

## SECTION A INTRODUCTION AND OVERVIEW

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In the last decade, great economic progress has been achieved throughout Latin America. Monetary reform, political stability and social and economic reforms have created a climate in which international trade has increased. At the first Summit of the Americas (1994), then President Clinton noted that these conditions presented opportunities for increased U.S. exports to Latin America:

*"The commitment to democratic government in Latin America coupled with continued economic reform and market-opening policies in most countries of the region should result in U.S. exports growing at a rate faster than average in future years. Additionally, the passage of NAFTA has given a new impetus to the interest of Latin countries in working towards a hemispheric free trade zone."*

### SOUTHEASTERN TRANSPORTATION ALLIANCE

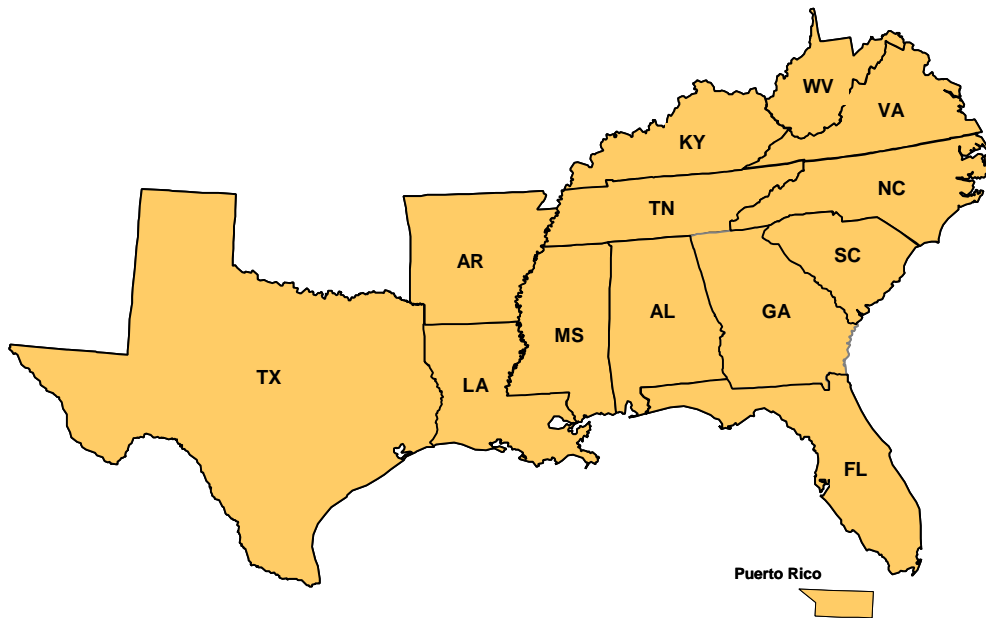
Others also recognized the increased opportunities that have emerged in recent times. They also understood that positive, well planned, and decisive actions were required if these opportunities are to be exploited fully. Dr. Robert L. Robinson, then Executive Director of the Mississippi Department of Transportation, stated:

*"It is the prediction of many that South and Central America are going to provide the next major economic expansion--similar to the Pacific Rim Nations. If we work together as a region, get ready and move appropriately, the Southeast is in the right place at the right time. If we are to get the maximum benefit from both South and Central America's economic expansion, we must be pro-active and not after the fact reactive."*

This vision of opportunity and responsibility led to the formation of the Southeastern Transportation Alliance. The Alliance is an organization of the state transportation agencies in the states/commonwealths of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Puerto Rico, South Carolina, Tennessee, Texas, Virginia, and West Virginia, in cooperation with the United States Department of Transportation, Federal Highway Administration. The Alliance, shown in **Exhibit A-1**, is an informal agreement between these partners to provide a means of financing and conducting the Latin America Trade & Transportation Study (LATTTS).

For purposes of this study, Latin America was defined by the Alliance as all western hemisphere nations south of the United States.

**Exhibit A-1  
SOUTHEASTERN TRANSPORTATION ALLIANCE**



**STUDY SETTING**

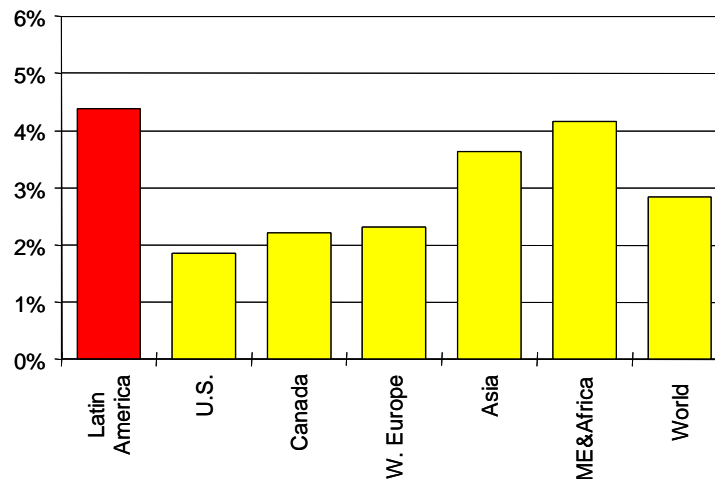
There are many indications that Latin America may be on a prosperity threshold. Restrictive and discriminatory import duties are declining, multi-lateral trade agreements are occurring, and hemisphere-wide free trade is a possibility. Under these conditions, international trade could substantially increase. (**Exhibit A-2**)

