

Glossary

Aerotropolis: A land use development form consisting of aviation-intensive businesses and related enterprises surrounding a major airport, which serves as its core. The concept is based on airports as drivers of local economic development as well as hubs of global communications and trade.

Air Cargo: Any property carried or to be carried in an aircraft. This includes commercial air freight, including express packages and airmail, transported by passenger or dedicated cargo airplanes.

All-Cargo Carrier: An air carrier certificated to provide scheduled air freight, express, and mail transportation over specified routes; may also conduct nonscheduled operations that may include passengers.

Air Quality Management District (AQMD): In 1947, the State of California enacted the Air Pollution Control Act that authorized the creation of Air Pollution Control Districts (APCD) or Air Quality Management Districts (AQMD) in every county of the State. California has 22 APCDs, 12 AQMDs and 1 Air Resources District for a total of 35 districts.

Airport Rescue and Firefighting (ARFF): A special category of firefighting that involves the response, hazard mitigation, evacuation and possible rescue of passengers and crew of an aircraft involved in (typically) an airport ground emergency.

Air Service Agreement (ASA): A contractual agreement between two countries that determines the designation of access points for air transport services to carry through.

At-Grade Crossing: A junction or intersection where two or more transport axes cross at the same level (or grade).

Backhaul: Cargo carried on a return journey, typically a truck on a return trip from delivering a previous load.

Ballast Water: Water carried onboard a ship to increase stability or to achieve a desired depth. Ballast water is typically taken onboard a ship in one location and discharged in another, thus creating the possibility for distributing non-native and invasive plants, animals, viruses, and microorganisms.

Barge: A boat, usually flat-bottomed, for carrying freight on rivers and other waterways, either under its own power or towed by another vessel.

Belly Cargo: Freight that is carried under the main (e.g., passenger) deck of an aircraft.

Beneficial Cargo Owner: The importer of record who owns or has title to the freight being transported, physically takes possession of cargo at destination, and does not act as a third party in the movement of such goods.

Berth: Wharf space at which a ship docked. A wharf may have several berths, depending on the length of the ships accommodated. To berth (verb) a ship is to bring a ship into such a space.

Bill of Lading: A contract between a shipper and a carrier listing the terms and conditions for moving freight between specified points; serves as a receipt for goods and a contract to deliver it as freight.

Bobtail: A truck (tractor) operating without a trailer or chassis attached.

Bottleneck: A section of a highway or rail network that experiences operational problems such as congestion. Bottlenecks may result from factors such as major intersections, reduced roadway width, or steep grades that can slow trucks.

Boxcar: An enclosed railroad freight car, typically 40 or more feet long with sliding side doors, used for packaged freight and some bulk commodities.

Breakbulk Cargo: Non-containerized, general cargo of non-uniform sizes, often transported on pallets or in crates, boxes, barrels, sacks, drums, or bags. Examples of breakbulk cargo include iron, machinery, coffee beans, logs, and wood pulp.

Broker (transportation): A person or company that arranges for transportation of loads for a percentage of the revenue from the load.

Bulk Cargo: Loose cargo that is unbound as loaded or mechanically conveyed, without count and in an unpackaged form. Bulk cargo may be dry bulk or liquid bulk. Examples of bulk cargo include coal, grains, ore, cement, and petroleum products.

Bunker Fuel: A low-grade fuel oil used to power ocean-going ships. By State law (2008), vessels are required to switch from bunker fuel to cleaner, low-sulfur fuel when sailing within 24 miles of the California coast.

Cabotage Rights: The right of a company from one country to transport goods by vessel, aircraft, or other registered vehicle between two points in another country. Permission to engage in cabotage is, in general, strictly restricted in every country.

Capacity: The physical facilities, personnel and process available to meet the product of service needs of the customers. Capacity generally refers to the maximum output or producing ability of a machine, a person, a process, a factory, a product, or a service. Regarding the transportation system, this term references the ability of the transportation infrastructure to accommodate traffic flow.

Carrier: An individual or legal entity that is in the business of transporting passengers or goods for hire.

Cartage: Transport of goods by truck (or over-the-rail carrier) to or from a main carrier (e.g., vessel or aircraft), bonded warehouse, or free trade zone within the local port or airport commercial zone, usually under the supervision of customs authorities.

Chassis Pool Leasing: Where carriers that contribute to the pool may also lease chassis from the pool regardless of ownership.

Chassis: A metal trailer frame or undercarriage with tires, brakes, and lights that is designed to be pulled by a truck for over-the-road transportation of shipping containers, which are lifted on and off the chassis.

Class I Railroad: A large freight rail carrier having annual operating revenues of \$250 million or more as adjusted annually for inflation (using the base year of 1991) by the Surface Transportation Board (STB). This group includes the nation's major railroads.

Class II Railroad: A freight rail carrier having annual operating revenues of less than \$250 million but more than \$20 million, as set and adjusted by the STB (using the base year of 1991). In 2017, operating revenues for Class II Railroads were less than \$447,621,226, but more than \$35,809,698. They are considered "regional railroads" by the Association of American Railroads.

