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16. Abstract

Numerous distribution centers (DCs) have been built in Texas over the past 20 years. They serve retail, grocery, oil, motor vehicle, manufacturer, and other types of business. These DCs vary in size and truck traffic. Depending on the type of DC and roads providing access, a DC will have some level of traffic operations, safety, and pavement wear impact on those roads. DC site selection often involves the DC site selector/owner/operator/developer negotiating with local agencies, including economic development agencies, to identify potential sites and obtain the best incentives. TxDOT is typically brought into the process very late and is then asked to accommodate local agency and DC owner requests without having prior input.

This project assessed the DC site selection and development process as it affects TxDOT. The project also developed tools, guidelines, and strategies for gaining early collaboration with DC owners and local agencies in planning and engineering the DCs and their access and funding improvements to state highways. This project analyzed obstacles resulting in TxDOT not being involved earlier in the DC site selection process. Research products included in this report summarize the research performed and present a handbook containing tools and recommendations for working with proposed DC site selectors, developers, and others.

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RESEARCH REPORT:
GUIDANCE ON MITIGATING IMPACTS OF LARGE DISTRIBUTION CENTERS ON TEXAS HIGHWAYS

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DISCLAIMER

This research was performed in cooperation with the Texas Department of Transportation (TxDOT) and the Federal Highway Administration (FHWA). The contents of this report reflect the views of the authors, who are responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official view or policies of the FHWA or TxDOT. This report does not constitute a standard, specification, or regulation.

This report is not intended for construction, bidding, or permit purposes. The engineer in charge of the project was Brian Bochner, P.E. #86721.

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This project was conducted in cooperation with the Texas Department of Transportation and the Federal Highway Administration.

TABLE OF CONTENTS

Page

LIST OF FIGURES

Page

LIST OF TABLES

Page

1. BACKGROUND AND INITIAL INTERVIEWS

Numerous distribution centers (DCs) have been built in Texas over the past 20 years. They serve retail, grocery, oil, motor vehicle, manufacturer, and other types of business. These DCs vary in size and truck traffic. Depending on the type of DC and roads providing access, a DC will have some level of traffic operations, safety, and pavement wear impact on those roads. DC site selection often involves the DC site selector/owner/operator/developer negotiating with local agencies, including economic development corporations, to identify potential sites and obtain the best incentives. TxDOT is typically brought into the process very late and is then asked to accommodate local agency and DC owner requests without having prior input.

This report summarizes findings of a research project that provided TxDOT with an assessment of the DC site selection and development process as it affects TxDOT. The project also developed tools, guidelines, and strategies for gaining early collaboration with DC owners and local agencies in planning and engineering the DCs and their access and funding improvements to state highways. This project analyzed obstacles resulting in TxDOT not being involved earlier in the DC site selection process. Research products included this report summarize the research performed and present a handbook containing tools and recommendations for working with proposed DC site selectors, developers, and others.

Information on DCs, the processes involved in site selection and development, and the experiences of local communities and TxDOT districts were collected through a review of existing resources (published reports, articles, and government documents) and telephone interviews with representatives from distribution centers located in Texas, representatives from local communities, and TxDOT district engineers and staff.

Initial telephone interviews were conducted with:

- representatives of 14 distribution centers (some from the companies' corporate offices or real estate branches, some local DC managers); some requested that individual DCs not be identified for security or confidentiality purposes;
- 11 local government representatives, plus the Governor's Office of Economic Development; and
- 14 TxDOT representatives (district engineers, area engineers, and other staff) from 8 districts having distribution centers and from TxDOT's Government and Public Affairs office.

Appendix A provides the Governor's Office of Economic Development Site Location Requirements form. Individual responses to the interview questions are provided in Appendix B.

FUNCTIONS AND CHARACTERISTICS OF DISTRIBUTION CENTERS

Globalization of many parts of our economy has resulted in some fundamental changes in the supply chain for the goods we consume. Distribution and transportation have undergone major changes, especially for large retailers, but also for manufacturers and even grocery chains.

Goods are often transported by container, carload, or truck load from across the country and the world to major distribution centers where the loads are broken down to less than truckload lots, combined with other goods to form truckloads destined for a single retail store, and then shipped as a full truckload to retail outlets.

Distribution centers are widely used in many types of high volume businesses including retail, grocery, oil, motor vehicle, and manufacturing. There are several components of distribution that interface with or are handled in the distribution system:

- Transportation – shipments into and out of distribution center;
- Repackaging – breaks large quantities truckloads of similar goods or goods from one source and repackages into smaller quantities for individual stores;
- Value added – adds features to products before repackaging (e.g., apparel monograms); and
- Product dedication – may handle only selected types of products, such as refrigerated products or tires (*1*).

The role of DCs in the supply chain is to receive bulk shipments and process the products for shipping to retail stores as efficiently as possible (*2*). While DCs may serve a short-term warehousing role, most DCs are not intended to serve a major long-term warehouse function. Many DCs are hubs for just-in-time delivery to retail stores. Hence, truck movements to and from the DC can be expected to exceed those at a similar sized warehouse. Efficiency of access—both regional and local—are important for the successful site selection and operation of a DC.

Information on DC site selection, transportation and infrastructure needs, and transportation issues associated with DC operation was collected via a resource review and from telephone interviews with DC representatives, local community officials, and TxDOT district and area office personnel.

DC SITE SELECTION CRITERIA

Major DCs may be located within metropolitan areas, in small cities, or in rural areas. Location is usually determined by the market served and other factors. Table 1 shows many of those factors.

Table 1. Selected Distribution Center Site Location Factors (3, 4).

- Land/site
  - Tract size
  - (Low) land cost
  - Taxes
  - Operating costs
  - Geographic location in proximity to:
    - Retail stores served
    - Suppliers
    - National point of origin (near port, border, or other entry point)
    - Reliable, high speed, uncongested roadways to provide access (major or minor)
    - Other intermodal facilities (rail or air)
    - Free Trade Zone
  - Needed Utilities
    - Electricity (e.g., major transmission lines)
    - Telecommunications infrastructure
    - Gas
    - Water
    - Waste disposal
    - Installation costs and utility rates
  - Site access to interstate highway system and markets (some also need rail, air)
    - Major east-west and north-south highways (may specify interstate highway)
    - No congestion along access routes
    - Good road maintenance
    - Adequate (wide) shoulders
    - Access route flexibility (multiple routes)
  - Transportation costs
  - Local construction and building materials costs
- No truck noise restrictions
- Not adjacent to residential area
- No complicating conditions along access routes
  - Schools
  - Railroad crossings
  - Truck restrictions
- Workforce
  - Availability of qualified/trained personnel (full-time and temporary)
  - Local employee amenities (housing, schools, shopping, etc.)
  - Commute time to site (usually less than ½ hour)
- Incentives/Public Sector Partnerships
  - Short- or long-term tax abatements
  - Public subsidy/assistance with land purchase (sometimes donated)
  - Public commitment to share costs or pay outright for needed infrastructure improvements
  - Public provision of utilities or other financial incentives
  - Other incentives

Based on information gathered, the four most important factors that affect the DC location decisions are:

1. Proximity to customers and suppliers;
2. Infrastructure and labor costs;
3. Community and site characteristics; and
4. Incentives offered to select a particular area or site.

The proximity to customers and suppliers is basically determined by the travel time by truck or railroad. Community characteristics include the availability of labor force as well as support from agencies at the city, county, and sometimes state levels. Site characteristics are the geographical factors such as topography and access to major highways. Infrastructure cost depends largely on the connection to the available water, electricity, and sewer networks.

Proximity to Market

In DC site selection, the first step in the decision making process is to determine the geographic area to be served by the DC, then determine the approximate DC site location that can conveniently serve that area. Most of the companies associated with Texas DCs use logistics network modeling that take into account current and potential store locations, sales volumes, and supplier characteristics. DCs need direct or very convenient access to the state highway/freeway system and/or to intermodal transfer terminals. Companies that rely on imported goods and materials want access to seaports (generally the Port of Houston) and/or the Mexican border. Timely delivery to the local store network is an across-the-board criterion, with 24-hour delivery being the norm. Because of this requirement, potential DC sites are mostly near the centroid of the retail stores to be served.

Once the network models identify ideal locations, the companies begin their site searches in a number of ways. Some identify a radius, ranging from 30 to 100 miles out from the ideal location. Some look throughout a particular metropolitan region, such as the Houston or Dallas-Fort Worth areas. Others look up and down particular interstate corridors (e.g., I-35 or I-45) or for intersections of major corridors giving them direct access to the DC service area (e.g., Dallas-Ft. Worth intersections of I-20 or I-30 with I-35 or I-45). Desirable DC sites may also be in rural areas, at the edge of a small town or city, or in a high accessibility location in a metropolitan area—usually toward the periphery.

Site Characteristics

DC companies consider land parcel size, shape, and grade/slope (for new construction) or facility size (for DCs that planned to move into an existing facility); the availability or the ease/cost of adding/upgrading utility infrastructure, as well as utility costs in the area; and lease costs. Proximity or availability of utilities is often critical since that can affect development costs. Adjacent land uses can also be critical since compatibility can become a major issue when a DC of 500,000 to 1,000,000 square feet and 100 truck bays is proposed.

Site Access Needs

The companies interviewed generally prefer to locate DCs along (or close to) major highways. This may mean direct connections to a highway or (especially in the case of DCs located in business parks) quick and reliable arterial access to the highways via other major roadways.

However, some DC operators are willing to locate on county roads or 2-lane FM routes—usually within about 2 miles of a freeway—to secure lower cost sites. Other desired roadway assets mentioned in the course of the DC interviews included:

- 4-lane access roads, wide shoulders;
- proximity to major east-west and north-south highways;
- away from heavily congested roads, retail areas, school zones, and other traffic-related obstacles;
- traffic signals to facilitate ingress and egress from the site; and
- transportation capacity and flexibility (direction and mode).

Some Texas DCs also need quick access to rail yards or to major intermodal terminals where containers leave rail for trucks. Rail access is becoming more important for many retailers because of rising fuel prices.

Other factors were also reported. For example, existence of at-grade railroad crossings along an access route can be viewed as an impediment to efficient DC access. DC driveway access and also local accessibility for large heavy duty trucks are considered critical.

Labor Pool

Labor, which is typically the second highest cost element in a DC, may have an influence in the location decision. Major DCs typically employ 500 to 800 people (with some DCs in Texas employing up to 1,500). The characteristics of the local labor force are also considered; DC operators examine local demographics to determine the availability, cost, and quality of the potential labor force they will be able to attract. One DC respondent also mentioned that his company prefers locations with no unionization.

DC operators look for a reasonable commute radius for their future employees; two of the companies interviewed specified an employee base within a 20-mile commute. Others indicated travel times of 30 minutes or less.

Site and Infrastructure Costs

Once the target area has been identified, the next step in the decision process is to examine several potential sites within the target area by comparing several characteristics including site size and accessibility as well as the expected land, infrastructure, and utility costs.

The several candidate sites within the target area may be located in the different jurisdictions (cities or counties). Other site specific factors considered are adjacent land uses and environmental impacts. Weather may also be a factor; a company may avoid an area prone to flood, hurricane, or snow due to the potential disruption of operations (*5*). Even frequent high winds may cause a company not to consider a site.

Incentives

Incentives usually play a significant role in site selection, especially those involving small municipalities outside the major metropolitan areas. The large DCs may bring a few hundred to over 1,000 jobs as well as additional property tax base. This can be a powerful attraction to an area that has economic development as a high priority. For example, Corsicana's former K-Mart

DC employed 8 percent of the local workforce (850 jobs) before corporate downsizing caused its closure (subsequently reopened as a Home Depot DC) (*6*).

In many states including Texas, even the political leaders up to the governors' offices and state economic development agencies are involved in the process of providing economic incentives. Table 2 lists some of the incentives that are often used in Texas to attract DCs.

Table 2. Selected State and Local Incentives Available for DCs in Texas *(7, 8)*.

Incentive Type	Definition
State Incentive Programs	
Texas Enterprise Zone Program	Refunds of state sales and use taxes, ranging from $2500 to $7500 per job created or retained.
Texas Capital Fund Infrastructure Program	Grant ($50K to $750K) for public infrastructure (water, sewer, roads) needed to assist a business, in exchange for jobs created or retained in the community.
Tax Increment Finance District (TIFD)	Allows debts to be incurred to fund capital investments needed for the DC and that will be paid back via future tax revenues generated by the new development.
Texas Capital Fund Real Estate Development Program	Grant ($50K to $750K) for real estate development needed to assist a business, in exchange for jobs created or retained in the community.
Freeport/Foreign Trade Exemption	Exemption on taxation of merchandise, goods, etc. that are kept in the state for 175 days or less.
Texas Smart Jobs Program; Skills Development Fund	Job training grants for new employees
Local Incentive Programs	
Local Property Tax Abatement	Reduction or exemption of taxes granted by local government (county, city, special district) on a piece of property for a specified length of time. Tax abatements have been granted for DC properties and for DC inventories for varying periods.
Tax Credits/Rebates	Local tax credits can be awarded in various amounts, usually in exchange for local jobs created by the new business. Examples of such credits are job creation tax credits, property tax abatements, inventory tax abatements, and county tax abatements.
Infrastructure Costs	Local agency(s) pay portion or full cost to extend utility, roadway, drainage, or other infrastructure to DC site. In some cases the DC developer may pay the cost and recover all or a portion of the cost through tax rebates.
Site Costs	Local agency may pay a portion of full cost of DC site in return for long term commitment from DC company.
Section 380.001 of Municipal Code – Loans and Grants	Under this code, municipalities can provide loans and grants of city funds, as well as low- or no-cost use of city staff, services, or facilities.
Goodwill Incentives	Varies but can include discounted moving costs, discounted banking costs for DC company employees (managers, supervisors) moving into the community.

Incentives were mentioned as a site selection factor by almost all of the DC respondents. One company considers incentives a little differently—as accommodations to make a DC site viable rather than most attractive among candidates.

Some of the most common incentives are tax credits or abatements; depending on the characteristics of the company and the community, these incentives could include the following:

- job creation tax credits,
- property tax abatements,
- inventory tax abatements,
- county tax abatement,
- Freeport zone, and
- port credits.

However, one company reported that it will not accept certain tax abatements (e.g., school property tax) due to the image of the impact of loss of those funds to the community. Other incentives offered to DCs by local communities in Texas included workforce training programs or training grants, such as the Texas Smart Jobs Program and funding or work to build roads or other infrastructure.

The other principal category of incentives is assistance in providing infrastructure. Usually this takes the form of utility extensions, drainage improvements, or road improvements. However, at least one Texas DC was built and leased to the operator to improve the cash flow of the company.

Incentives received by Texas DC developers included:

- free site,
- 10-year property tax abatements (city, county),
- 10-year inventory tax abatements,
- utility extensions to site,
- drainage improvements,
- Freeport zone designation,
- training grants,
- state tax abatements (site outside Texas),
- grants for funding utilities, power, and
- local tax rebate for hiring local residents.

Community Characteristics

Characteristics of the surrounding community is another factor in site selection. The company opening a new DC will often bring some of that company's existing employees—generally management and administrative staff—into the area. Therefore, another plus for a potential site is an attractive community close by. One DC respondent mentioned that a site needed to be attractive to the company's investors; another that a good local economy was a factor. General compatibility of a DC with the community is another consideration. It often ties into the community's willingness to support the development of the DC.

Annual Surveys of Corporations and Consultants by AreaDevelopment.com

The project surveys of DC owners, local agencies, and TxDOT district offices were conducted in the fall of 2007 and the early spring of 2008, prior to the economic downturn that became evident later in 2008.

The online magazine AreaDevelopment.com conducted an annual survey of corporate representatives and consultants in August of 2008, prior to the severe financial crisis of the late fall but during a time period when signs of a market adjustment were likely beginning to affect industries. The survey's respondents are from a larger spectrum of industries; only 14 percent of respondents to the corporate survey are involved in distribution operations (64 percent of respondents are involved in manufacturing), and 47 percent of the consultants responding to the consultant survey serve distribution operations. However, the survey has general value because it seeks information on factors important in selection of industrial sites with substantial inbound and outbound flows of goods. Because of the survey's timing, it is likely that respondent answers regarding site selection considerations reflect industry priorities that may be somewhat affected by the downturn. The responses may be of value even if not all of the responses apply to distribution centers.

Approximately 35 percent of the survey's corporate respondents indicated that their companies plan to open new facilities during the next two to three years. Approximately 25 percent of the planned new facilities will be warehouses and/or distribution centers. Among the consultants who responded, half had clients with plans for new facilities during the next two years (with distribution centers accounting for 27 percent of planned new facilities).

Site selection factors were rated in importance by respondents as "very important," "important," "minor consideration," or "of no importance." Overall rankings for the factors were then calculated based on the combined percentages of respondents that ranked each factor as "very important" or "important." Table 3 lists the top 10 factors for site selection as ranked by corporate and consultant respondents in 2008.

Table 3. Top 10 Factors in Site Selection.

Corporate Representatives	Consultants
1. Highway accessibility	1. State and local incentives
2. Labor costs	2. Highway accessibility
3. Occupancy/construction costs	3. Availability of skilled labor
4. Tax exemptions	4. Energy availability and costs
5. Energy availability and costs	5. Tax exemptions
6. Availability of skilled labor	6. Occupancy/construction costs
7. State and local incentives	7. Corporate tax rate
8. Corporate tax rate	8. Proximity to major markets
9. Low union profile	9. Availability of land
10. Availability of land	10. Labor costs

Source: http://www.areadevelopment.com

The top two priorities for corporate representatives in 2008 were the same as in the 2007 survey—highway accessibility and labor costs. Building costs and tax exemptions rose in

importance during 2008, while availability of land became less important. Other survey results indicated that more companies in 2008 may be looking for existing sites and facilities to reduce construction costs.

In conclusion, these surveys indicate that highway accessibility and costs of labor, infrastructure, and energy are among the most important site selection criteria. That means that there is a place for TxDOT to play an even bigger role in attracting new distribution centers to Texas. At the same time, incentives are also highly valued. Since some view highway improvements to be incentives, TxDOT could also find itself being courted for improvements to make sites more accessible. This presents TxDOT with both a need and an opportunity to help DC owners, developers, and agents find sites that are already highly accessible, with little or no need for highway improvements.

2. LARGE DISTRIBUTION CENTERS IN TEXAS

Table 4 shows the locations of Texas retail, manufacturing, and grocery DCs of 500,000 square feet and larger. Most are located close to interstate highways or other freeways within or close to the "Texas Triangle." Several others are located along I-30 east of Dallas-Ft. Worth. While a few of these DCs are older, most are less than 15 years old and many are less than 10 years old.

Table 5 shows the distribution of the Table 3 DCs by TxDOT district. Over half of the 62 DCs listed in Table 3 are in the Dallas and Ft. Worth districts of TxDOT. This is likely the result of having access to the interstate highway system going in almost all directions plus having almost all of the rest of the Texas, Oklahoma, Louisiana, and Arkansas market area within one day's drive by truck. About 20 percent of these DCs are in the Houston District. A few serve as entry processing facilities for the Port of Houston while most of the others serve a regional function. Of the other 22 TxDOT districts, only the Waco and Tyler districts, both near the Dallas-Ft. Worth area, have more than two of the large DCs; about 90 percent of the large DCs are in the Waco-DFW-Tyler region within about 100 miles of the intersections of I-35 and I-45 with I-30 and I-20 intersections or in the Houston area. Those areas combine the best regional access in Texas with one-day proximity to high concentrations of population.

Despite the size of Texas, it is notable that other than Wal-Mart, no company has more than two large DCs and nearly all have just one. Because of the location and interstate highway access available to the Dallas-Ft. Worth region, it seems likely that many companies with only a single distribution center in the region will continue to seek locations near Dallas-Ft. Worth.

The literature implies that large DCs tend to be located in rural areas. However, 27 of the 62 large Texas DCs listed in Table 4 are in urban areas and 25 more are on urban fringes. Seven of those are located in or on the fringes of small cities and towns. Only 10 DCs are located in rural areas. Hence, the challenge to successfully accommodate large DCs without adverse impacts on TxDOT highways includes urban areas as well as small towns and rural locations.

As shown in Tables 6 and 7, almost half of these large DCs are located in industrial parks. Eight have direct access to TxDOT highways, and five more have direct access to frontage roads. The other 49 DCs have direct access only from county or municipal roads so the driveway-related issues tend to be under local jurisdiction. Nevertheless, all 62 DCs are located on or close to state highways and all but a few rely on freeways and interchanges for most of the truck travel they generate.

Table 4. Selected Texas Distribution Centers over 500,000 Square Feet.