**Exhibit A-2  
POTENTIAL FOR INCREASED LATIN AMERICAN TRADE**



The Wilbur Smith Associates Consultant Team included the firm of DRI/McGraw-Hill, an organization that regularly analyzes the world's economies, and makes forecasts of both international economies and trade. Shown on **Exhibit A-3**, the DRI forecasts for 1997-2020 indicate annual economic growth rates of 4.6% for Latin America (compared with 1.85% for the U.S.).

**Exhibit A-3**  
**REAL GDP GROWTH IN EMERGING AND DEVELOPED COUNTRIES**  
**1997-2020**



In the changing global marketplace, lower operating costs offer a competitive advantage for companies. Since transportation costs are a significant element in the total delivered costs of goods, a state-of-the-art transportation infrastructure with which to move goods and services just in time and cost effectively is essential for competing in the future.

The proximity of the Alliance Region to the Latin American markets, coupled with a good intermodal transportation system, will provide competitive advantages for companies in the Alliance states.

## STUDY PURPOSES

In recognition of these potentials, the Southeastern Transportation Alliance was formed "... to assess infrastructure development required to capitalize on international trade stimulated by increased trade with Latin America." The purpose of the Alliance in undertaking LATTs was to enhance economic development in the Alliance States, collectively and individually, by taking advantage of the accelerating opportunities for trade with Latin America.

This will increase economic production in the Alliance Region and provide more jobs, increased wage earnings and additional prosperity, for the Region's people.

The study assisted the Alliance in attaining its goal by accomplishing the following:

1. Investigated and identified trade opportunities between the USA and other countries, with special emphasis on Latin America;
2. Identified how the economies of the Alliance States could benefit if they are able to capture "their fair share" of this international trade;
3. Evaluated existing relevant transportation infrastructure and its ability to meet the increased demands associated with growth in Latin American trade; and
4. Developed strategies to optimize investments in the Region's ports, waterways, airports, railroads, major highway corridors, and intermodal facilities.

The trade information assembled, analyzed and forecast during the study is directly related to the transportation investment strategies that are a principal study product. The reasons are, first, that expanding foreign trade is related to increased domestic job opportunities; second, that growth in foreign trade as well as rising domestic economic activity, increases the demands on transportation facilities; third, that changes to the transportation system can accommodate, facilitate or inhibit this increasing use; and fourth, that the partners in this study have both a common and individual stake in investing in transportation improvements to make the most of the opportunities arising from this situation.

## PUBLIC OUTREACH

The Southeastern Transportation Alliance determined that, for LATTs to be successful, a proactive public involvement process was to be conducted at all stages of the project; i.e. early and continuous involvement. This would ensure that there was public availability of study information and that there were ample opportunities for study inputs, comments and suggestions by the general public, major stakeholders, and affected public agencies.

The distribution of study newsletters on a periodic basis helped achieve these goals. Through these means, information about the study was disseminated. Also, a contact person was designated in each state who was available to receive inputs that interested parties might want to make to the Study Team.

A second means for sharing information and receiving comments, suggestions and information involved the use of the Internet. A LATTs web site was

developed and maintained during the study. The web site was updated periodically with the latest information concerning the study.

## STUDY TEAM APPROACH

The Study Team for the Latin American Trade & Transportation Study was composed of participants from the state transportation agencies constituting the Alliance, the Federal Highway Administration, and the Wilbur Smith Associates Consultant Team.

### Steering Committee

The Chief Administrative Officer of the respective state transportation agencies, along with the Federal Highway Administrator, constituted the Steering Committee for this study. This committee had active control of all decisions relating to this study.

### Working Committee

This committee was appointed to coordinate the technical elements of the study. Each state and the Federal Highway Administration had one representative on the Working Committee.

### Consultant Team

The Consultant Team was supervised and guided by the Steering Committee and the Working Committee. Following a competitive selection process, the Alliance selected the Wilbur Smith Associates Consultant Team to conduct the study. This team is comprised of:

- ▶ Wilbur Smith Associates (WSA), the prime contractor for the study. WSA is an international consulting, engineering, economic and planning firm which specializes in the transportation sector.
- ▶ DRI/McGraw-Hill is the economics-consulting unit of Standard and Poor's, a division of the McGraw-Hill Companies, a global information services company.
- ▶ R.K. Johns and Associates is a maritime consulting firm.
- ▶ VZM/TranSystems specializes in cargo ports.
- ▶ HNTB Corporation assisted WSA with the airport component of the study.
- ▶ WHM Transportation Engineering provided support services regarding Intelligent Transportation Systems (ITS).