Class III Railroad: Railroads with annual operating revenues of \$20 million or less, as set and adjusted by the STB (using the base year of 1991). In 2017, operating revenues for Class III Railroads were \$35,809,698 or less. The typical Class III is a short line railroad, which feeds traffic to or delivers traffic from a Class I or Class II railroad. All switching and terminal rail companies are Class III railroads, regardless of operating revenues.

Classification Yard: A rail yard used to break up, sort, and reconfigure trains among several tracks to optimize delivery of their cargo, usually by destination station or junction.

Classification: Grouping of railcars in a rail yard in accordance with train movement requirements, usually by destination station or junction. A yard where such activity takes place may be called a classification yard.

Clearance (Infrastructure): In goods movement generally, the distance between a limiting piece of infrastructure and a transport vehicle (e.g., the clearance under a bridge or tunnel).

Coal-n.e.c: Petroleum and Coal, Not Elsewhere Classified; other coal and petroleum product that is not elsewhere classified, such as liquefied natural gas, calcined petroleum coke-mfpm, coke petroleum (not produced in petroleum refineries), fireplace logs (made from coal), fuel briquettes or boulets (made with petroleum binder), and waxes (petroleum: not produced in petroleum refineries).

Coastal Shipping (or Short-Sea or Coastwise Shipping): Commercial marine shipping operations between ports along a single coast or involving a short sea crossing.

Cold-Ironing: The process of providing shoreside electrical power to a ship at berth while its main and auxiliary engines are turned off, thus substantially reducing air pollutant emissions. Cold-Ironing is also called shore power or alternative marine power. (Opposite: see “hotelling”).

Common Carrier: A person or business (e.g., trucking firm, railroad, ship, or barge line) that is available for hire to transport goods or people on regular routes for a fee.

Consolidation: The action or process of combining several things into a single, more effective or coherent whole, such as cargo containing shipments of two or more shippers or suppliers.

Container (Intermodal): A large re-sealable, weather-tight transportation box (typically metal), into which cargo is packed for shipment, with suitable strength to withstand shipment, storage, and handling designed for more efficient freight transport due to its standard size and because cargo does not need to be unloaded and reloaded for transport between modes. International ocean-going shipping containers are commonly 20 or 40 feet in length and U.S. domestic standard containers are generally 48 or 53 feet (rail and truck).

Container and Container Shipping: A container is a large, standard-size, weather-tight, metal box into which cargo is packed for shipment aboard specially configured, ocean-going containerships. It is designed to be moved with common handling equipment enabling high-speed intermodal transfers in economically large units between ships, railcars, truck chassis, and barges using a minimum of labor. International shipping containers are commonly 20 or 40 feet in length. U.S. domestic standard containers are larger, generally 48 or 53 feet (rail and truck).

Container on Flatcar (COFC): A form of intermodal transport where containers without chassis are transported to a railhead and then loaded onto a flat rail car to continue their journey.

Container Terminal: A facility where cargo containers are transhipped from one vehicle or one mode of transportation to another for continued transport. Such a facility at a port, where ocean-going container vessels dock to discharge and load containers by cranes is a maritime

container terminal. A facility where the transshipment is between land vehicles, such as between trucks and trains, is an inland container terminal. (Also see Terminal.)

Container Throughput: A measure of the number of containers handled over a period of time; a measure of productivity for a seaport or terminal.

Conventional (Rail) Car: An intermodal flat car designed to carry single-stacked trailers or containers, used for shipment of one or two trailers and about 89 feet long with a tare weight of about 35 tons.

Corporate Average Fuel Economy Standards (CAFE Standards): First enacted by Congress in 1975, the purpose of CAFE is to reduce energy consumption by increasing the fuel economy of cars and light trucks.

Corridor of the Future: Any of six interstate routes identified by the U.S. Department of Transportation in 2007 to participate in a federal initiative to develop multi-state corridors to help reduce congestion (Interstates 5, 10, 15, 69, 70, and 95).

Crossdock Facility: A materials-handling facility used in the short-turn-around transfer of intermodal rail or truck freight. Incoming shipments are transferred directly to outgoing trailers with little or no storage. Shipments may spend less than 24 hours at such facilities, sometimes less than an hour.

Cross-Sectoral: Relating to or affecting more than one group, area, or section; in goods movement, may refer to impacts or vulnerabilities in one sector that may affect other sectors.

Customs: A tax or duty imposed on imported goods. Also, customs may refer to the U.S. Customs and Border Protection agency, a unit of the Department of Homeland Security, which collects such fees and also works to prevent terrorists from entering the country, enforce immigration and drug law, and prevent the importation of illegal cargo.