Distribution Center[1]	Address	City	Size (sq. ft.)	Jobs	Site					Truck Access						Aerial Photo On File	TxDOT District
					Urban	Fringe	Rural	Industrial Park	Free standing	Front Rd.	Distance to Interchange	State Hwy.	County Road	City Arterial/ Collector Street	Local Street		
Retailers																	
99 Cents Only Stores (Ex-Albertsons)	23623 Colonial Parkway	Katy	741,000	-		●			●		3 blks			●		Yes	HOU
Academy	1800 N. Mason Road	Katy	1,500,000	1400		●		●			5 blks				●	Yes	HOU
Blockbuster	3000 Redbud Blvd.	McKinney	818,000	1415		●			●		1 blk		●			Yes	DAL
Container Store	500 Freeport Parkway	Coppell	725,000	400	●			●			7 blks			●		Yes	DAL
Dillards	4501 N. Beach Street	Fort Worth	716,000	800	●			●			3 blks			●		Yes	FTW
Do-It-Best (u.c.)	801 Hewitt Avenue	Waco	500,000	-	●				●		0.6 mi			●		Vicinity	WAC
Family Dollar	3101 E. I-20	Odessa	907,000	500		●		●		●	2 blks					Yes	ODA
Home Depot (Ex-KMart)	2200 S. US Bus 45	Corsicana	1,453,000	250	small				●		1 mi.	●				Yes	DAL
Home Depot	6115 FM 1405	Baytown	755,000	350		●		●			7 mi.	●				Yes	HOU
Home Depot (u.c.)	8103 Fallbrook Drive	Houston	535,000	-	●				●		0.8 mi			●		Yes	HOU
Home Interiors	1649 W. Frankford Rd.	Carrollton	659,000	616	●			●			3 blks			●		Yes	DAL
JC Penney	1701 Intermodal Parkway	Haslet	1,200,000	517		●		●			2½ mi				●	Vicinity	FTW
Kohl's	1600 I-45	Corsicana	540,000	225		small			●		2½ mi	●				Yes	DAL
Lowe's	955 Lowe's Lane (I-30 W)	Mt. Vernon	1,100,000	-		small			●	●	Adjac.					Yes	PAR
Mervyn's (ex)	1600 Plano Parkway	Plano	533,000	-	●			●			¾ mi			●		Yes	DAL
Macy's (ex-Foley's)	2103 Ernestine	Houston	810,000	600	●			●			2 blks				●	Yes	HOU
M.J. Designs/Michaels	500 Airline Drive	Coppell	504,000	-	●			●			½ mi				●	Yes	DAL
Radio Shack[2]	900 Terminal Road	Fort Worth	1,142,000	3337	●				●		7 blks				●	Yes	FTW
Rooms to Go	3500 S. Watson Road	Arlington	851,000	185	●				●	●	3 blks					Vicinity	FTW
Sears	2775 Miller Road	Garland	878,000	400	●			●			1 mile			●		Yes	DAL
Stage Stores	506 Beall Blvd.	Jacksonville	500,000	439	small				●		35 mi			●		Yes	TYL
Target	13786 Harvey Road	Tyler	1,630,000	950			●		●		1 blk		●			Yes	TYL
Target	4333 Power Way	Midlothian	1,350,000	750			●		●		5 blks				●	Yes	DAL
Toys R Us	3800 Railport Parkway	Midlothian	846,000	200			●		●		3 blks				●	Yes	DAL
Tractor Supply (exp. u.c.)	2801 Corporation Parkway	Woodway	654,000	-		●			●		300 ft.				●	Yes	WAC
True Value Hardware	2601 E. SH 31	Corsicana	775,000	185			●		●		2½ mi	●				yes	DAL
Walgreens	710 FM 664 (Ovila Rd.)	Waxahachie	650,000	750		small			●		Adjac.	●				Yes	DAL
Wal-Mart #7042	4554 E. Greenwood St.	Baytown	2,000,000	600		●		●			7 mi.				●	Vicinity	HOU

Distribution Center[1]	Address	City	Size (sq. ft.)	Jobs	Site					Truck Access						Aerial Photo On File	TxDOT District
					Urban	Fringe	Rural	Industrial Park	Free standing	Front Rd.	Distance to Interchange	State Hwy.	County Road	City Arterial/ Collector Street	Local Street		
Wal-Mart #6068	2120 N. Stemmons	Sanger	1,200,000	800			●		●		1 blk		●			Yes	DAL
Wal-Mart #7036	3162 Brast Road	Sealy	1,100,000	840			●		●		2 mi.	●				Yes	YKM
Wal-Mart #6036	14868 FM 645	Palestine	1,000,000	1,500			●		●		26 mi	●				Yes	TYL
Wal-Mart #6012	3100 N. Quincy Rd.	Plainview	1,000,000	1,500	small			●			2 blks			●		Yes	LBB
Wal-Mart #6016	3900 N I-35	New Braunfels	980,000	1,200			●		●	●	¾ mi.					Yes	SAT
Wal-Mart #7010	20131 Gene Campbell Road	New Caney	890,000	-			●		●		4½ mi		●			Yes	HOU
Wal-Mart #6083	9605 NW H.K. Dodge Loop	Temple	800,000	750		●			●		2 mi	●				Yes	WAC
Wal-Mart #6056	591 Apache Trail	Terrell	750,000	225		●		●			2 blks				●	Yes	DAL
Wal-Mart #6005	201 Old Elkhart Road	Palestine	660,000	350	small				●		35 mi				●	Yes	TYL
Manufacturers/Distributors																	
Army-Air Force Exchange	1801 Exchange Parkway	Waco	625,000	-		●		●			0.4 mi				●	Yes	WAC
Bridgestone America	600 Gateway Parkway	Roanoke	608,000	180		●		●			2½ mi				●	Vicinity	DAL
Caterpillar (u.c.)	Exchange Parkway	Woodway	(750,000)	140-180		●		●			1½ mi				●	Vicinity	WAC
General Mills (u.c.)	4901 Henrietta Creek Road	Roanoke	670,000	-		●		●			4½ mi				●	Vicinity	DAL
Haggar Clothing Co.	5401 N. Riverside Drive	Ft. Worth	665,000	-	●			●			1 mi			●		Yes	FTW
Igloo Products[2]	777 Igloo Road	Katy	1,400,000	1560			●		●		1/3 mi		●			Yes	HOU
LG Electronics	13700 Independence Pkwy	Haslet	500,000	-		●		●			1¼ mi				●	Yes	FTW
Mattel	501 Meacham Road	Fort Worth	1,000,000	120	●			●			1 blk			●		Yes	FTW
Michelin	8800 City Park Loop	Houston	663,000	50	●			●			2 blks				●	Yes	HOU
Orgill (u.c.)	7001 Elder Lake Road	Kilgore	530,000	300		●		●			2½ mi				●	Vicinity	TYL
Nestle	13600 Independence Pkwy.	Haslet	525,000	-		●		●			1¼ mi				●	Yes	FTW
Phillips Electronics	300 Freedom Drive	Roanoke	776,000	-		●		●			3 mi.				●	Vicinity	DAL
Solo Cups (ex-Circuit City)	3737 Duncanville Road	Duncanville	510,000	-	●				●		4 blks			●		Yes	DAL
Whirlpool (ex-GM Parts)	1101 Everman Parkway	Fort Worth	852,000	150	●			●			3 blks			●		Yes	FTW
Whirlpool	14900 Frye Road	Fort Worth	500,000	15	●			●			1½ mi				●	Yes	FTW
Grocery																	
Albertsons	7550 Oak Grove Road	Fort Worth	1,030,000	600	●			●			4 blks			●		Yes	FTW
Aldi (u.c.)	2500 Westcourt Road	Denton	500,000	120		●			●		2 mi				●	Yes	DAL
Grocers Supply (Ex-Fleming, Safeway; not now DC)	2600 McCree Road	Garland	1,080,000	310	●			●			2 blks				●	Yes	DAL
Grocers Supply	3131 E. Holcombe Blvd.	Houston	959,000	-	●				●		2 blks			●		Yes	HOU
HEB	4710 N. IH-35	San Antonio	1,380,000	-	●				●	●	1 blk					Yes	SAT

Distribution Center[1]	Address	City	Size (sq. ft.)	Jobs	Site					Truck Access						Aerial Photo On File	TxDOT District
					Urban	Fringe	Rural	Industrial Park	Free standing	Front Rd.	Distance to Interchange	State Hwy.	County Road	City Arterial/ Collector Street	Local Street		
HEB	2301 Hunter Road	San Marcos	~650,000	540	●				●		6 blks			●		Yes	AUS
Kraft	1006 Railhead Dr	Haslet	650,000	238		●		●			2 mi				●	Yes	FTW
Kroger	701 Gellhorn Drive	Houston	880,000	-	●			●			2 blks				●	Yes	HOU
McLane Southwest	2828 Industrial Blvd.	Temple	500,000	830		●		●			1.3 mi			●		Yes	WAC
Randall's	10700 Telge Road	Houston	646,000	-	●			●			1 blk			●		Yes	HOU
Randall's/Tom Thumb	743 Henrietta	Roanoke	1,260,000	440		●		●			4 blks				●	Yes	DAL

[1] u.c. – under construction

[2] Includes some manufacturing

Source: Texas Transportation Institute

Table 5. Selected Large Texas Distribution Centers by TxDOT District.

District	Distribution Center Type			Total
	Retail	Manufacturer/ Distributor	Grocery	
Dallas	14	4	3	21
Houston	7	2	3	12
Ft. Worth	4	6	2	12
Waco	3	2	1	6
Tyler	4	1	0	5
San Antonio	1	0	1	2
Austin	0	0	1	1
Lubbock	1	0	0	1
Odessa	1	0	0	1
Paris	1	0	0	1
Yoakum	1	0	0	1
Total	37	15	11	63

Source: Table 4

Table 6. Distribution Center Location Types.

DC Type	Area Type			Location Type	
	Urban	Fringe	Rural	Industrial Park	Free Standing
Retail	15	13	9	14	23
Manufacturer/ Distributor	6	8	1	13	2
Grocery	7	4	0	7	4
Total	28	25	10	34	29

Source: Table 4

Table 7. Distribution Center Access Types.

DC Type	Access Type				
	Frontage Road	State Highway	County Road	City Major	Local
Retail	4	8	4	10	11
Manufacturer/ Distributor	0	0	1	4	10
Grocery	1	0	0	5	5
Total	5	8	5	19	26

Source: Table 4

3. SITE SELECTION/NEGOTIATION EXPERIENCES IN TEXAS

The research team interviewed representatives from DCs, local communities in which they are located, and TxDOT district offices about DC site selection processes. This chapter describes the findings from the interviews.

TxDOT districts learned about potential new DCs in one of several ways:

- from TxDOT's Government and Public Affairs Office, which is referred DC contacts by the Governor's Office of Economic Development (GOED) if they are contacted by a company seeking a DC site;
- from local economic development agencies or cities that have been contacted by a company wanting to build a DC in the specific or general area; or
- by the DC developer or an agent, seeking information (rarely), access, or improved highways.

The search may begin with a call to the Texas Governor's Office of Economic Development. Those calls may seek general information, or may request assistance in locating sites meeting stated criteria. GOED may gather data or other information to help the DC developer find communities or counties meeting certain criteria. On behalf of the DC developer, GOED may even request site proposals from interested agencies. In the case of transportation, GOED has weekly meetings with a member of GPA staff (currently Helen Havelka) to pass on transportation requests. However, because DC operators usually prefer anonymity and confidentiality, the identity of the DC is not passed on.

Site selection and development experiences tended to fall into one of three categories:

- *DCs that needed negligible or no transportation/infrastructure improvements to begin operations.* Some of these moved into existing facilities or built facilities in existing business parks. Others built along highways where the needed access (ramp, driveway) already existed or was previously planned by TxDOT.
- *DCs that needed transportation improvements that were provided or paid for by the local community (via community development or other funds) and/or the DC company.* TxDOT involvement was sometimes sought during the process for data, traffic studies, or permits/approvals. In one case, TxDOT was initially asked to build an overpass to provide access for a new DC. Since TxDOT could not fund this improvement, the TxDOT area engineer worked with the DC site engineer to identify feasible alternative access points for the site.
- *DCs that needed transportation improvements for which TxDOT performed the work and provided at least part of the funding.* Most of these involved traffic signals, deceleration lanes, highway on-ramps, overpasses or underpasses, interchanges, highway extensions, or pavement improvements.

The **Governor's Office of Economic Development** (GOED) handles initial responses from DC developer representatives. These usually come at the beginning of the site selection process. Inquiries may come after Texas has been selected as a site location or may involve consideration of sites in multiple states. Some inquiries are for basic information (demographics, state laws, regulations, policies, programs, labor force information) and some are for assistance to identify candidate locations meeting specified DC criteria. Some assistance requests extend to arranging visits to candidate sites or communities, or to having the GOED request proposals from local agencies for specific sites. GOED also receives requests for incentives. Inquiries may come from DC developers, but frequently start with real estate brokers, consultants, or developers.

GOED's role is to attract business—including DC sites—to Texas. GOED normally first contacts local economic development offices (LEDO) in areas of interest to the DC. The LEDO responds to specific needs and any requests for site proposals. The LEDO may involve other agencies, but usually does so on an as-needed basis. A "Site Location Requirements" form provided by the GOED collects general information on the type of business and project being proposed, planned financing, projected employment, markets to be served, expected environmental impacts, and site and building needs. The complete form is included in this report as Appendix A. The form includes a short section concerning the transportation modes that will be utilized for incoming and outgoing goods, but does not otherwise address transportation requirements of planned DCs.

GOED refers transportation requests to TxDOT. TxDOT has a designated representative (currently Helen Havelka, Government and Public Affairs Office) who works directly with GOED. She passes requests on to appropriate districts if the desired area is known. However, some inquiries are kept confidential at DC developer request. Traffic, access, and road improvement requests are not normally received or handled at this level. That normally happens after a site has been selected (or tentatively selected) and is handled by a TxDOT district or area office.

Some (but not all) of the more significant infrastructure improvements were already-planned projects that were moved up on TxDOT's program schedule; one was a programmed road widening that was simply performed on a different segment of the same road to accommodate the DC access needs. However, a few were previously unanticipated and required reprogramming or use of TxDOT discretionary funds. The degree of TxDOT involvement notwithstanding, most site searches and negotiations followed a similar timeline. The interviewed companies generally begin site searches for new distribution centers one to two years in advance of construction. Local communities that are being considered find out about the possibility of a new DC in their area fairly early in the process, though they may not always know the identity of the company until later. Companies usually make initial contact with state and/or local economic development agencies, depending on how broad the search area is.

However, early explorations are often made through third parties (e.g., commercial real estate brokers, site selection consultants) so that the DC company will remain anonymous. Once the search is narrowed down to one or more sites or local areas, DC developers (the companies themselves or a firm doing at least some portion of the development) involve other state and local agencies (city/county departments, utility companies, tax assessors, Texas Workforce Commission, TxDOT) as needed. Local area negotiation teams often include representatives from the LEDO, the city manager's or mayor's office, city departments, county commissioners, utility providers, banks, and local industrial commissions. The Texas Department of Agriculture, as well as TxDOT, has been part of some negotiation teams. Depending on the DC, local areas within Texas may be competing with other Texas locations as well as with sites in other states, usually along the same transportation corridor or within a set distance radius. As described previously, roadway improvements are often a potential incentive that local areas offer to attract a DC. However, as one DC company stated, roadway improvements are often viewed as being necessary to make a site viable for further consideration rather than as an incentive.

DC OWNER RELIANCE ON TXDOT

There were a variety of responses from DC operators and local community representatives regarding when TxDOT involvement is customarily sought during the site selection and development process. The responses to this question received from DC companies are as follows:

- Involve TxDOT from the beginning.
- Due-diligence process always includes TxDOT and equivalent agencies, so they are involved early in the process.
- TxDOT is involved after the site is identified (based on the desire to keep site exploration confidential).
- Involve TxDOT on most sites, typically once a site plan is established.
- TxDOT is involved when needed.
- Only involve TxDOT if infrastructure changes or permits are needed.
- Where road improvements are needed, TxDOT is involved as early as possible.
- Only involve state DOTs if needed for access or road improvements.

The above responses generally refer to sites located on or near state highways. TxDOT is often not involved if it appears that access will not rely on state highways.

Answers from local communities about TxDOT involvement in the process were similar:

- TxDOT is a critical player; needs to be involved from day one (this referred to development of a business park containing DC sites);
- from the very beginning of the process;
- as soon as site is in competition;
- as soon as they know about the type of proposed facility and its transportation requirements;
- as soon as negotiations/interest become serious;
- about one month into the selection process;
- as needed; not until there is a real chance that a DC will locate here;
- when necessary improvements are identified;

- after site is selected; TxDOT did not appear to be needed for site selection (this was a site where the local TxDOT district believed it had been contacted far too late); and
- when transportation question or need arises.

TxDOT district and area office personnel had a variety of experiences regarding their initial involvement in or awareness of DC site development. Depending on the site/DC, TxDOT offices were contacted:

- during the site selection and planning phase;
- in conjunction with city developing site with which to attract DCs;
- close to beginning of site design;
- at site plan approval phase;
- after DC site was selected;
- when a special tax district was formed to finance improvements;
- after hearing by word of mouth;
- when access permits were required;
- when traffic signal was requested;
- when road improvements were requested (by developers or local agencies);
- very late; after land clearing had started (1.5 years too late for improvements to be complete for the scheduled DC opening); and
- in conjunction with road damage by overweight trucks;

TxDOT's involvement in site selection and planning has been limited, based input from both TxDOT and others involved in the process. Some DCs have set site plans, including access points, and TxDOT suggestions for alternate access points are not often accepted. Local agencies developing a site for potential DCs tend to be more willing to collaborate with TxDOT on site locations and plans.

Three of the TxDOT representatives interviewed said that their office would prefer to be involved as early as possible in a site selection process, to be able to participate in decisions regarding the site plan and access points, to help plan the best road improvements to serve traffic needs, and to have more time to identify funding sources. Other TxDOT offices said that they do not necessarily need to be involved in the early negotiation processes, but are also very clear about what is required to qualify for improvements that they will fund.

Hence, different districts have different views about when they would like to become involved. This may derive from different roles and experiences they have had in the past.

DC REQUESTS TO TXDOT

Requests made of TxDOT by the DC companies interviewed varied widely, from no requests at all to requests for significant infrastructure improvements. Examples of requests made include:

- driveway permits;
- access route improvements and extensions;
- traffic impact analysis to determine needs;
- deceleration lanes;
- traffic signals;

- moving up already-planned improvements;
- new interchange or ramp; and
- interchange modification.

TxDOT has also occasionally received requests from local area agencies for improvements to attract a DC to a particular site. These improvements generally involve improved access to highways. Examples of improvements requested to attract a DC include:

- adding traffic signals to an intersection;
- adding or redesigning ramps at an existing overpass;
- widening an overpass;
- adding a grade separation;
- adding turn lanes at intersection;
- improving intersection geometrics to accommodate heavy trucks;
- reconstructing an FM road connecting to the highway, to accommodate heavy trucks; and
- building a new FM road to connect to the highway.

TxDOT responses to DC and local area requests also varied, depending on circumstances. In some instances, TxDOT has declined to make an improvement if an analysis determined that the improvement was not actually necessary for safety or access purposes. In others, TxDOT simply grants permits for improvements that are then funded and performed by the DC or local agencies. Because TxDOT is not usually able to make substantial unprogrammed improvements quickly enough for DC developer needs, some improvement requests initially made of TxDOT end up being handled by local agencies on local roads (or on the DC's own property). TxDOT does not usually fund unprogrammed improvements; again, local agencies are sometimes willing to provide front-end funding for improvement that they can recover over time from the DC owners. In other cases, the DC developers provide funding directly for the needed improvements. TxDOT has, on occasion, moved up a planned improvement to complete it earlier than it was originally scheduled, or used unallocated discretionary district or statewide funds (available though TxDOT Administration) for part or all of a project's cost. This is not a frequent practice.

DC TRANSPORTATION ISSUES AND CONCERNS

Most major urban roads in Texas are designed to accommodate large trucks in at least moderate volumes. However, local streets, rural roads, and some older rural highways are not designed for high volumes of large trucks. Even some major urban roads may not be designed to accommodate the truck volumes generated by large DCs (reported to be up to 1,000 per day per direction). Some of the characteristics of large trucks—as large as WB72 (trailers up to 59 feet long) instead of the previous norm of WB50 (with 42.5 foot trailer)—are much more demanding and difficult to safely and efficiently accommodate on roads that have not recently been upgraded. Turning movements and queues created by these trucks create access issues that can have detrimental impacts on adjacent roads. Some of the problems that typically accompany large volumes of large trucks on rural or local roads plus unimproved highways can include (*9*, *10*, *11*, *12*, *13*):

- Traffic and geometrics
  - Acceleration/deceleration (e.g., highways, ramps, driveways), weaving sections

    - Congestion
    - Turning radii, swept paths, encroachment
    - WB50 superseded by WB62 – WB72 trucks
    - Sight lines and distances
    - Low speeds for tight turns
- Pavements
    - Rutting and cracking (increase in 18KESALs, average vehicle weights, frequencies above design)
    - Shoulder needs and deterioration
    - Faster deterioration/shorter service life
    - Poor ride quality
    - Base failures
- Bridges
    - Faster deterioration/shorter service life
    - Weight limits
- Demands for improvements (additional or reprogrammed)
    - Interchanges (additional, upgraded, truck geometrics)
    - Intersections
    - Ramp modifications
    - Acceleration/deceleration lanes
    - Passing lanes
    - Increased sight distances
    - Widening
    - Shoulders
    - Stronger pavements
    - Traffic control
    - Signing (additional to overcome sight line blockage)

Specific to Texas, TTI found in interviews of users—truck drivers and Department of Public Safety (DPS) officers—the following concerns and perceived deficiencies (*14*):

- Freeway entrance and exit ramps
    - Ramps too short
    - Not enough merging or weaving distance
    - Traffic does not yield to ramp traffic
- Secondary road lane widths not wide enough
- Shoulders
    - Too narrow
    - Cannot accommodate safe truck stopping/parking
    - Intersections inadequately designed to accommodate trucks

The interviews with DC representatives identified some transportation issues similar to those specified above, though most of those interviewed have not experienced any significant difficulties since their facilities opened. Post-opening transportation issues identified by a very few of the DC representatives included:

- occasional difficulties with traffic congestion;

- safety conflicts (one now shares a highway on-ramp with a local high school);
- maintenance needs due to potholes and other road wear; and
- tight geometrics at (older) frontage road intersection and U-turn lanes.

One DC has discovered that its own business growth over the last several years (more trucks going in and out than when it opened) was resulting in long queues of trucks trying to enter the highway on-ramp and blocking part of the access road. As a solution, the DC has instituted "appointment-only," scheduled truck pickups and drop-offs at the facility to control the number its trucks on the interchange at any one time.

Another of the interviewed DC companies follows a practice of "stepping up" operations during the first three years following the opening of a new DC; the DC will operate at half capacity during the first year, at two-thirds capacity during the second year, and expand to full capacity in the third year. This allows the surrounding community to adjust to the increased traffic volume resulting from the DC.

Most of the local community representatives reported no negative impacts to the local transportation system as a result of the DCs. Some problems with traffic congestion on local streets in two of the communities were solved once planned roadway and/or interchange improvements were completed. Two of the TxDOT districts reported problems with a roadway or interchange that were later upgraded to support heavy truck traffic from a DC. Another saw some minor changes in travel characteristics at a nearby highway interchange.

CONCLUSIONS AND RECOMMENDATIONS

The interviews and case studies identified some of the issues that TxDOT may face pertaining to distribution center development and operations, as well as pointing the way to some potential solutions.

- TxDOT is not always drawn into the DC site selection process when local agencies are first contacted. Sometimes this is to heed DC developer requests for confidentiality. However, other times it is a result of a local agency not feeling there is a need for TxDOT (until the need arises).
- Some local agency contacts to TxDOT go to the district office, directly to the district engineer, or to the local area office. It appears that communications between the district and area offices are incomplete or may not occur in a timely manner.
- Earlier, better, or more regular communication may be needed between TxDOT district (or area) offices and local economic development offices. While most of the local communities represented in the interviews indicated that TxDOT is a regular partner in their economic development activities, in practice some communities involved the local TxDOT district or area office after specific transportation needs arose.
- One of the TxDOT respondents observed that while most Texas city officials know that road improvement funding is limited, some small town officials still think that TxDOT has unlimited funds. Most push for construction faster than TxDOT can deliver. Inability to complete TxDOT improvements on time (i.e., when desired by DC owner) is a frequent claim.

- Given TxDOT's project programming cycle, what is considered early in the site selection process for DCs and local communities still does not provide much lead time for TxDOT. With only 12-24 months to go from site search to a site and plan for infrastructure needs, there is not much time to plan for and build transportation improvements, particularly those that need to locate funding sources that are programmed on a TxDOT funding cycle.

Two of the DC representatives interviewed suggested that TxDOT should work with economic development agencies (state and/or local level) up front to help to attract desired business into the state and to prime local communities for potential business development. TxDOT is already involved with the Governor's Office of Economic Development, but not in that manner. This could also be a way for TxDOT to encourage site selection in locations where improvements are already planned. If possible, TxDOT could then stay involved with the DC companies to see if needs are being serviced and to potentially partner on future expansions and additional business.

A DC representative described the proactive involvement of the Georgia Department of Transportation (GDOT) during a recent DC site search: GDOT, working with the state economic development office, supplied detailed information on infrastructure plans for numerous sites in the state. This information helped the company to locate several potential site options in Georgia and make their selection. Another company with DCs in several states said that almost all state DOTs have the same funding delay challenges. One state (Oklahoma) seems to have overcome the timing problem although he did not know what the solution was.

4. CASE STUDIES – DC SITE SELECTION, IMPACTS, AND LESSONS LEARNED

The research team conducted several case studies of Texas DCs to ascertain experiences associated with site selection and experiences associated with requests for access improvements, and impacts on the road system. The purpose of the case studies was to identify lessons learned and potential best practices.

This chapter summarizes findings from the case studies. Each case study concludes with a list of lessons learned, best practices, and also practices to avoid.

CASE STUDY – ACADEMY SPORTS, KATY

Description of Distribution Center

Academy Ltd. is a privately held company. The Academy DC in Katy, Texas, has approximately 1.5 million square feet, including a recent expansion. Academy is a retail sports and outdoors retailer. This DC also houses the company's corporate headquarters. There are over 100 Academy Sports and Outdoors retail stores in 11 Southeastern states; in addition to the Katy DC that serves the current stores, a new DC is under construction outside Jeffersonville, Georgia, that was scheduled to be completed in 2009.

