Getting Around in the Heart of Texas

SAM NEWBERG

The Dallas/Fort Worth area is finding a number of ways to keep people and goods moving.

The Dallas/Fort Worth area is on the cutting edge of transportation. Its central location between the east and west coasts makes it a key transfer point for the movement of goods, and it has emerging logistics hubs as a result. As the fourth-largest metropolitan area in the country, bolstered by wealth from the aerospace, information technology, and oil industries, it is also on the cutting edge in terms of road building and transit, with a variety of freeways, tollways, and transit-oriented development.

Logistics

A fast-growing niche of the transportation and industrial markets is logistics hubs. These "inland ports" are the transfer point from rail to truck, and are typically in central locations in mid-America. With the rise of imported goods and the use of containers to move cargo, logistics hubs represent a

A crowd waits for DART's Red Line at Union Station in downtown Dallas.

major point of transfer. Dallas/Fort Worth is already the fourth-largest industrial market in the United States, and its location as a major highway and rail crossroads is conducive to the development of logistics hubs.

As cargo containers arrive by ship from Asia, primarily in Long Beach and Los Angeles, they are loaded onto rail and transferred to trucks at an intermodal facility. Because of limited land at ports like Long Beach and Los Angeles, inland ports are created in mid-continent locations to allow for transfer to trucks and distribution to population centers further east. Logistics hubs contain intermodal facilities for the train-to-truck transfer, and typically a substantial amount of distribution warehousing is developed nearby. The advantage for users is the efficiency and corresponding lower cost, due to proximity to the intermodal facility, of transferring goods from train to truck and then to a nearby distribution warehouse to await delivery to the final destination, be it a store or elsewhere.

Used somewhat loosely in the industry, the term *logistics hub* is defined by stricter parameters by a collection of industry experts including the Texas Transportation Institute (see sidebar, page 78). By the stricter definition, fewer than ten true logistics hubs exist in the United States, and they are located in Illinois, Kansas, and Texas, to name a few locations. Two such hubs are in the Dallas/Fort Worth area. One, AllianceTexas, is nearly 20 years old and the other, the Dallas Logistics Hub, is newly established.

Alliance

During the late 1980s, the family of Ross Perot, Sr., the wealthy Texan and future presidential candidate, began to acquire land on speculation in the suburbs north of Fort Worth. To manage these landholdings, the Perot family formed a company, Hillwood, run by Ross Perot, Jr. The land was purchased in part for its proximity to transportation, including Dallas/Fort Worth International Airport (which had been open for

ALLIANCETEXAS

The AllianceTexas logistics hub, which features a Burlington Northern Santa Fe intermodal facility, is conveniently located near both Fort Worth Alliance Airport and Interstate 35.

Global Trade and Transportation Trends Emphasize Location

It has become a somewhat tired axiom that the three most important success factors in real estate are "location, location, and location."

But the fact is this statement has never been truer, especially in the context of global trade and transportation trends, which are driving demand for larger, exceptionally well-located distribution and logistics facilities.

Consider the reality of global trade and transportation patterns in the United States today:

In 1970, the United States imported/exported a total of $84 billion in goods. As of January 2008, it had already passed $84 billion in trade by the second week of January. And currently, U.S. trade exceeds $3 trillion.

Today, Americans produce fewer of the goods they consume than ever before. Manufactured goods produced domestically have gradually decreased from 24 percent of gross domestic product (GDP) in 1969 to 12 percent in 2005, a 100-year low for the U.S. economy.

At the same time, shipments of manufactured goods and raw materials (total U.S. imports of goods alone) have risen to about $163 billion every month, with the Pacific Rim countries contributing the largest share of growth, at roughly $600 billion last year.

Historically, most imported goods have been processed for direct shipment to their terminal destinations upon entry into the United States, usually at or near one of the major American shipping ports. But this is changing. Increasingly, containers of goods shipped to the United States are transferred mostly by rail from the port of entry to an inland port, such as logistics parks in central California, Dallas, and Kansas City. These locations are becoming huge markets for the regional distribution of goods to population centers throughout the country. The distribution process uses rail for the initial long-haul stage and trucking for the final leg.

ALLIANCETEXAS

Cargo containers arriving by ship are loaded onto rail and then transported to inland intermodal facilities, such as the one depicted above, where they are transferred onto trucks and then delivered to a distribution warehouse.

