

**THE POTENTIAL ECONOMIC IMPACT
OF THE
LA QUINTA TRADE GATEWAY
CONTAINER TERMINAL**

prepared for



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THE POTENTIAL ECONOMIC IMPACTS OF THE LA QUINTA TRADE GATEWAY CONTAINER TERMINAL

Martin Associates was retained by the Port of Corpus Christi to measure the potential economic impacts that would be generated by the development of the La Quinta Trade Gateway container terminal. The proposed container terminal at full build-out consists of a 188 acre marine terminal, 3,500 linear feet of wharf, and a 114 acre intermodal rail terminal. The proposed layout of the facility will have a capacity to handle 1.5 million (twenty foot equivalent units), and it is further assumed by the developers that 25% of the containerized cargo moving via the facility will be handled at the intermodal rail yard. The project is designed in four phases. During the first phase the La Quinta Channel will be extended, a 1,500 ft. turning basin will be constructed and a 31 acre terminal will be developed. Two cranes are assumed in Phase I, with a target capacity of 250,000 TEU's for a maximum throughout of 151,515 actual container moves. During the second phase, 32 additional acres for the terminal will be developed, along with a 50 acre intermodal yard. The terminal capacity is projected to reach 500,000 TEU's or 303,030 actual container moves in this Phase II. In Phase III, 62 additional terminal acres are developed for a total terminal area of 125 acres. An additional 26 acres are added to the intermodal yard and six cranes are assumed to be in place for Phase III. Projected terminal capacity in Phase III is 1 million TEU's, with a 606,061 container move capacity. In Phase IV, maximum build-out occurs. The terminal area is 188 acres, 9 cranes are in place, a 114 acre intermodal yard is fully developed and 3,500 linear feet of berth is completed. The maximum capacity is designed at 1.5 million TEU's, with practical capacity at 1.2 million TEU's, or about 700,000 container moves.

In the initial stages of development, all containers will be moved by truck. In the later years, a 25% intermodal share is assumed.

The potential economic impacts are estimated using these operational assumptions. The structure of the impact analysis is described in the next section.

1. IMPACT METHODOLOGY

Waterborne activity at the planned La Quinta container terminal would contribute to the local and regional economies by generating business revenue to local and national firms providing vessel and cargo handling services. These firms, in turn, provide employment and income to individuals, and pay taxes to state and local governments. The impact of the container terminal is not reduced to a single number, but instead, the container activity will create several impacts. These are the revenue impact, employment impact, personal income impact, and tax impact. These impacts are non-additive. For example, the income impact is a part of the revenue impact, and adding these impacts together would result in double counting.

1.1 Business Revenue Impact

At the outset, activity at the terminal would generate business revenue for firms which provide container handling services. This business revenue impact will be dispersed throughout the economy in several ways. It will be used to hire people to provide the services, to purchase goods and services, and to make Federal, state and local tax payments. The remainder will be used to pay stockholders, retire debt, make investments, or held as retained earnings. It is to be emphasized that the only portions of the revenue impact that can be definitely identified as remaining in the local economy are those portions paid out in salaries to local employees, for local purchases by individuals and businesses directly dependent on the seaport, in contributions to state and local taxes, and in lease payments and wharfage, dockage and handling fees.

1.2 Employment Impact

The employment impact of the container terminal will consist of three levels of job impacts.

- . Direct employment impact - jobs directly generated by the movement of the containers via the proposed terminal. Direct jobs generated by the containers will include jobs with railroads and trucking companies moving cargo between inland origins and destinations and the marine terminals, longshoremen, steamship agents, freight forwarders, stevedores, etc.
- . Induced employment impact - jobs that will be created throughout the local economy because individuals directly employed due to the proposed container terminal will spend their wages locally on goods and services such as food, housing and clothing. These jobs are held by residents located throughout the region, since they are estimated based on local and regional purchases.
- . Indirect Jobs - jobs that will be created locally due to purchases of goods and services by firms, not individuals. These jobs include jobs with local office supply firms, maintenance and repair firms, parts and equipment suppliers, etc. Also, the indirect impacts associated with marine construction activity are included.

