FAQ Series: Goods Movement (5 Parts)

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Introduction

There has been a great deal of public interest in goods movement, particularly as it related to transportation options for the SR 710 EIR/EIS. Most of the specific concerns relate to trucks, particularly on the freeways and local streets in the study area. To address those issues, it is important to have a broad understanding of how the goods movement industry operates in Southern California. This five-part series of frequently asked questions (FAQs) provides that background knowledge. The range of topics, from truck data to port operations to goods movement strategies, are intended to give a broad view on the issues and some detailed information.

The FAQs are ordered so that they can be read from start to finish. However, readers can also look at individual topics that interest them, and do not need to read every part of the series.
Part 1: What Truck Data are Available for Existing and Future Conditions?

1: It has been claimed that only 3% of the traffic on the 710 freeway north of I-10 is trucks. How is this determined? Where is the freight currently being transported?

The 3% statistic has been quoted frequently, and is often misunderstood. 3% of the vehicles on SR-710 north of I-10 are trucks. The term “freight” encompasses all goods being transported for commercial gain. Freight may involve various modes, including rail, air, train, truck or van, or some combination. As a gateway to the US market for international goods, as well as one of the largest domestic manufacturing centers, Los Angeles-area transportation systems use all of these modes to transport commercial goods.

Caltrans reports truck data (and other traffic data) on their website at http://www.dot.ca.gov/hq/traffops/saferesr/trafdata. The truck traffic data reported are based on the total number of trucks counted and then divided by the total number of vehicles. The 2010 data are based on a count of 1,368 trucks/day and 44,000 vehicles/day, or 3.1%. Over two-thirds of these trucks are small trucks, with two or three axles. Similar percentages can be calculated for locations farther south, such as the segments between SR 60 and I-10 (5.0%), north of I-5 (7.6%), north of I-405 (14.3%), and at the beginning of I-710 near the Port of Long Beach (26.4%).

Truck count data, while useful, do not reveal anything about origins and destinations (where trucks are coming from and going to). Over 85% of truck trips in Los Angeles County stay completely within the six-county SCAG region (Ventura, Los Angeles, Orange, San Bernardino, Riverside, and Imperial Counties) and also do not involve goods from the San Pedro ports. For example, these truck trips are transporting goods from suppliers to manufacturers or from regional distribution centers to local stores. Only approximately 6% of truck trips in Los Angeles County are passing through on their way from an origin to a destination outside the region, such as agricultural products being transported from the Central Valley to the southwest. Less than 8% of truck trips in Los Angeles County start or end at the San Pedro ports, or are carrying goods directly transferred from the ports. (Source: SCAG 2012 RTP/SCS, Goods Movement, Table 4).

Almost all of the trucks on SR 710 north of I-10 are local trucks that do not come from the San Pedro ports. Port trucks are readily identifiable by the corrugated steel containers they transport on an independent chassis (photo below). Any other type of truck, including “semis” consisting of a cab and a trailer, are unlikely to be traveling to or from the ports.
Container truck from the Ports

Semi-truck

More discussion on truck destinations will be provided in Part 4 of the FAQ series on Port Operations and Forecasts.
2: How many trucks are on the roads now?

The graphic below is a summary of some available truck data. It is a combination of the data available from Caltrans’ website and the new data collected for the SR 710 Study. The tan boxes are Caltrans freeway data, the green boxes are new freeway data collected as part of the SR 710 EIR/EIS, and the blue boxes are new surface street data.

Truck percentages are almost always much higher on the freeways than the surface streets. Truck percentages also tend to be somewhat higher in the off-peak periods, when there are fewer cars. In the study area, the daily freeway truck percentages range from 2.4% to 8.3%. The AM and PM peak hour freeway truck percentages range from 1.5% to 9.2%. On the surface streets, the data from the field indicate truck percentages ranging from 0.3% to 2.4%.

3: How much will truck traffic increase in the future and what is the data source used?

In the study area, seven freeway segments were evaluated, supplemented by four other freeway segments near the study area (e.g., I-710 south of I-5). Model projections on these segments indicate that total freeway truck volumes will increase from an average of 10,900 trucks per day to 16,700 trucks per day in 2035. The estimates do not assume any
improvements in the SR 710 EIR/EIS study area. See the responses to FAQs #5, #6, and #7 for more specific information on the changes in truck patterns with potential alternatives.