The facility operates seven days per week, from 4:30 or 5:00 a.m. until 1:00 a.m. There are several peak seasons throughout a typical year, including the periods preceding Christmas holidays, spring break, and hunting season. Some value-added services are performed at the distribution center, including ticketing and security-tagging merchandise.

The Katy facility is located on the southeast corner of Mason Road (a 4-lane divided north-south county road that connects to I-10) and Franz Road (4 lanes divided). Primewest Parkway (2-4 lane local street) parallels Mason Road and runs behind the DC. DC truck access is via this street. Access to the offices of the DC and headquarters is via Mason Road. Figure 1 shows an overhead view of the facility and its access points. Figure 2 shows a wider view of the facility and its connection to I-10.

Figure 1. Overhead View of Academy DC Facility prior to Latest Expansion, Katy, Texas (Source: Google Earth).

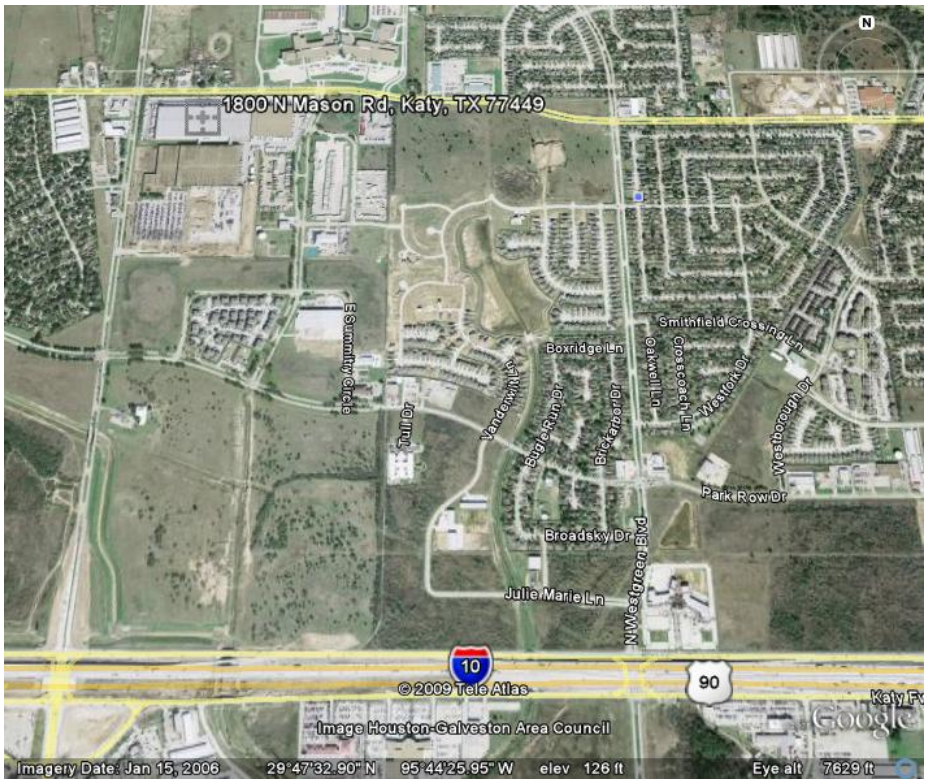

Figure 2. Overhead View of Academy DC and Access to I-10. (Source: Google Earth).

Selection of DC Sites

Academy opened this DC in the early 1980s, taking over an old General Electric facility to be a distribution center and corporate office. Current management is unaware of the criteria used to select that site. However, at the time, the Academy chain was much smaller and centered around the Houston area.

The search for a site for the new facility in Georgia began approximately two years before construction, with a logistical analysis of inbound and outbound shipping needs for Academy's stores and vendors. This analysis yielded a search region with an approximate 100-mile radius spanning three states. Within this region, Academy worked with state economic development corporations, local consultants, and state DOTs to identify potential locations. State DOTs in the three states provided information on current and planned infrastructure at the various sites that were considered.

Academy evaluated potential sites according to the following criteria:

- site size (sufficient land for current needs and for predicted future expansion);
- workforce availability;
- cost and quality of the land parcel;
- central location for stores to be served, vendors, and import ports;
- road infrastructure, including the condition of surrounding roads, the suitability of roads and interchanges for heavy tractor-trailer combinations, and access to north, south, east, and west corridors; and
- traffic patterns around nearby major cities, with the goal of avoiding heavy/congested traffic.

All three states offered incentives, including tax abatements, grant funding for utility and power infrastructure, and port credits.

Roadway Needs and Improvements during Development

A highway interchange near the selected site for the Georgia DC was old and already scheduled for improvements. The fact that the needed roadway improvements for this location were already planned by the state and would require no special accommodations for the new DC was a major factor in Academy's decision to locate there.

Current Access and Roadway Issues

The existing Academy facility has benefited from TxDOT's improvements to I-10; these improvements were already planned and are proceeding according to TxDOT's original schedule. Academy considered installing a traffic signal at one of the DC's egress points, due to the levels of both truck and commuter traffic at the intersection. After discussing the signal with TxDOT and assessing costs, Academy opted not to install the signal. Academy has also added additional left turn lanes adjacent to its own property and modified access to accommodate expansions of the DC and office spaces.

The facility has not created additional work or maintenance problems for TxDOT, according to the West Harris County Area Office. Since the facility is located in a well-developed area, the existing roadway network is mostly adequate for the level of traffic generated.

Lessons Learned and Potential Best Practices

Academy's site search in the southeastern U.S. demonstrated the valuable role a state DOT can play in bringing businesses to its state. The Georgia DOT worked in partnership with the state and local economic development agencies to provide information about transportation infrastructure—existing, planned, and feasible—of sites under consideration. This proactive engagement with the development process enabled GDOT to assist and encourage economic development and its location in Georgia. Continued involvement with the businesses after DCs or other major facilities are built may provide opportunities to partner on future expansions.

Potential best practices associated with both the existing and new DCs include:

- Site location—both general and specific—may involve a number of criteria or advantages. In the cases of the two Academy DCs, criteria or advantages of interest included:
    - proximity to an interstate highway interchange,
    - existing and planned infrastructure (in Katy, the existing facility and the expansion of I-10; in Georgia, the roadway network at the new site),
    - location within distribution network,
    - availability of suitable workforce, and
    - establishment of tax abatements, grant funding for utility and power infrastructure, and port credits (Georgia location);
- Locate DCs near regional highways to limit the improvements needed to roadways;
- Locate the DC near an interchange or other highway access that is:
    - designed to handle large and heavy trucks and
    - has capacity to handle a large number of additional trucks;
- Establish communication between TxDOT and the DC owner or developer well in advance of any location decision to discuss and agree on access or other improvements that are needed. During site selection for the Georgia DC, both the company and the Georgia DOT benefited from:
    - early information from the DOT on existing and planned roadway network at multiple sites within the state and
    - collaboration in the site selection process among DC owner, DOT, and other state and local agencies;
- Continue communication between TxDOT and DC owner concerning transportation-related needs and issues; and
- Roadway improvements provided by the DC on its own property and/or connecting to TxDOT roads (such as the additional left turn lanes at the Katy DC) further improved the DC's access.

Practices to Avoid

Potential practices to avoid associated with the existing DC include:

- Installation of a traffic signal solely to facilitate site traffic to enter and exit the site (plan abandoned).

CASE STUDY – IGLOO CORPORATION, KATY

Description of Distribution Center

Igloo is a manufacturer of water coolers and ice chests. The company headquarters is located on Igloo Road in Waller County outside Katy, Texas. The facility includes a new factory/distribution center (805,000 square feet) plus the original distribution center, which was enlarged at the time of the new building's construction and now also houses both factory and DC functions (500,000 square feet). Total size of the Igloo facility, including the corporate office, is almost 1.4 million square feet. It is situated on 105 acres. The DC serves at least 250 retailers nationwide and employs a total of 1300 people, some full-time, some seasonal. The facility includes space used to manufacture some Igloo products.

Igloo products are primarily purchased by consumers during the summer, which determines the manufacturing and shipping schedules for the company. The shipping season for Igloo begins in late December (after Christmas), with the highest-volume shipping occurring in January through April. Product shipping tapers off from May through July and decreases further in late summer and early fall. October and November are the lowest shipping months. Truck pickup appointments during the shipping seasons range from 7:00 in the morning until 4:00 in the afternoon (until 6:00 or 7:00 p.m. during the busiest months). Some retailers leave trailers at the facility to be loaded at night (loading continues until midnight) and pick them up the next day.

The site is located at the intersection of Igloo Road and Old Katy Road (US 90), just off I-10. Access to the site is by way of a highway interchange connecting Igloo Road to I-10. An existing rail spur is being upgraded to further increase shipping capabilities. Two driveways on the east side of the complex serve truck traffic, two additional driveways serve employee traffic; these all connect to Igloo Road. Another driveway provides access to US 90 to the north. Figures 3 and 4 show the facility and its access points, though the images precede the construction of the Igloo Road/I-10 interchange.

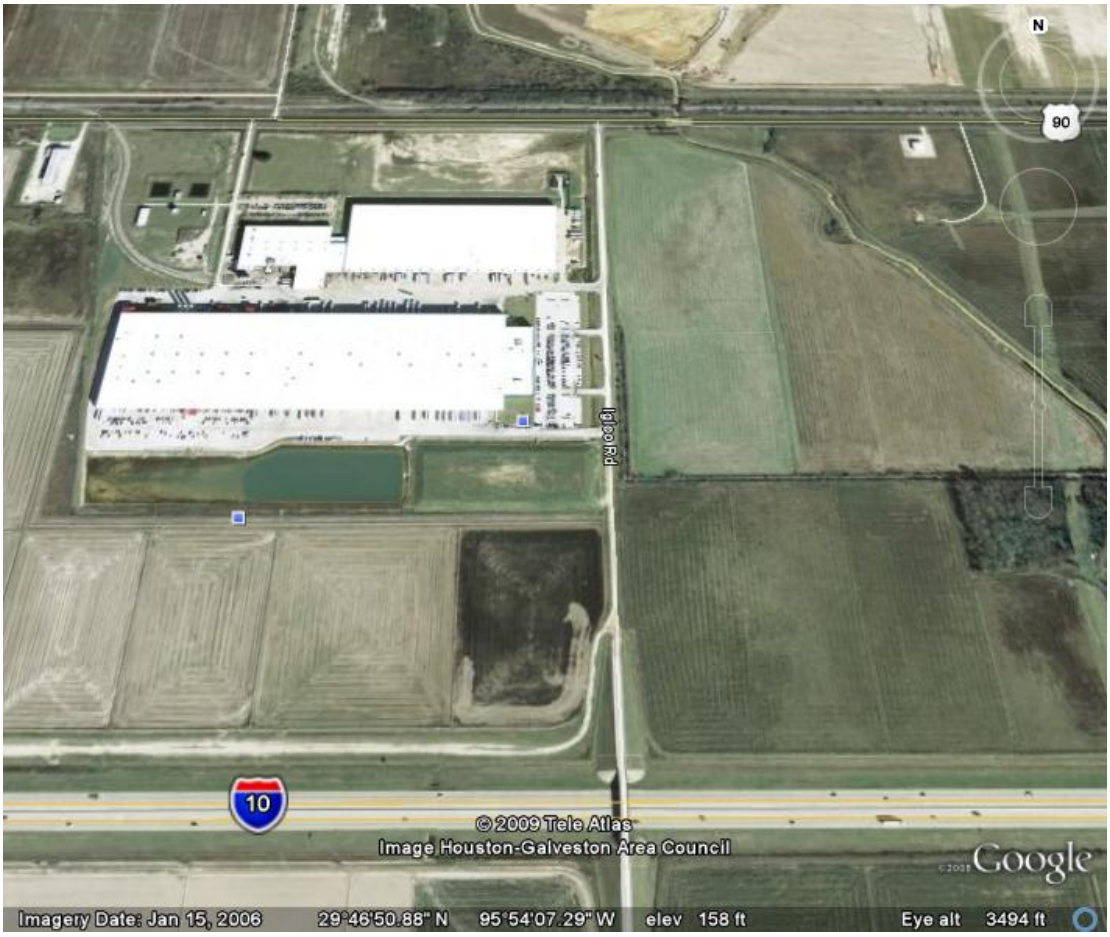

Figure 3. Overhead View of Igloo Facility (Source: Google Earth).

Figure 4. Wider View of Igloo Facility and Access Routes prior to Construction of Igloo Road Interchange (Source: Google Earth).

Selection of DC Site

Igloo's distribution center has been located at the current site since 1979. When the previous facility's lease for this site was close to expiring, the company needed to consider sites on which to expand the DC and factory. In addition to the existing Katy site, Igloo looked at alternative sites in Missouri, Florida, and California as well as Arlington, Texas. The distribution center, as well as the previous Igloo factory on I-10 in west Houston, had the advantage of a substantial and long-term employee base, proximity to an interstate highway and to the Port of Houston, and a nearby source of one of the primary materials used in their product manufacturing (plastic resin, manufactured in Houston). The backhaul rate is also favorable to Igloo: a larger number of trucks enter than leave the Houston area loaded with consumer goods. Because more goods come into the area than leave, many of these trucks would need to leave empty; as a result, Igloo generally pays a lower rate to ship its products out of the Houston area than it would in many other locations. Waller County authorized a Freeport zone and also a county tax abatement. Finally, Igloo was offered a very favorable lease renewal.

Due to the above criteria, the decision was made to expand the existing distribution center and build manufacturing facilities at the Katy site. Construction began in 2003 and the new facility opened in November 2004.

Roadway Needs and Improvements during Development

Igloo communicated with TxDOT for several years prior to the planned facility expansion about TxDOT's plans for the area, including a widening of I-10. The planned highway widening was a significant factor in Igloo's decision to remain and expand at the current site. An interchange at the intersection of Igloo Road and I-10 had been planned in 1979 but ramps had not been constructed; Igloo asked TxDOT to move up the construction of this interchange that had originally been planned for 2018. The new interchange was to resolve some potential capacity and safety issues connected with the heavier truck traffic expected from Igloo and from other businesses along that portion of I-10. TxDOT designed the new interchange and construction costs were paid by Igloo and the land owners on the other side of the highway. The interchange was completed in September of 2007.

The only difficulty faced in the design and construction of the interchange was the refusal by one landowner to sell or donate land for the interchange. This was resolved by designing a three-legged interchange at Igloo Road with no westbound onramp. The westbound on-ramp will be built in the future. The I-10/Pederson Road interchange to the east of Igloo Road, which previously served as access to I-10, does have a westbound onramp that provides access to the Igloo Site.

Before the Igloo Road interchange was completed, Igloo's trucks and employees used Pederson Road to reach US 90 and then US 90 to reach Igloo Road. Igloo asked for a traffic signal to be installed at the intersection of Pederson and US 90 due to the increase in local traffic (and potential traffic safety issues) generated by the Igloo plant. TxDOT performed a signal warrant study and determined that a signal was not warranted. Now that the Igloo Road interchange is complete, the Pederson Road intersection is not used heavily by Igloo, so any traffic and safety concerns associated with that intersection have been resolved.

Current Access and Roadway Concerns

There have been no unusual maintenance problems or needs; the Igloo Road interchange on I-10 was designed to handle truck traffic. Igloo Road adjacent to the DC is paved with concrete and has stood up well to truck traffic and turns. No other roadway improvements have been made by TxDOT in the vicinity of the site. Igloo has experienced no subsequent problems with access to or from its site.

Igloo Road has some damage at its intersection with US 90, as shown in Figures 5 and 6. There has been some deterioration (broken pavement edges) in the corner radii at the mainly due to insufficient radii. The intersection is asphalt. There is also damage to the asphalt at its joint with the Igloo Road concrete pavement on the south side of that intersection (see Figure 6). This damage has apparently not caused significant access problems for the distribution center. Figure 7 shows Igloo Road, including the concrete section adjacent to the DC.

Figure 5. Insufficient Turning Radius and Pavement Failure with Some Patching, Igloo Road and US 90.

Figure 6. Pavement Failure at Igloo Road and US 90.

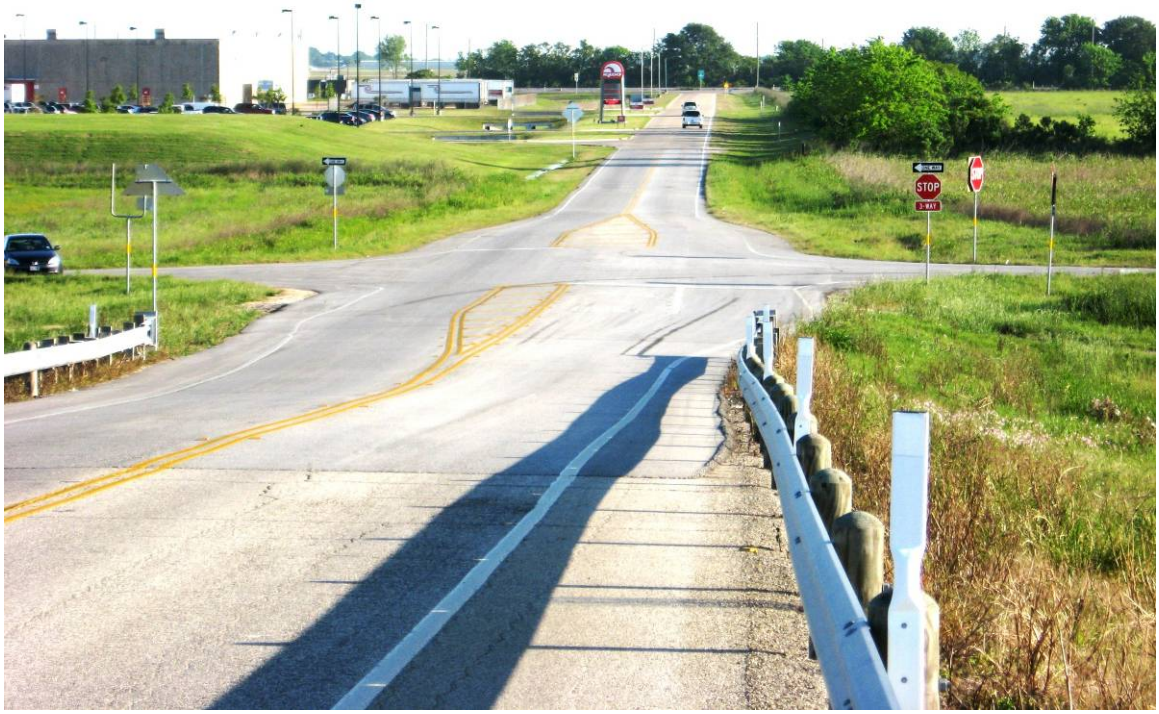

Figure 7. Igloo Repaved Igloo Road with Concrete Adjacent to DC Property to Protect against Deterioration due to Tire Scraping in Tight Turns.

Lessons Learned and Potential Best Practices

The Igloo DC was originally built about one mile from an existing highway interchange that was capable of handling truck traffic. The new I-10 interchange adjacent to the Igloo DC was also designed to handle truck traffic and was funded by the business owners (Igloo and others) rather than requiring TxDOT funds. This demonstrated the value of interchange proximity to DCs.

Other lessons learned that could be considered best practices include:

- Site location—both general and specific—may involve a number of criteria or advantages. In this case, criteria or advantages of interest included:
    - proximity to an interstate highway interchange,
    - location of customers,
    - location of the primary manufacturing material used to make the product at the combined factory-DC,
    - shipping rates for finished products,
    - availability of what was perceived to be adequate (safe and efficient access),
    - willingness of TxDOT to work with DC owner to upgrade access,
    - county establishment of a Freeport zone and tax abatements, and
    - location where qualified, experienced labor force was present (in this case, long term existing employees).
- Locate DCs near regional highways to limit the amount of improvements needed to roads connecting the DC to the regional highways.
- Locate the DC near an interchange or other highway access that is:
    - designed to handle large and heavy trucks and
    - has capacity to handle a large number of additional trucks.
- Location of the DC on one or more roads that do not require further improvement to accommodate large or heavy trucks to reach the DC.
- Establish communications between TxDOT and the DC owner or developer well in advance of any location decision to discuss and agree on access or other improvements that are needed. Agree on:
    - improvements to be made and
    - scheduling for improvements to be completed.
- Use concrete to pave roads that carry large volumes of large trucks or have high volumes of turning trucks.
- Providing funding and/or donations for right of way and construction can help both the DC owner/developer and TxDOT better respond to scheduled need for road improvements. In this case, it also helped to have other nearby property owners that were willing to participate (for their own access benefits).

Practices to Avoid

Lessons that demonstrate practices or conditions to be avoided:

- Provide adequate corner turning radii to avoid deterioration of corner pavement edges; consider using either concrete paving or flush concrete curbs where trucks may occasionally drive beyond the pavement edges.
- Avoid butt joints of asphalt and concrete where truck traffic is frequent.

CASE STUDY 3 – BREAK-OF-BULK FACILITY IN NORTH TEXAS

Description of Distribution Center

This break-of-bulk facility serves 13 distribution centers (called Store Support Centers) across the country. Its distribution region overlaps with other break-of-bulk facilities in its retail company's network. Each of the Store Support Centers in turn serves approximately 100 retail outlets. The facility has about 1 million gross square feet with 85 truck bays.

The DC operates six days per week (Monday-Saturday), three shifts per day, with a peak employee shift from early morning to early afternoon. Nearly all types of merchandise sold by the retail company pass through this DC, except for salon and furniture items. Most items are cross-docked from an inbound truck directly to an outbound trailer without spending any time in storage at the facility, but some items are warehoused for short periods of time. Few items are kept in residual or other long-term storage.

Selection of DC Location

This DC is located in a DC park on a county road, near an intersection with an FM road. It is approximately 2.5 miles from I-35W (See Figures 8 and 9). The DC park houses several other operating DCs. Other DC facilities are being constructed on speculation for future lease. This DC company was attracted to this site because of the proximity not only to the interstate highway, but also to a BNSF intermodal facility, through which the DC receives most of its products. Additional incentives for the DC company included tax credits for hiring employees from the surrounding urban area and a location in a Free Trade Zone, though the zone's benefits do not currently apply to this facility. The company had no formal contact with TxDOT during the location search.

Figure 8. Overhead View of DC and Access Roads.

