2.65	1	3	3	2	3	2.85
I-5	SD	I-805	County Line	Aliso Creek Safety Roadside Rest Area: Expand truck parking, add amenities, ZE charging, onsite electric generation and storage. Supports I-5 Alternative Fuel Corridor	Truck parking, ZEV	3	2	3	2.65	1	3	3	2	3	2.85
I-805	SD	Balboa Avenue	NB Bypass Lane	I-805/SR 52: ZE infrastructure/truck parking/staging	Truck parking, ZEV	3	2	3	2.65	1	3	3	2	3	2.85
SR 188	SD	International Border	SR 98	Tecate POE: ZE truck charging/parking/staging	POE, ZEV, Truck Parking	3	2	3	2.65	1	3	3	2	3	2.85
SR 52	SD	I-805	I-15	I-805/SR 52: ZE infrastructure/truck parking/staging	Truck parking, ZEV	3	2	3	2.65	1	3	3	2	3	2.85
SR 78	SD	SR 79 S	San Diego-Imperial County Line	ZE infrastructure/truck parking/staging to support SR 78 Alternative Fuel Corridor	Truck parking, ZEV	3	2	3	2.65	1	3	3	2	3	2.85
SR 78	IC	San Diego-Imperial County Line	SR 86 S	ZE infrastructure/truck parking/staging to support SR 78 Alternative Fuel Corridor	Truck parking, ZEV	3	2	3	2.65	1	3	3	2	3	2.85
Washington Street	SD	San Diego International Airport	I-5	Dedicated truck lanes/passing lanes and freight signal priority on arterials. Lane conversion to truck only, dependent on grade separation of railroad and trolley tracks	Highway, ITS	2	3	3	2.65	1	3	2	3	3	2.85

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						Environment	Equity	Economy	Benefits Weighted	Cost	Funding	S. Support	Tech Complexity	Planning Cont.	Opportunities/ Feasibility Weighted
SR 11	SD	SR 125	International Border	Otay Mesa East POE: Off-peak, incentive-based pickup/delivery system for POEs, dependent on truck staging infrastructure	POE, Off hours	3	2	3	2.65	1	3	2	2	2	2.6
SR 7	IC	International Border	SR 98	Calexico East POE: Off-peak, incentive-based pickup/delivery system for POEs, dependent on truck staging infrastructure	POE, Off hours	3	2	3	2.65	1	3	2	2	2	2.6
Harbor Drive	SD	Tenth Avenue Marine Terminal		TAMT Freight Rail Improvements, including but not limited to: track repositioning, track upgrades and increased staging area for rail cargo and loading	Marine, rail	3	2	3	2.65	2	3	3	3	2	2.55
Heber Road	IC	SR 111	SR 7	Major East/West roads that connect to north south freight routes can benefit from infrastructure and IT improvements	ITS	2	3	3	2.65	2	3	2	3	3	2.5
SR 188	SD	International Border	SR 98	Tecate POE: Off-peak, incentive-based pickup/delivery system for POEs, dependent on truck staging infrastructure	POE, Off hours	3	2	3	2.65	1	2	2	2	2	2.35
SR 94	SD	Campo	Plaster City	U.S.: Desert Line Basic Service, Rehabilitation	Rail	3	2	3	2.65	3	3	3	3	2	2.2
SR 115	IC	I-8	SR 78	Dedicated truck lanes/passing lanes and freight signal priority on arterials	Highway, ITS	2	3	3	2.65	3	3	2	3	3	2.15
SR 905	SD	SR 11	International Border	Otay Mesa POE: Off-peak, incentive-based pickup/delivery system for POEs, dependent on truck staging infrastructure	POE, Off hours	3	2	3	2.65	1	1	2	2	2	2.1
SR 94	SD	Tijuana	Tecate	Mexico: Tijuana-Tecate Rail Line Improvements	Rail	3	2	3	2.65	3	1	3	2	2	1.55
SR 94	SD	Tecate	Campo	Tecate/Campo new rail POE, dependent on Desert Line Rehabilitation	Rail, POE	3	2	3	2.65	3	1	3	2	2	1.55