The SCAG travel demand model includes estimates of trucks on all roads. This is the same model (the 2008 RTP model) that was used to evaluate overall traffic operations for the AA study. SCAG validated the model for the six-county region, and the study team completed a comprehensive validation effort for the study area.

4: What is the distribution of truck traffic in the region, and how much of it goes north?

The chart on the right (Source: Caltrans, “Truck Miles of Travel: California State Highway System 1988-2003”) shows the distribution of truck traffic in the region by county, measured with the truck miles of travel on the state highway system.

Los Angeles County accounts for 33 percent of the total regional truck miles traveled – the highest for any single county. However, most (two-thirds) truck traffic occurs outside LA County. The high volumes of trucks in Riverside and San Bernardino County indicate that the greatest concentration of truck activity is to the east, not the north.

The response to FAQ #1 noted that over 85% of the truck trips in Los Angeles County stay completely within the six-county SCAG region. A recent study of trucks that use I-210 between SR 134 and SR 57 found similar results: Over 80% of these trucks had origins and destinations in Los Angeles County. In other words, they are local trips. Only approximately 4% of the trucks had origins in Kern County or farther north, and approximately 6% had destinations in Kern County or farther north. (Source: 2011 Interstate 210 Truck Origin and Destination (O-D) Study).

A survey of truck drivers leaving the two large intermodal yards south of downtown Los Angeles in 2009 found that, even among trucks not destined for the San Pedro ports, only 5% have destinations in north Los Angeles County or farther north. (Source: 2009 I-710 Rail Yard Truck Driver Survey).

As noted in FAQ #1, most trucks do not come from the San Pedro ports. However, for port trucks, the vast majority of the San Pedro trucks have nearby destinations at the near-dock
facilities or the intermodal yards south of downtown Los Angeles. The remaining port trucks have destinations to the east. The SCAG model was used to get a better visual understanding of the port truck distribution in the region. The analysis looked at all of the truck trips which use I-710 at a location south of Pacific Coast Highway in Long Beach. The map below shows the routes of truck trips that pass this point on I-710. It illustrates that most of the longer San Pedro port truck trips use the freeways to/from the east, with almost no port traffic destined to the north and west.

More information on the destinations of San Pedro port trucks can be found in the other FAQs in this series.

(Source: CH2M Hill analysis using 2008 RTP 2035 No Build model, provided by SCAG in the SCAG 08R35a3_bl_rev2 scenario for land use and networks).

5: How many trucks will travel on I-210 if the SR-710 is completed?
Detailed truck studies were not part of the Alternatives Analysis (AA) phase, but data are available from the modeling activities. Both traffic and truck volumes will change on I-210 if
SR-710 is completed. The magnitude of the changes (which can be positive and negative) depend on the alignment of the alternative and the section of I-210.

Since F-7 was the only freeway alternative retained for the EIR/EIS phase, data on that alternative are presented here. With that alternative, traffic and truck volumes will increase on I-210 west of the I-210/SR-134 interchange, and decrease to the east.

- East of SR-134, the 2035 No Build projections are 6.4% of the total traffic. With F-7, the truck percentage will be reduced to 6.2% of the total traffic.
- West of SR-134, the 2035 No Build projections are 9.8% of the total traffic. With F-7, the truck percentage will increase to 11.3% of the total traffic.

All of these truck modeling data are preliminary, and will be updated using the 2012 RTP model data for the EIR/EIS analysis.

6: If a tunnel were constructed, would truck traffic to and from the north increase?

Construction of a tunnel would not be expected to alter truck traffic destinations. Cars and trucks that are already going north (via surface streets or other freeways) may choose to take a tunnel to reduce their travel time, but no additional truck traffic will go north.

Because of their need for large parcels of flat land, most distribution centers in Southern California are located near freeways in south Los Angeles County and the Inland Empire. A 2010 study found that most undeveloped land that is suitable for distribution centers is located in the same areas, so most of the growth of distribution activity will also be in south Los Angeles County and the Inland Empire. (Source: 2010 Industrial Space in Southern California)

The land use patterns for the major distribution centers and freight facilities are well established, and it is not anticipated that the directional flow of the traffic will change significantly. The larger freight facilities – rail intermodal terminals, airports, and major warehouse installations – are bound by legacy infrastructure and difficult to move.