Distribution Centers (DC): a strategically located warehouse-type facility, often highly automated, that receives, sorts, processes, temporarily stores, and redistributes inventory (products, goods) to retailers, wholesalers, or consumers. Distribution centers may or may not be dedicated to a single retail organization. Distribution centers may also perform value-added services, such as consolidation, packaging, light assembly, labeling, and performance tracking. Distribution centers may also be called a fulfillment center, cross-dock facility, break bulk center, or package handling center.

Dead Mileage (also called Deadheading): In freight transportation, the operation of a carrier service in a non-revenue mode (e.g., making a trip without freight), a return (backhaul) trip to a home terminal or base, or a vehicle's crew travelling as passengers. Movement of a paid crew (e.g., in a truck or on a freight train or ship) without performing goods movement service is considered dead mileage. In rail transportation use, may also apply to one locomotive hauled by another.

Declared Combined Gross Vehicle Weight (CGW): The total unladen weight of the combination of vehicles (motor truck and trailer) plus the heaviest load that will be transported by that combination.

Deep-Sea Shipping Service/ Liner, Charter, and Tanker Service: A liner service involves regular, scheduled stops at ports along a fixed route. Liner routes are dominated by container ships transporting manufactured goods. Charter service, also known as tramp shipping, is an "as-needed" mode of shipping, which moves between ports based on cargo availability; tramps inexpensively transport a single form of dry bulk cargo (e.g., grain, coal, ore, sugar) for a single

shipper. Tanker service transports crude oil, petroleum, and other liquid products. Tankers can be chartered, but most are owned and operated by major oil companies.

Deep-Sea Shipping Vessels: Ocean-going ships that transport cargo to and from seaports. Vessels include dry bulk carriers, which transport commodities such as iron ore, coal, and food; liquid bulk carriers such as tankers that ship crude oil, chemicals, and petroleum products; diesel-powered container ships that transport imports and exports in standardized containers; general cargo ships; and roll on-roll off (Ro/Ro) vessels that transport wheeled cargo such as cars, trucks, and trains.

Deep-Sea/Water Ports: A port that is compatible with the large heavy loaded ships which may require the water to be 30 feet deep or even more.

Demurrage: The detention of a freight car or ship by the shipper beyond the permitted time (grace period) for loading or unloading. In maritime use, a penalty fee imposed for unreasonable delay in loading or unloading cargo or damages payable by a ship charterer to the ship owner as compensation for lost time (e.g., when a chartered ship is not returned to the owner by a specified date). In rail use, a charge assessed by railroads for the detention of rail cars by shippers or receivers beyond a specified free time.

Dock: A space used for loading or receiving merchandise at a freight terminal.

Double-Stack: Railcar movement of containers stacked two units high.

Draft: The vertical distance (depth) of a vessel from its waterline to the deepest point of its hull. Draft, which varies according to how much cargo the vessel is carrying, determines the minimum depth of water a vessel can safely navigate.

Drayage: Transportation of freight (often containers from railyard or seaports) by truck typically over a relatively short distance to an intermediate or final destination; may also refer to a charge for pickup/delivery of goods moving short distances (e.g., from marine terminal to warehouse). Originally, the term dray referred to a cart, usually three-sided, used to haul goods.

Dredge: To remove sediment from the bottom of a harbor channel, river, or other waterway to improve the passage for vessels. A waterborne machine is used for this purpose.

Dry Bulk Cargo: Cargo loaded or unloaded by means of conveyor belts, spouts, or scoops, and not placed individually; flowing cargoes such as rice, grain, various ores, etc.; stored loose.

Dwell Time: The length of time a rail car(s) sits at a particular location.

Environmental Justice: The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

Export: To send or transport goods abroad for trade or sale (opposite, see Import).

Farm-to-Market Corridor: The U.S. Department of Transportation (U.S. DOT) has designated State Route (SR) 99 from south of Bakersfield to Sacramento as the California Farm-to-Market Corridor, a High Priority Corridor on the National Highway System.

Fifth Wheel: The semi-circular steel coupling device mounted on a tractor which engages and locks with a chassis semi-trailer.

Infrastructure Investment and Jobs Act (IIJA): Is a five-year federal funding and authorization bill signed into law in November 2021 that governs the U.S. federal surface transportation spending. IIJA includes a provision that requires each State that receives funding under the National

Highway Freight Program to develop a State Freight Plan that provides a comprehensive plan for the immediate and long-range planning activities and investments of the State.

Flatcar: In rail transportation, a freight rail car that has a floor without any housing or body above, frequently used to carry containers and trailers or oversized and odd-shaped commodities.

Flip-Line: An area of a terminal or yard designated for mounting containers on a chassis or exchanging (switching out) one chassis for another. Switching out a chassis may be done for various reasons (e.g., because the chassis is defective, or to change from a yard chassis to a highway chassis or because the driver is required to match ownership of the container to ownership of the chassis). To flip may refer to picking a container up off the ground and mounting it on a chassis for highway transport.