SR 7	IC	International Border	SR 98	Calexico East POE: Border Wait Times - Install the remaining border wait times equipment (northbound) at all CA-BC land POEs, and Regional Border Management System	POE, ITS	3	2	2	2.35	1	2	3	3	3	2.75
I-5	SD	Downtown San Diego	Oceanside	Commuter Rail 398 - includes upgrades to Pacific Surfliner/ COASTER/ Metrolink/ Freight LOSSAN services from Orange County to Downtown San Diego; add station at Gaslamp	Rail	3	2	2	2.35	3	3	3	3	2	2.2
I-5	SD	Miramar	Sorrento	LOSSAN: Sorrento to Miramar Phase 2	Rail	3	2	2	2.35	3	3	3	3	2	2.2
I-805	SD	Palm Avenue	H Street	Managed Lanes: GP conversion to ML	Highway	3	2	2	2.35	2	2	2	2	3	2.1
I-805	SD	I-8	Mesa College Drive	Managed Lanes: GP conversion to ML	Highway	3	2	2	2.35	2	2	2	2	3	2.1
I-5	SD	Downtown San Diego	Oceanside	Commuter Rail 398 - Build Del Mar tunnel, add stations at Central Mobility Hub and Camp Pendleton, and Grade Separation at Leucadia Blvd.	Rail, Grade Separations	3	2	2	2.35	3	3	3	2	2	2.05
I-5	SD	Downtown San Diego	Oceanside	Commuter Rail 398 - Build Sorrento Mesa and UTC tunnels, add station at Balboa Ave.	Rail	3	2	2	2.35	3	3	3	2	2	2.05
I-5	SD	Old Town	County Line	Grade separations for LOSSAN	Grade separations	3	2	2	2.35	3	3	2	3	2	2.05
I-5	SD	SR 905	SR 54	Managed Lanes on freeways with high truck volumes: GP conversion to ML	Highway	3	2	2	2.35	3	2	2	2	3	1.75
I-805	SD	H Street	I-15	Managed Lanes: GP conversion to ML	Highway	3	2	2	2.35	3	2	2	2	3	1.75
I-805	SD	Balboa Avenue	NB Bypass Lane	Managed Lanes: GP conversion to ML	Highway	3	2	2	2.35	3	2	2	2	3	1.75
SR 15	SD	I-805	I-8	Managed Lanes: GP conversion to ML	Highway	3	2	2	2.35	3	2	2	2	3	1.75
Evan Hewes Highway	IC	SR 86	I-8	Major East/West roads that connect to north south freight routes can benefit from infrastructure and IT improvements	ITS	2	2	3	2.3	1	2	2	3	3	2.6
SR 905	SD	SR 11	International Border	Otay Mesa POE: Commercial Vehicle Enforcement Facility (CVEF) modernization: Improvements to the CVEF to reflect GSA's proposed Otay Mesa POE Modernization Project	POE	2	2	3	2.3	1	1	3	3	3	2.5
Cole Boulevard	IC	Dogwood Road	SR 98	Major East/West roads that connect to north south freight routes can benefit from infrastructure and IT improvements	ITS	2	2	3	2.3	2	2	2	3	3	2.25
SR 905	SD	SR 11	International Border	Otay Mesa POE: Widened bridge between POE and CVEF to coincide with improvements at both facilities.	POE	2	2	3	2.3	2	1	3	3	3	2.15
Miramar Road	SD	I-805	I-15	Dedicated truck lanes/passing lanes and freight signal priority on arterials. Lane conversion to truck only	Highway, ITS	2	2	3	2.3	2	1	2	3	3	2
Palomar Airport Road/W San Marcos Boulevard	SD	I-5	SR 78	Dedicated truck lanes/passing lanes and freight signal priority on arterials. Lane conversion to truck only	Highway, ITS	2	2	3	2.3	2	1	2	3	3	2
Scripps Poway Parkway	SD	I-15	Community Road	Dedicated truck lanes/passing lanes and freight signal priority on arterials. Lane conversion to truck only	Highway, ITS	2	2	3	2.3	2	1	2	3	3	2

Corridor	County	Start	End	Project Description	Project Type	Scoring of Benefits				Scoring of Feasibility					