As defined by the Texas Transportation Institute, the Center for Transportation Research at the University of Texas, the Heitman real estate investment firm, and the North American Inland Port Network, an inland port is a site located away from traditional land, air, and coastal borders that has the vision to facilitate and process international trade. It does so by strategically investing in multimodal transportation assets and by promoting value-added services as goods move through the supply chain.

It has also been demonstrated that successful inland port logistics parks have the following additional characteristics: access to major container seaports; intermodal facilities serviced by a Class I railroad; a minimum of 1,000 acres (247 ha) of total land (includes IMF); U.S. Customs clearance services; Foreign Trade Zone status; strong local market access (e.g., a major metropolitan area); nearby access to north–south and/or east–west interstate highways; and access to a strong local labor pool.

Why are transfers to inland ports occurring more frequently, and what distinguishes a high-performance inland port?

To the first question, the sheer volume of goods now flowing through the nation's seaports has in some cases overwhelmed the ports' capacity to process the goods; they simply lack space for the task. Because of their structural limitations or technological shortcomings, many of the facilities at or surrounding ports are aged, outmoded, and ill equipped to meet the goods-processing challenges of the 21st century. Finally, the cost of land and lease rates around major seaport markets have increased dramatically, creating an overdeveloped, overpriced market.

New inland ports, on the other hand, are being designed and located precisely to accommodate today's just-in-time supply chain management system demands. Optimally positioned inland ports are all of the following:

Bigger and more flexible. The consolidation of warehousing, logistics hubs, and distribution centers has created the need for bigger facilities, from 1 million to 4 million square feet (92,903 to 371,612 sq m), consuming hundreds of acres of land that can be configured and reconfigured to accommodate all methods of picking, packing, and storing processes.

Technologically advanced. The materials-handling equipment installed in many

of these newer facilities can include miles of conveyor belts, laser scanners, computer management systems, and laser-guided picking equipment. This equipment can cost as much as or more than the total cost of the building itself.

Intermodal. Achieving the highest level of shipping efficiencies requires multimodal transportation (i.e., rail to truck). Companies that locate their distribution centers next to an intermodal facility can save millions of dollars a year in drayage costs compared with distribution centers that are located many miles away from such a facility.

Located at the nexus of air, rail, and highway systems. Distributors, shippers, and manufacturers need to operate from locations that intersect multiple shipping routes via several modes of transportation and be within reach—by days if not by hours—of customers or other end users.

Notably, there are only so many prime locations in this country that can accommodate true inland ports. Highway systems have largely been built out and large land positions are limited, expensive, and difficult to assemble.

Those ports that are successful at distribution and logistics in the decades to come will be those that capitalize on large facilities with sophisticated mechanical handling equipment located near intermodal facilities and at the nexus of the interstate highway system.

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ALLIANCETEXAS

These distribution warehouses are near the AllianceTexas logistics hub and Alliance Airport (seen in the background).

just over ten years at the time), as well as Interstate 35. This instinctive move paid off, as the landholdings have been developed into AllianceTexas, one of the largest logistics hubs in the country.

"It is almost like running a city up here," says David Pelletier, director of communications for Hillwood. To date, Hillwood's 17,000 acres (6,882 ha) of holdings have resulted in 29 million square feet (2,694,188 sq m) of development, including the aforementioned airport, 7,000 homes, and industrial, office, and retail space. In addition to the logistics hub, major developments at AllianceTexas include a regional office for Fidelity Investments and a Cabela's store, an outfitter of hunting, fishing, and outdoor gear. Currently under construction is a mixed-use town center (see Patricia Kirk's mixed-use article, page 86).

The AllianceTexas logistics hub comprises a Burlington Northern Santa Fe (BNSF) intermodal facility, which performs 600,000 lifts per year. A "lift" is one container being moved, or lifted, from a train to a truck or vice versa. According to Pelletier, the intermodal facility is the key component of AllianceTexas. Expansion and increased efficiency of the facility will allow for an increase to 1.2 million lifts by 2012.

In addition, the Alliance Airport was developed in partnership with the city of Fort Worth and the Federal Aviation Administration. This facility includes a major FedEx sorting hub and an American Airlines maintenance facility. The airport is in the early stages of lengthening its runways to allow the largest cargo aircraft, including 747s, to take off fully loaded with cargo and fuel in order to reach their Asian destinations, for example, nonstop.