7: Did truck volumes on I-210 increase when it was extended? Won’t that just happen again with this project?

Freeway projects affect traffic patterns. The I-210 extension increased traffic volumes on I-210, but decreased traffic on I-10 and SR 60. Extending SR-710 to the north will almost certainly increase traffic volumes on that freeway. However, the effects on the crossing freeways (I-210, I-10, and SR 60) will be varied. Some segments will have higher traffic volumes.
volumes than no-build, and some will have lower volumes. An extensive modeling effort as part of the SR-710 EIR/EIS will quantify these traffic volume changes.
Part 2: What Freight Movement Efforts are Underway in the LA Basin?

1: How is this study considering the Alameda Corridor for freight movement? When will the Alameda Corridor reach capacity?

The Alameda Corridor is a grade-separated rail facility on which trains transport containerized goods between the San Pedro ports and intermodal yards south of downtown Los Angeles. As of July 2012, an average of 43 trains used the corridor per day. The corridor has a capacity of approximately 150 trains per day, and current estimates are that it will carry 124 trains per day by 2035. (Source: I-710 Railroad Goods Movement Study) The forecast of truck trips in this study takes into account the capacity of on-dock and near-dock rail facilities at the San Pedro ports, as well as the capacity of the Alameda Corridor. The movement of goods by these rail facilities reduces the demand for truck travel.

2: Where are the distribution centers located? Who uses them?

Because Southern California serves as a gateway to the rest of the United States for foreign goods, and also houses one of the nation's largest manufacturing centers, there is a significant need for distribution centers. In addition to storage, these centers perform a variety of ancillary services including cross docking where international containers are unloaded so the goods can be segregated and reconsolidated for directional shipments to markets outside California. These facilities also supply value added services such as packaging, quality control, and final assembly. Distribution centers are typically a minimum of 200,000 square feet, and many are over 1,000,000 square feet. Some receive deliveries via rail spurs, but most rely on the roadway network for both incoming and outgoing shipments.

The main users of distribution centers are suppliers and retailers. For example, a supplier of sneakers may receive shipments of several different product lines at a distribution center, sort them according to the demand for each product at various stores, and then send trucks with the correct product mix to each store in which its products are sold. Similarly, a toy retailer may receive shipments from various suppliers, sort them according to the demand at each of its stores, and then ship toys from a variety of suppliers on a single truck to each of its stores.

The warehouses are often located in close proximity to each other and to the primary freight generators such as rail yards and truck terminals. The distribution centers are primarily located in three areas:

- In the immediate vicinity of the San Pedro Bay ports and Los Angeles International Airport. These distribution centers serve the import and export cargo market.
• **Five to ten miles from the San Pedro ports and LAX.** These distribution centers are often used for intermodal exchange of cargo so that commercial goods can be transported to facilities located outside of Los Angeles County, often outside the state of California. These facilities are often called “near-dock”. The Intermodal Container Transfer Facility (ICTF) is one example – it is a large rail yard located approximately five miles from the San Pedro ports.

• **In the Inland Empire, an area that comprises the counties of Riverside, Imperial and San Bernardino.** In the last decade or so, Moreno Valley and the rest of the Inland Empire have become the nation’s largest hub of distribution warehouses, with an estimated 400 million square feet (http://www.nytimes.com/2012/07/23/us/in-california-warehouse-industry-is-expanding.html?pagewanted=all&_r=0).

3: **How will the proposed High Desert Corridor affect truck traffic in Southern California?**

The High Desert Corridor (HDC) is a proposed east-west freeway/expressway linking SR 14 in Los Angeles County to SR 18 in San Bernardino County. More information about the project is available on Metro’s web site (http://www.metro.net/projects/high-desert-corridor). The project is intended to serve the growing population centers in the Antelope Valley and the Victor Valley. It will also facilitate the movement of goods from the San Joaquin Valley to points east. As discussed in the response to FAQ #4 in Part 1 of the series, some truck traffic on I-210 has origins or destinations in Kern County or farther north. If the High Desert Corridor is constructed, this truck traffic, as well as automobile traffic, could travel from the San Joaquin Valley to Barstow and points east without entering the Los Angeles Basin.