						Environment	Equity	Economy	Benefits Weighted	Cost	Funding	S. Support	Tech Complexity	Planning Cont.	Opportunities/ Feasibility Weighted
SR 78	IC	SR 86 S	SR 111 S	Westmorland Bypass - New four-lane expressway bypass route around the City of Westmorland with improved connections to Forrester Road, and redesignate this alignment as SR-78 (SCAG 2016 RTP/SCS)	Highway	2	2	3	2.3	2	1	2	3	3	2
SR 78	IC	SR 111 S	County Line	SR 78/SR 111 S/E Interchange: Grade Separations - Strategic	Grade separations	2	2	3	2.3	3	1	2	3	2	1.55
I-5	SD	National City	Downtown San Diego	Barrio Logan: Surfliner maintenance facility ZE locomotive fueling hub	Rail, ZEV	3	2	1	2.05	3	3	3	2	2	2.05
I-15	SD	I-8	SR 163	Snapdragon Stadium: Emergency/seasonal truck parking locations	Truck parking	2	2	2	2	1	3	3	3	3	3
I-5	SD	I-805	County Line	Del Mar Fairgrounds: Emergency/Seasonal truck parking location	Truck parking	2	2	2	2	1	3	3	3	3	3
Dogwood Road	IC	SR 98	Malan Street	Right turn and/or left turn lane pockets to minimize rear-end collisions	Highway	2	2	2	2	1	1	2	3	3	2.35
Forrester Road	IC	I-8	SR 78	Right turn and/or left turn lane pockets to minimize rear-end collisions	Highway	2	2	2	2	1	1	2	3	3	2.35
Worthington Road	IC	Forrester Road	SR 115	Right turn and/or left turn lane pockets to minimize rear-end collisions	Highway	2	2	2	2	1	1	2	3	3	2.35
Harbor Drive	SD	Civic Center Drive	32nd Street	Vesta Bridge - Phases 2 and 3: Harbor Drive to SR 15 ramps at 32nd St	Grade separations	2	2	2	2	3	3	2	3	2	2.05
SR 52	SD	I-15	SR 125	SR-52 Truck Climbing Lane/dedicated truck lanes on steep grades: expansion for temporary truck only lane	Highway	2	2	2	2	2	1	2	3	3	2
Dogwood Road	IC	SR 98	Malan Street	Passing lanes and intersection improvements	Highway	2	2	2	2	3	1	2	3	3	1.65
Forrester Road	IC	I-8	SR 78	Passing lanes and intersection improvements	Highway	2	2	2	2	3	1	2	3	3	1.65
SR 111	IC	SR 78	County Line	Brawley to Calipatria, from Calipatria to Niland and from Niland north to Riverside County line: Passing lanes and intersection improvements	Highway	2	2	2	2	3	1	2	3	3	1.65
SR 78	SD	I-5	I-15	SR 78 dedicated truck lanes at heavy interchanges	Highway	2	2	2	2	3	1	2	3	3	1.65
SR 78	IC	SR 115	Riverside County line near Palo Verde	Passing lanes and freight signal priority/intersection improvements	Highway	2	2	2	2	3	1	2	3	3	1.65
I-5	SD	SR 905	SR 54	Dedicated truck lanes on freeways with high truck volumes: expansion	Highway	1	2	3	1.95	2	1	2	2	3	1.85
SR 7	IC	International Border	SR 98	Calexico East POE Access Road Improvements - SR 7 Menvielle Road widening from 2 to 4 lanes from SR-98 to SR-7 SR-98 widening and operational improvements from Rockwood Avenue to SR-7	Highway	2	1	3	1.95	3	1	2	3	3	1.65
Forrester Road	IC	I-8	SR 78	FORRESTER ROAD FROM I-8 TO SR-78. WIDEN AND IMPROVE TO FOUR-LANE STATE HIGHWAY. PHASE 1 OPERATIONAL IMPROVEMENTS. PHASE 2 TO INCLUDE A FOUR (4) LANE ROAD WIDENING AND WESTMORLAND BYPASS. Expansion	Highway	1	2	3	1.95	3	1	2	3	3	1.65