## TRADE AND ECONOMIC DEVELOPMENT OPPORTUNITIES (SECTION B)

A macro-scale analysis was performed to assemble, evaluate and forecast international trade information, consistent with the first two study purposes presented earlier. The major findings of these analyses are presented in Section B and are summarized as follows:

### Historical and Current Trade Patterns

In response to a number of factors, Latin America is experiencing unprecedented economic growth. Study analyses revealed that:

- ▶ There is a sustained pattern of growth in trade between Latin America and the United States.
  - B In recent times, the growth rate in trade has escalated above historical patterns.
- ▶ For a number of reasons, including its advantageous geographical relationship to Latin America, trade between the United States and Latin America tends to gateway in the Alliance Region (i.e., enter or leave the United States through the Region).
  - B 86 percent of Latin America imports into the United States enter through the Alliance Region.
  - B 71 percent of all U.S. exports to Latin America depart through the Alliance Region.
- ▶ Of the total Latin American trade gatewaying in the Region, 80 percent of the tonnage and 60 percent of the commodity value was seaborne trade.
- ▶ Trade crossing the Texas/Mexico border accounts for 20 percent of the tonnage and 38 percent of the value of gateway traffic.
- ▶ In relative terms, the smallest component of trade with Latin America enters or leaves the United States by air. Nevertheless, airborne freight is a very important element for certain commodities.

### Trade Forecasts

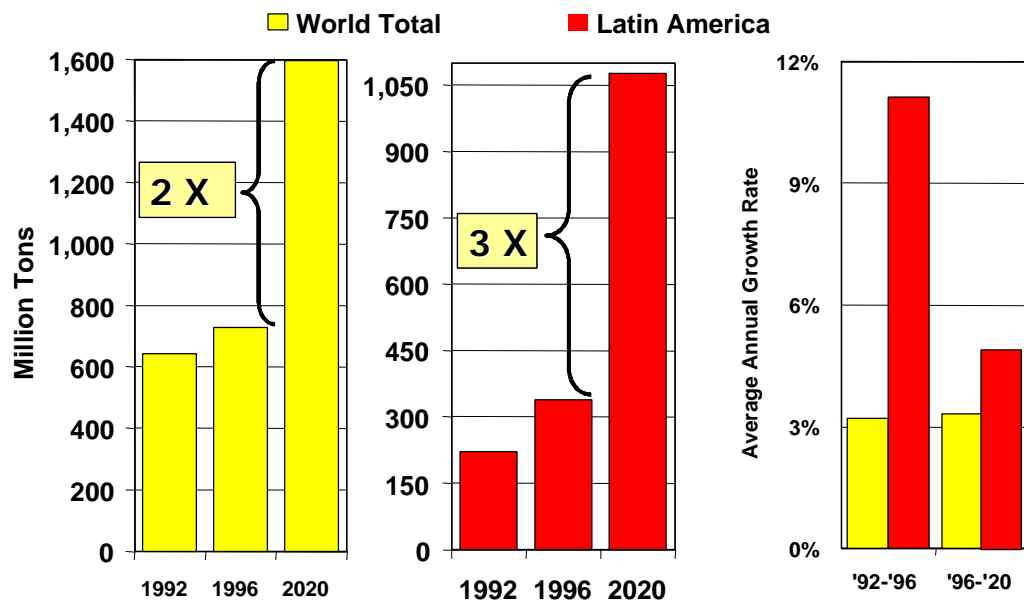
Forecasts developed by the study clearly show that trade with Latin America will be even greater in the future, in both relative and absolute terms.

- ▶ As noted in **Exhibit A-4**, total international trade by the Alliance Region is expected to double by the year 2020.
- ▶ The Latin American component of total international trade is expected to triple during this time span.

These “Base Case” forecasts assume a continuation of recent trends and conditions until 2020. Nevertheless, there are significant events which could result in a “High Case” scenario. These events could include:

- ▶ Increased liberalization of trade, e.g. a Western Hemisphere Free Trade Agreement,
- ▶ Higher economic growth trends for Latin America and/or the United States, and
- ▶ Changes in U. S. policies regarding Cuba.