4: **Does the Southern California Association of Governments (SCAG) propose truck lanes on or near SR 60 and would those truck lanes affect the volume of trucks in the San Gabriel Valley?**

SCAG’s adopted 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) includes the East-West Freight Corridor (EWFC)—truck-only lanes near (not necessarily on) SR-60. While numerous potential alignments were examined, a corridor concept adjacent to SR-60 is expected to be explored further through a full environmental impact report. Refer to pages 18-22 of the Goods Movement Appendix (http://rtpscs.scag.ca.gov/Documents/2012/final/SR/2012fRTP_GoodsMovement.pdf) in the 2012-2035 RTP/SCS for more information.
Part 3: What are the Logistics and Technologies Associated with Goods Movement?

1: Do all trucks in the region carry goods that originate at the Ports?
There is a wide variety of goods movement in Southern California, and a widely held
misperception is that all trucks include goods from the Ports being shipped out of the region;
that simply is not the case. SCAG reports that over 85% of the truck traffic in the region is
interregional (starts and ends inside the region). Many of the remaining truck trips do not
involve the Ports.

2: What types of goods movement takes place in Southern California?
Southern California is home to over 22 million people, and much of the goods movement
here is related to delivering goods and services to residents and local businesses. In addition,
Southern California is home to ports that serve international goods movements; serves as a
hub for two of the nation’s largest railroads (BNSF and Union Pacific); houses a major
international air cargo facility at LAX; and serves as the junction of interstate highways that
serve the entire country (I-5, I-15, I-40, and I-10).

Within the region, the manufacturing, retail sales, wholesale trade, construction,
transportation and warehousing, and mining sectors rely on the movement of goods as a key
part of their daily operations. Together, these industries are directly responsible for about one-
third of the region’s economy.

Not all goods come from the ports, but some imported goods move through the region.
Many of these goods arriving at the ports are destined for stores and factories in the region,
and other goods have destinations elsewhere in the United States.

Many of the goods that are moved out of Southern California are produced here. The raw
materials or component elements may come from overseas, and then the products are
manufactured or processed here. Goods passing through may also be generated from
elsewhere in the U.S. For example, agricultural products from the Central Valley move
through the region. Most of these agricultural goods are processed at centers in the Central
Valley and transported via truck to the rest of the United States. Some of these agricultural
goods are transported to the San Pedro ports for export around the world.

3: How are goods moved in Southern California?
Goods moved locally within the region are generally moved by truck. Trucks are usually the
only option because the destinations for these goods (stores, distribution centers, and
factories) are not served by rail. Goods arriving or departing by air are also generally moved by truck because LAX is not served by rail. Even if rail were available, these goods tend to be high-value or time-sensitive goods where the delay involved in a transfer to rail would be unacceptable.

Goods that enter the Southern California region at the Port of Los Angeles or the Port of Long Beach (POLA/POLB) typically are transported to a distribution center where they are sorted and mixed with other goods with the same destination before being transported to their final destination. This process is explained more in FAQs #4 and #6. These goods may begin their trip through the region either via truck or via rail. Generally, goods with destinations up to a day’s driving distance of the ports will be shipped via truck. This range includes destinations from the Central Coast to Fresno, Bakersfield, Barstow, and Las Vegas. While this area is geographically large, most of the population, and therefore most of the destinations of these goods, are within the urbanized area of Southern California. It is not practical to ship via rail to these destinations because shipping via rail requires an intermodal yard near the destination at which goods can be moved from the rail network back onto trucks for delivery to their final destination.

Goods arriving at the San Pedro ports with destinations farther to the east are generally shipped via rail for the majority of their journey. They will typically be transported by truck or rail (often via the Alameda Corridor) to one of the intermodal rail yards south of downtown Los Angeles. From there, they will be transported via rail to an intermodal yard near their destination. At that yard, they will be transferred from rail to a truck, which will then take them to a distribution center near their final destination. From the distribution center, a truck will transport them to their final destination.

The Southern California ports best serve U.S. destinations in the southwest, although some shippers may go as far east and north as Chicago, and even occasionally beyond. However, they are unlikely to be shipped north. Typically, goods will not arrive at the ports if they have destinations elsewhere on the west coast. Goods destined to northern California or the Northwest U.S. will generally arrive at the Port of Oakland or the Port of Tacoma.