The development generated has been substantial, including 26 million square feet (2,415,479 sq m) of distribution space and 28,000 full-time jobs. Major companies with distribution facilities at AllianceTexas include JCPenney, Kraft, Ford, Motorola, and Volkswagen. Of the 170 companies located there, 66 are in the Fortune 500, Global 500, or Forbes 500.

"One of the things that make AllianceTexas successful is [that] Dallas is the fourth-largest metro area," Pelletier explains. He notes that even though AllianceTexas as a whole is only 40 percent built out, it has already created a $31 billion economic impact, including $6.5 billion in real estate investment.

Dallas Logistics Hub

Development of a second logistics hub is underway in the Dallas/Fort Worth area. Located on the opposite end of the metropolitan area, in southeast Dallas, the Dallas Logistics Hub (DLH) includes 6,000 acres (2,429 ha) and is expected to result in 60 million square feet (5,574,182 sq m) of space over time.

Jon Cross, director of marketing for the San Diego–based Allen Group, the developer of the DLH, is bullish about the project simply because of its location. "It's hard to find available land near dual rail and four major highways in a major metro area," he says. "It's like having oceanfront property." Like AllianceTexas, the DLH has an intermodal facility, developed by Union Pacific (UP), and is located near four highways, three of which are interstates, in addition to the Lancaster Airport, which may one day be expanded to allow for cargo flights.

The DLH is still in its infancy. The first two buildings under construction there are a 635,040-square-foot (58,997-sq-m) cross-dock distribution warehouse and a 192,850-square-foot (17,916-sq-m) office warehouse. They will be the first two industrial structures in Texas to receive Leadership in Energy and Environmental Design (LEED) certification. "I think it is a must to be competitive in the industry," says Cross about building green.

Both AllianceTexas and the Dallas Logistics Hub are long-term investments, and are being built out over a period of decades. They are financed privately by "patient capital" that does not require quarterly earnings reports like publicly traded real estate investment trusts (REITs). However, both developers anticipate continued growth in logistics, as container ports are expected to double their volume by 2020.

Private/Public Toll Roads

Figures complied by the Texas Department of Transportation (TxDOT) indicate that between 1980 and 2003, the population of Texas increased by 57 percent, and miles driven by even more. Total road miles, however, increased by less than 8 percent. Though the Dallas/Fort Worth area is served by a web of freeways, interstates, and major arterials, toll roads are an increasing part of the transportation equation there.

The existing Dallas North Tollway and President George Bush Turnpike bisect each other and serve the north Dallas suburbs. A third, State Highway 121, is the latest addition to a growing network of toll roads in the Dallas/Fort Worth metropolitan area. The 121 is partially finished, and by 2012 it will connect from Dallas/Fort Worth International Airport to the northeast and fast-growing cities in Collin and Denton counties, located north of Dallas.

"The advantage of toll roads is they are not a drain on scarce gas tax funds out there," says Kevin Feldt, director of project development and planning for the North Texas Tollway Authority (NTTA), a state agency that builds and manages tollways in the Dallas/Fort Worth area. Futhermore, he says, the cash flow from tolls enables system growth to be self-perpetuating.

In times when road construction cannot keep up with population growth, toll roads provide a popular alternative. Indeed, TxDOT officially supports tollways as a means of financing a road system that they acknowledge lacks sufficient funding. Without substantial tax increases at the state level to pay for major highway expansion, tollways will continue to be an option for new projects, because they can move forward in a shorter time frame and they free up scarce tax dollars to be used on other projects.

A Red Line DART train headed to Westmoreland lets passengers disembark at the Mockingbird Station.

The Venue, a 279-unit apartment complex under construction, is part of a transit-oriented development taking shape near the Galatyn Park Station in Dallas.

TOD

The Dallas Area Rapid Transit (DART) system has operated light-rail service since 1996, and has major expansion plans (see sidebar, page 82). Two major lines serve downtown Dallas, the southern side of the city, and northern suburbs such as Garland, Richardson, and Plano. A third commuter rail service, the Trinity Railway Express, connects to Fort Worth.

Under construction is the Green Line, which will serve southeast Dallas and run northwest from downtown Dallas to Carrollton. A fourth line is also planned to the northwest, serving Irving and terminating at Dallas/Fort Worth International Airport.

Since Mockingbird Station opened in Dallas in 2001, the metropolitan area has become an unexpected poster child for transit-oriented development (TOD). A second phase is planned for Mockingbird Station, including 23,000 square feet (2,136 sq m) of additional retail space. Even the George W. Bush Presidential Library that is planned on the campus of nearby Southern Methodist University will be within walking distance of the station, something that not even the president himself may have considered.