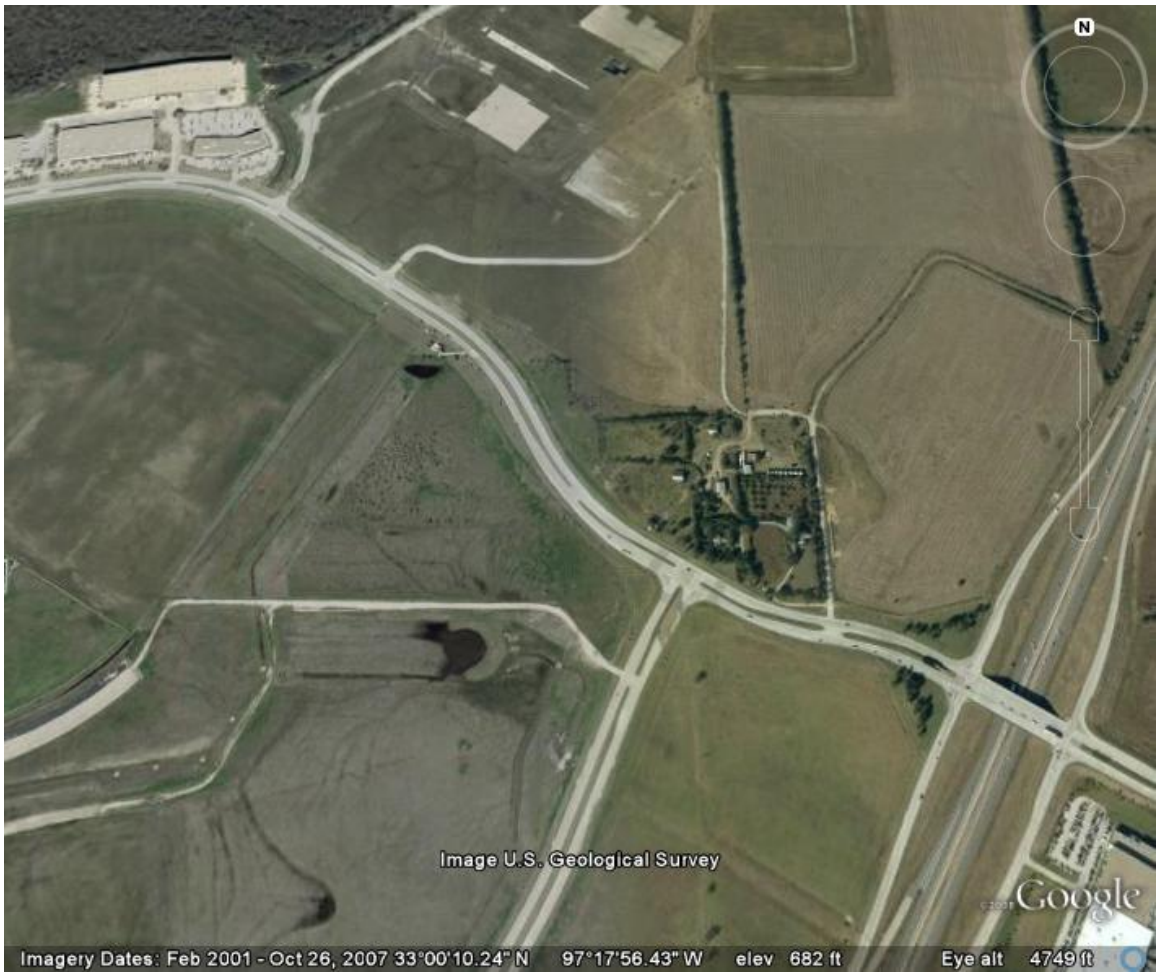

Figure 9. Wider View of DC and Access Roads.

Roadway Needs and Improvements during Development

There were no roadway improvements needed to serve this distribution center. The DC is located in a well-developed area with many similar facilities and much of the needed infrastructure already in place. TxDOT has planned future improvements to I-35W in the vicinity of the DC park.

Current Access and Roadway Concerns

The DC has experienced some issues with street blockages at the at-grade rail crossing west of the DC (off the aerial photos to the left), and some highway traffic congestion close to the Texas Motor Speedway. The DC owners are looking forward to the planned I-35W corridor improvements. They are also anxious to see if a new corridor around the Dallas-Ft. Worth area might include a spur into the area. There have been some maintenance problems with the roads within the DC park (broken pavement).

Lessons Learned and Potential Best Practices

This break-of-bulk facility in North Texas is located in an area with already-existing infrastructure, which eliminated the need for roadway or access improvements by TxDOT. Other lessons learned that could be best practices include the following:

- Site location—both general and specific—may involve a number of criteria or advantages. In this case, criteria or advantages of interest included:
  - proximity to regional controlled access highway,
  - proximity to rail intermodal facility,
  - availability of what was perceived to be adequate (safe and efficient) access,
  - location of labor force, and
  - location within the company's distribution network.
- Site located in a DC park already provided with essential access and street infrastructure, including access to a nearby interstate highway interchange and limited the amount of improvements needed to roads connecting the DC to the regional highways.
- Regarding improvements to the regional access system, maintain good communications between TxDOT and the DC community in order to provide input and be familiar with plans.

Practices to Avoid

Potential practices to avoid associated with the existing DC include:

- Location of the DC on a roadway that is not suited to a large number of large trucks. The DC is located near a suitable highway interchange, but some of the roadways within the DC park (not TxDOT-maintained) may not be suited for the truck traffic that it carries and may be deteriorating as a result.
- Avoid access routes dependent on crossing at-grade rail crossings with significant numbers of daily trains.

CASE STUDY 4 – RETAIL DC IN NORTH TEXAS

Description of Distribution Center

This retail DC covers 650,000 square feet on a 149 acre site. The DC serves over 750 stores in a 500 mile radius. In 2008, the facility employed 745 employees, 115 of them truck drivers, and operates seven days per week, 24 hours per day. The peak hour for shipping was reported to be around three in the afternoon, Monday through Saturday. In 2008 the operator estimated that approximately 54 trucks left and arrived at the DC each day; each truck generally leaves and returns the same day. Besides the distribution operation, limited truck maintenance (washing and oil changes) is performed on facility grounds.

Selection of DC Location

The DC is located on an FM road, close to an intersection with a non-interstate freeway and approximately one mile from an Interstate highway. The facility is in a mostly undeveloped area at the edge of a small city on the outskirts of a metropolitan area. The primary criteria for this DC's site location were its geographic position within the retailer's store network, followed by the size of the land parcel. Other attractions of this location were the nearby freeway and

Interstate highway and the lower traffic congestion at the outskirts of the metropolitan area. Figure 10 shows the location of the DC relative to the non-interstate freeway.

Figure 10. North Texas Retail DC while under Construction and Its Principal Access (Source: Google Earth).

Incentives were provided by the Texas Department of Economic Development (about $1.37 million—including about $400,000 in loans) to build and improve access roads and intersections and to install water and sewer infrastructure. The city offered a 60 percent tax abatement for seven years (the city stood to annually receive about $1 million in taxes and the school district $2 million). The DC operator also gained access to the Texas Smart Jobs workforce training program. With this DC projected to be the largest employer in a small city, the city was willing to offer financial incentives to attract the DC.

TxDOT was involved fairly late in the process, when a driveway permit was needed. If improvements had been needed on TxDOT roads, the DC company said they would have involved TxDOT earlier.

Roadway Needs and Improvements during Development

Other than a driveway permit, no roadway improvements on TxDOT roads were needed during site development. Improvements were needed to the intersection and the access roads serving the DC. These improvements were provided by the city.

Current Access and Roadway Concerns

The DC company currently reports no roadway concerns, either on TxDOT roads or on access roads.

Lessons Learned and Potential Best Practices

This retail DC in North Texas is located in a relatively undeveloped area, but close to roads that are designed to handle the truck traffic it generates. Lessons learned that could be considered best practices include:

- Site location criteria or advantages of interest included:
  - location within the company's distribution network,
  - land parcel size,
  - proximity to regional highway and Interstate Highway system,
  - availability of what was perceived to be adequate (safe and efficient) access, and
  - location of labor force.
- Locate DCs near regional highways to limit the amount of improvements needed to roads connecting the DC to the regional highways

CASE STUDY 5 – MANUFACTURER DISTRIBUTION CENTERS IN NORTH TEXAS

This case study covers two DCs operated by the same company. The owner requested that the locations and identity be kept confidential, so no aerial photos are included in this summary.

Description of Distribution Center

This product manufacturer has two distribution centers located in North Texas. One is a factory distribution center that stores newly made products and ships to the manufacturer's trade partners' DCs as well as to its own regional distribution centers. The second is a regional distribution center that ships to the manufacturer's local distribution centers around the country. The two DCs are within the same county.

The regional distribution center (RDC) operates five to seven days per week, 24 hours per day. It has over 800,000 square feet of gross floor area and employs approximately 150 employees over several shifts, with approximately 80 to 90 people at the peak shift (beginning late morning). The operator reports that an average of 70 to 80 of the company's own trucks leave the facility per typical day. A one week count showed that a total of 275 trucks entered and departed each weekday that week. The RDC serves some local customers, as well as a network of 17 local distribution centers (LDCs). The radius of its service area is several hundred miles, serving seven other major cities in Texas and cities in seven other states. In addition to its distribution operations, the RDC provides some product customization and final assembly.

The factory distribution center (FDC) operates four days per week, 10 hours per day, with one shift of 15 employees. It has about 500,000 square feet of gross floor area. According to the company, approximately 50 trucks enter and leave the facility on an average day. Week long counts showed similar truck volumes. The FDC's service area is smaller than that of the RDC; the FDC primarily serves local trade partners/retailers and is served by suppliers.

Both DCs generally experience peak shipping toward the end of each fiscal quarter (March, June, September, and December).

Selection of DC Site Location

Both the regional and the factory DCs are located close to Interstate Highways in well-developed business parks, and were already-existing facilities when taken over by the operator. One of the nearby Interstate Highways provides a reasonably direct connection to one of the company's factories in another city. The locations also take advantage of a large employee base in the surrounding area.

Selection criteria for the company's distribution centers include the following:

- location within distribution network,
- sufficient property/site size (allowing for future growth),
- existing infrastructure,
- good road access,
- proximity to Interstate and/or major highways,
- proximity to rail, and
- attractiveness of site to investors (developers).

If future DCs are planned for Texas, site selection will also take into account the eventual location of significant new or improved travel corridors; the previously proposed Trans Texas Corridor was of interest to this company.

Roadway Needs and Improvements during Development

There were no roadway improvement needs associated with this company moving into these two distribution centers in North Texas. The company selected existing facilities at least partially to avoid the need to pursue infrastructure improvements. Any improvements had been previously made. Both DCs are located in well-developed areas that had adequate roadway infrastructure for the DC needs at the time and had plans for additional improvements in future years.

Current Access and Roadway Issues

These two DCs have experienced no access or roadway issues with TxDOT roads or interchanges. There have been some currently unresolved road maintenance issues on some local roadways within one of the business parks, including pot holes and broken concrete slabs. Some of the roadway sections and railroad crossings on the truck routes between the DC and the highway are rough enough to cause freight damage as trucks roll over them.

Other roadway and access concerns include occasional delays from rail traffic at the at-grade rail crossings and traffic congestion close to a major activity center nearby. The DC owners are eager for the planned improvements along one of the nearby Interstate Highways and hope that some other proposed transportation network improvements in the state are completed so that the DC network will benefit from them.

Lessons Learned and Potential Best Practices

This company's two DCs in north Texas are located in areas that already had existing infrastructure (including buildings/facilities), which eliminated the need for roadway or access

improvements by TxDOT or (at least initially) by local agencies. Reuse of existing DC buildings removed many of the typical needs and negotiation items.

Other lessons learned that could be considered best practices:

- Site location—both general and specific—may involve a number of criteria or advantages. In this case, criteria or advantages of interest included:
    - proximity to regional highway,
    - availability of what was perceived to be adequate (safe and efficient) access,
    - location of labor force,
    - shipping rates for finished products, and
    - location within the company's distribution network.
- Selection of existing DC buildings in an existing business or industrial park normally eliminates the need to obtain infrastructure improvements since they often have already been made.
- Locate DCs near regional highways to limit the amount of improvements needed to roads connecting the DC to the regional highways.
- The level of maintenance on local jurisdiction or industrial park roads (in one case) may not be up to TxDOT standards. This could cause some operators to prefer to locate along TxDOT highways.

Practices to Avoid

Lessons learned that would be desirable to avoid include:

- As part of the site selection process, to avoid access roadways developing pot holes or other pavement condition problems, check the roadway design to make sure they can accommodate the anticipated volume of large or heavy trucks over an extended period.
- Avoid locations that depend on access routes with existing or anticipated congestion or frequent interruptions (e.g., at-grade railroad crossings).

CASE STUDY 6 – RETAIL DC IN WEST TEXAS

Description of Distribution Center

This retail DC facility is 907,000 square feet, and in 2004 served 550 stores in Texas, New Mexico, Utah, and Arizona. The DC is eventually expected to serve up to 800 stores in its region. Employment at the facility has ranged between 375 and 450, partially due to competition with a recently booming oil industry in the area.

Selection of DC Location

The DC is located on the frontage road of an Interstate Highway, adjacent to an interchange. The DC site is on an urban fringe, but is surrounded by other development including a soft drink DC, a call center, and several hotels.

Criteria for choosing this site included its proximity to the retail chain's existing stores, as well as to the chain's planned expansion. One criterion for the site was a location west of I-35, in order to serve future stores in the Western United States. The fact that this DC would be a "big fish in a small pond" in this urban area, without significant competition for transportation and

employees, was also attractive to the chain. The DC company chose a site immediately off an east-west interstate highway, at the location of a proposed highway interchange that has since opened.

Additional incentives provided by the local community included various financial, road, and development assistance from the local economic development corporation, tax abatements from the local taxing entities, and a fire suppression system for the DC installed by the county. Figure 11 shows the DC and its connections to the Interstate Highway.

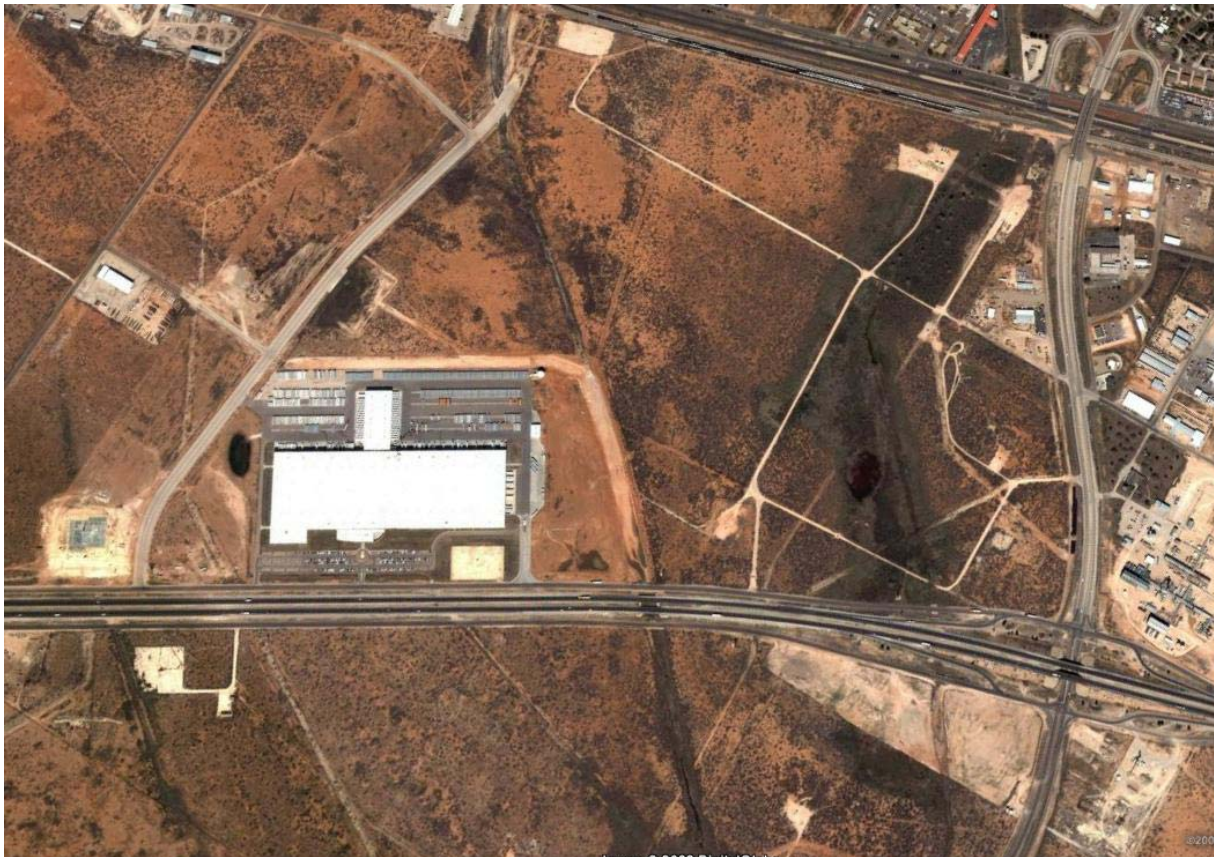

Figure 11. Overhead View of DC and Access Prior to Construction of New Interchange at Intersection Just to Left of DC (Source: Google Earth).

Roadway Needs and Improvements during Development

The highway interchange/overpass that would serve DC traffic was planned, but not yet constructed when the DC was being built. There was no direct communication between the DC company and TxDOT; local agencies that had negotiated to bring the DC to the area contacted TxDOT after the site location decision was made to discuss the upcoming highway interchange and to request help in maintaining access to the DC via nearby interchanges until the new overpass was built. Funding to build the new interchange came from TxDOT district discretionary funds. TxDOT became involved with the project as the site was being platted, reviewing driveway locations and designs as well as drainage. The city reserved right of way for right-turn lanes, and the local economic development corporation (EDC) paid for relocation of billboards that would normally have been TxDOT's responsibility.

Current Access and Roadway Concerns

The DC reports no current concerns with highway access or roadway conditions. The TxDOT district reported some deterioration of pavement on frontage roads. Resulting traffic volumes required a traffic signal at the highway interchange to the west of the facility (an access point that was used more heavily by the DC before the new interchange/overpass was completed). TxDOT improved frontage road pavement and rebuilt sections of the frontage roads during the construction of the new interchange.

Lessons Learned and Potential Best Practices

Lessons learned that could be considered best practices include:

- This DC was located in a relatively undeveloped area, but close to roads designed to handle the truck traffic it generates. This reduced the amount of improvements needed.
- Site location criteria included:
  - proximity to regional highway,
  - availability of what was perceived to be adequate (safe and efficient) access,
  - location of labor force,
  - location within the company's distribution network, and
  - local financing of infrastructure improvements.
- Locate DCs near regional highways to limit the amount of improvements needed to roads connecting the DC to the regional highways.
- An additional lesson learned was the advantage of involving TxDOT early in the site selection process to avoid road improvement delays (which can in turn lead to DC construction or opening delays).

Practices to Avoid

Lessons learned that represent practices to avoid include:

- Selecting a location needing an additional freeway interchange that is not scheduled to be constructed before the DC is scheduled to open.
- Wait until site or design plans are complete before contacting TxDOT to request major improvements. Doing so usually results in DC construction being completed prior to when the TxDOT improvements can be constructed.

CASE STUDY 7 – CONFIDENTIAL DISTRIBUTION CENTER, SOUTHEAST TEXAS

A general merchandise distribution center is located at the intersection of two FM roads outside a small city in southeast Texas. At the request of the owner, the company name is withheld. This DC has approximately 1.1 million gross square feet of building floor area on a site of approximately 100 acres. It opened in 2005. It operates 24 hours per day, seven days per week. There is no other development other than rural farms nearby. At maturity, this DC will serve about 100 stores. Maturity was expected to occur in the 2008-2009 timeframe. Interviews were conducted in 2007.

Site Selection and Site Selection Criteria

When the site search was initiated, the company was seeking a site generally on the west side of Houston. The search area was within 50-100 miles of what had been identified as an ideal

logistical location. The other final contenders for this DC were located within about 75 miles of the selected location.

Site selection started with contact with the Governor's Office of Economic Development through an agent in order to keep the owner's identification confidential. Information sought from the GOED included labor force and demographic information, general economic conditions, likelihood of available sites, and good residential locations nearby for management relocations. The GOED assisted the agent to involve several local economic development agencies or departments to propose sites meeting additional criteria.

Site selection criteria generally included:

- adequate labor force,
- access via state highways or acceptable county roads from Interstate Highway,
- site size and dimensions to accommodate standard site plan,
- adequate facilities and drainage,
- no railroad crossings or schools along access routes,
- not adjacent to residential development or in an industrial park, and
- improvements to provide adequate utility service and site access.

The city's Economic Development Corporation represented the local area in the site search. The Sealy City Manager led negotiations on behalf of local agencies, but ultimately the county, TxDOT and the Texas Department of Agriculture were involved to address specific needs (TxDOT for roadway infrastructure). This DC owner considers local agency assistance and funding as what is necessary to make a site viable and competitive rather than pure "incentives." This company does not seek local tax abatements other than to recover costs they might front end instead of waiting for public funds to come available for public improvements.

The owner started site selection about one year prior to desired construction initiation. Site selection and negotiations for improvements took 2 to 3 years.

Requested Improvements

In addition to the general site selection criteria listed above, to make the selected site viable for the DC, access improvements were needed as were utility extensions and site drainage. The DC owner front ended the drainage improvement costs that were then to be recovered over time through tax abatements. The city and county used Texas Capital Funds to help pay for other infrastructure improvements.

Figure 12 shows the location of the DC and the primary access routes that now exist. Figure 13 shows the site plan that the DC owner developed. Prior to negotiations, the only access between I-10 and the site was via an existing interchange with a state highway and along the state highway to an FM road and then to the site. Truck traffic on the interchange was already heavy for a rural interchange with tight geometrics.

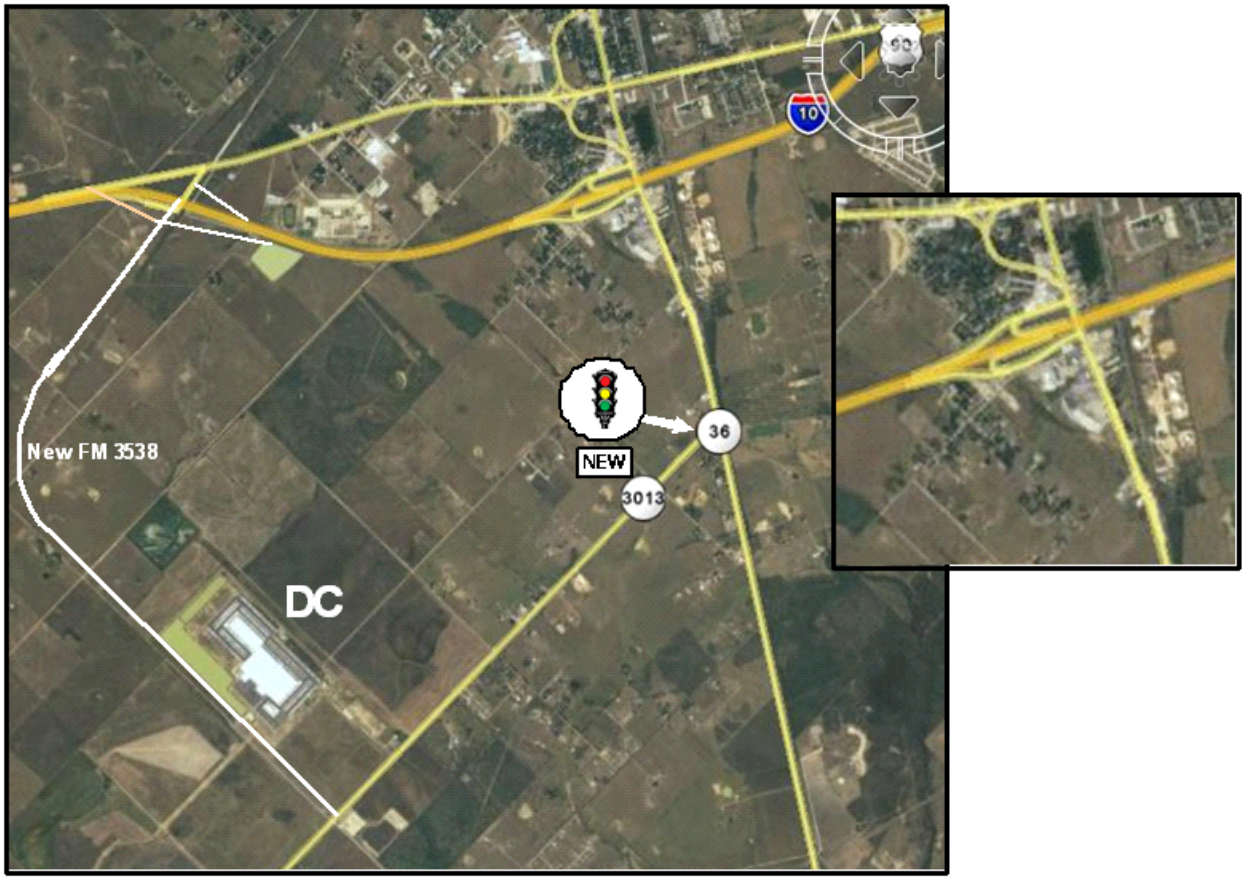

Figure 12. DC Site Location and Access Routes (Photo Source: Google Earth).