The exhibit below illustrates typical, simplified distribution patterns for goods imported to the United States via west coast ports. Transfers from truck to rail or vice versa must take place at intermodal yards.
4: Why does it seem like that there so many trucks on the freeways?

Typically, trucks constitute 5 to 10 percent of the traffic volume on freeways in Southern California. It often seems like the percentage is higher because trucks are large and highly visible.

Most of these trucks are transporting goods within the Southern California region, where 22 million people live. Many large distribution centers for the region are located east of the study area in Inland Empire cities such as Ontario, Fontana, and Rialto. Goods processed at these distribution centers then travel on the freeways to reach stores throughout the region.

Other trucks are transporting agricultural goods from the Central Valley to points east via I-15, I-10, or I-40. These trucks travel through the study area to make this journey. As discussed in
the response to FAQ #4 in Part 1 of the series, very few trucks from the ports travel directly to the study area.

5: **How do goods get from the location where they are produced or sold to their ultimate destination?**

The mechanism that describes the movement of freight and goods from the original source of production to the final point of consumption is referred to as the supply chain. From the producer, the products may be moved directly to the point of use by truck. However, for many supply chains the original movement is by truck to an intermodal transfer point for water, rail, or air shipment. The graphic below is a generic example of the options for an international shipment.

![Retail Supply Chain Example](image)

**Source:** Target, Inc.

Overseas goods arrive in the U.S. at the destination (circled in the figure) to be transferred to another mode. When these international shipments arrive to the destination transfer point (e.g., the Port of Long Beach), they move by truck or rail into the distribution system. International shipments often move by truck to a warehouse location where the containers are opened and the products sorted out and segregated based on their next or final destination.
After the consolidation takes place the products move by truck to the next destination which may be direct to the point of consumption or to another intermodal transfer point. At this secondary transfer point, shipments are broken down again and consolidated for delivery. Products that are produced domestically (i.e., in Southern California) have similar supply chains, but are generally simpler than those for international goods.

Supply chain diagrams for “big box” retail products (red) and groceries (blue) are shown below. A retailer like Wal-Mart has thousands of suppliers in many international, domestic, and NAFTA locations. They use all modes of transportation to get their goods close to the point of sale. Along the way the shipments are broken out and reconsolidated by destinations, a process which can occur multiple times. A grocery store tends to have suppliers that are geographically closer, but the supply chain is equally complex.
6: Can rail lines like the Alameda Corridor handle a greater share of goods movement instead of trucks?

The Alameda Corridor is a dedicated, grade-separated rail facility roughly parallel to I-710 that moves containerized goods from the ports to the intermodal yards south of I-5. There is no freight rail system in the 710 corridor north of the intermodal yards, which are located south of downtown Los Angeles.

The Alameda Corridor has additional available capacity, but has some limits to its available market. As discussed in the response to FAQ #4 in Part 1 of the series, very few trucks from the ports travel north of the SR-710 study area. A survey of truck drivers leaving the two large intermodal yards south of downtown Los Angeles in 2009 found that, even among trucks not destined for the San Pedro ports, only 5% are headed north, so there is very little opportunity to capture a major concentration of freight that is not already being moved by rail. The trucks traveling through the Study area and on I-5 are coming from and going to a variety of destinations that are not served by rail. To transfer these goods to rail, new or expanded intermodal yards would be required near both their origins and their destinations. Movement of goods that are now made by a single truck trip would then require two truck trips, two transfers, and one rail trip in between the truck trips. Multiple transfers would substantially increase the cost, delivery time, and complexity of the supply chain.
7: Would the electrification of rail have an impact on goods movement?

Electrification of rail has pros and cons for operations and cost. While it is generally beneficial for air quality compared to conventional rail, electrification doesn’t change the realities of where goods are transported. Rail, whether electrified or not, is only effective where the concentrations of distribution centers, intermodal facilities and warehouses are high enough.

8: What are rail yards, intermodal facilities, warehouses, distribution centers, and inland ports?