**Exhibit A-4  
ALLIANCE TRADE GROWTH TRENDS: FORECASTS**



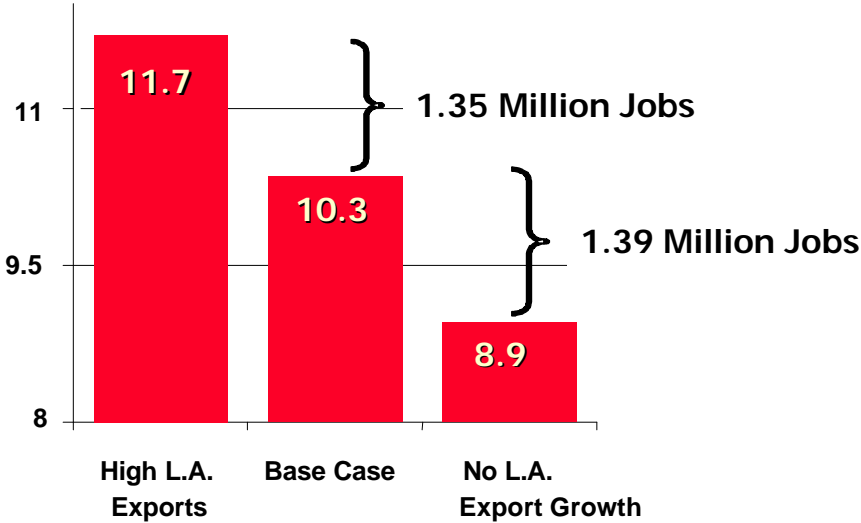
Under a “High Case” scenario, the volume of trade with Latin America through Southeast Alliance gateways is forecast to increase to 1.1 billion metric tons, more than 22 percent higher than the “Base Case” forecast for 2020.

### Economic Development Impacts

Trade with Latin America leads to additional jobs for the people of the Southeastern Alliance Region. Given the Region’s position in the Western Hemisphere’s economy, these jobs are likely to be created in value-added industries and in the higher wage occupations within those industries. Using a system of macroeconomic models, simulations have been undertaken to predict the impact of Latin American trade on the Alliance. Levels of Alliance

employment were compared for the “Base Case” and the “High Case.” To demonstrate the importance of Latin American trade upon job formation in the Alliance Region, these analyses also produced an estimate of employment levels if there were no growth in trade with Latin America. Results of these analyses are depicted in **Exhibit A-5**.

**Exhibit A-5**  
**CHANGE IN ALLIANCE EMPLOYMENT**  
**FROM 2000 TO 2020**  
**(Millions of Jobs)**



- ▶ The “Base Case” scenario will result in 1.39 million additional jobs, i.e. jobs that are created through increased trade with Latin America under the “Base Case” growth assumptions.
- ▶ If the “High Case” growth scenario is realized, an additional 1.35 million jobs will be created in the Alliance Region.
  - ▶ That is, under the “High Case” growth scenario, there will be an additional 2.74 million jobs created in the Alliance Region which are attributable to increased trade with Latin America.

LATTS STRATEGIC TRANSPORTATION SYSTEM (SECTION C)

The role of the Alliance Region as the United States’ major gateway for Latin American trade flows places a significant responsibility on the Alliance to maintain a transportation system adequate to serve these flows as well as other freight and passenger traffic.



Accordingly, a process was undertaken which led to the identification of those transportation facilities which either currently are of significant importance to Latin American trade flows or which could become significantly important.

The resulting LATTs Strategic Transportation System consists of all four modes typically used for freight transportation, i.e., waterports, airports, railroads and highways. Each mode plays an important role in trade and economic development.

The main features of the LATTs Strategic Transportation System are discussed in Section C and are summarized as follows:

- ▶ Waterports
  - B A total of 42 waterports within the Alliance Region were included in the Strategic Transportation System.
  - B This included 31 coastal ports and 11 inland riverports.
- ▶ Airports
  - B The Strategic Transportation System included 48 airports.
  - B Of this total, 46 were existing facilities and two were proposed airports.
- ▶ Railroads
  - B Some 22,285 miles of railroads were included in the Strategic Transportation System.
- ▶ Highways
  - B The mainline portion of the LATTs Strategic Highway System totaled 22,859 miles.
  - B Interstate highways comprised 14,602 miles (or nearly two-thirds) of the mainline portion of the system. Non-interstate facilities made up the remaining 8,257 miles.
  - B The LATTs Strategic Highway System also included 123 individual intermodal connectors to waterports and airports.

## INVESTMENT NEEDS PERSPECTIVE (SECTION D)

The analysis of investment needs as reported in Section D of this report provides a perspective for the adoption of investment strategies that will achieve the LATTs goal and its seven supporting objectives. The overview and perspective below indicates the magnitude of the challenge that lies ahead as well as various characteristics of the total investment needs. These features, in turn, influenced the particular strategies which were adopted by the study and which are reported in Section E.