SR 115	IC	I-8/SR 7 Interchange	Evan Hewes Highway/SR 115 Junction	Construct 4-lane expressway (Proposed new road included in the long range transportation plan)	Highway	1	2	3	1.95	3	1	2	3	3	1.65
I-5	SD	SR 54	SR 15	Dedicated truck lanes on freeways with high truck volumes: expansion	Highway	1	2	3	1.95	3	1	2	2	3	1.5
I-5	SD	SR 94	I-8	San Diego International Airport: Airport (wireless) charging for ZE on-airport trucks/support vehicles/baggage carts/belt loaders	Air cargo	3	1	1	1.7	1	3	2	2	1	2.5
Harbor Drive	SD	Civic Center Drive	32nd Street	Vesta Bridge Phase 1 and operational improvements SR-15, Main, Harbor, and 32nd Streets	Grade separations, ITS	2	2	1	1.7	2	3	2	3	2	2.4
SR 111	IC	SR 78	County Line	Truck route development and geofencing around disadvantaged communities: Calipatria	Highway, ITS	1	3	1	1.7	1	2	2	1	3	2.3
SR 86	IC	I-8	SR 78 S	Truck route development and geofencing around disadvantaged communities: Brawley	Highway, ITS	1	3	1	1.7	1	2	2	1	3	2.3
SR 98	IC	I-8 W	SR 111	SR-98 FROM OLLIE AVENUE TO ROCKWOOD DRIVE. IN CALEXICO - WIDEN CONVENTIONAL HIGHWAY PHASE 1A - FROM 32.4 TO 32.6 WIDEN FROM 4 TO 6 LANES	Highway	1	1	3	1.6	1	1	2	3	3	2.35
SR 98	IC	I-8 W	SR 111	SR-98 FROM DOGWOOD ROAD TO ALL AMERICAN CANAL. PHASE 2 - FROM 30.0 TO 30.9 WIDEN FROM 2 TO 4 LANES	Highway	1	1	3	1.6	2	1	2	3	3	2
SR 98	IC	I-8 W	SR 111	SR-98 FROM ALL AMERICAN CANAL TO VV WILLIAMS AVENUE. PHASE 1C - FROM 30.9 TO 32.2 WIDEN FROM 2 TO 4 LANES	Highway	1	1	3	1.6	2	1	2	3	3	2
SR 98	IC	SR 111	SR 7	SR-98 FROM SR-111 TO SR-7. WIDEN AND IMPROVE TO 4/6 LANES. ON EITHER JASPER ROAD OR SR-98	Highway	1	1	3	1.6	2	1	2	3	3	2
I-8	SD	Greenfield Dr	Forrester Rd	Jacumba/Jacume new commercial vehicle POE	POE	1	1	3	1.6	3	1	3	3	3	1.8

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						Environment	Equity	Economy	Benefits Weighted	Cost	Funding	S. Support	Tech Complexity	Planning Cont.	Opportunities/ Feasibility Weighted
SR 111	IC	SR 98	I-8	WIDEN AND IMPROVE TO 6 LANE FREEWAY WITH INTERCHANGES AT HEBER, MCCABE, AND JASPER AND OVERPASS AT CHICK RD.	Highway	1	1	3	1.6	3	1	2	3	3	1.65
I-805	SD	Mesa College Drive	Balboa Avenue	Managed Lanes: expansion	Highway	1	1	2	1.3	2	2	2	3	3	2.25
I-15	SD	I-8	SR 163	Managed Lanes: expansion	Highway	1	1	2	1.3	3	2	2	3	3	1.9
I-15	SD	Valley Parkway	SR 76	Managed Lanes: expansion	Highway	1	1	2	1.3	3	2	2	3	3	1.9
I-15	SD	SR 76	County Line	Managed Lanes: expansion	Highway	1	1	2	1.3	3	2	2	3	3	1.9
I-5	SD	SR 54	SR 15	Managed Lanes on freeways with high truck volumes: expansion	Highway	1	1	2	1.3	3	2	2	3	3	1.9
I-5	SD	I-8	I-805 North	Managed Lanes: expansion	Highway	1	1	2	1.3	3	2	2	3	3	1.9
I-805	SD	I-15	I-8	Managed Lanes: expansion	Highway	1	1	2	1.3	3	2	2	3	3	1.9
SR 15	SD	I-5	I-805	Managed Lanes: expansion	Highway	1	1	2	1.3	3	2	2	3	3	1.9

Policies	Scoring of Benefits				Scoring of Feasibility						
	Environ- ment	Equity	Economy	Benefits Weighted	Cost	Funding	S. Support	Tech Complexity	Planning Cont.	Opportunities/ Feasibility Weighted	
Toll discounts for ZE trucks	3	3	2	2.7	2	2	3	2	2	2.15	