The transfer of shipments from one mode to another and the combining of products for efficient movement to the final destination occur at transfer points. Common transfer points include:

- **Rail Yard**: A rail yard is a location where full rail cars of goods are sorted from incoming trains from particular origins and then added to or grouped into outbound trains moving in a specific direction. There may also be facilities where loading and unloading of rail cars can occur and where regional short line railroads can transfer cars to the Class 1 mainlines. Rail yards are common where rail networks change direction or intersect with other railroads.

- **Intermodal Facilities**: An intermodal facility is a general term describing a location where goods transfer from one mode to another. For example, goods may be moved from water to rail or truck at a port. Another example is a transfer from truck to rail at an intermodal facility such as the BNSF location in Los Angeles. A rail intermodal facility may be combined with a rail yard where full trains are created but they can also be separate. Airports also have facilities where air cargo is transferred to trucks and vans for delivery.

- **Warehouses**: Warehouses serve two purposes in the supply chain. The first is to store goods until they are needed at a final location. The second is to provide a facility where products coming in can be deconsolidated and sorted for reconsolidation to create efficient loads for products going in the same direction.

- **Distribution Center**: This second type of warehouse is known as a distribution center. These facilities may also provide additional services as part of this process. For example, goods coming in from international locations may be inspected or packaged or have some final assembly processes performed. Distribution centers may be operated by private companies such as the big box retailers or by third parties providing services to numerous companies.
Inland Port: An inland port is an inland site located away from traditional ports at land, air and coastal borders. Inland ports are linked to major container seaports (i.e., the San Pedro ports) and facilitate the movement of goods from the seaports to major population centers. An inland port transfers container between multiple modes of transportation (i.e., rail and truck), processes international trade and provides value-added services (i.e., manufacturing and distribution).

9: **What are the new and evolving technologies for goods movement? Where have they been implemented? Where are they practical?**

The application of technology in the supply chain is a constant process applied to reduce cost in operations, improve customer service, provide increased security and quality control, to foster regulatory compliance, and to act on environmental concerns. Some categories of technologies include:

- **Equipment and Facilities:** Different types of vehicles or equipment alterations that improve performance reduce cost or lower emissions are voluntarily employed by carriers and shippers or mandated by regulations. In California, this includes trucks that meet the emission standards being applied to port traffic. It also includes the no idle policies for maritime vessels where electricity is used to power vehicles at the pier rather than their engine systems. Companies are working to "green" their distribution facilities and apply alternative energy sources. Shippers and carriers participate in programs such as EPA Smart-Way which monitors efficiency and encourages continuous improvements in energy use.

- **Software:** Transportation operations and shipment tracking software is continuously employed and improved to improve customer service, quality, and security as well as to reduce the cost of operations. Network modeling software is used to identify the most efficient routings and load configurations to meet demand. This often results in a reduction in the numbers of vehicles employed to meet the customer needs. These models also identify when a modal diversion can reduce cost and improve emissions. The conversion of truck to rail is the primary example of this. Monitoring and communications equipment installed in vehicles and coordinated with operations software can monitor speed, idling, driving habits, and other factors that improve performance and safety and reduce emissions.

- **Highway Technology:** The public sector employs technology to improve compliance while reducing delay for carriers. Weigh in motion sensors in the highways allow carriers to avoid stopping at scales. Toll passes have a similar effect in avoiding delay.
Traffic signal synchronization improves efficiency and electronic signs on the freeways divert traffic helping to reduce congestion.

In addition to supply chain improvements, improvements to the vehicle fleet occur through legislated requirements. SCAG’s plans for a low and zero-emissions truck fleet by 2035 are illustrated below. Changes to the truck fleet will not necessarily change the number of trucks, but will improve the air quality associated with truck movement.

**Goods Movement Environmental Action Plan**

Targeted Deployment Dates
- 2015-2020 for drayage trucks
- 2017-2035 for all regional trucks
- 2018-2035 for advanced rail technologies
Part 4: What are the Current Operations and Future Forecasts at the Ports of Los Angeles and Long Beach?

1: The Ports are forecasting a lot of growth – how much more freight will they carry? How will the planned expansion of the Panama Canal affect cargo demand at the San Pedro Bay ports?