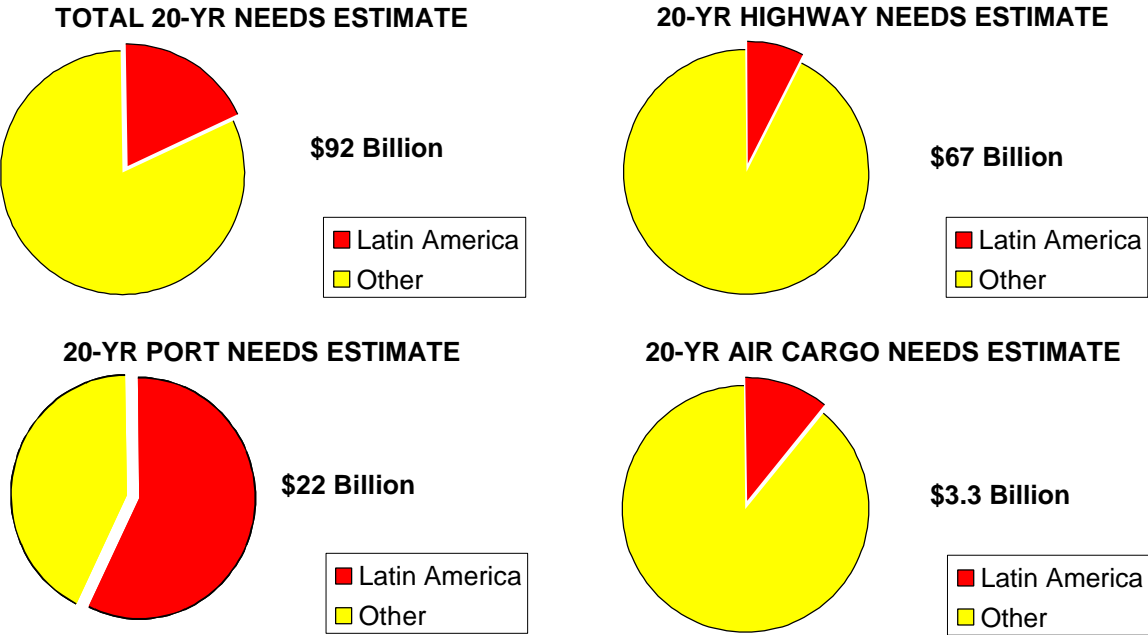
### Total Investment Needs

Depicted in **Exhibit A-6** are various characteristics of public sector investment needs on an overall basis. These needs encompass the LATTs Strategic Port, Airport and Highway Systems. No needs are included for the LATTs Strategic

Rail System because they are almost exclusively the domain of the private sector and are not directly germane to public investment strategies. Nevertheless, the rail system and its freight transportation role and performance characteristics does influence, to a degree, public sector investment strategies for other modes, particularly highways.

Investment needs on the LATTS Strategic Transportation System were found to be as follows:

**Exhibit A-6  
20 YEAR NEEDS ESTIMATES**



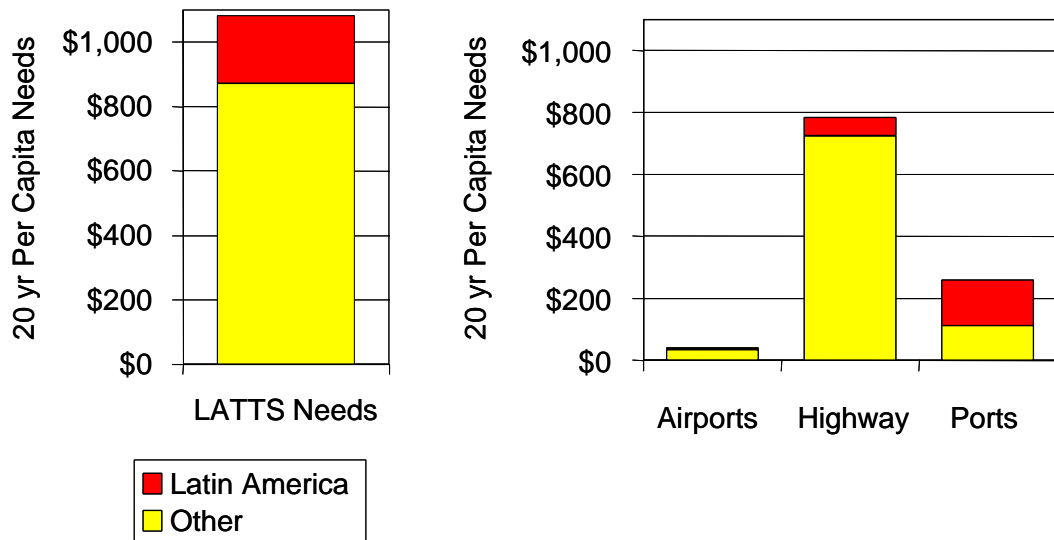
- ▶ Total needs amount to \$92 billion over the 20-year period.
  - B Of this amount, \$18 billion, or 20 percent of the total, are the direct result of Latin American traffic.
  - B The vast majority of total needs (80 percent) are required to serve personal travel and non-Latin American freight flows.
  - B Given this relationship and the nature of the LATTS Strategic Transportation System, investments aimed at serving growing trade flows with Latin America will also have a very substantial impact upon serving overall transportation needs within the Alliance Region.
  