Focus Routes: Identified in the Caltrans Interregional Transportation Strategic Plan (ITSP), this subset of the High Emphasis Routes highlights the State's highest priority routes that, when complete, will connect all urban areas and geographic goods movement gateways, as well as link rural and small urban areas to the trunk system.

Fork Lift: A machine used to pick up and move goods loaded on pallets or skids.

Freight Forwarder: A person or company whose business is to act as an agent on behalf of a shipper. A freight forwarder frequently consolidates several shipments from various shippers into one large shipment and coordinates booking reservations. Upon reaching the destination, the shipment is separated into small shipments and delivered.

Gantry Crane: A track-mounted, shoreside crane used in loading or unloading of cargo.

Gate: In goods movement, the location or structure at a port of entry, seaport, or intermodal terminal where trucks are cleared to enter or exit. Increasingly, gate entry procedures are automated to confirm required information about the vehicle, the load, and compliance with applicable rules.

General Aviation: Any civilian aviation activity other than regularly scheduled commercial passenger airlines or military operations.

Geofencing: A virtual perimeter for a real-world geographic area; geofences around yards and other downtime areas provide instant notifications when a vehicle enters or exits an area when it should not.

General Cargo: In contrast to bulk cargo, any containerized or breakbulk goods.

Gondola: In rail transportation, a freight car with sides and no roof.

Goods Movement: The processes and activities involved in picking up, moving, and delivering products or raw materials from points of origin (or producers) to points of delivery or use (or consumers). Goods movement relies on transportation, financial, and information systems that involve global, international, national, interstate, statewide, regional, and local networks.

Grade Separation: A construction design in which travelled ways: e.g., highways, railroad lines, or pedestrian walkways: cross under or over each other at different vertical elevations in order to avoid conflicts.

Green Equipment: In goods movement, vehicles (such as trucks and locomotives) and cargo-handling equipment that uses emission-reducing technologies. Green locomotives, for example, use alternative forms of energy from diesel, thus reducing air pollutant emissions. Hybrid

locomotives feature a bank of batteries and a small diesel engine that is used to recharge the batteries (e.g., “Green Goat” (BNSF) yard-switcher locomotives). GenSet locomotives have multiple engines operating in tandem rather than a single engine.

Gross vehicle Weight: The combined total weight of a vehicle and its freight.

Ground Handling: In aviation, the servicing of an aircraft while it is on the ground and usually parked at a terminal gate of an airport.

Harbor: Any place to which ships may resort for shelter, or to load or unload passengers or goods, or to obtain fuel, water or supplies.

Hazardous Material (or “HazMat”): A substance or material that, because of its quantity, concentration, or physical or chemical characteristics, may cause or significantly pose a substantial hazard to human health or the environment when improperly packaged, stored, transported, or otherwise managed.

Heavy Hauler: A truck equipped to handle unusually heavy loads (e.g., steel, heavy machinery, transformers, boats, bulldozers, etc.).

High Emphasis Routes: Highways having the State’s highest priority for programming to meet freeway/expressway standards or otherwise designated for their critical importance to interregional travel. High emphasis routes were first recognized in the 1990 Interregional Road System Plan (Caltrans).

Highway: Any road, street, parkway, or freeway/expressway that includes rights-of-way, bridges, railroad-highway crossings, tunnels, drainage structures, signs, guardrail, and protective structures in connection with highways. The highway further includes that portion of any interstate or international bridge or tunnel and the approaches thereto (23 U.S.C. 101a).

Hopper Car: A freight car having sloping floors leading down to one or more doors designed for releasing (dumping) the contents (such as coal or ore) by gravity. Such cars are often used for handling dry bulk goods.

Hotelling: Allowing the auxiliary engines of a ship to run continuously while at dock to provide power for lighting, ventilation, heating and cooling, pumps, communication, and other onboard equipment. (Opposite: see “cold-ironing”).

Hub: A common connection point for components in a network; a common term in describing a freight transportation network, as in “hub and spoke.”

Import: To receive, bring in, or carry in goods from an outside source, especially to bring in goods or materials from a foreign country for trade or sale (opposite, see Export).

Infrastructure: In goods movement, the roads and highways, tunnels and bridges, rail lines and yards, seaports and improved waterways, airports, and related intermodal yards and communication systems (including intelligent transportation systems) that support the movement of products and raw materials.

Integrated Carrier: A cargo transporter (or freight forwarder) that uses its own multiple fleets or equipment (aircraft, ships, trucks, etc.) instead of the scheduled airlines or shipping lines.

Intermodal Car: A rail car designed specifically for handling piggyback trailers or containers, or both. Intermodal cars may be long flatcars with collapsible trailer hitches, or shorter, lightweight platforms with rigid hitches for use at mechanized terminals. Some newer designs are articulated and have as many as ten platforms connected to form one “car.”

Intermodal Equipment Provider: Any person that interchanges intermodal equipment (e.g., chassis or trailers) with a motor carrier pursuant to a written interchange agreement or has a contractual responsibility for the maintenance of the intermodal equipment.