Overweight Truck Route Planning: Study the potential for increasing weight limits for battery electric medium- and heavy-duty vehicles on on Clean Freight Corridors and other truck routes, and policy support for necessary legislative changes	3	2	3	2.65	1	2	2	2	2	2.35	
Low-emission zones in AB 617 or other disadvantaged communities	3	3	1	2.4	1	2	2	2	2	2.35	
Develop recommendations on land use compatibility for truck parking/warehouses/ industrial uses, increasing buffer zones near residential, schools, other sensitive uses. Recommend maintaining/ adding truck parking/industrial land use availability in appropriate areas	2	3	2	2.35	1	2	2	2	1	2.25	
Develop recommendations for inland ports in Imperial County with zero-emissions vehicles and rail connections	2	2	3	2.3	1	2	2	2	1	2.25	
Address Caltrans truck route network for STAA/CA legal and fill in gaps	2	1	3	1.95	3	2	2	3	3	1.9	
Climate adaptation projects across region-study and prioritize most vulnerable freight facilities	1	1	2	1.3	1	2	2	2	1	2.25	
Update development impact fees to consider future intensive land use, such as mining/extraction, and required freight transportation infrastructure/roads/bridges	1	1	1	1	1	2	2	3	1	2.4	

Programs	Scoring of Benefits				Scoring of Feasibility					Opportunities/ Feasibility Weighted
	Environment	Equity	Economy	Benefits Weighted	Cost	Funding	S. Support	Tech Complexity	Planning Cont.	
NextGen 511 Concept of Operations Traveler Information System	3	3	3	3	2	2	3	3	3	2.4
Zero-emission truck incentive program	3	3	3	3	3	1	3	2	2	1.55
Pilot creation of cargo bike delivery areas through bike project implementation	3	3	2	2.7	1	2	3	3	2	2.65
Provide incentives for businesses to purchase cargo bikes	3	3	2	2.7	1	1	3	3	2	2.4
New or rebuilt switcher locomotives to hybrid, near-zero, or zero-emission technologies for BNSF	3	3	2	2.7	3	3	2	2	2	1.9
New or rebuilt switcher locomotives to hybrid, near-zero, or zero-emission technologies for UPRR	3	3	2	2.7	3	3	2	2	2	1.9
New or rebuilt switcher locomotives to hybrid, near-zero, or zero-emission technologies for SDIY	3	3	2	2.7	3	3	2	2	2	1.9
Support for private truck parking site development/ZE charging through grant support and establishment of public-private partnerships	3	2	3	2.65	2	3	3	2	3	2.5
Pilot delivery lockers in Mobility Hubs	3	2	2	2.35	1	2	3	3	2	2.65
Pilot delivery robots in Mobility Hubs	3	2	2	2.35	1	1	3	3	2	2.4
Dynamic curb regulations	2	2	3	2.3	2	1	3	2	2	1.9
Truck platooning/Connected and Autonomous pilots on SR 905	2	2	3	2.3	1	1	1	1	1	1.7
Truck Parking Information Management System: regionwide resource for port tenants and truck operators to obtain information about availability and potentially reserve parking resources, including emergency/seasonal locations; could be tied to Port Freight Community Web Portal and integrated with regional ITS systems	2	2	2	2	1	1	3	3	3	2.5
Smart Intersection Systems	2	2	2	2	3	3	2	3	3	2.15
Pilot urban consolidation center operations in Mobility Hubs	2	2	2	2	2	2	2	2	1	1.9
Active Transportation and Demand Management	2	2	2	2	3	2	2	2	3	1.75
Advanced Train Detection Systems for at-grade crossings	2	1	2	1.65	3	3	2	2	2	1.9
Regional Advanced Air Mobility deployment	1	1	1	1	3	\$1	2	1	1	1.15