1.3 Personal Earnings Impact

The personal earnings impact is the measure of employee wages and salaries (excluding benefits) received by individuals directly employed due to handling the containerized cargo at the proposed La Quinta container terminal. Re-spending of these earnings throughout the regional economy for purchases of goods and services is also estimated. This, in turn, generates additional jobs -- the induced employment impact. This re-spending throughout the region is estimated using a regional personal earnings multiplier, which reflects the percentage of purchases by individuals that are made within the Corpus Christi area. The direct earnings are a

measure of the local impact since they are received by those directly employed by seaport activity.

1.4 Tax Impact

Federal, state and local tax impacts are tax payments to the state and local governments by firms and by individuals whose jobs would be directly dependent upon and supported by (induced jobs) activity at the proposed container terminal.

2. KEY IMPACT ASSUMPTIONS

Since no container terminal currently exists at the Port of Corpus Christi, it was necessary for Martin Associates to develop the economic impacts for a prototype terminal. The first step in the analysis is to develop an operational profile of the proposed container terminal. This operational profile is based on the in-house data bases that Martin Associates has developed from impact studies conducted for existing container terminals, particularly at such ports as Houston, Baltimore, Seattle, Portland (OR), Los Angeles and Long Beach. The impact model developed as part of this study includes mathematical models of specific terminal and support operations. These specific terminal operations include:

- . Gate operations (manning levels per lane and per box throughput)
- . Terminal operations (manning levels based on number of boxes per terminal gang hour)
- . Staffing for maintenance and repair based on similar terminal operations (primarily in the Gulf and South Atlantic)
- . Intermodal rail loading and rail discharging (manning levels based on the number of intermodal boxes per rail yard gang hour)
- . Container yard staffing (manning levels based on similar sized yards)
- . Vessel loading and discharge productivities (manning levels based on number of boxes loaded or discharged per ILA gang hour and ship staff)

In addition to direct terminal impacts, economic impacts are also estimated for support activities, including steamship agency activities, towing and pilotage activities, and freight forwarding, as well as vessel chandlery (supplies), container repair and leasing. These impacts of support operations are based on data bases developed from other impact studies of container operations at the previously identified ports for which Martin Associates has conducted economic impact studies. Towing and pilotage impacts are based on data developed from interviews with key vessel agents and steamship lines as well as data developed by Martin Associates during the recent economic impact study for the Port of Corpus Christi.¹

¹"The Economic Impacts of the Port of Corpus Christi", Prepared for the Port of Corpus Christi Authority; by Martin Associates; January 2004

Jobs with trucking firms are estimated based on the share of containers likely to move to and from the terminal via truck, as well as the average truck distance each box will move. Truck revenue is based on the average container linehaul trucking rates. Job impacts with linehaul rail are based on the average rail linehaul distance to key origin and destination points served via the Texas Gulf ports, as well as the number of crew changes on a typical intermodal linehaul move. Rail revenue is estimated based on the average rail rate portion of an intermodal rate via the Gulf Coast.

The annual projected container throughput during each phase is then substituted into the impact model to estimate the potential economic impacts.

3. ECONOMIC IMPACTS OF CONTAINER OPERATIONS

The economic impacts of the terminal are estimated for the first year, fifth, tenth, fifteenth and twentieth year of operation. In the first year of operation, the terminal is projected to handle 30,300 containers. By the twentieth year, or full build out, the terminal is projected to handle 703,800 container moves. Using the Port of Corpus Christi Impact Model, the direct, induced and indirect impacts are estimated for the five different levels of terminal throughput.

During the initial year of operation, the proposed La Quinta container terminal is assumed to handle 30,300 containers, which would generate 608 direct, induced and indirect jobs, \$35 million of business revenue, \$32 million of personal wages and salaries and consumption purchases, \$4.1 million of local purchases, and \$3 million of state and local taxes.

In the fifth year of operation, annual throughput is projected to increase to 147,700 container moves (243,700 TEU's). This represents the maximum throughput under Phase I. With this projected level of throughput, nearly 3,000 direct, induced and indirect jobs are projected, with \$168.7 million of revenue and \$20.1 million of local purchases. State and local taxes are projected to reach \$14 million annually under this throughput assumption.