- ▶ Twenty-year port needs amount to \$22 billion.
  - B This represents 24 percent of the total for all needs on the LATTS Strategic Transportation System.

- B Of the port total, the majority (57 percent) is related to trade with Latin America. This reflects the importance of the Alliance Region’s ports to Latin America trade flows.
- ▶ Air cargo needs of the LATTs Strategic Airport System amount to \$3.3 billion.
  - B This is the smallest of the three modal components, constituting only 4 percent of the total.
  - B Of the air cargo total, only 12 percent is directly related to Latin American trade flows.
  - B The vast majority of total needs (88 percent) are a result of air cargo needs associated with other international and domestic flows.
- ▶ Needs for the LATTs Strategic Highway System total \$67 billion over the 20-year analysis period.
  - B Highway needs are the largest component of total needs of the three modes at 72 percent.
  - B Nevertheless, only 8 percent of the total needs of the LATTs Strategic Highway System is directly related to trade with Latin America.
  - B On the other hand, some 92 percent of the needs of the LATTs Strategic Highway System are attributable to traffic flows which are not associated with Latin American trade flows.

Investment Needs Per Capita

The \$92 billion in needs for the LATTs Strategic Transportation System clearly is a hefty amount. However, when viewed in terms of per capita investment needs, it takes on a different perspective, as depicted in **Exhibit A-7**. For this presentation, per capita estimates were based on regionwide population (1998).

**Exhibit A-7**  
**PER CAPITA LATTs SYSTEM NEEDS ESTIMATES**  
**20 Year Total**

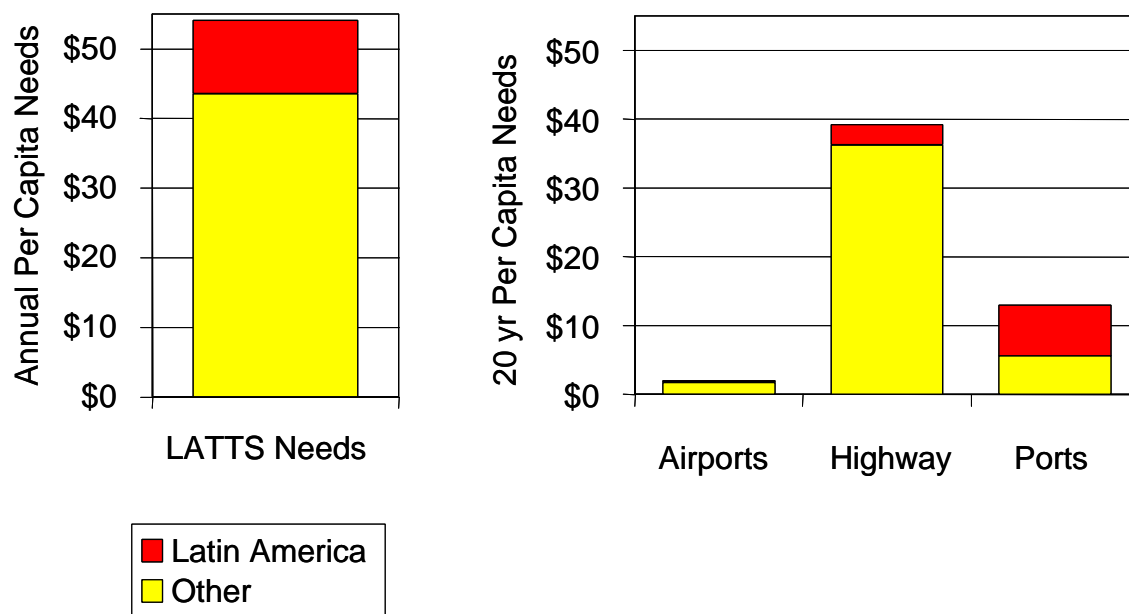


- ▶ Total needs of \$92 billion equate to \$1,082 per person over 20-years.
- ▶ The Latin American component of total needs amount to \$211 per capita, or only 20 percent of the total.
- ▶ Per capita needs are significantly higher for the highway component, amounting to \$783 over 20-years.
- ▶ Port per capita needs for the 20-years amount to \$260.
- ▶ By far the smallest per capita needs by mode is for airport cargo facilities at \$39.

The total 20-year need values are converted to annual amounts in **Exhibit A-8**.

- ▶ On an annual basis, per capita needs of the LATTTS Strategic Transportation System amount to \$54.
- ▶ Of this total, only \$11 is related to Latin America trade flows.
- ▶ Annual highway needs amount to \$39 per capita.
- ▶ Ports have annual needs of \$13 per person.
- ▶ Only \$2 per person per year is needed for air cargo flows.