Intermodal Freight Transportation: Transportation of freight, typically in an intermodal container or vehicle, using more than one mode of transportation (e.g., rail, ship, or truck) in a single trip, generally with no handling of the freight itself when changing modes.

Intermodal Terminal: A location where different transportation modes and networks connect.

Intermodal: Involving two or more different modes of transportation in conveying goods.

JIT Shipping: Just-in-Time shipping; an inventory control strategy that strives to achieve a steady flow of materials through the supply chain and to minimize or avoid warehousing by having components or products produced and shipped to arrive just in time for use. In this strategy, containers or transporting ships or vehicles may serve as “movable warehouses.” This inventory control method depends on highly reliable transportation.

King Pin: A coupling pin centered on the front underside of chassis; couples to the tractor.

Labor Union: An organized association of workers, often in trade or profession, formed to protect and further their rights and interests.

Lading: Contents of a shipment. The freight in or on a railcar, container, or trailer.

Landbridge: The movement of cargo (such as containerized goods) from one country through the port of another country and then by rail or truck to an inland point in that county or to another country; for example, the through movement of Asian goods to Europe across North America.

Landed Cost: The total cost of a product to a buyer, up to the final destination (e.g., at the port of destination or at the buyer's door), including the original purchase price (cost) of the item, all brokerage and logistics fees, complete shipping costs, customs duties, tariffs, taxes, insurance, currency conversion, crating costs, and handling fees, as applicable.

Landlord Port: A seaport where the port authority builds the wharves, which it then rents or leases to terminal operators. The operators, in turn, provide the cargo-handling equipment (cranes, forklifts, etc.), hire longshore laborers to operate machinery, and negotiate contracts with ocean carriers to handle the unloading or loading of their cargoes. (Contrast with operating port).

Less Than Container Load (LCL) and Less Than Truckload (LTL): A shipment of cargo that is not large enough to fill a standard-size container; various shippers may pool their LCL shipments together in one container. In trucking, a shipment that would not by itself fill the truck to capacity by weight or volume.

Lift On-Lift Off (Lo/Lo): A cargo-handling technique involving the transfer of commodities to and from a ship using shoreside cranes or the ship's lifting gear.

Lights Out Facility: A storage or retrieval facility, such as a warehouse or distribution center, with minimal or no staffing.

Line Abandonment: Discontinuation by a railroad of rail service and maintenance on a rail line or line segment subject to approval of appropriate federal and state agencies.

Line Haul: Movement of freight over tracks of a railroad from one station to another (not a switching service).

Liquid Bulk Cargo: A type of bulk cargo that consists of liquid items, such as petroleum, water, or liquid natural gas.

Logistics Park: A development concept in which distribution centers typically seen in a suburban area are built in a park like setting, usually populated by warehouses and logistics-related companies/offices and is also an intermodal facility where truck trailers and containers are transferred between trucks and the railroad.

Logistics: In the freight industry, a collective term for a wide set of activities dedicated to the production, transformation, and distribution of goods, from raw material sourcing to final market distribution, as well as the related information flows and scheduling.

Longshoremen: Dock workers who load and unload ships or perform associated administrative tasks. May or may not be members of labor unions. Longshoremen are also called stevedores. Longshore gangs are hired by stevedoring firms to work the ships.

Manifest Train: A freight train with a mixture of car types and cargoes. Also known as a Mixed Freight Train.

Manifest: A transport document or invoice that provides a summary of all cargo being transported on a train, ship, or truck.

MAP-21: Moving Ahead Progress for the 21st Century Act; signed in July 2012 and funds surface transportation programs. It provided needed funds and it transformed the policy and programmatic framework for investments to guide the growth and development of the country's vital transportation infrastructure. Replaced by the Fixing America's Surface Transportation act (FAST Act - see above).

Maquiladora: Assembly facilities in Mexico, especially those located near the United States-Mexico border, to which foreign materials and parts are shipped (duty free) and assembled into products that are returned to the same market or exported, the facility ownership thus taking advantage of cheaper labor and less restrictive regulations.

Marine Terminal: Any designated area of a seaport used for the receipt or shipment of waterborne cargo, typically including wharves, storage areas, loading and unloading equipment, rail and truck facilities, offices, maintenance areas, and other related functions.

Mean Low Water: A tidal datum (a base elevation used as a reference point). The average of all the low water heights observed over a 19-year period.

METRANS: The METRANS Transportation Center was established in 1998 through the Transportation Equity Act for the 21st Century (TEA-21) as the first University Transportation Center in Southern California. METRANS is a partnership of the University of Southern California (USC) and California State University, Long Beach (CSULB).

Mile: A unit equal to 5,280 feet on land; a nautical mile is the distance of one minute of longitude at the equator, approximately 6,076.115 feet; metric equivalent is 1,852 feet.

Multimodal: The availability of multiple transportation options, or modes, within a system or a corridor. The transportation of goods under a single contract but performed with at least two different means of transport (See also intermodal freight transportation).