Additional office and residential development is occurring at Galatyn Park. Blue Cross Blue Shield, in partnership with locally based Koll Development Company, broke ground on a 1.1 million-square-foot (102,193-sq-m) regional office complex last year. Upon completion in 2010, it will house 3,900 employees and be the largest single office complex near a DART station.

The Venue, a 279-unit apartment complex developed by California-based Legacy Partners, is also under construction. The Venue and the Blue Cross Blue Shield offices will complement development already in the station area, which includes a Renaissance Hotel and the Eisemann Center for the Performing Arts.

Clean Air and the Expansion of DART

In an era when people continue to be obsessed with their vehicles—even in light of ever-increasing gas prices—it is difficult to imagine that Americans' auto-centric lifestyle may dramatically change in the next 20 years.

Yet, the U.S. Environmental Protection Agency (EPA) is steering the country in the right direction with focuses on clean air and public transportation. In north Texas, for example, 70 percent of air pollution today is attributable to vehicle emissions, which could result in even worse air quality, greater health concerns, and strict federal regulations.

"Region 6 [including Texas] has been out of standard and nonattainable with federal regulations since the 1980s," says David Bary, spokesman for the EPA in Dallas. "The EPA has an air quality index that rates regions at levels considered 'good' all the way to 'hazardous.' "

The Dallas/Fort Worth (DFW) area is ranked at a moderate level, compared with California, Chicago, Philadelphia, Boston, and New York, which are deemed at higher levels of nonattainment.

"With the predicted increase in population over the next 20 years, DFW will continue to make clean air improvements and develop alternate means of transportation," Bary says.

The biggest improvement to air quality in DFW has been realized through the addition of Dallas Area Rapid Transit (DART). Established in 1983, the regional transport authority covers 13 cities within the DFW area. DART caters to the transportation needs of Dallas and its surrounding cities with 130 bus routes, 44 miles (70.4 km) of light rail, 31 miles (50 km) of freeway with high-occupancy vehicle lanes, and a paratransit service for disabled and elderly people.

With 34 stations, a total vehicle fleet of 95, and an average weekday ridership of 58,000 passengers, the light-rail system has contributed immensely in getting more vehicles off the road since service commenced in 1996. Its enhanced popularity, company success, and intent to improve air quality in Dallas have sparked expansion plans for the DART light-rail system.

"The light-rail system will double in length by 2014 to 93 miles [149 km]," says Lawrence McShack, manager of community affairs for DART. "The expansion will extend the blue line, add a green and orange line to the system, and include 28 new stations."

McShack says riders currently do not have a direct way to get to the south and east of DFW. The expansion plan will provide access to those areas. "It's an extensive project with an ultimate goal to get more cars off the road and improve the region's air quality," he says.

Tony Mendoza, senior manager of transit solutions with DART, says DART offers something for everyone who wants to promote an environmentally healthy lifestyle. "People used to think transit existed in high-density areas, but now people are noticing the convenience of light rail and the environmental benefits of carpooling and riding bikes to work," he says. "The expansion of DART will address the air quality issue while providing more areas for people to travel and opportunities to save money."

In addition to DART's clean air expansion project, the city of Dallas has pursued air quality initiatives for years. It all started in 1993, when the city purchased its first alternative-fueled vehicle. Now, Dallas has the largest fleet of low-emission vehicles in the state of Texas. Furthermore, Dallas passed an anti-idling ordinance, which prohibits motor vehicles that weigh over 14,000 pounds from idling for more than five minutes during the ozone season (April 1–October 31). The North Central Council of Governments recently introduced a program called "Air Check Dallas" to allow owners of vehicles over ten years old a $3,000 voucher toward the purchase of a newer car, namely one that produces lower emissions. This will help the DFW area reduce ozone-forming pollutants caused by older motor vehicles.

"We're trying to do everything we can to improve air quality and spend money where clean air is needed," says Meranda Cohn, public information officer for the city of Dallas.

Even though it's a major environmental challenge for metropolitan areas across the country to reduce emissions while sustaining economic development and accommodating population growth, the

city of Dallas has developed a public forum to educate and involve the community in the issue of clean air.

The outlet, "Green Dallas," strives to encourage citizens of the DFW area to live a healthier, environmentally friendly lifestyle by helping to improve air quality.