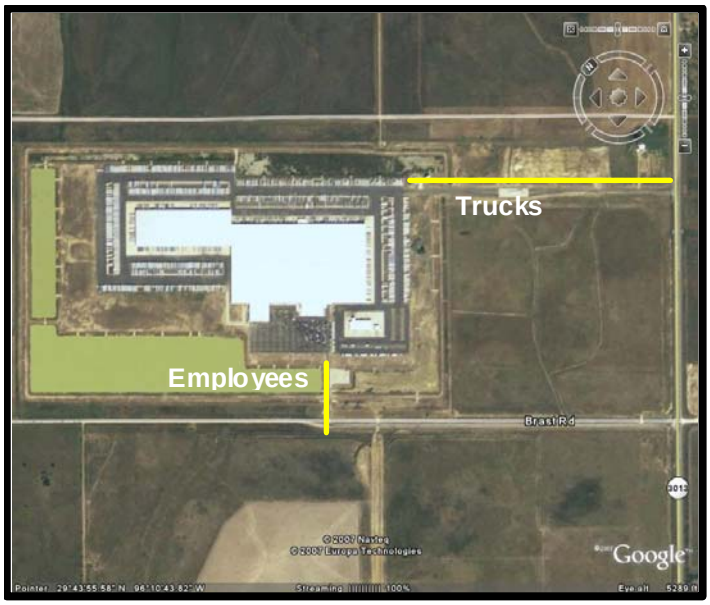

Figure 13. DC Site Layout and Access Driveways (Photo Source: Google Earth).

The DC owner commissioned a traffic impact analysis (TIA) to determine access and roadway improvement needs. The TIA identified needs for left turn and deceleration lanes to serve the proposed site driveways plus improvements and a traffic signal at the intersection of the state highway and the FM road. Improvement of a county road that later became an FM road as a result of improvements made by TxDOT was also needed between the existing FM road and the site driveway (see Figure 14). Ultimately, because the state highway interchange could not be improved for higher truck volumes due to right-of-way constraints, TxDOT decided to create a new full interchange about one mile west at an existing grade separation over an abandoned rail line. There were already ramps to and from the west; the additional ramps were added to complete the interchange. The county road in front of the DC site was designated as an FM road and was improved and extended as a two-lane road to the new interchange about two miles from the DC.

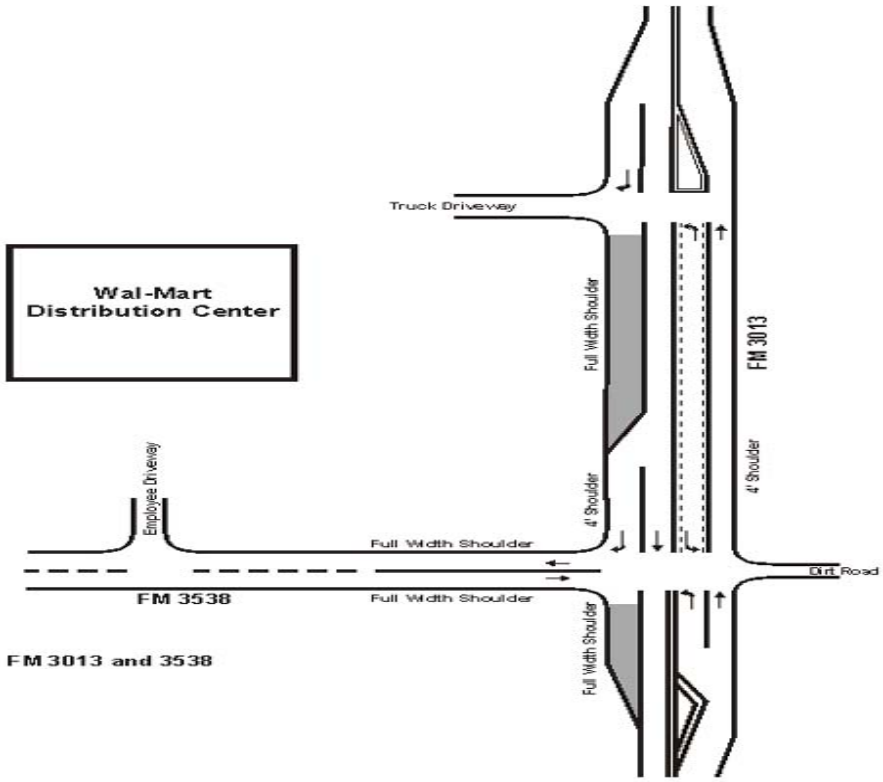

Figure 14. Site Access Improvements Adjacent to Site.

TxDOT was brought into the negotiations after the site plan was set and access improvements had been identified. TxDOT representatives stated that had they been brought in earlier, the site plan (site access) could have been adjusted to facilitate access. There was no funding programmed for the requested TxDOT improvements, and TxDOT did not have sufficient lead time to secure funding and construct the improvements. The TxDOT district engineer approached TxDOT's administration seeking unprogrammed funds to cover the TxDOT portion of the cost of these improvements. Due to the late entry of TxDOT into the process, the DC opened prior to completion of the TxDOT improvements. Fortunately, this DC owner typically starts operations at about half the ultimate volume and ramps up to full operation over a period of

about three years. This reduced the impact of the new operation prior to completion of the access improvements.

TxDOT Concerns

TxDOT concerns through this process were:

- brought in too late to either assist with or influence the site location or access plan;
- not enough time to secure funding through the normal programming process; and
- not enough time to complete improvements before the DC opened.

Certainly in this case, with the extent and types of improvements needed, the lead time was inadequate. The city policy of involving other agencies was similar to that of most others contacted—involve other agencies when need for their assistance arises. This DC owner, for reasons of confidentiality needed to avoid instigating higher site land prices, typically does not want to involve any more agencies than necessary. However, the DC owner was also concerned about the necessary lead time and duration to complete improvements. With both parties concerned, there may be ways to increase the lead time with the right strategy.

Current Operations and Conditions

Once the road improvements were all completed, traffic operations improved. There have been no concerns about current operations. Conditions improved at the SH 36 interchange on I-10 due to relief provided by the new FM 3538 interchange. There had been no road maintenance issues identified by TxDOT or the DC operator as of the time of the interviews.

Lessons Learned

Several lessons may be taken from this example include:

- Unless TxDOT is able to provide reasons to local agencies and DC owners to involve TxDOT earlier, it is likely that the same situation will continue to be repeated. In some cases, where few or only minor improvements are needed, the short lead time may be sufficient, especially if the DC owner will front end or pay improvement costs.
- A TIA can be helpful to identify what site access and road improvements are needed.
- This DC owner prefers to rely on local agencies for improvements, including access improvements, due to their ability to respond faster. TxDOT could encourage the Governor's Office of Economic Development to encourage DC owners wanting quick DC construction to seek sites on local roads. That will not end requests for TxDOT improvements on state highways between major highways and the local roads, but it could reduce the number of requests.
- Some DC sites will need major access improvements and commitments by other agencies may limit ability for TxDOT to ignore the requests. Since TxDOT cannot count on funds being available, it would be beneficial to TxDOT to find a way to inform local agencies (and possibly the GOED) as to what can be counted on from TxDOT.
- TxDOT funds for unprogrammed improvements may be available through TxDOT's administration (unprogrammed funds). District engineers also have small amounts of unprogrammed funds.
- Some DC owners will front end improvement costs if they can recover those costs later.

- DC owners want accessible sites. If TxDOT could assist identification of easily accessible sites, it might provide reasons to involve TxDOT earlier (possibly at the initial stages where GOED assists DC owners to find candidate areas).
- Improvements that benefit new DCs may also benefit other users and relieve existing problematic conditions.

Potential Best Practices

From this case study, a few notable practices were identified that could be designated as best practices:

- Request a TIA as standard practice for any DC adjacent to a state highway or requesting improvements to state highways.
- If TxDOT funding is not readily available for requested improvements, negotiate for other agencies to contribute a portion of the cost.
- Request the DC owner (or local agency) to front end portions of the cost for which funding cannot be obtained in time to meet the DC opening schedule; this will require a repayment arrangement.
- If funding is not available for the TxDOT share of improvement costs, seek unprogrammed funds from TxDOT Administration.

Practices to Avoid

Practices to avoid when possible include:

- Avoid selecting a location needing major road improvements to achieve the desired accessibility.
- Do not select a location that depends on interchanges that are not really designed for high volumes of large trucks.
- When major state highway improvements are needed, understand that the DOT's processes usually require several years before a project can be completed. Under such circumstances, the DC developer and DOT district engineer should agree on a workable lead time for the funding scenario selected.

CASE STUDY CONCLUSIONS AND BEST PRACTICES

Many of the findings from the case studies mirror what was found in the background review and the initial interviews. Many of the findings apply to TxDOT, but many also apply to DC site selectors and developers and to local economic development agencies and other local interests. As a result of the repeated findings, some credible conclusions can be drawn. The same is true for potential best practices and practices to be avoided. Fortunately almost all findings should help all parties work in similar directions since the goals are generally the same or mutually supporting.

Consistent Overriding Finding

DC site selectors and developers consistently do not involve TxDOT in actual site selection. TxDOT is usually not contacted unless the DC developer needs highway improvements or driveway permits, and that usually occurs after site plans and often building designs are complete. This is so late in the DC development process that major improvements cannot be completed prior to the DC opening.

By the time TxDOT becomes aware of the need for improvements to state highways, if improvements are major, there often is not sufficient time to use the normal programming process and still meet the desired opening date for the DC. Finding sufficient funding can be just as challenging. It is much easier if TxDOT becomes involved early in the site selection process so TxDOT can help avoid sites that will need major road improvements, and if improvements are needed, more time will be available to seek and secure funds, if available.

Conclusions

While past and current practice by DC site selectors and developers has been not to seek TxDOT involvement until late in their planning and design process, there can be advantages to all parties to involve TxDOT early. However, to achieve this, TxDOT will need to demonstrate to DC site selectors, developers, and local agencies the value of TxDOT being involved early. This subject is described in detail in Chapter 2 of the accompanying handbook titled *Guidelines For Successful Location And Accommodation Of Major Distribution Centers On Texas Highways* (*15*).

Many DCs are located on city streets and county roads, but all depend on state highways (Interstate and regional freeways) for access. DC site selectors and developers—and TxDOT—can save both time and costs by selecting DC sites that are already served by truck-ready interchanges and access routes and are not subject to congestion. TxDOT can help to identify such areas along the state highway system. Hence, early TxDOT involvement can help DC site selectors and the local economic development agencies that seek to attract DCs to their areas.

The seven case studies revealed some consistent patterns that are also consistent with findings in prior chapters. These include:

- DC site selectors and TxDOT desire to see DCs located where there is good truck-ready access and where the additional truck traffic will not lead to congestion.
- DC site selectors and developers and TxDOT desire to see safe efficient DC access where no undue delays result to DC or passing traffic. As a result, most DCs are located in rural areas, on the peripheries of urban areas, or in industrial parks provided with good truck access.
- Other site selection criteria that have been used for DCs in Texas include:
    - General location:
        - proximity to the destinations for the DCs goods (both current and anticipated); and
        - proximity to suppliers, vendors.
    - Site:
        - site size and dimensions (sufficient land to fit standard site plan to accommodate current needs and for predicted future expansion);
        - cost and quality of the land parcel;
        - favorable site and facility costs;
        - adequate existing infrastructure and drainage; and
        - attractiveness of site to investors (developers).
    - Access:
        - access to north, south, east, and west corridors;

        - access via state highways or acceptable county roads from Interstate Highway;
        - proximity to an Interstate Highway or regional freeway;
        - site immediately off an Interstate Highway at the location of an existing or pending highway interchange;
        - traffic patterns around nearby major cities, with the goal of avoiding heavy/congested traffic;
        - good road access;
        - no railroad crossings or schools along access routes;
        - proximity to rail;
        - proximity to an intermodal facility;
        - proximity to a major seaport; and
        - eventual location of significant new or improved travel corridors.
    - Qualified local workforce available;
    - Tax credits for hiring employees from the surrounding urban area;
    - Favorable shipping rates;
    - Location in a Free Trade Zone;
    - No adjacent to residential development; and
    - Improvements to provide adequate utility service and site access.
- Most DC site selectors wish to locate their facilities on the periphery of an urban area, in a rural area, or in an industrial park to avoid congestion, high land costs, and nearby residential development.
- Some DC owners prefer industrial parks where access and infrastructure already exists. Some are also willing to use existing buildings.
- Most DC developers seek and are given financial incentives tied to specific locations. This usually covers part or most of the infrastructure costs, but may also include tax abatements or other payments or costs.
- DC owners take advantage of the positive economic benefits to be realized by cities and counties where the DC locates (e.g., jobs, property taxes) and use them to leverage incentives and/or development costs from local or state agencies.
- A few DC owners are willing to pay or front end the cost for key access or other improvements.
- Only one DC owner interviewed for case studies or in the earlier general interviews mentioned their own use of traffic impact studies to assess access and needs for other roadway improvements.

Best Practices

- For DC site selectors, developers, and owners:
    - Site location—both general location and specific site—may involve a number of criteria or advantages. Appropriate criteria or advantages typically included:
        - location within distribution network;
        - location of the primary vendors, suppliers and/or manufacturing materials used at the DC;
        - land parcel size and dimensions to accommodate site plan that will meet current and anticipated needs;
        - proximity to an Interstate Highway or regional freeway interchange;

        - location of the DC on one or more roads that do not require further improvement to accommodate large or heavy trucks to reach the DC—normally with 4 lanes or 2 lanes with shoulders;
        - availability of what is perceived to be adequate (safe and efficient access)
        - existing and planned road and utility infrastructure;
        - willingness of TxDOT and/or other transportation agencies to work with DC owner to upgrade access;
        - proximity to rail intermodal facility;
        - local availability of suitable qualified workforce;
        - provision of local agency funds to pay for infrastructure improvements and other development costs;
        - tax abatements;
        - Freeport zone and port credits; and
        - shipping costs for finished products.
    - Locate DCs near regional highways to limit the improvements needed to roadways.
    - Locate the DC near an interchange or other highway access that is:
        - designed to handle large and heavy trucks and
        - has capacity to handle a large number of additional trucks.
    - Consider a site located in a DC park already provided with essential access and street infrastructure, including access to a nearby interstate highway interchange; limited the amount of improvements needed to roads connecting the DC to the regional highways.
    - Locate DCs near regional highways to limit the amount of improvements needed to roads connecting the DC to the regional highways.
    - Use traffic impact studies (TIA) to help locate DCs and their site access in locations where they can be successfully accommodated with no or limited additional roadway improvements (see TIA checklist in Chapter 3 of accompanying handbook, *Guidelines For Successful Location And Accommodation Of Major Distribution Centers On Texas Highways*.
    - Establish communication with TxDOT and other transportation agencies well in advance of any location decision to discuss and agree on access or other improvements that are needed:
        - Obtain early information from TxDOT on existing and planned roadway network serving areas and specific of interest; and
        - Collaboration among DC owner, TxDOT, and other state and local agencies about improvements affecting site selection; agree on:
            - improvements to be made;
            - scheduling for improvements to be completed; and
            - sources of funding for improvement.
    - Continue communication with TxDOT (and other transportation agencies) owner concerning transportation-related needs and issues.
    - When major state highway improvements are needed, understand that TxDOT's processes usually require several years before a project can be completed. Under such circumstances, the DC developer and TxDOT district engineer should agree on a workable lead time for the funding scenario selected.

- To expedite funding for highway improvements, consider partnered funding. This may included shared funding, funding by the DC developer or local agency, or the DC owner front ending costs and being repaid over time or when funds become available.
- Provide funding and/or donations for right of way and construction to help TxDOT better respond to scheduled need for road improvements.
- Before selecting a location, check the design of roads to be used for DC access to make sure they can accommodate the anticipated volume of large or heavy trucks over an extended period.

- For local economic development and other agencies:
  - Encourage DC site selectors and developers to follow the site selection criteria listed in the DC best practices.
  - Establish communication with TxDOT well in advance of any location decision (involving the DC owner or developer as early as possible) to discuss and agree on access or other improvements that are needed:
    - early information from TxDOT on existing and planned roadway network serving areas and specific of interest; and
    - collaboration on improvements affecting site selection among DC owner, TxDOT, and other state and local agencies; agree on:
      - improvements to be made and
      - scheduling for improvements to be completed.
  - Continue communication with TxDOT and DC owner concerning transportation-related needs and issues.
  - Provide funding and/or donations for right of way and construction to help TxDOT (and/or other transportation agencies) better respond to scheduled need for road improvements.
  - Promote potential sites for DCs that are near regional highways to limit the amount of improvements needed to roads connecting the DC to the regional highways.
  - Consider use of existing DC buildings in an existing business or industrial park; that normally eliminates the need to obtain infrastructure improvements since they often have already been made.
  - To expedite funding for highway improvements, consider partnered funding. This may included shared funding, funding by the DC developer or local agency(s), or the DC owner front ending costs and being repaid over time or when funds become available.

- For TxDOT (and other transportation agencies):
  - In support of TxDOT's goal to support economic development, increase the visibility of TxDOT support of economic development efforts by providing briefings to local economic development agencies and community leaders about TxDOT projects, plans, and how TxDOT can help.
  - Present a "TxDOT is Here to Help" approach, consistent with agency policies and procedures.

- TxDOT could also participate with presentations in the GOED briefings for site selectors, describing assistance TxDOT can provide and potential benefits to DC interests.
- Maintain ongoing communications with local economic development offices regarding how TxDOT can assist in the consideration of potential DC sites and provision of adequate access. Encourage those offices to notify TxDOT when site selectors first start looking for specific DC sites in their area so TxDOT can help them, too.
- Establish early communication with DC site selectors and prospective DC owner or developer well in advance of any location decision to discuss and agree on access or other improvements that are needed:
    - Early information from TxDOT on existing and planned roadway network serving areas and specific of interest; Offer assistance through provision of information about the highway system; current, programmed, or planned highway improvements; areas served by underutilized but truck ready interchanges; locations subject to congestion (existing or projected), etc.
    - Identify ways to provide safe and efficient access to candidate DC sites;
    - Suggest a TIA to help identify access options and the best way to accommodate the DC and passing traffic in near a candidate site;
    - Discuss and compare state highway improvements needed for alternative sites and site plans and the costs associated with those improvements;
    - Provide information on timing, funding, construction of state highway improvements' communicating within TxDOT to explore other questions or requests;
    - Collaboration on improvements affecting site selection among DC owner, TxDOT, and other state and local agencies; agree on:
        - improvements to be made and
        - scheduling for improvements to be completed.
    - Encourage DC site selectors and developers to follow the site selection criteria listed in the DC best practices list above.
- Continue communication between TxDOT and DC owner concerning transportation-related needs and issues.
- Request TIAs and use site plan reviews to help locate DCs and their site access in locations where they can be successfully accommodated with no or limited additional roadway improvements.
- Employ TxDOT access management policies and guidelines as described in the TxDOT *Access Management Manual* (*16*).
- To expedite funding for highway improvements, consider partnered funding. This may included shared funding, funding by the DC developer or local agency, or the DC owner front ending costs and being repaid over time or when funds become available.
- If funding is not available for the TxDOT share of improvement costs, seek unprogrammed funds from TxDOT Administration.
- Request the DC owner (or local agency) to front end portions of the cost for which funding cannot be obtained in time to meet the DC opening schedule; this will require a repayment arrangement.

- Use concrete to pave roads that carry large volumes of large trucks or have high volumes of turning trucks.
- Follow other recommendations contained in Chapter 3 of accompanying handbook *Guidelines For Successful Location And Accommodation Of Major Distribution Centers On Texas Highways*.

Practices to Avoid

Some practices were identified that result in less than desired DC operation. Some problems are associated with site access that was insufficient upon the opening of the DC or became that way over time. Others required the expenditure of funds (transportation agency, economic development, or other local agency and/or the DC developer) for improvements that might have been avoided at another location. Some of these practices are listed below

- For DC site selectors, developers, and owners:
  - Waiting to contact TxDOT and other transportation agencies until the site has been selected and site or design plans are complete, then requesting major roadway improvements. The frequent result is for the roadway improvements not to be complete on the DC's opening date (often much later).
  - Failure to consider the need for truck-ready access until after the site has been selected. This has resulted in the need for major improvements when another site might have already had suitable access or require only minor improvements.
  - Selecting a location needing an additional freeway interchange that is not scheduled to be constructed before the DC is scheduled to open.
  - Location of the DC on a roadway that is not suited to a large number of large trucks. The DC is located near a suitable highway interchange, but some of the roadways within the DC park (not TxDOT-maintained) may not be suited for the truck traffic that it carries and may be deteriorating as a result.
  - Sites that depend on access routes with congestion that existed or was anticipated during certain periods of the day or week and resulted in delays to inbound and outbound trucks.
  - Selection of a site where access routes depend on crossing at-grade rail crossings with significant numbers of daily trains. Delays to inbound and outbound trucks result.
  - Overlooking or not checking on underdesigned or deteriorating access roads that developed pot holes or other pavement condition problems over time.
  - Installation of a traffic signal solely to facilitate site traffic to enter and exit the site (due to poor access location).
  - Insufficient corner turning radii causing broken pavement or trucks running off the pavement
  - Butt joints of asphalt and concrete where truck traffic is frequent, resulting in pavement failures and potholes.

- For economic development agencies:
  - Waiting to contact TxDOT and other transportation agencies until the site has been selected and site or design plans are complete, then requesting major roadway improvements. The frequent results are:

        - selection of a site needing improvements when sites in a nearby area might not have needed any or as many improvements;
        - no funding available for the requested improvements; and
        - insufficient time to complete the needed roadway improvements by the DC's opening date (often much later).

- For TxDOT and other transportation agencies:
    - Waiting for DC interests to approach TxDOT and assuming that the normal project development and funding processes will suffice in an economic development process. Proactive development of relationships with local economic development agencies and familiarization of them with TxDOT funding and scheduling can lead to fewer unrealistic expectations and earlier involvement of TxDOT.
    - Insufficient corner turning radii causing broken pavement or trucks running off the pavement. Where short radii cannot be avoided, use concrete pavement or flush concrete curbs with asphalt pavements.
    - Butt joints of asphalt and concrete where truck traffic is frequent, resulting in pavement failures and potholes. Use different joint designs that will withstand truck traffic loadings.

5. YEAR-LONG DC TRAFFIC COUNT

A year-long count of inbound and outbound traffic was conducted at a general merchandise distribution center at a confidential location in Texas. During the early stages of this project there were questions about how much traffic is generated by a DC and when the peak periods occur and how big they are. The purpose of the year long count was to obtain a general idea about the traffic generation patterns of DCs, such as hourly, daily, and monthly traffic variations. Little has been documented regarding such characteristics for DCs.

The surveyed DC is located just outside a small town along an Interstate Highway just beyond the fringes of a major metropolitan area. The DC operates 24 hours per day and seven days per week. It has two driveways. One serves DC trucks plus a very small number of other vehicles servicing the back side of the building. The second driveway serves employees and visitors plus a very few additional vehicles that service the building (including virtually no large trucks).