Nitrogen Oxides (NOx): A generic term for the nitrogen oxides that are most relevant for air pollution. These gases contribute to the formation of smog and acid rain, as well as affecting tropospheric ozone. In air pollution control, nitrogen dioxide (NO₂) is of primary interest and used as an indicator for the larger group of nitrogen oxides.

Off-Dock Rail: Freight railyards located not immediately on a marine terminal but rather within the larger region served by a port. Typically, cargo is trucked from a marine terminal or transload facility to these yards, where transcontinental rail service is available.

Omni-Channel Supply Chain: A multichannel approach to sales that seeks to provide customers with a seamless shopping experience, whether they're shopping online from a desktop or mobile device, by telephone, or in a brick-and-mortar store. An omnichannel approach means there's integration between distribution, promotion and communication channels on the back end.

On-Dock Rail: Freight railyards located at marine terminals, providing direct shipside rail service. On-dock railyards receive import cargo discharged from marine vessels as well as export cargo unloaded from freight trains. Typically, these yards consist of rail tracks, temporary storage areas for equipment and cargo, and staging areas.

Operating Port: A seaport where the port authority builds the wharves, owns the cranes and cargo-handling equipment, and hires the labor to move the cargo. A stevedore hires longshore labor to lift cargo between the ship and dock, where the port's laborers pick it up and move it to a storage or shipping site (contrast with landlord port).

Pallet: A wooden, plastic, or paper platform, sometimes with sides and/or a top, on which packaged goods are placed to facilitate movement by forklifts and other freight-handling equipment. Pallets come in a wide variety of types and dimensions; common sizes include 48" x 40", 42" x 42", and 36" x 36." Various organizations, including the International Organization for Standardization (ISO) promote standardization of international pallet sizes.

Panamax/New Panamax/Post Panamax or Neopanamax: Terms for the size limits for ships travelling through the Panama Canal. An ocean-going ship with dimensions of the maximum size possible to pass through the Panama Canal. In 2011, these dimensions are: maximum length 295 meters, maximum beam overall 32.25 meters, and maximum draft 13.50 meters. When expansion of the canal is completed, the new Panamax vessel will be: maximum length 366 meters, maximum beam 49 meters, and maximum draft 15.2 meters.

Performance Measures: Objective, usually quantified standards used to evaluate how well a system is functioning when compared to baseline goals or objectives.

Physical Internet: A conceptual initiative that uses the Internet as a metaphor to envision an open, global logistics network of the future, enabled by a standard set of protocols, modular containers, and smart interfaces for increased efficiency and sustainability.

Piggyback: A transportation arrangement in which truck trailers with their loads are moved by train to a destination.

Placard: A sign affixed to a rail car or truck, which indicates the (typically hazardous) designation of the product being transported in that vehicle.

Particulate Matter (PM): In air pollution control, solid particles and liquid droplets found in the air. Particles range in size from visible materials, such as dust, dirt, soot, or smoke, to particles so small that they can only be detected using an electron microscope. Particle pollution includes "inhalable coarse particles," with diameters larger than 2.5 micrometers and smaller than 10 micrometers and "fine particles," with diameters that are 2.5 micrometers and smaller. Diesel engines emit a complex mix of toxic pollutants, including very small carbon particles ("soot") called diesel PM, known to contain over 40 cancer-causing substances.

Particulate Matter 10 (PM 10): Refers to tiny particles or droplets in the air that are 10 microns in width. Because of their small size, particles on the order of 10 micrometers or less (coarse

particulate matter, PM10) can penetrate the deepest part of the lungs such as the bronchioles or alveoli.

Particulate Matter 2.5 (PM 2.5): Refers to tiny particles or droplets in the air that are one half microns or less in width. Exposure to fine particles can cause short-term health effects such as eye, nose, throat and lung irritation, coughing, sneezing, runny nose and shortness of breath. Exposure to fine particles can also affect lung function and worsen medical conditions such as asthma and heart disease.

Project Cargo: Term broadly applied to large, heavy, high value or project-critical materials and equipment being shipped (either domestic or overseas) for a specific purpose, such as for a new factory, highway, oil drilling platform, wind turbine generators, etc.

Proposition 1B: The ballot initiative passed by California voters in November of 2006, subsequently enacted as the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006. Prop 1B authorized the State to sell \$19.925 billion of general obligation bonds to fund transportation projects "to relieve congestion, improve the movement of goods, improve air quality, and enhance the safety and security of the transportation system."

Public Use Airport: A publicly or privately-owned airport that offers the use of its facilities to the public without users obtaining special clearances, and that has been issued a California Airport Permit by Caltrans.

Public-Private Partnerships: In transportation planning, arrangements between government and private sector entities for the purpose of providing or improving infrastructure, facilities, and services. (Sometimes called P3 projects.)