The San Pedro Bay ports are the busiest ports in the U.S. Combined, they are the seventh busiest in the world (World Shipping Council, 2011). Container trade at the Ports of Los Angeles and Long Beach nearly doubled between 1994 and 2004 (USDOT Office of Freight Management and Operations, *Freight Facts and Figures, 2005*). Container volumes through the San Pedro Bay ports are projected to nearly triple from nearly 14 million TEUs (twenty-foot equivalent units) in 2006 to approximately 43 million TEUs by 2035.

The graphic below illustrates recent (2007 to 2010) decline in port container volumes, due to the economy. The projections are based on the business plans at the Ports.

![San Pedro Bay Ports Container Volume Trend and Projections](source: SCAG 2012-2035 Regional Transportation Plan)
The completion of the Panama Canal expansion, scheduled for 2014, is expected to shift some port container traffic from the West Coast to the East Coast and Gulf ports, as the all-water route from Asia to the eastern U.S. through the canal becomes more economical. Even with the improvements to the canal, it will still take five to six fewer days for freight to unload on the West Coast and cross the U.S. by train than to travel through the Panama Canal. However, if freight corridors in the west become too congested and reduce the reliability of the supply chain, goods movement could shift to alternative ports, routes, or modes – away from the San Pedro Bay ports.

2: How do goods get from the Ports to their destinations?

The other FAQs in this series provide a lot of information about the logistics of goods movement from the ports. In general, most goods from the ports make multiple trips, and their first stop out of the ports is a rail yard or distribution center where the goods are repackaged for transport (either within or outside of Southern California). The mode of transport depends on the goods and the carrier, but both trucks and rail are used. Also note that many goods (and empty containers) also return to the Ports.

3: What kind of goods are shipped and distributed from the Ports?

The Port of Los Angeles and the Port of Long Beach process a variety of goods and are two of the primary gateways for sending and receiving international goods between the U.S. and other nations. The imported goods arriving at these ports predominately come from Asia in international shipping containers. The largest categories of imported goods coming through the ports are consumer goods such as toys, sports equipment, electronics, furniture, and clothing. Larger goods such as machinery and vehicles also arrive at the ports. Imported goods are transferred to truck or rail at one of the intermodal facilities on or near the ports, or at the intermodal facilities near downtown Los Angeles, before being shipped to their final destination.

The ports also process goods that are exported to other countries. The primary exports through the ports are raw materials such as petroleum and chemicals, foods, and waste paper and recycled materials.

4: Do most of the trucks using the roads come from the Port?

No – the vast majority of trucks are local trucks that never travel to or from the Ports. SCAG estimates are that over 92 percent of the trucks in Los Angeles County are not Port-related.
Of course, at locations closer to the Ports, a truck on the roadway is more likely to be a Port truck. Most of the trucks on the freeways and roads around the Ports are going to near-dock facilities, or the intermodal yards south of downtown Los Angeles. North and east of Los Angeles, the vast majority of the trucks are transporting goods within the metropolitan area and have no contact with the Ports.

5: What actions are the Ports taking to lessen port truck pollution?

The trucks at the Ports are cleaner than average, and the Ports are leaders in developing clean air programs. For example, the Port of Long Beach (POLB) has a Clean Trucks Program (outlined in the San Pedro Bay Ports Clean Air Action Plan) that has reduced air pollution from harbor trucks by more than 90 percent in approximately three years. The POLB started banning old polluting trucks in 2008, and as of January 1, 2012 the program bans all trucks that do not meet the 2007 federal clean truck emission standard from port terminals. Trucks that meet the federal 2007 emission standard produce 80 percent less air pollution than older trucks. To help finance the replacement of older trucks, the POLB began collecting a temporary Clean Trucks Fee applied to containerize cargo moving through the POLB by truck until all trucks are replaced by newer models. Currently, nearly all of the 11,000 drayage (or short-haul) trucks servicing the Port terminals are 2007 or newer models. The Port of Los Angeles (POLA) has a similar program. POLA implemented a “progressive ban on polluting trucks”, which required all trucks entering the port to meet federal standards. The result was a reduction in port truck emissions of over 80 percent.


6: Do the goods that arrive at the Ports get shipped to both local and national destinations?