The owner of the DC agreed to permit the counts to be made, provided that no damage would result to any facilities and that the DC staff would not have to be involved with the count or the equipment. No modifications to on-site facilities were to be made. With those requirements, the count equipment had to be durable, safe from vandalism, self-powered, be able to transmit the data without use of land lines, and not store identifying information about vehicles or the site. The best available option given financial resources available was direct current-powered video imaging detectors using solar power, batteries, and a cellular modem. The detectors were capable of monitoring the two-lane (one per direction) driveways. They were mounted on light poles about 25 feet above the driveway and about 10 feet from the edge of pavement. Although the detectors were designed to distinguish between three vehicle class types, experience showed that the classification technology was not accurate at the slow speed of operation on the driveways. However, manual counts confirmed that for periods of several hours, the detectors were fairly consistent for total vehicles.

COUNTS COLLECTED

Accumulation of count data started in July 2008 and extended through early July 2009. The data reported here is for the year between July 1, 2008, and June 30, 2009. Data were fairly complete for the truck driveway. In a few cases hourly counts were not recorded during maintenance of the equipment. In such cases when the equipment was returned to service, volumes stored in memory were downloaded, but recorded as the latest hour's volume. Hence, for this driveway there are a few artificially high counts and some hours with no reported volumes. This covers an insignificant portion of the 8,760 hours counted.

Data for the employee/visitor driveway are less complete. The detector stopped functioning at one point and had to be replaced. At another time the battery went dead and had to be returned to the factory for replacement. In the end, data were available for all or parts of seven of the twelve months. However, since these counts are being used to examine variations, only monthly variations were lost. The daily and monthly counts we do have are consistent on a monthly basis

so this shortfall is not viewed as seriously detracting from the findings as will be discussed below.

FINDINGS

Caution

The findings reported below are for one general merchandise DC in Texas. While it should provide an example of traffic characteristics of a DC, other DCs may experience different variations due to such factors as climate differences, location with respect to stores served and locations of suppliers, location relative to metropolitan areas, and types of stores and businesses served.

Monthly Variations

Figure 15 shows the monthly variations of total trucks entering and leaving the DC. The data are for average daily trucks entering the DC during the month shown; these are not based on average trucks per month. November is the highest month as might be expected since it begins the Christmas season when retail activity peaks. The November volume is about 15 percent above average. Other peak months are July (readying for return to school season) and May (pre-summer). The monthly exiting volume pattern is the same as for entering.

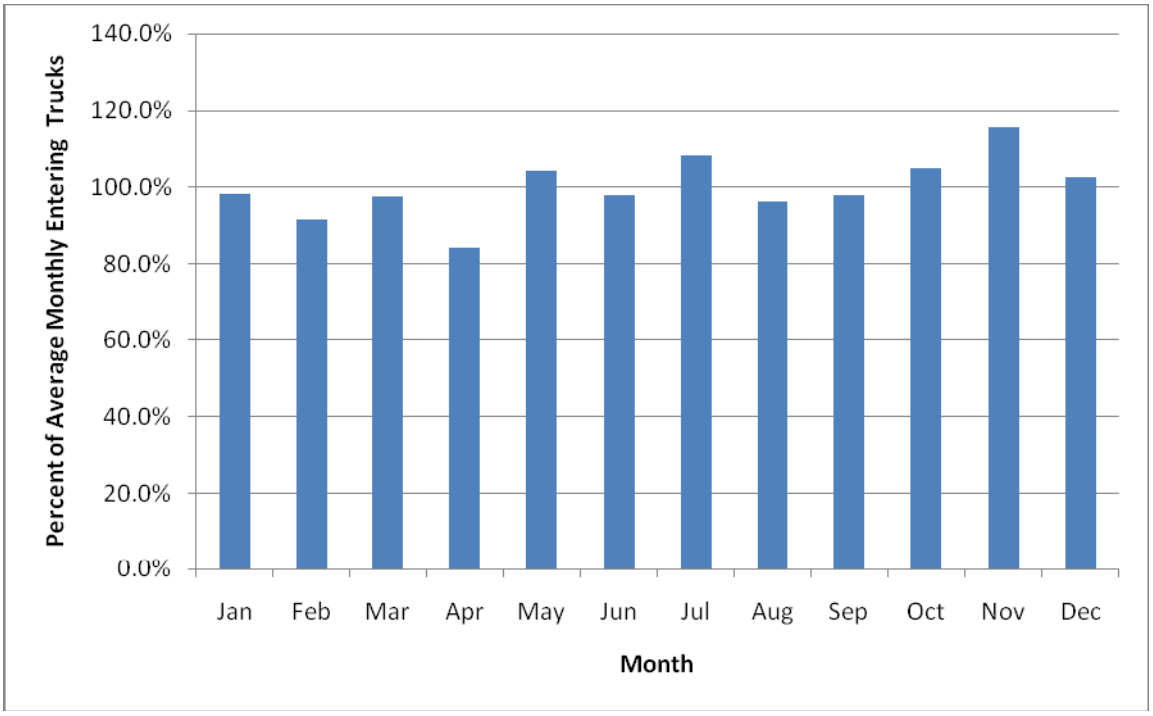

Figure 15. Monthy Variations – Trucks.

As mentioned above, the data available show that employee/visitor vehicles were quite similar for the months counted. The highest month was less than 5 percent above average.

Daily Variations

Figure 16 illustrates the daily variations in truck activity. These are consistent through the year. Friday is the peak day at about 115 percent of average. However, Tuesdays through Fridays are very similar in terms of total truck volumes. Because this DC has a 24/7 operation, even Saturdays and Sundays experience significant truck volumes at about 80 percent of average.

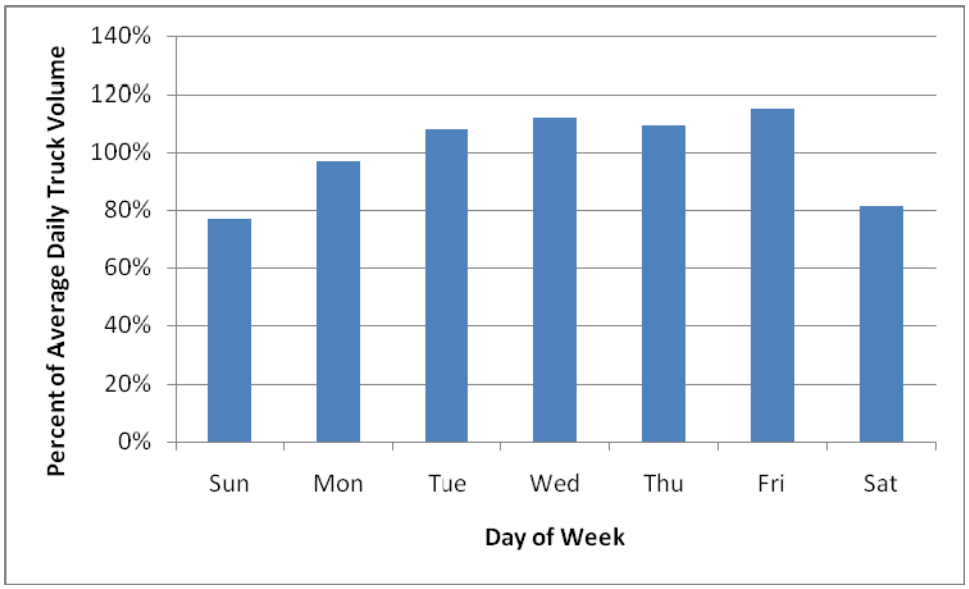

Figure 16. Daily Variations – Truck Volumes.

Figure 17 shows the hourly variations for employee and visitor vehicle volumes. On a daily basis this peaking is just slightly more pronounced than for trucks. The highest day is about 20 percent above average. Like with trucks, Tuesday-Friday volumes are very similar.

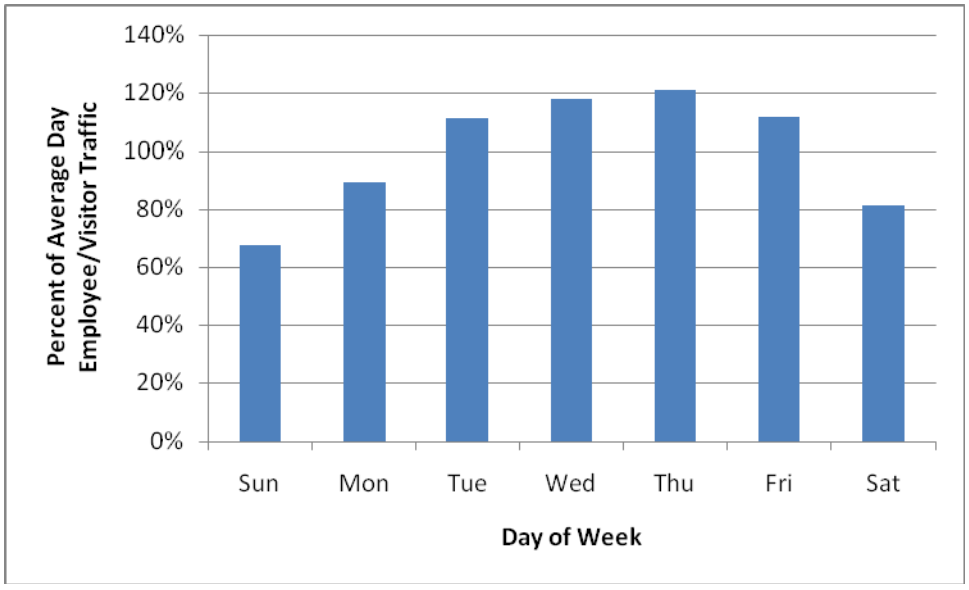

Figure 17. Daily Variations – Employee and Visitor Traffic Volumes.

Figure 18 shows the hourly variations for all traffic combined. On the average, the employee/visitor vehicles make up about 60 percent of this DC's daily generated trips. Since the patterns of both trucks and other vehicles are almost the same, the combination is also about the same. The highest days for total trips—Wednesday and Thursday—are about 16 percent above average. The average weekday volume for total trips averages about 110 percent of average day trips for the complete week.

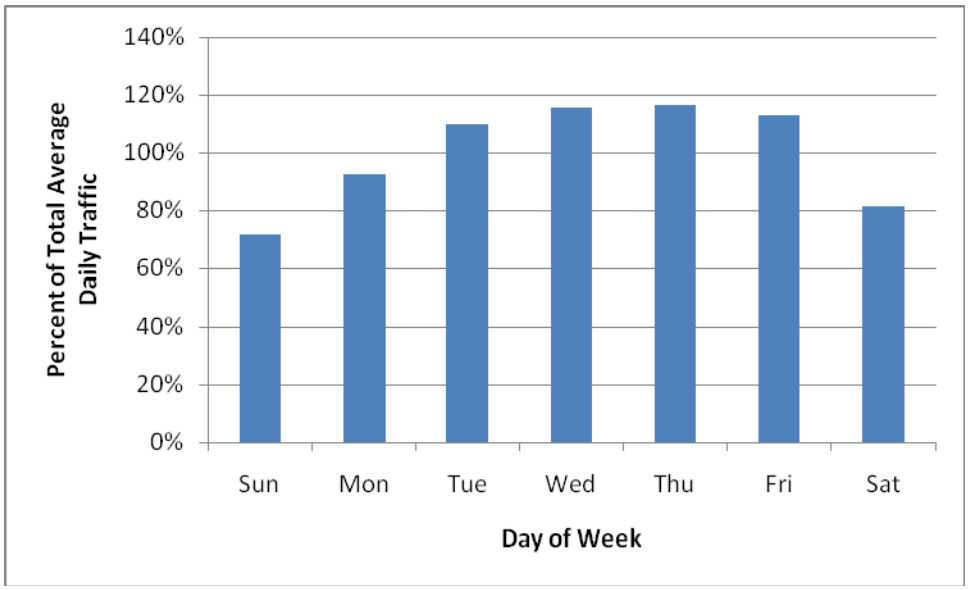

Figure 18. Daily Variations – Total DC Traffic Volumes.

Hourly Variations

Traffic also varies with time of day. Figure 19 shows the inbound and outbound variations by time of day for trucks. The figures shown are the hour's percentage of the daily directional total. The highest inbound hours are typically 9 a.m. to 3 p.m. The highest outbound hours are a little later, generally between 10 a.m. to 5 p.m. The outbound peaking is also a little more pronounced. The inbound peak hour averages about 6 percent of daily inbound traffic. The corresponding outbound volume is a little less than 7 percent. Of course, these are average trends, so volumes for specific days may look a little different. The inbound peak tends to be earlier since DC activity peaks during the day and inbound trips bring merchandise into the DC and outbound trucks take it away. However, some trucks enter empty after having delivered merchandise to a store; others leave empty after delivering merchandise to the DC.

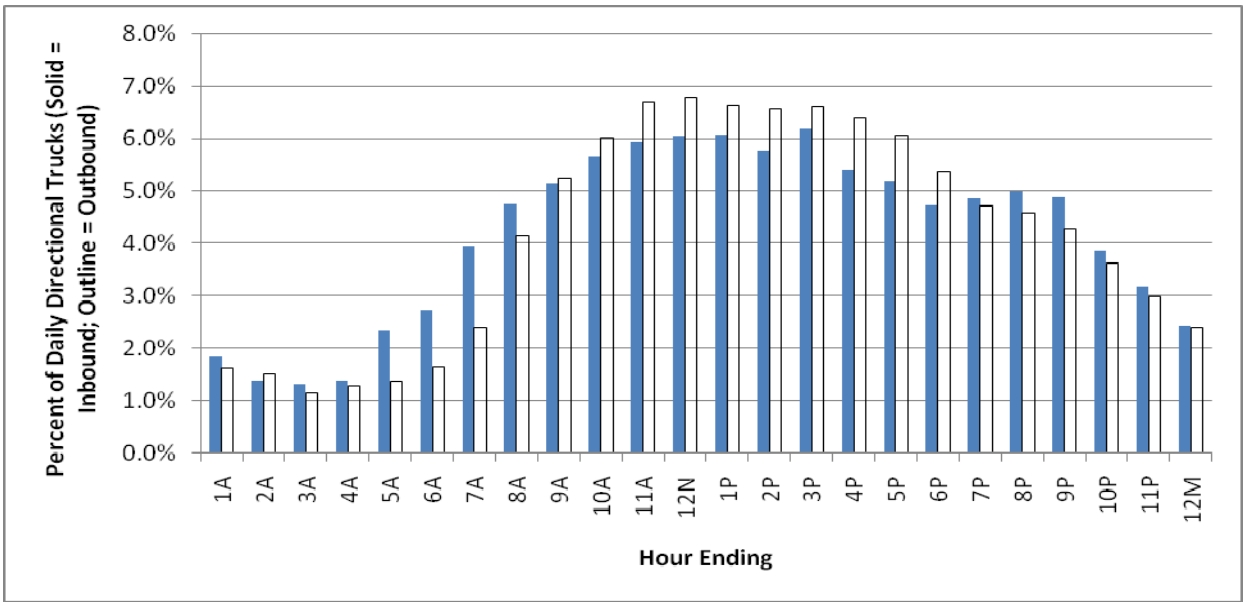

Figure 19. Hourly Variations – Inbound and Outbound Trucks.

Figure 20 shows similar variations for employee/visitor traffic. The peaks are much more pronounced due to the scheduling of work shifts. At this particular DC, shifts vary during the week and not all workers start a shift at the same time (i.e., shifts are staggered). Furthermore, shift starting and ending time varies during the year. Hence, the average patterns shown in Figure 20 may understate some of the peaking that would occur at a DC with concurrent starting and ending times for similar shifts.

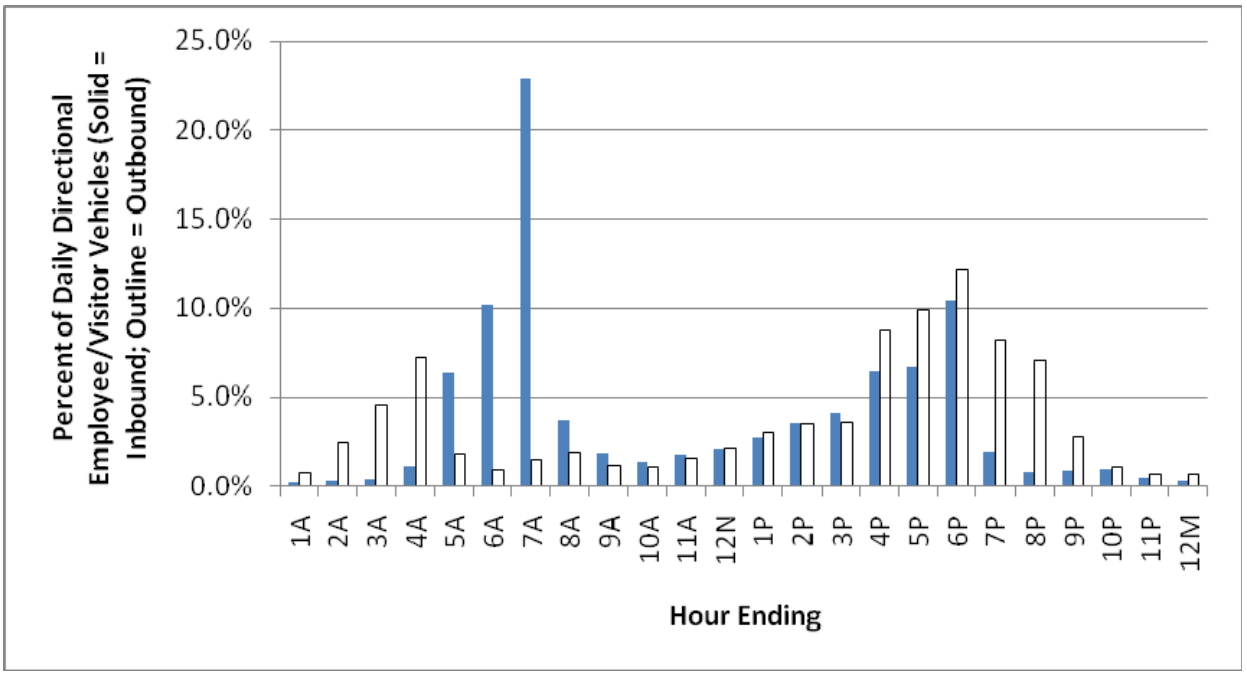

Figure 20. Hourly Variations – Inbound and Outbound Employee/Visitor Vehicles.

The highest inbound peak (which shows in Figure 20 as 6 a.m. to 7 a.m. but is often 5 a.m. to 6 a.m.) makes up over 20 percent of the daily inbound total. Since shifts appear to be somewhat staggered, the peaks spread somewhat over a few hours, although some of the spreading effect is due to averaging several months' worth of data (individual day count data may be more helpful in establishing a percentage for the highest hour). There is also an evening inbound peak that follows the departure of the daytime shift. This shows to be about 5 p.m. to 6 p.m., but field observations indicated that the spread effect was due to multiple shifts starting between 3 p.m. and 6 p.m.

The outbound peaks correspond to the ends of work shifts. The night shifts end between about 2 a.m. to 4 a.m., while day shifts end anywhere between 3 p.m. and 8 p.m. The highest outbound peak is only about half of the inbound peak.

Figure 21 shows the peaking for the total traffic. Even with the steady truck volumes added in, the inbound morning shift peak still dominates with about 20 percent of the inbound traffic. The outbound peak averages about 12 percent. However, the midday traffic portion is higher than for employee/visitors.

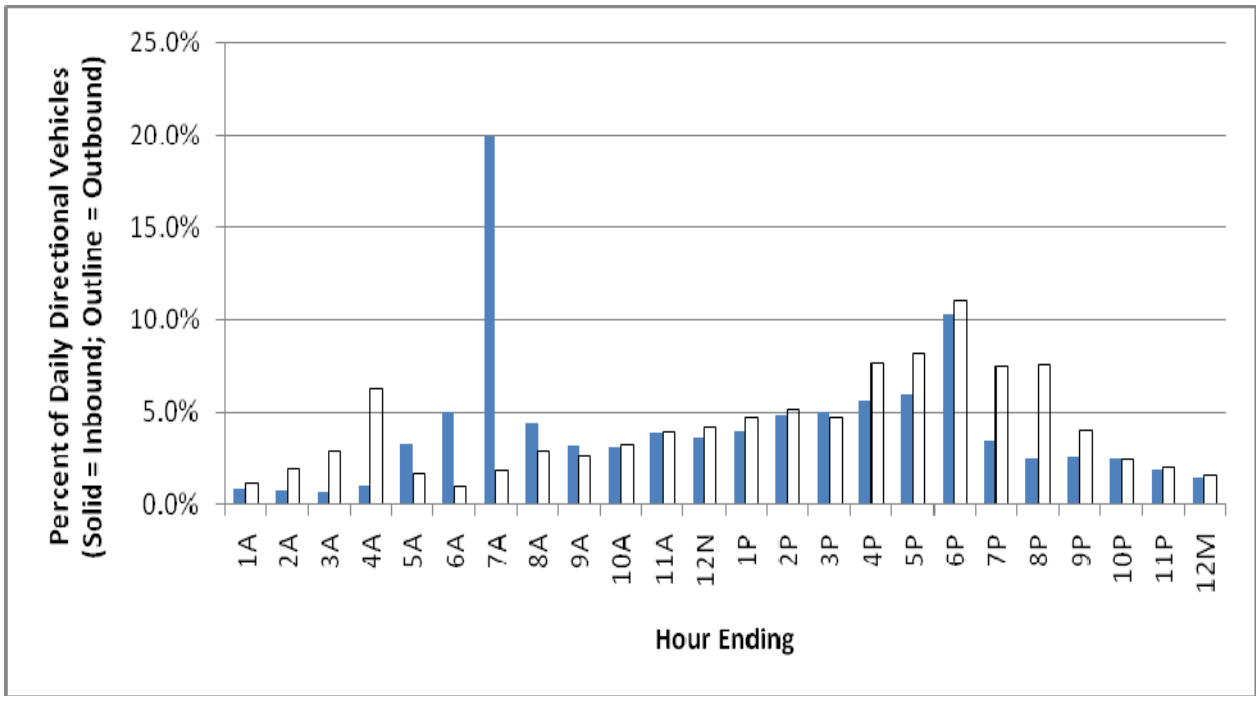

Figure 21. Hourly Variations – Combined Traffic.

Hourly Traffic Volume Profiles

In addition to the monthly, daily, and hourly variations, the hourly count data were sorted to show the profile of hourly volumes in terms of percent of average. Figure 8 shows the hourly percentages of average sorted in descending order for the 8,760 hours of the year. Transportation agencies use this type of profile to determine the design volume to use. Generally, the most cost-effective way to design is to accommodate the volumes up to a sharp break in the curve. In Figure 22, the break appears at about 250 to 300 percent of average.

Transportation agencies often use the 30th highest hour for design when a pronounced curve is not present. The 30th highest hour for truck volumes is about 275 percent of average which falls in the truck volume curve area.