Rail Yard: A rail terminal, typically with a network of tracks and multiple sidings, at which traditional railroad activities occur, such as assembling trains and sorting and redistribution of railcars and cargo (see classification). Railcars in yards are moved by gravity (e.g., rolling into position from a manufactured hill, or hump) or by specially designed yard locomotives called switchers.

Railhead: The end of a railroad line or a point in the operations at which cargo is loaded or unloaded.

Reefer: In shipping, a controlled temperature (i.e., refrigerated) shipping container.

Repower: The replacement of an older, more polluting diesel engine with a newer, less polluting engine. Repower may involve the use of alternative fuel sources, such as liquid natural gas or electric power.

Rolling Stock: The inventory of wheeled transport vehicles owned by a railroad or motor carrier; often used in rail transportation, usually referring to both powered and unpowered vehicles, including locomotives, railroad cars, and passenger coaches.

Shipper: The person or company who is usually the supplier or owner of commodities shipped. Also called Consignor.

Shipping Company: A company whose business is in transporting goods or passengers in ships.

Shipping Line: A business that transports cargo aboard ships.

Short Line Railroad: An independent or subsidiary railroad that operates over a relatively short distance; generally, a Class III railroad. Short line and regional railroads operate and maintain 29 percent of the American railroad industry's route mileage, and account for 9 percent of the rail industry's freight revenue and 11 percent of railroad employment.

Short Ton: A weight unit of measure equal to 2,000 pounds.

Short-Sea Shipping: Commercial marine shipping operations between ports along a single coast or involving a short sea crossing; also known as coastal shipping or coastwise shipping.

Side-Handler: A diesel-powered, container-moving vehicle used at a terminal or yard with a motorized lift and spreader that attaches to the side of an empty container; used for moving empty containers onto or off trucks or stacks of containers. (Compare with top-handler.)

Siding: In rail transportation, track adjacent to a main or secondary track for meeting or passing trains.

Slow Steaming: The deliberate reduction of a marine vessel's cruising speed to reduce fuel consumption, thus lowering operational costs, as well as reducing CO2 emissions.

Stack Car: An articulated five-platform rail car that allows containers to be double stacked. A typical stack car holds ten 40-foot equivalent units.

Standard Industrial Classification: A standard numerical code used by the U.S. Government to classify products and services.

Stevedore: A labor management company that provides equipment and hires workers to transfer cargo between ships and docks and is responsible for the loading or unloading of ships in port. Also used to mean an individual worker (i.e., a longshoreman).

Straddle Carrier: Motorized, rail-mounted or rubber-tired, container terminal equipment that straddles a row of containers and is used to move containers around the terminal; may also move containers to and from truck chassis. Straddle carriers can typically lift up to 60 tons or two full containers. (See transtainer).

Strategic Rail Corridor Network: An interconnected and continuous rail line network consisting of over 36,000 miles of track serving over 140 defense installations.

Sulfur Oxides (Sox): A group of pollutants that contain both sulfur and oxygen molecules. Sulfur dioxide, SO₂ is the most common form in the lower atmosphere. Exposure to sulfur oxides can be harmful to human health. Since sulfur oxides are irritants, they have been associated with reduced lung function, increased incidence of respiratory diseases, irritation of the eyes, nose, and throat, and even death.

Supply Chain: A network of production, trade, and services required to move a product or service from supplier to customer, beginning with the transformation of raw materials, through intermediate manufacturing stages, to the delivery of finished goods to a market.

Sustainability: Policies and strategies that are aimed at meeting contemporary social needs without compromising the ability of future generations to meet their needs.

Switching: Movement of freight cars between two locations in close proximity. Typically involves moving cars within a rail yard or from specific industry locations to a yard for placement on a train.

Tank Barges or Tankers: Ships used for transporting bulk liquids, such as petroleum, chemicals, molasses, vegetable oils, liquefied gases, etc.

Tank Car: A railcar used exclusively for transporting liquids, liquefied gases, compressed gases, or solids that are liquefied or compressed prior to loading.

Tare Weight: The weight of clean, empty equipment (e.g., the weight of a rail car containing no lading or packing and debris resulting from previous lading).

Tariff: A schedule or system of charges, duties, or fees imposed by a government on imports or exports.

Terminal Access Route: A designated truck route from a STAA-designated route to a terminal. Federal law requires that states allow STAA trucks reasonable access to terminals.

Terminal Operator: A company that oversees activities at a site where vehicles that transport materials empty their cargo and load new products or manages a place where oil or petrochemical products are stored.

Terminal: Generally, a facility at which freight is received, handled, and shipped. Terminals are usually locations where vehicle combinations (rail cars, trucks, trailers, chassis, etc.) are regularly exchanged and temporarily stored. In rail transportation, a railroad facility used for handling freight and the receiving, classifying, assembling, and dispatching of trains. (Also see rail yard.) At seaports, a wharf area where an owner or tenant operates cargo-handling equipment to load and unload ships. (Also see container terminal.)