**Exhibit A-8**  
**PER CAPITA LATTTS SYSTEM NEEDS ESTIMATES**  
**Annual per Capital Average**

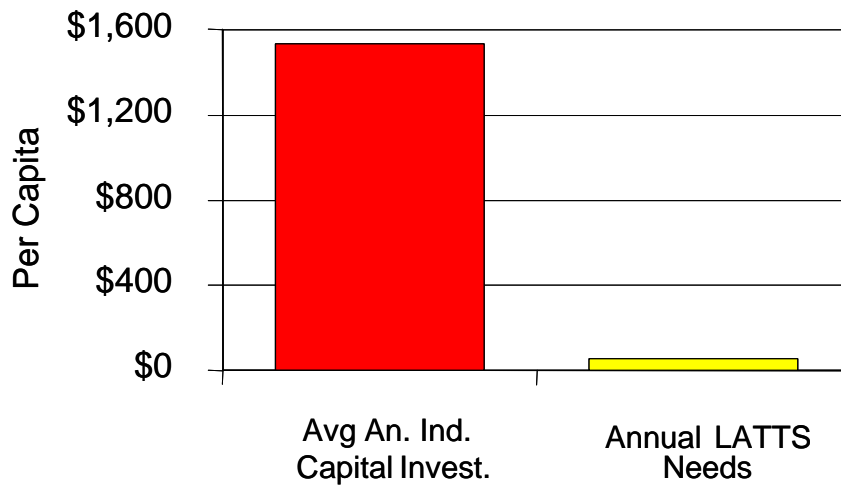


Comparison with Industrial Capital Investments

Industry clearly has a major dependence upon the transportation system to transport raw materials, intermediate and finished goods. Despite this heavy dependence, industrial capital investments are far greater than transportation investment needs.

As noted in **Exhibit A-9**, investment in 1998 by private industry (in South Carolina) equated to more than \$1,500 per capita. As already emphasized, only \$52 per capita is required annually for the LATTTS Strategic Transportation System.

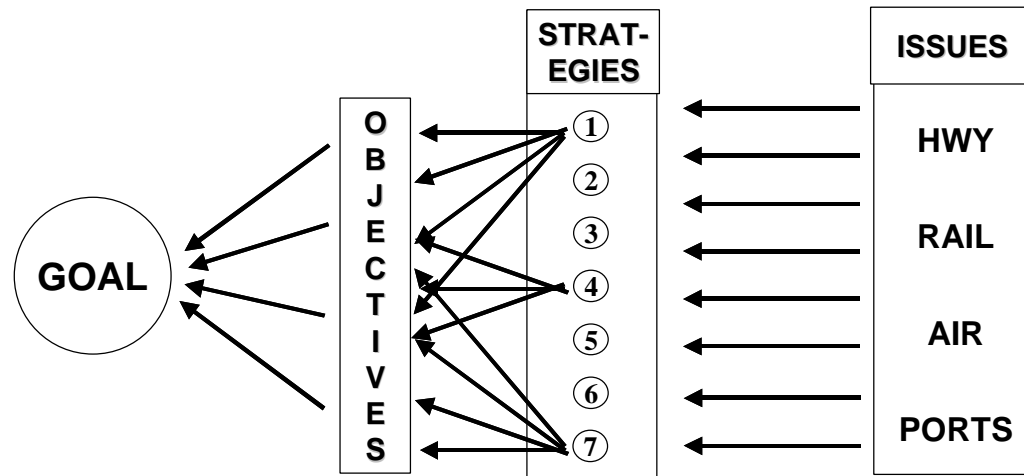
**Exhibit A-9**  
**LATTTS SYSTEM NEEDS vs INDUSTRIAL CAPITAL INVESTMENT**  
**Annual per Capita Average**



INVESTMENT STRATEGIES (SECTION E)

Development of investment strategies for the LATTTS Alliance followed an orderly and structured process. The diagram presented in **Exhibit A-10** depicts the principal elements of the approach.

**Exhibit A-10  
INVESTMENT STRATEGY OVERVIEW**



### Goal and Objectives

The goal of the Latin American Trade and Transportation Study framed the goal which the investment strategies are intended to support. The overall goal may be summarized as follows.

*Goal – Support economic development through improved transportation for trade.*

Seven objectives were defined to support achievement of the LATTs goal. They related to the following topics (and are further discussed in Section E).