Distribution and supply chains are complex, and vary by the supplier and individual businesses. Most businesses do not receive goods directly from the Ports, but rather from individual suppliers. These suppliers serve many businesses. A common model is that an individual supplier will receive goods from the Ports that are then distributed to locations throughout the country (inside and outside of Southern California).
Because Southern California has a large population, many of the goods remain local. Also, goods being used here are much more likely to come through the Ports of Long Beach and Los Angeles. Elsewhere in the U.S., goods are more likely to arrive through ports in the Northwest, Gulf Coast, or East Coast.

7: **What impact will the new Southern California International Gateway (SCIG) have on truck traffic? Will SCIG take trucks off the roads?**

The SCIG intermodal transfer facility will be located approximately four miles from the Ports and would operate more efficiently than the existing intermodal facilities, resulting in fewer overall truck trips. Currently, many trucks travel between the Ports and Hobart Yard (located approximately 24 miles north of the Ports) near downtown Los Angeles, generally on I-110 and I-710. SCIG would eliminate an estimated 95 percent of these truck trips by diverting them from Hobart Yard to the new SCIG facility on designated truck routes to avoid local neighborhoods and sensitive receptors (i.e. hospitals, schools, etc). The SCIG Project would include contracts with drayage companies that would require use of the designated truck routes shown in the map below.

SCIG is projected to reduce truck trips on I-710, between the SCIG project site and the Hobart Yard, by over 1.3 million truck trips per year. Source: SCIG Draft Environmental Impact Report ([http://www.portoflosangeles.org/EIR/SCIG/DEIR/deir_scig.asp](http://www.portoflosangeles.org/EIR/SCIG/DEIR/deir_scig.asp))
Part 5: How is the topic of Goods Movement factored into the development of Alternatives for the SR 710 Study?

1: **Will the impact of freight traffic be considered within the SR-710 EIR?**

Yes. The latest travel forecast model (known as the SCAG 2012 RTP model) includes an updated truck (freight) component. In the model, the traffic impacts of trucks are directly measured along with other vehicles (cars) to determine the effect on the roads in the region. In the model, trucks have their own distribution patterns, so the effects of truck travel to and from the Ports, distribution centers, warehouses, intermodal facilities, and other truck destinations are considered explicitly.

The travel forecast model will be used to assess a variety of impacts. It is used to evaluate travel time, delay, and level of service (LOS) impacts. It is also used in conjunction with detailed operational models to evaluate other traffic measures, including intersection operations, queuing, and freeway operations. Trucks figure into the modeling efforts throughout.

The traffic models are also used as input into the environmental analysis. In particular, noise and air quality analysis require detailed, specific input from the traffic modeling. Information on trucks is an important part of those data.

2: **How is freight traffic from the Port of LA and the Port of Long Beach being considered?**

Freight traffic from the Ports is part of the evaluation, and included as a component of the overall trucks in the study area. However, for the SR 710 study, the relatively low percentage of port trucks in the Study Area means that it is more important to evaluate non-port trucks, particularly those on the local streets and freeways. As noted in the other FAQs, most port truck traffic ends up south of Los Angeles or going to points east along I-10 and I-60. The modeling efforts will tell us whether some of those trucks use different routes if the build alternatives are constructed.
3: Are freight alternatives being considered in the SR-710 Environmental Study, and are they part of the GRID system?

Freight alternatives were considered, but it was determined that they would not have a meaningful benefit in addressing the needs for the Study. Previous FAQ responses have noted that the freight destinations are spread all over the region, and are particularly distributed away from the Ports. Dedicated freight alternatives have major infrastructure requirements of their own that make them suitable when a very large amount of goods have a common origin and destination, which isn’t the case in the Study Area. The GRID system has a much larger focus, and would not address the needs of the Study in a way that is competitive with the other alternatives under consideration.

4: Is goods movement a part of the purpose and need?

The Study is focused on improving transportation in the Study Area. Goods movement is part of the transportation system. However, the issues related to goods movement are not a major contributor to a majority of the need elements. The Study is focused on improving mobility and congestion within the Study Area. Review of the data indicates that a number of factors contribute to congestion in the Study Area and results in four primary need elements. The need elements for this Study are an inefficient regional transportation system, congestion on local streets, freeway congestion, and an inefficient transit service. As indicated in FAQ series 1 through 4, trucks are only 5 to 10 percent of the total traffic in the Study Area. Therefore, the Study does not focus on goods movement, but focuses on improving overall mobility and relieving congestion within the Study Area.