Laura Fiffick, director of the Office of Environmental Quality for Green Dallas and the city of Dallas, says the Green Dallas Web site is a good tool that organizes all of the initiatives the city is undertaking while also providing information and interaction for the community.

"Dallas is acting as an advocate for its citizens, hoping they will copy our actions," Fiffick says. "We want citizens to be the leaders for their community and to help us work together to aggressively take control."

The city of Dallas also encourages its employees to use DART by providing complimentary DART passes.

"As employees of Dallas, we want to set a clean air trend and therefore are [better positioned] to ask companies to do the same," Fiffick says.

"You don't need to make a drastic lifestyle change—even carpooling or commuting by DART once or twice a week will make an impact on the community," Mendoza says. "All of us can contribute and do our share for cleaner air."

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The W Hotel is part of the Victory Park development near the Victory Station in Dallas.

The Beat, a ten-story, 75-unit condo development, will open this year near DART's Cedars Station. The Beat will complement the massive South Side Works mixed-use project in this evolving area just south of downtown.

The Victory Park development is on a 75-acre (30.3-ha) brownfield site north of downtown Dallas. Developed by Hillwood, it contains the American Airlines Arena (basketball and hockey), which opened in 2001. By the end of 2008, development will include 750 residential units, 665,000 square feet (61,780 sq m) of office space, over 60 shops and restaurants, and a W hotel. Although current rail service is limited to special events at the arena, Victory Station will become a permanent stop with the start of Green Line service in late 2009.

The urban center at Las Colinas, a futuristic suburban downtown developed during the 1980s, is adding new residential development in anticipation of DART service planned in 2011. The Delano, a 258-unit luxury apartment complex developed by

The W Hotel can be seen from the platform of the Victory Station, which will be served by the Green Line.

Legacy Partners, is just one of the new residential projects that complement the existing office, hotel, and residential development. Plans call for the original people-mover system, called Area Personal Transit, to be linked into the DART station and provide circulation throughout the Las Colinas urban center.

A 2007 study conducted by the Center for Economic Development and Research at the University of North Texas in Denton showed that the economic development generated by real estate located near transit stations is substantial. Their estimates show that since 1999, the total value of projects that are attributable to the presence of DART light-rail service is $4.26 billion. The expansion will certainly result in opportunities for billions of additional investment in the coming years.

Bridges

One of the planning goals for the city of Dallas is to create better connections to, and across, the Trinity River, which flows along the western edge of downtown and divides it from the west side of the city. The broad valley of the Trinity River dwarfs the waterway itself, which in most seasons is a trickle compared with most rivers. And although downtown Dallas abuts the Trinity, much of its banks are lined with low-intensity uses, many of which are industrial.

An effort is being made to open up the river and its environs to recreational and other public uses. Work is also underway to replace the first of three bridges across the Trinity, with spans designed by internationally renowned architect Santiago Calatrava.

Loren Montgomery, a fundraiser and champion for the bridge project and chairman of the Southern Dallas Development Corporation, a nonprofit organization that promotes growth in the southern sector of Dallas, is enthusiastic about the Calatrava spans. "To have such an internationally renowned designer create three of the most revolutionary and modern

The Vista, a 279-unit apartment complex, is also near the Victory Station.

bridges in the world is a remarkable achievement for Dallas," says Montgomery, who believes the bridges create economic development opportunities and improve the image of the area. Ground has been broken on the first bridge, due to be completed in 2009.

Trans-Texas Corridor

Sometimes referred to as the NAFTA Superhighway because of its connection to Mexico, the Trans-Texas Corridor (TTC) is an ambitious infrastructure project proposed by Governor Rick Perry in 2002. If fully realized, the TTC could have far-reaching effects on the movement of people and goods, and certainly on trade with and through Mexico.

The vision for the Trans-Texas Corridor is for separate truck and automobile lanes, as well as freight or passenger rail service and utility lines. All would fit in a corridor up to 1,200 feet (365.8 m) wide.

Two roadways are planned, I-69/TTC and TTC 35. Both would start at the Mexico border at Laredo and/or McAllen/Brownsville. I-69/TTC would head northeast around Houston toward Arkansas, while TTC 35 would head north past San Antonio, Austin, and Dallas and into Oklahoma.

Looking ahead, many believe that the Dallas/Fort Worth area is well poised to tackle various transportation challenges. Not only is a range of transportation options being tested, but investment in them is also being maximized by the private sector. **UL**

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