1. Regional Competitiveness
2. Freight Mobility
3. Interconnected Multimodal System
4. Transportation Efficiency
5. Environment
6. Safety
7. National Security

### General Strategies

The strategic initiatives which evolved from these evaluations and assessments resulted in the identification of a series of basic strategies that will aid the Alliance in achieving its goal and the supporting objectives. The strategies generally fall into the following categories:

- ▶ **Utilization of Existing Infrastructure** – Because of scarce resources, it is essential that the existing transportation infrastructure be utilized in the most effective and efficient manner. Strategies designed to achieve optimal utilization primarily will support the LATTTS objectives regarding regional competitiveness, freight mobility, efficiency and national security.
- ▶ **Add Physical Infrastructure** – In some cases, even the optimal use of existing infrastructure will not obviate the need to add capacity and connectivity to the transportation system. Accordingly, prudent investments in new physical infrastructure clearly will be required. Strategies involving additional infrastructure will support the LATTTS objectives regarding regional competitiveness, freight mobility, interconnected multimodal system, efficiency, safety and national security.
- ▶ **Increase Operating Throughput** – Strategies to increase operating throughput overlap and are significantly interrelated to some of the other strategic initiatives discussed herein. In combination, implementation of these initiatives will ensure that the LATTTS Strategic Transportation System is capable of accommodating the expected increases in trade with Latin America as well as the other transportation demands that are placed upon the system. Initiatives designed to increase throughput capacity will support LATTTS objectives regarding regional competitiveness, freight mobility, interconnected multimodal system, efficiency and national security.
- ▶ **Corridor Approach for Investing** – Study analyses have documented a pattern of freight movements which often involve significant corridor volumes. Concentration of investments in major corridors will have a major impact upon the achievement of LATTTS objectives regarding regional competitiveness, freight mobility, interconnected multimodal system, efficiency, safety and national security.
- ▶ **Agile Freight Operations** – The LATTTS Strategic Transportation System must be able to cope with major surges in traffic flows and with a variety of cargo handling and transportation requirements. Enhancement of the agility of the system to adapt to these circumstances will support LATTTS objectives regarding regional competitiveness, freight mobility, interconnected multimodal system, efficiency and national security (including military deployments).
- ▶ **Improved Clearance Processes at Gateways** – A major challenge confronting the freight industry is to optimally improve clearance processes at gateways such as customs inspection stations and cargo delivery through freight terminal gates. These initiatives will support LATTTS objectives regarding regional competitiveness, freight mobility, efficiency, and national security.
- ▶ **Attention to Connections** – Another major challenge is the facilitation of freight movements between freight terminals and mainline facilities.

Strategies which address the needs of intermodal connectors will support LATTS objectives regarding regional competitiveness, freight mobility, interconnected multimodal system, efficiency, environment, safety and national security.

- ▶ **Encourage Technology** – Transportation technological advances often have a significant impact in terms of productivity gains. Initiatives designed to get optimal productivity through technology will support LATTS objectives regarding regional competitiveness, freight mobility, interconnected multimodal system, efficiency, environment, safety and national security.
- ▶ **Information Integration** – Improvements in communication and data interchange within the freight industry will support LATTS objectives regarding regional competitiveness, freight mobility, interconnected multimodal system, efficiency and natural security.
- ▶ **ITS Applications** – Strategies to employ Intelligent Transportation Systems (ITS) are interrelated and overlapping with other strategies which focus upon better use of existing infrastructure, increased throughput capability, agile freight operations and improved clearance processes at gateways. ITS strategies will support LATTS objectives regarding regional competitiveness, freight mobility, interconnected multimodal system, efficiency, safety and national security.
- ▶ **Increase Public Awareness** – Achievement of the LATTS goal and objectives is, in large measure, dependent upon public and political support. Only with this support will it be possible to implement the strategic initiatives which are proposed by this study. In effect, public awareness initiatives will be supportive of all of the LATTS objectives.
- ▶ **Improve Institutional Relationships** – Formation of the Southeastern Transportation Alliance for purposes of conducting the Latin America Trade and Transportation Study illustrates the benefits that can be achieved by enhanced institutional relationships. Additional initiatives to improve institutional relationships within the governmental domain will support all of the LATTS objectives.
- ▶ **Partnerships** – In addition to improved relationships between governmental institutions, there is increasing awareness of the need for partnerships between public and private interests. This is particularly true regarding the freight industry which is largely dominated by the private sector. Nevertheless, the public sector plays a major role in the provision, maintenance and operation of significant portions of the freight transportation system. Partnerships which enhance the interrelationships between the public and private sectors will be supportive of all of the LATTS objectives.



- ▶ **Improve Freight Profile** – In recent times, freight transportation has achieved greater visibility within governmental transportation agencies. This higher profile is warranted by the importance of freight transportation in the economic viability of communities, states, the Alliance Region and the nation as a whole. Accordingly, initiatives are needed to raise the profile of freight within transportation planning activities and investment decisions. Initiatives which increase the visibility and profile of freight will be supportive of all of the LATTs objectives.

Discussions in Section E present a series of more specific strategic initiatives which broadly encompass the categories of strategies summarized above.