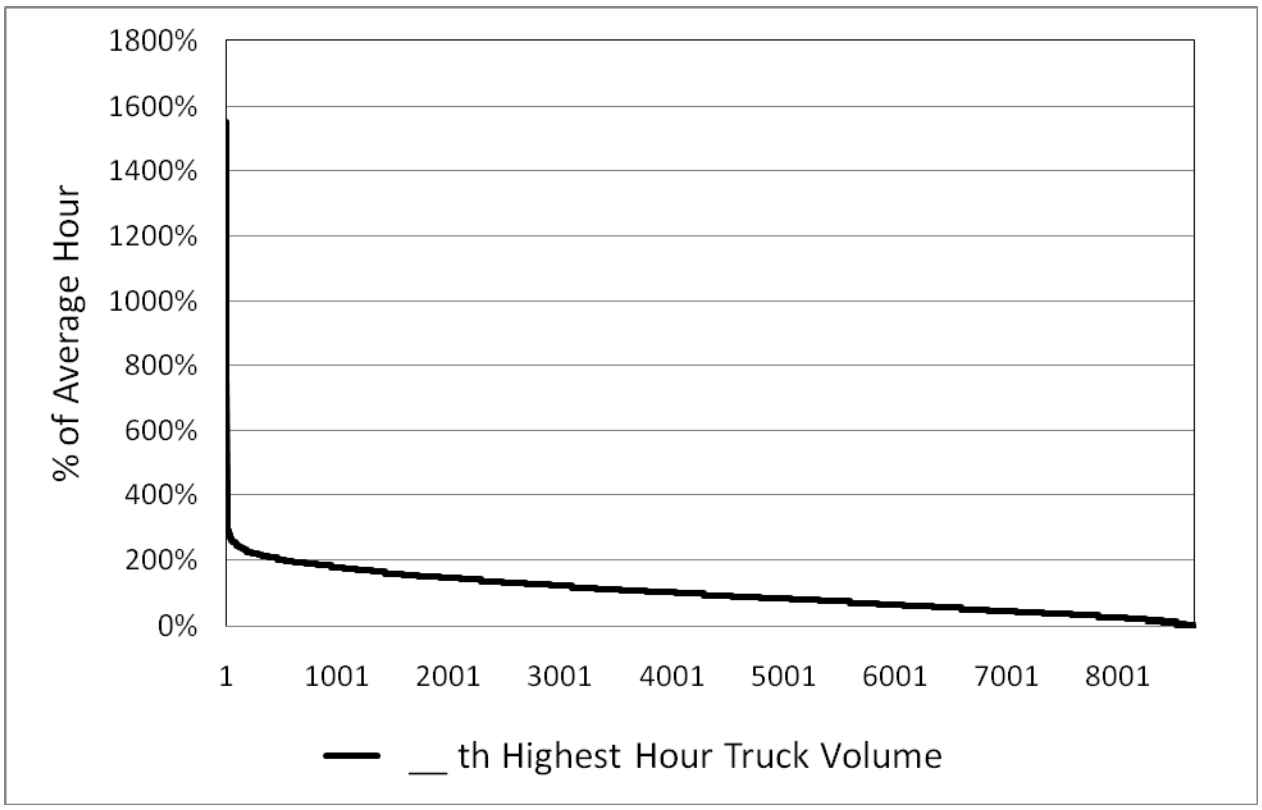

Figure 22. Annual Profile of Hourly Truck Traffic.

As a result, if one knows about how many trucks—on average—are expected to be generated by a DC of this type, one could use 275 percent of that for a design level for access. That would cover nearly all peak hours. However, this may not be the correct volume to use for the purposes of a traffic impact analysis (TIA). TIAs should use hourly volumes that coincide to street peak hours, although for access, if those hours do not coincide with DC peaks, additional hours of analysis may be appropriate.

Figure 23 shows a profile for total traffic based on the approximately 3,800 hours of data available for both driveways at the same time. This profile shows two distinct break points. One is at about 135 percent of average and is exceeded by about 20 percent of the hours. If the percentage was used, it would be exceeded about 20 percent of the time—too much for use in design. The next break appears at about 350 percent and is exceeded about 2.5 percent of the time. Beyond that, the curve becomes very steep. The equivalent to the 30th highest hour (prorated for number of hours in sample) is about 550 percent which is just below the top break. This volume is close to what was counted during the highest hour on three days in one week in July. It may be close to what should be used for design if the shift change occurs during the a.m. or p.m. street peak hour.

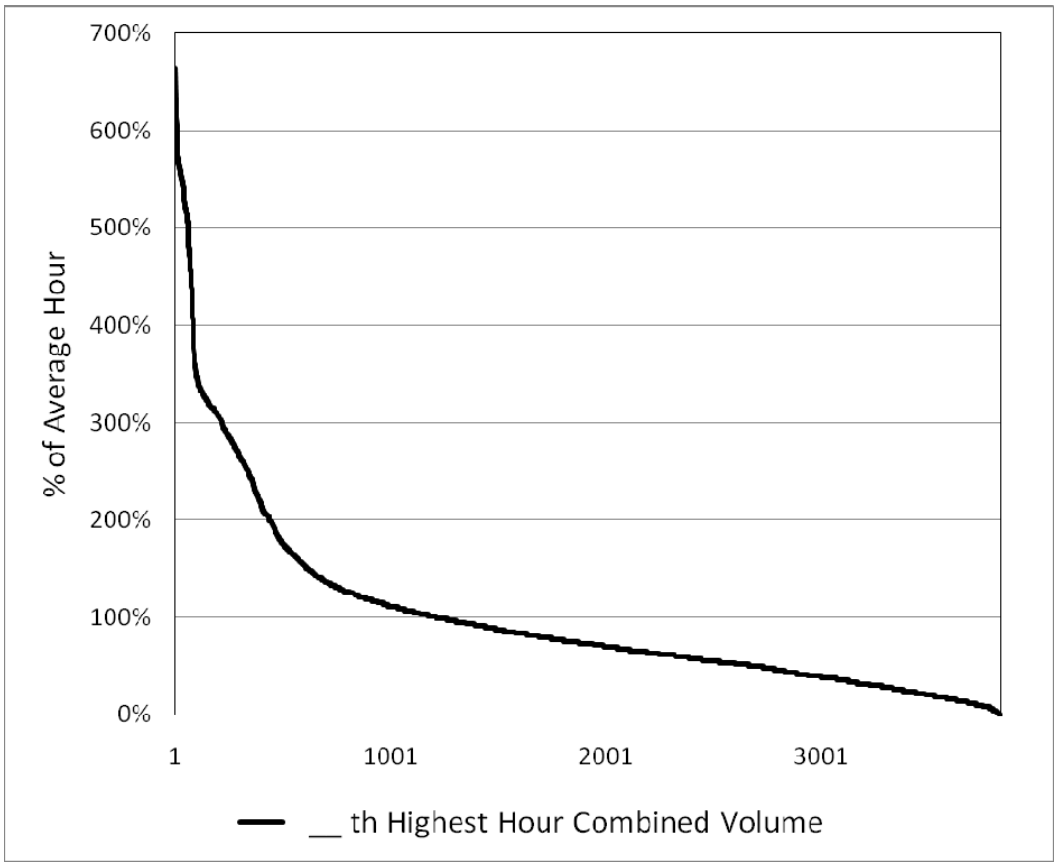

Figure 23. Profile of Total Hourly Traffic.

OBSERVATIONS

These variations show several things about the trip generation characteristics this general merchandise DC:

- Daily truck traffic volumes are fairly consistent throughout the year. Average daily vehicle trip generation was as much as about 15 percent above average during November and as low as about 15 percent below average in April. For this DC, November, July, and May were the highest months.
- Daily employee/visitor traffic volumes were quite steady throughout the months for which count volumes were available.
- Daily total vehicle trip generation at this DC peaked Wednesday through Friday at about 16 percent above the average day. Night shifts appeared to be scheduled Sunday evening through Friday morning. Truck volumes were slightly higher on Friday with Tuesday – Friday being the highest days. Volumes may vary at other DCs based on employee shift schedules.
- Truck traffic at this 24/7 DC peaked between 10 a.m. and 5 p.m. Peaking was quite flat. The inbound peak preceded the outbound peak by one to two hours. At this DC the outbound peak for trucks averaged just over 6.5 percent of the outbound daily volume and the inbound peak averaged about 6 percent of the daily inbound volume.

- Employer/visitor trip peaking was much more pronounced, due primarily to traffic associated with shift changes at this DC, which had some staggering of work schedules. About 23 percent of the inbound trips occurred during the inbound peak hour. The outbound peak hour was much less pronounced at about 11 percent of daily outbound volumes. The shift ends at this DC appeared to be staggered.
- For total traffic, the employee/visitor volumes comprised just under 60 percent of the daily total. Since employee/visitor trips were both larger in number and more sharply peaked, the hourly variations more closely resemble the employee/visitor variations. About 20 percent of total daily inbound trips were associated with the start of the main daytime shift. Another 10 percent of the inbound trips occurred with the start of the main evening shift. Outbound peaking was more spread and peaked at about 11 percent of total outbound trips.
- Over the full year, hourly truck volumes were relatively consistent with nearly all hours having average plus or minus about 100 percent. The profile showed a pronounced break at about 250-275 percent of average, which is also about where the 30th highest hour falls for trucks.
- The profile was less clear for total trips; however, due to missing employee/visitor volumes for some months the profile also only covers about half of the days of the year. It may also be due to the high employee/visitor peak hours associated with shift changes that may substantially exceed other variations. Breaks occur in the profile at 150, 350, and 550 percent of average hourly nondirectional volume. The 550 percent approximately matches the peak hour volume counted during a July week and may be appropriate for access design (but not for use in traffic impact studies that normally use average weekday volumes which are about 110 percent of average total daily).

6. DC TRIP GENERATION

The number of trips that enter and leave a development is referred to as trip generation. Trip generation is most frequently expressed in either rates per development unit (e.g., vehicle trips per 1,000 gross square feet of building floor area) or as regression equations using development units as the independent variable. Trip generation rates and equations are used in estimating traffic expected to enter and depart from proposed developments. Those estimates are used in traffic impact analyses that are used by developers and public agencies to assess the impacts that development-related traffic will have on the surrounding street system and what access and roadway improvements will be needed to satisfactorily accommodate the proposed development.

The Institute of Transportation Engineers (ITE) has the largest database of trip generation data in its *Trip Generation* report (*17*). Although this report contains trip generation data for over 160 land uses (including some subgroups of major land use categories), there are no data for distribution centers.

As part of this project driveway traffic counts were made at seven major distribution centers in Texas. Several DC owners granted permission for these counts contingent on remaining anonymous. All seven have at least 500,000 gross square feet. Most are retailers' DCs, but two belong to a manufacturer and one includes some value added activity within the DC. One also includes corporate headquarters.

TRAFFIC COUNTS

Traffic counts were conducted at most sites over a full week. Most counts were made using tube counters with the count data adjusted per manual counts. One site was counted using video detectors. Another site was counted manually only during the morning and evening street peak periods.

Traffic counts were summarized into standard ITE trip generation rates for each site. Where week long counts were available, the weekday average was determined. The same was done for Saturdays and Sundays.

TRIP GENERATION RATES

Table 8 shows the trip generation rates for each of the seven DCs counted and for the periods counted. Cells that are blank or shaded out indicate those periods for which no data are available. The table also contains notes indicating the special characteristics of some DCs. The right three columns of the table contain the weighted average rates for each period. The averages are weighted by development units, that is, gross square feet of building area. This means that for each period, the total vehicles in or out are divided by the number of square feet of the counted DCs. This is consistent with the ITE method for determining average trip generation rates.

Table 8. Trip Generation Traffic Count Summary – 7 DCs.

Period	Direction	North Texas Retail DC 1		North Texas Retail DC 2		North Texas Retail DC 3		North Texas Factory DC		North Texas Regional DC		SE Texas Retail DC 1[1]		SE Texas Retail DC 2		Weighted Average Vehicles		
		Total Vehicles	Trucks	Total Vehicles	Trucks	Total Vehicles	Trucks	Total Vehicles	Trucks	Total Vehicles	Trucks	Total Vehicles	Trucks	Total Vehicles	Trucks	Total /1,000 Sq. Ft.	Percent Inbound	Percent Trucks
Weekday																		
Daily	In+Out			1394	308	2810	371	169	106	895	558			1528	593	1.580	50%	28%
AM street peak hour	In	85	2	26	5	110	8	5	4	20	9	359	13	33	16	0.096		
	Out	36	0	11	6	67	6	5	3	12	5	41	9	23	13	0.029		
	In+Out	121	2	37	11	177	14	10	7	32	14	400	22	56	29	0.125	59%	9%
AM peak hour of generator	In	131	0	16	4	292	6	7	4	26	5			147	10	0.120		
	Out	53	0	30	6	107	8	6	4	15	13			6	3	0.042		
	In+Out	184	0	46	10	399	14	13	8	41	18			153	13	0.162	96%	5%
PM street peak hour	In	111	2	9	7	26	8	4	4	34	23	185	18	105	9	0.071		
	Out	107	4	40	9	178	7	5	4	23	12	554	9	145	16	0.158		
	In+Out	218	6	49	16	204	15	9	8	57	35	739	27	250	25	0.229	42%	15%
PM peak hour of generator	In	111	2	90	10	227	9	5	3	23	21			105	105	0.109		
	Out	107	4	126	14	33	6	12	4	29	19			145	145	0.088		
	In+Out	218	6	216	24	260	15	17	7	52	40			250	250	0.197	42%	27%
Saturday																		
Daily	In+Out			198	123	2814	92	65	50	292	172			895	312	0.991	50%	18%
Peak hour of generator	In	25	0	9	8	109	4	3	2	16	14			146	10	0.060		
	Out	136	7	13	11	14	0	6	3	20	14			12	4	0.039		
	In+Out	161	7	22	19	123	4	9	5	36	28			158	14	0.099	92%	12%
Sunday																		
Daily	In+Out			156	42	2795	55	54	44	236	191			802	326	0.940	50%	16%
Peak hour of generator	In	103	4	26	2	190	2	3	3	18	18			140	6	0.093		
	Out	24	1	8	6	17	2	5	5	9	9			10	1	0.014		
	In+Out	127	5	34	8	207	4	8	8	27	27			150	7	0.107	93%	7%

[1] Includes corporate headquarters and value added/product enhancement section

The summary table also shows the portion of traffic made up of large trucks. These are SU 30 (approximately 30 foot wheelbase single unit trucks) or larger trucks. Nearly all are tractor-semi-trailer combinations.

An attempt was also made to develop stable regression equations for the rates. However, the coefficient of determination (R^2) was too low in each case to support an acceptable regression equation. Figures 24 through 28 show the results in terms of trips plotted against gross floor area as well as the resulting regression equations. Even elimination of DCs with differing characteristics (factory DC, value added facilities, corporate headquarters) did not result in significantly better statistical fits. The results for weekdays show a general trend although one site exhibits a consistently high rate across most periods. The weekend day trends are inconsistent because some operate all seven days during the week while others are closed or have limited operation on one or both weekend days.

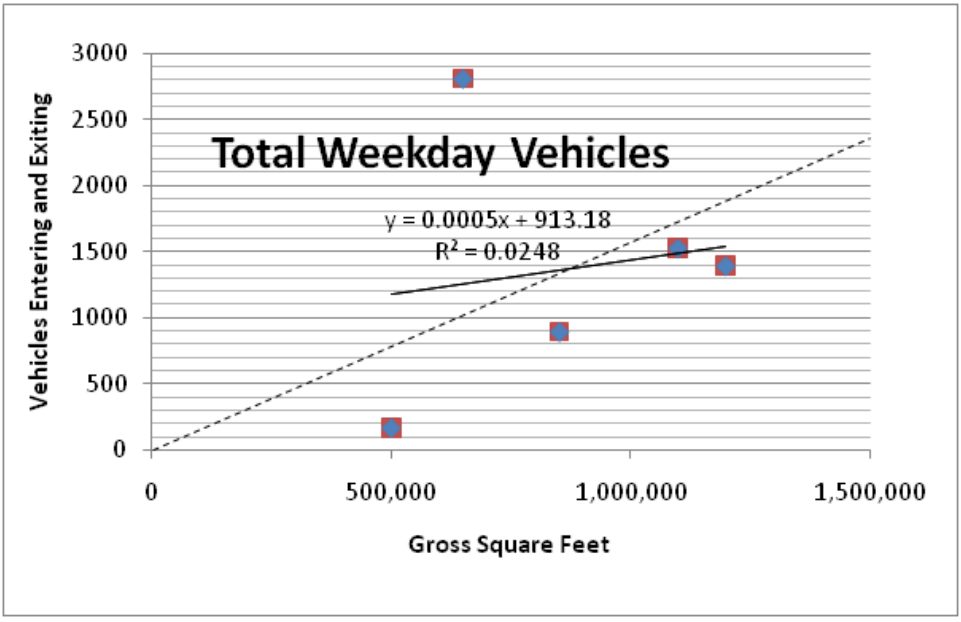

Figure 24. Daily Weekday Vehicle Trip Generation versus Gross Square Feet of DC Floor Area.

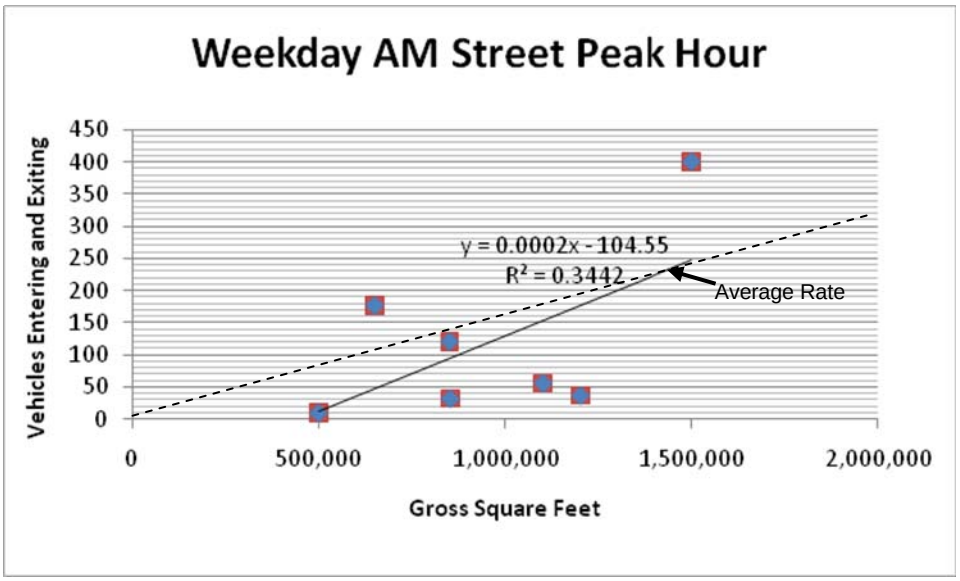

Figure 25. Weekday AM Street Peak Hour Vehicle Trip Generation versus Gross Square Feet of DC Floor Area.

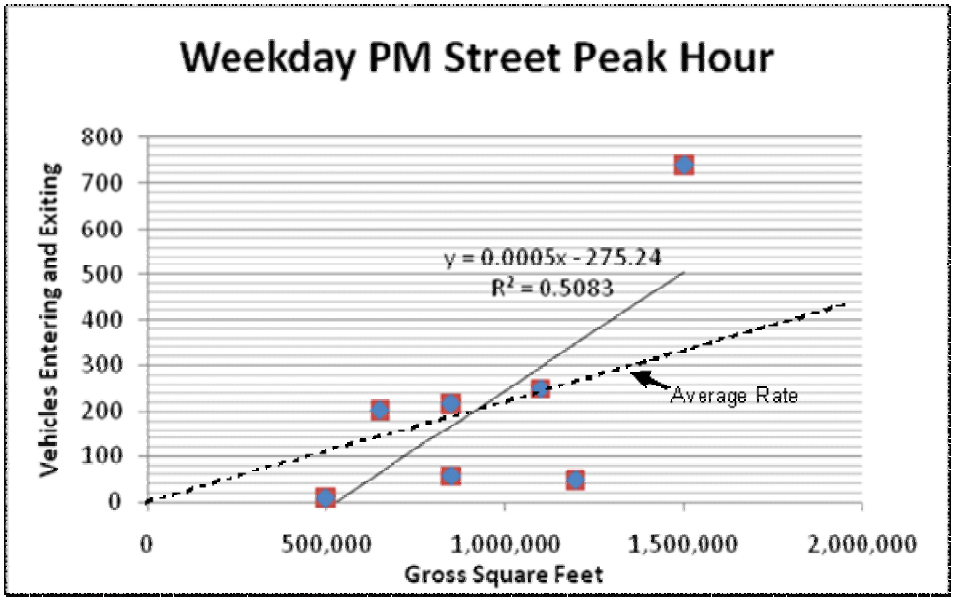

Figure 26. Weekday PM Street Peak Hour Vehicle Trip Generation versus Gross Square Feet of DC Floor Area.

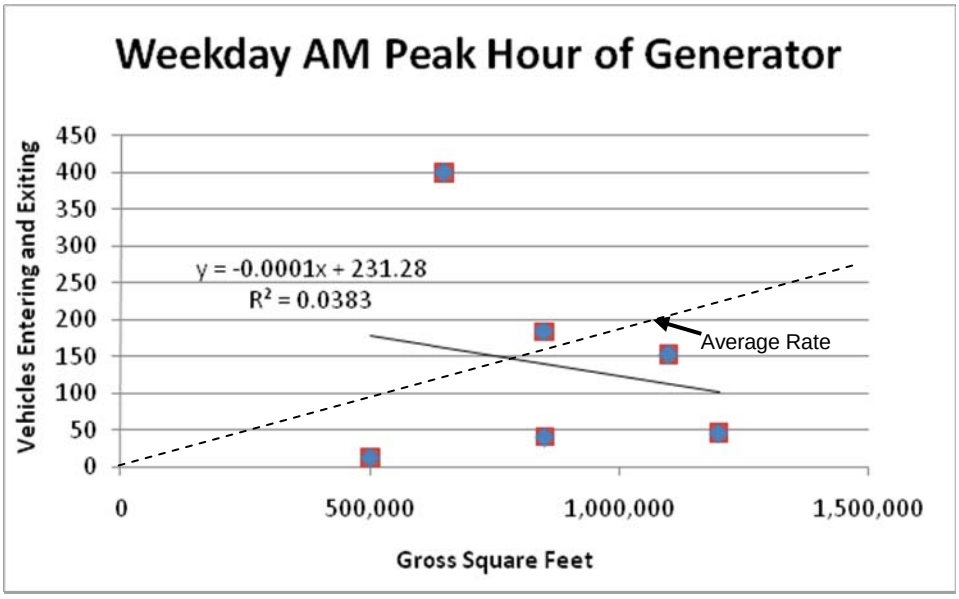

Figure 27. Weekday AM Peak Hour of Generator Vehicle Trip Generation versus Gross Square Feet of DC Floor Area.

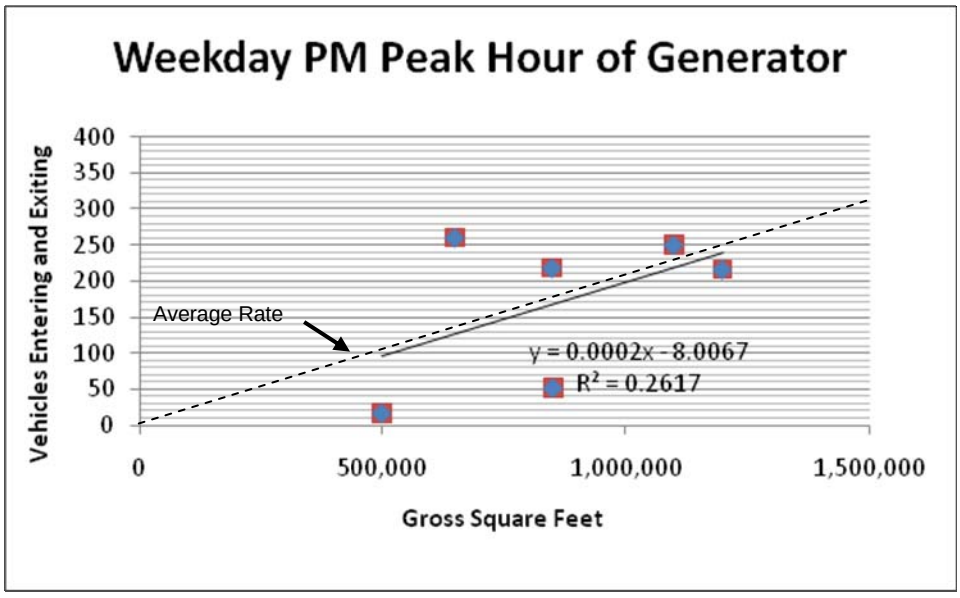

Figure 28. Weekday PM Peak Hour of Generator Vehicle Trip Generation versus Gross Square Feet of DC Floor Area.