In the tenth year of operation, 271,300 container moves are projected, which is about 450,000 TEU's, and represents nearly full utilization of the capacity under Phase II. This projected activity is estimated to support 5,753 total jobs, about \$350 million of business revenue, \$302.6 million of total personal earnings, \$41.7 million of local purchases and \$27.2 million of state and local taxes.

By year 15, 437,000 containers (721,050 TEU's) are projected for the terminal, accounting for nearly 75% of Phase III terminal capacity. This throughput will generate nearly 9,300 total jobs, \$563.6 million of business revenue, \$487.6 million of personal earnings, \$67.2 million of local purchases and \$43.9 million of state and local taxes.

Finally, in year 20, 703,800 container moves are projected by the Port, for a nearly 1.2 million TEU throughput. This represents the full-build throughput, and is projected to support

nearly 15,000 total direct, induced and indirect jobs annually. These job holders will receive \$785.7 million of personal earnings, and businesses providing services to the terminal are projected to receive \$907.7 million annually with this throughput. Local purchases are projected at \$108.2 million and state and local taxes are projected at \$70.7 million.

Exhibit 1 summarizes the estimated annual impacts generated at the 5 year increments.

Exhibit I
Potential Economic Impacts of the Proposed
La Quinta Trade Gateway Container Terminal
Projected Annual Impacts

IMPACTS	Year of Operation				
	1	5	10	15	20
	30,300 Lifts	147,700 Lifts	271,300 Lifts	437,000 Lifts	703,800 Lifts
JOBS					
DIRECT	337	1,643	3,164	5,099	8,217
INDUCED	218	1,061	2,054	3,311	5,366
INDIRECT	53	258	535	862	1,387
TOTAL JOBS	608	2,962	5,753	9,272	14,970
PERSONAL INCOME (Millions)					
DIRECT	\$ 13.1	\$ 63.8	\$ 123.7	\$ 199.4	\$ 321.3
INDUCED	\$ 16.2	\$ 78.7	\$ 152.8	\$ 246.2	\$ 396.8
INDIRECT	\$ 2.6	\$ 12.6	\$ 26.1	\$ 42.0	\$ 67.6
TOTAL INCOME (Millions)	\$ 31.9	\$ 155.1	\$ 302.6	\$ 487.6	\$ 785.7
BUSINESS REVENUE (Millions)	\$ 34.6	\$ 168.7	\$ 349.9	\$ 563.6	\$ 907.7
INDIRECT PURCHASES (Millions)	\$ 4.1	\$ 20.1	\$ 41.7	\$ 67.2	\$ 108.2
STATE/LOCAL TAXES (Millions)	\$ 2.9	\$ 14.0	\$ 27.2	\$ 43.9	\$ 70.7

4. ECONOMIC IMPACT OF TERMINAL DEVELOPMENT

The construction cost of the full development of the La Quinta container terminal is estimated at \$348.6 million. Under Phase I, \$106.3 is allocated for development and construction, followed by \$57.8 million in Phase II, \$83.4 million in Phase III and \$101.1 million in Phase IV. Using a construction job multiplier developed for the State of Texas by the U.S. Bureau of Economic Analysis, Regional Input-Output Modeling System (RIMSII), it is estimated that 2,396 construction jobs would be supported during Phase I of the construction, 1,303 direct, induced and indirect jobs would be supported in Phase II of the construction, 1,880 total jobs during Phase III of the terminal construction, and 2,279 direct, induced and indirect jobs supported in Phase IV of construction and development.

The employment, personal income and state and local tax impacts are presented in Exhibit II.

Exhibit II
Economic Impact of Construction of La Quinta Trade Gateway
(One-Time Construction Impacts)

Year	Construction Costs Millions	Jobs Direct, Induced, Indirect	Personal Income Millions	Taxes Millions
Phase I	\$ 106.3	2,396	\$82.1	\$7.4
Phase II	\$ 57.8	1,303	\$44.6	\$4.0
Phase III	\$ 83.4	1,880	\$64.4	\$5.8
Phase IV	\$ 101.1	2,279	\$78.1	\$7.0

In conclusion, it is to be emphasized that the impacts described in this study are based on the incremental development of the proposed La Quinta Trade Gateway container terminal. Changes in the throughput assumptions as well as changes in development costs would affect the economic impact estimates.