Third-Party Logistics (3PL) Provider: A specialist in logistics who may provide a variety of transportation, warehousing, and logistics-related services to buyers or sellers.

Throughput: In goods movement, a measure of how much cargo is moving through a system, measured in terms of volume of trucks, trains, or cargo.

Ton and Tonne: A ton (also known as a short ton) is a unit of weight equal to 2,000 pounds, used almost exclusively in the United States. A tonne (or metric ton) is a unit of weight equal to 1,000 kilograms, used everywhere else in the world. A tonne is equivalent to about 2,205 pounds.

Ton-Mile: The movement of a ton of freight one mile.

Tonnage: Generally, refers to freight handled.

Top-Handler: A diesel-powered, container-moving vehicle used at a terminal or yard with a motorized lift and spreader that attaches on the top of an empty container; used for moving containers onto or off trucks or stacks of containers. (See side-handler.)

Trackage Rights: In rail transportation, rights obtained by one railroad to operate its trains over another railroad's tracks.

Tractor Unit: A characteristically heavy-duty towing engine and cab that provides power for hauling a towed or trailered load.

Tractor-Trailer: A combined trucking vehicle consisting of a motorized towing engine and cab (tractor) and an attached trailer, semitrailer, or both (a double) having four or more axles (also known as "semis," "big rigs" or "18-wheelers").

Trade Barrier: A (usually) government-imposed restriction on the free (usually international) exchange of goods or services. May take the form of import policies, tariffs, licensing, or other restrictions.

Trade Corridor Improvement Fund (TCIF): One of the key program elements authorized by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, approved by the voters in 2006 as Proposition 1B. The \$2 billion fund is available to the California Transportation Commission (CTC), as appropriated, for programmed infrastructure improvements along federally designated "Trade Corridors of National Significance" or other corridors with a high volume of freight movement.

Trade Corridors of National Significance: A federal designation under SAFETEA-LU. These are one of the categories of facilities available for funding under TCIF.

Trailer on Flat Car (TOFC): A container placed on a chassis that is in turn placed on a railcar.

Trailer: A nonautomotive freight vehicle to be drawn by a truck tractor unit or other motor truck.

Tramp Shipping: In marine transportation, shipping by means of a vessel that does not operate on a published schedule but serves different ports in response to tenders of cargo.

Transload Facility: Any place where transloading is conducted.

Transloading: The operation of transferring cargo from one transportation mode to another. May also refer to the operation of transferring cargo from one container to another for any of a number of reasons, such as for consolidation, weight restrictions, palletizing, leasing contract requirements, or supply chain management (e.g., to synchronize delivery of goods to meet real-time demands).

Transshipment: The shipment of goods (or containers) to an intermediate destination by one carrier, then shipped again to another destination by the same or another carrier. Shipments transferred from one transportation line to another, such as from rail to a water carrier.

Transtainer: Large, motorized, rubber-tired gantry (RTG) or rail-mounted gantry (RMG) hoist used to move and stack containers in a yard or at a terminal. Transtainers can lift 30 to 40 tons and straddle up to six rows of containers stacked five or six containers high. They may be used to load or unload containers on trucks, terminal chassis, or rail cars.

Trucking Company: A company that ships goods or possessions by truck.

Trucks: Any of a broad range of motorized vehicles used to transport freight. The Federal Highway Administration (FHWA) classification system recognizes 10 types of trucks, with classes 4 through 7 being medium-duty trucks, and classes 8 through 13 heavy-duty trucks. In intermodal transport, freight is often carried by tractor-trailers; the tractor is the front part, including the cab, and the trailer is the detachable wheeled chassis behind the tractor on which the container is placed. Tractor-trailers with a semitrailer, trailer, or both and four or more axles may be known as "semis" or "18-wheelers." The largest trucks that may operate legally in California are defined by the federal Surface Transportation Assistance Act (STAA) of 1982. A STAA semitrailer may be up to 53 feet in length, with a kingpin-to-rear axle (KPR) maximum of 40 feet, and with no overall length limit. The maximum length for a California legal truck tractor and semitrailer combination is 65 feet overall. A motor truck (3 axles) and trailer or semitrailer combination (double) may be 75 feet.

Tugboat and Towboat: A tugboat is a type of harbor craft used for maneuvering larger ships in and out of port. A towboat is a type of watercraft used to pull (tow) or push barges.

Unit Train: Freight trains moving large tonnages of a single (often bulk) product between two points without intermediate yarding or switching.

Velocity: In goods movement, a measure of how fast cargo is moving through a transportation system, typically measured in terms of average vehicle speed per unit time.

Warehouse: A commercial building used to store goods. Warehouses usually are located and designed to facilitate movement and handling of materials, components, or products, with truck (and often rail) access, loading docks, and vehicle storage. Cool warehouses or cold storage may be used for agricultural products. Large (e.g., "big box") stores may combine warehouse and retail functions in the same building.

Waybill: Documents used to identify the shipper and consignee, routing, cargo, rate, weight, and other shipping information.