The a.m. and p.m. street peak hours and the peak hours of generator are the periods of most importance for assessment of access needs and traffic impacts. The street peak hours are the highest consecutive hours for street traffic between 7-9 a.m. and 4-6 p.m. on weekdays. Those are the times when traffic is heaviest on adjacent streets serving the development site. The peak hours of generator are the highest hours of development site trip generation between midnight

and noon (a.m. peak hour of generator) and noon and midnight (p.m. peak hour of generator). Those periods are when traffic to and/or from the site is heaviest and is often used for driveway and turn lane design. In addition to the regression lines that were attempted, Figures 24 through 28 also each show a dashed line representing the weighted average trip generation rates shown in the summary table. These lines are shown for reference purposes.

Given the scatter of data shown, it is clear that there is not a strong relationship between trips for any period and gross floor area. This may be due to the variability of operations associated with the sample DCs or it may just be the small sample size. The variability in operations of the various DCs consists of differences in operating days and hours, shift time changes, and staggering shift change times. There may also be differences in DC maturity—the percent of planned capacity that the DC handled at the time of the counts. There may also be seasonal differences as demonstrated in the previous chapter.

CONCLUSIONS

The trip generation counts for the seven DCs did not yield a statistically consistent trip generation relationship between vehicle trips and gross square feet of floor area, the most common independent variable usually used for estimating trip generation. While approximate employment was available for some of the sample DCs, those estimates were said to be very rough. Employment is not always known at the time that TIAs are usually performed and are often estimated based on square feet of floor space. Hence, the employment estimates were not judged to be appropriate for use as an independent variable.

RECOMMENDATIONS AND CAUTION

If TxDOT desires to use a trip generation rate for a TIA or other purpose, the best available basis is the average rates contained in Table 8. However, caution is urged since the sample variability is significant. If TxDOT finds frequent need for such trip generation rates, additional sample DC should be selected and counted.

7. CONCLUSIONS, RECOMMENDATIONS, AND IMPLEMENTATION

This project sought to determine the process and factors by which large distribution centers are located as well as what impacts they create on the state highway system and how best to address any adverse impacts. This project also developed a strategy for helping TxDOT be more effective in addressing its role in both the economic development and access provisions associated with these distribution centers.

This chapter presents some overall, high level conclusions and recommendations and refers to more details recommendations described elsewhere in this report and in the accompanying handbook titled, *Guidelines For Successful Location And Accommodation Of Major Distribution Centers On Texas Highways*.

This chapter also recommends actions to be taken immediately to place TxDOT in the position to attract requests for involvement in DC site selection and access—something TxDOT desires greatly.

CONCLUSIONS

At the outset of this project there was concern that the impacts of trucks that travel to and from DCs might be causing accelerated deterioration of the roadways providing access. There was also concern that many DCs were being located on sites that were rural and did not have the necessary roadway infrastructure to provide the needed access. Thirdly, concern was expressed that TxDOT was finding out about new DCs too late to either influence site selection or respond to requests for highway improvements to provide the needed access.

Impacts

Contacts with maintenance and area engineers in several districts with large DCs yielded a strong conclusion that state highways serving large DCs are not experiencing accelerated deterioration or wear. DC trucks are typically within the permissible weight limits for state highways. There were reports of pavement damage due to repeated use by overweight trucks, but these were described as mostly trucks serving oil fields. Any concerns about DCs and their truck traffic concerned the site selection and planning process the DC owners and developers used.

Site Selection and Access

It was confirmed during this project that TxDOT is rarely involved in the DC site selection process. TxDOT receives occasional requests for information about highways, traffic volumes, improvement projects, and construction schedules, but those involved in DC site selection keep all information very close to the vest—essentially confidential until the site has been selected and many of the local agency decisions and negotiations completed. Part of the reason is competition among cities for these sources of major employment—often 500 or more jobs per DC. However, the other main reason is to help negotiations between DC developers and local agencies competitive so the DC owners can secure an advantageous deal for locating in a particular city. DC developers also do not want land owners to boost land prices upon hearing a DC might be coming.

Once the site has been selected and secured, and once site design starts, DC developer attention shifts to the design. By the time the DC developer seeks an access permit or approaches TxDOT for a state highway improvement, design is well underway or even just about complete. It is often too late to influence access locations, let alone site alternatives. Hence, while TxDOT might in some cases be able to point out areas and sites that might offer better access and need no or fewer highway improvements, it is often too late. Additionally TxDOT often does not have sufficient time to go through its normal project development and funding process to get the improvement to construction. Many DCs open well in advance of completion of highway improvements—if funds can be found to pay for them. In some cases TxDOT funding may not be available for multiple years.

Advance Notice

This points to the third concern—insufficient advance notice to properly respond. TxDOT, like most government agencies, has a set of processes it must go through to take a project from conceptualization to completion. Those processes take time—often 6 to 12 years for major projects. On the other hand, DC site selection usually starts about two years before desired construction initiation and about three years before desired opening. TxDOT often is contacted for improvements with less than half that time to work with. As stated above, that is not long enough lead time.

To be more effective at (1) reducing the number and extent of highway improvements (by helping DC developers find truck-ready underused accessible locations) and (2) having a chance to provide improvements on a more timely basis, TxDOT does need to become involved earlier. The rest of this chapter addresses how TxDOT can get involved earlier and help DC site selectors and developers and local economic development agencies have accessible DC sites without undue improvements to state highways.

Getting Involved Early

While past and current practice by DC site selectors and developers has been not to seek TxDOT involvement until late in their planning and design process, there can be advantages to all parties to involve TxDOT early. However, to achieve this, TxDOT will need to demonstrate to DC site selectors, developers, and local agencies the value of TxDOT being involved early. This subject is described in detail in Chapter 2 of the accompanying handbook titled *Guidelines For Successful Location And Accommodation Of Major Distribution Centers On Texas Highways.*

Selecting Sites that Are Already Truck-Accessible

Many DCs are located on city streets and county roads, but all depend on state highways (Interstate and regional freeways) for access. DC site selectors and developers—and TxDOT—can save both time and costs by selecting DC sites that are already served by truck-ready interchanges and access routes and are not subject to congestion. TxDOT can help to identify such areas along the state highway system. Hence, early TxDOT involvement can help DC site selectors and the local economic development agencies that seek to attract DCs to their areas.

The conclusions and best practices sections at the end of Chapter 4 of this report and Chapters 2 and 3 of the accompanying handbook can help TxDOT, DC site selectors and developers, and

local economic development (and other) agencies find accessible sites and to understand the implications associated with requesting state highway improvements.

RECOMMENDATIONS

In short, the overview of the recommendations is to:

- Consistent with TxDOT's goal to support economic development in Texas, work with the Governor's Office of Economic Development to provide information about how TxDOT works, the process of requesting and obtaining highway improvements, and funding implications as well as providing useful information on highways and accessibility that will be useful to DC interests (e.g., projects under construction, programmed or planned; truck-ready underutilized interchanges, congested highway segments, etc.).
- Proactively develop relationships with local economic development agencies since they are often involved in both site selection and in securing improvements of various types. Educate those agencies and others about access, state highways, and the highway improvement and funding process so they can communicate them to DC interests.
- Adopt a "TxDOT is here to help" posture. Assist the DC interests with beneficial information including site selection criteria that benefit both the DC owners and developers and TxDOT.
- Provide information on funding, the process needed to get it from TxDOT, and options available to DC developers to fund projects and even to accelerate them.
- Also describe the normal lead times associated with different types of improvements and how scheduling occurs.
- Offer assistance to DC site selectors and to local economic development agencies to help them find mutually beneficial sites (highly accessible; minimal state highway improvements needed).
- Offer to assist with developing the DC site access plan. Encourage a traffic impact analysis to identify or confirm the need for specific access improvements or to evaluate alternatives. Review site plans before design begins to identify potential for improved site access or to reduce impacts on adjacent roads.

IMPLEMENTATION

The following steps are suggested to put TxDOT in a position to pursue these actions. These could be completed by TxDOT staff. If needed, some could be provided under an RTI implementation contract.

- Supply the brochure being developed as part of this project to all TxDOT district and area offices, especially those where there are significant numbers of DCs. Priority districts are:
    - Dallas;
    - Fort Worth;
    - Houston;
    - Waco;
    - Tyler; and
    - San Antonio.

- Provide the PowerPoint presentation being supplied as part of this project to the Governor's Office of Economic Development, TxDOT's Government and Public Affairs (GPA) office, and all district engineers to use in briefings to site selectors, economic development agencies, and local community leaders to help explain the opportunities and needs associated with the DC site selection and design process.
- Distribute the TIA checklist and the site plan review guidelines to district and area engineers in at least the six districts listed above for use in working with proposed DCs.
- Provide briefings to each of at least the six districts listed above so they better understand the issues, implications, opportunities, strategy, and resources available. Invited staff would ideally include at least:
    - district engineers,
    - director of Transportation Planning and Development,
    - public information officer,
    - area engineers,
    - site plan reviewers, and
    - staff responsible for issuing access permits.
- Develop and maintain current information of value to DC site selectors and developers, such as:
    - state highway and local road traffic volumes;
    - congested locations or segments of state highways;
    - programmed improvements (already shown on the "project tracker" on this website);
    - planned improvements not yet programmed;
    - access policies, design requirements, and permit procedures;
    - procedures for requesting and obtaining state highway improvements; and
    - how and where to seek more information.
- Maintain and expand the TxDOT "project tracker" website to include programmed projects in addition to those under construction.

APPENDIX A – GOVERNOR'S OFFICE OF ECONOMIC DEVELOPMENT SITE LOCATION REQUIREMENTS FORM

Source: http://www.texaswideopenforbusiness.com/site-search-assistance.html

OFFICE OF THE GOVERNOR
ECONOMIC DEVELOPMENT & TOURISM

Site Location Requirements Form

To assist you in identifying areas in Texas most suitable to your objectives, please provide the information requested as specifically as possible. Check all blocks as applicable to assure proper handling.

CONFIDENTIALITY

The Economic Development & Tourism division typically works closely with regional and community economic development groups to obtain site specific information for projects. Unless otherwise specified, the following procedure will apply.

The Economic Development & Tourism division will advise selected community development professionals or volunteers as deemed appropriate for the purpose of providing assistance and/or information requested herein and in other communications.

Communities will correspond directly with your company and keep the Economic Development & Tourism division informed of progress.

Please specify here, any special confidentiality requirements your company may have:

_____

_____

The Office of the Governor, Economic Development & Tourism division, as a state agency, must comply with the Texas Public Information Act (the "Act"). The agency will use best efforts to maintain the confidentiality of the name of and other information related to a company seeking to locate in the state until after the location negotiations are completed. In the event that a public information request related to the company is submitted to the agency, the agency will (i) promptly notify the company of the request, (ii) take all possible and appropriate actions with the Attorney General of Texas to prevent release of the information, including asserting exemptions under the Act (including the Economic Development Negotiations exception of section 555.131 and the Trade Secrets/Commercial Information exception of section 555.110) and (iii) provide the company with full information and opportunity to participate in such process.
To assist us in determining whether an exemption exists, please check the box below if you believe the information you are providing is exempt from disclosure and explain why.

☐ The enclosed information is exempt from disclosure under the Texas Public Information Act because:

_____

Signed _____ Date _____

Title _____ Phone _____

Please return completed form to:
Office of the Governor
Economic Development & Tourism
Domestic Expansion & Recruitment
P.O. Box 12428
Austin, TX 78711-2428

The Office of the Governor Economic Development & Tourism division does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment or provision of services.

Telephone: 512/936-0534 TDD: 512/936-0555
Fax: 512/936-0080

- Corporate Information -

Company _____ Contact _____

Address _____ Title _____

City _____ Phone _____

State/Province _____ Fax _____

Zip/Postal Code/Country _____ E-Mail _____

Parent Company _____ Website Address _____

Location _____ Ownership: ☐ Private ☐ Public

- Project Timeline -

Immediacy of need: ☐ Information only at this time

☐ Initial site visit expected in _____ months

☐ Preliminary decision date _____

☐ Proposed final decision date _____

☐ Decision dependent upon

- ☐ External Financing Identified
- ☐ Board approval of internal project funding
- ☐ Product contracts pending
- ☐ Other _____

Business Type

- ☐ Distribution
- ☐ Fabrication
- ☐ Assembly
- ☐ Service
- ☐ Headquarters
- ☐ Other _____

Project Type

- ☐ Consolidation
- ☐ Expansion, new location
- ☐ Expansion, existing location
- ☐ Relocation
- ☐ Start-up company

Please identify your North American Industry Classification System (NAICS) code_____
(Find you NAICS code at www.naics.com)

- Most Critical Needs- -

(In order of importance)

1. _____

2. _____

3. _____

4. _____

5. _____

Comments: _____

Is the project: resource driven ☐ Yes ☐ No
market driven ☐ Yes ☐ No
other _____

Do these factors limit your search to specific areas of Texas? ☐ Yes ☐ No

Regions of interest: ☐ Statewide ☐ Specific area(s): _____

- Financing- -

Capital Investment: Estimated Total Investment $ _____

Plant $ _____ Land $ _____ Equipment $ _____

Does your company have the funds necessary to finance this project? ☐ Yes ☐ No

If no, please explain _____

_____

- -Personnel -

Projected employment within first year of operation _____

Peak employment _____

Estimated time period to reach peak employment:

☐ 1-2 years
☐ 2-3 years
☐ 3-5 years
☐ Other _____

Number of personnel to be transferred to new location:

In-state transfers _____ Out-of-state transfers _____

Types of labor required in local area:

Unskilled _____% of workers Average wage _____

Skills:

_____% of workers.

_____% of workers.

_____% of workers.

_____% of workers.

☐ Prefer non-union ☐ Prefer union ☐ Union not a factor

☐ Training Assistance Important ☐ Training not a factor

Environment

☐ Permit/license assistance needed ☐ Not a factor

☐ Facility will have no environmental impact

☐ Facility will affect the environment in the following manner:

	Content	Volume
☐ Air	_____	_____
☐ Water	_____	_____
☐ Sewer	_____	_____
☐ Odor	_____	_____
☐ Noise	_____	_____
☐ Other	_____	_____

Is recycling applicable? ☐ Yes ☐ No

Type of feed stream needed _____

Type of feed stream available _____

Market

Product(s) of proposed facility: _____

_____

Raw materials: _____origin _____

Market areas to be served from project facility (indicate three largest metropolitan areas to be serviced within each market area):

	1	2	3
☐ Texas	_____	_____	_____
☐ U.S. Region (other than Texas)	_____	_____	_____
☐ National	_____	_____	_____
☐ International	_____	_____	_____

Transportation

Production materials arrive via:

Air _____% Truck _% Rail _____% Barge _____% Ship _____%

Finished products distributed via:

Air _____% Truck _% Rail _____% Barge _____% Ship _____%

List related requirements:

☐ International air service ☐ United parcel service
☐ Corporate aircraft facilities ☐ Common carriers (trucks)
☐ Rail ☐ Inter-modal

☐ Other: _____

- Special Services -

Support services:

☐ Machine shop
☐ Heat treating
☐ Painting
☐ Metal fabrication
☐ Plating
☐ Sterilization/Laboratory

Other? _____

_____

_____

- Site/Building -

Site preference:

☐ Industrial park
☐ Campus setting
☐ Freestanding site
☐ Incubator site
☐ Rail siding
☐ Commercial airport within _____miles
☐ Private airport within _____miles
☐ College/university within _____miles
☐ Enterprise Zone
☐ Foreign trade zone
☐ Port site
☐ Major highway access
☐ Interstate access

Location preference:

☐ Suburban
☐ Rural
☐ Urban
☐ North ☐ South ☐ East ☐ West
☐ Southeast ☐ Southwest ☐ Northeast
☐ Northwest ☐ All considered

☐ Population density _____/square mile within a radius of _____miles

☐ Other: _____

Size of site: _____minimum acres preferred Parking for _____cars

An existing building is: ☐ Required ☐ Preferred ☐ Unnecessary

Desire: ☐ Lease ☐ Lease with option ☐ Purchase ☐ Build-to-suit

☐ Under single roof ☐ Multiple buildings acceptable

Office _____ sq. ft. Production _____ sq. ft.

Warehouse _____ sq. ft. Outside storage _____ sq. ft.

Other _____ sq. ft. Total under roof _____ sq. ft.

Other building requirements:

Type of construction _____ ☐ Preferred ☐ Mandatory

Ceiling heights _____ ☐ Floor specifications/type _____

☐ Sprinkler ☐ Air conditioning ☐ Loading docks - how many _____

☐ Overhead crane capacity _____ ☐ Bay widths _____

Special building requirements: _____

- Utilities- -

Electricity:

Monthly peak demand _____(kW) Monthly kilowatt-hours _____(kWH)
or
Annual peak demand _____(kW) Annual kilowatt-hours _____(kWH)

Number of shifts _____ (e.g. 3 shifts) Days of operation_____(e.g. 24/7)

If available:

Anticipated power factor: power being used _____(kWH/(Power supplied from the line (KVA)

Anticipated load factor: annual kWH/(Demand – kW x 8760 hrs in a year) _____

Gas: Natural gas is: ☐ Essential ☐ Preferred ☐ Not used

Estimated cubic foot usage per month _____

For what purpose: _____

Can alternate fuel be used? ☐ No ☐ Yes

Type _____

Water: Water usage per month _____ G.P.D. required _____

For what purpose: _____

Sewer: Volume per month _____ Content _____

Special requirements: _____

Thank you for your interest in Texas!

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APPENDIX B – INTERVIEW SUMMARIES – DISTRIBUTION CENTERS

Table B-1. Interview Summaries – Distribution Center Representatives.

Company, Name, Title, Contact Information	Distribution Center Location	Constr. Period	Opening Date	How far in advance does search begin?	Initial Search Area	Basic community characteristics sought	How do you select a site?
Retailer #1	Waxahachie	~1999 to 2001 (27 months)	2001	12-18 months once a region is identified; entitlement and permitting process may take 2 years.	Oklahoma border down to Houston, I-35 and I-45 corridors.	• Location relative to store network that the DC will serve (modeled to optimize distances) • Site of at least 100 acres • Transportation infrastructure; close to interstate, major state roads • Avoid heavily congested areas, retail areas, other traffic-related obstacles.	• Proximity to major east-west and north-south highways
Retailer #2	Several		Various 1980s to present	1 year +. Starts by looking for ideal logistical location.	50-100 miles from ideal logistical location. Most DCs serve about 100 stores.	Labor force demographics fit desired employee characteristics; adequate road network already available; good residential location within 20 mile commute for employees (including supervisors who are transferred from other DCs) including good local economy.	Once area is found to be acceptable, characteristics include site proximity to ideal location, utilities, access, necessary road improvements to facilitate road access, no schools or RR crossings along access routes, not next to residential area, usually not in industrial park.

Company, Name, Title, Contact Information	Distribution Center Location	Constr. Period	Opening Date	How far in advance does search begin?	Initial Search Area	Basic community characteristics sought	How do you select a site?
Site selection consultant	Several sites and companies; discussion more general than site specific.	NA; project deferred due to downturn in company's products.	Was to have been 2007-8	3 years to opening	• For Seguin site, they wanted near Houston, but did not want congestion, hurricanes; Seguin was first city to west with adequate labor force. • Usually want less than 100 miles from logistical ideal.	• Labor force within 20 miles • Utilities • Motivated local government (incentives)	• Good arterial access • 4-lane access roads • No bottlenecks • No high winds or other similar weather deterrents • Good road maintenance • Wide shoulders • No schools zones on access routes • Traffic signals • No tolls (ignored by one retailer) • Shipping locations (stores) • Labor availability • Unionization (no) • Cost of site, building • Transportation costs • Taxes • Operating costs • Utility costs

Company, Name, Title, Contact Information	Distribution Center Location	Constr. Period	Opening Date	How far in advance does search begin?	Initial Search Area	Basic community characteristics sought	How do you select a site?
Retailer #3	Katy	2003-2004	2004	A couple of years; preparing for expiration of old facility lease in 2004	Sites under consideration included St. Louis, MO; Kansas City; Florida and California (paired sites), Arlington, TX. Existing site of original building was in Katy, but wasn't a "slam dunk."	• Employee base, both existing and potential • Highway and rail access • Port access	• Consider costs to acquire raw materials and ship out finished products • Ease of adding/upgrading utilities • Lease costs • Access improvement costs; existing site had beginnings of an intersection to I-10 that needed to be finished.
Retailer #4	Arlington	n/a	2002	1-2 years	Varies; in that case they were replacing an older warehouse in the same area.	• Labor force • Central location relative to store network • Major highway	Same as previous
Retailer #5	Baytown, Corsicana	Baytown: 2001-2002 (7 months) Corsicana: existing building	Baytown: 2002 Corsicana: 2005	Usually 15-18 months ahead	Depends on the stores that will be served. Baytown DC is an import facility, so needed port access. Corsicana is a support facility for Baytown, which affected location decisions.	Good-size labor pool within a reasonable commute distance; access to interstates.	Prefer being near interstates, multiple interstates if possible.
Retailer #6	McKinney	January-December 1997	1997	n/a (he wasn't there at the time)	Fairly large; anywhere from DFW trade to Alliance Airport.	Location with a favorable tax situation.	n/a

Company, Name, Title, Contact Information	Distribution Center Location	Constr. Period	Opening Date	How far in advance does search begin?	Initial Search Area	Basic community characteristics sought	How do you select a site?
Retailer #7	Fort Worth	n/a; was an existing building	n/a		Depends on the type of DC: factory, regional, or local. Network modeling is used to determine general locations.	For regional DCs, site that helps them service a group of local DCs in 24 hours. Transportation network important. Employee base.	Good transportation capacity and flexibility (in direction and mode), size of land parcel, attractiveness of site to their investors.
Retailer #8	Katy (existing); also constructing new DC in Georgia	Katy DC was existing building; new GA facility began constr Oct 2007	Katy: early 1980s GA: will open early 2008	18 months to2 years	100-mile radius (for new facility, encompassed three states) defined from logistical analysis of stores and vendors.	Site/land parcel size (for current needs and future expansion); workforce availability, cost, and quality; logistical centricity for stores, vendors, import ports; road infrastructure and condition (both major highways and local roads leading to them); interchange access to facility; ingress/egress to facility for both trucks and employees.	See previous response.
Retailer #9	Fort Worth	8 months	2002	18 months to 2 years	Look initially at entire U.S., based on yearly sales volumes. Looked within 30 mile radius of DFW for this one.	Transportation; rail services in the area; labor force; going average pay for certain types of jobs; other DCs/temp agency that operate in the area.	Close to a freeway; preferably 10 miles or closer to an interstate.
Retailer #10	Midlothian	4 months or more	June 2001	About 12 months	South Dallas to Midlothian to Alliance to Coppell	Transportation is main consideration; wanted to be close to I-35 and I-45, access to major roadways and connectors. Facility is on Highway 67.	See previous; he wasn't involved in the site selection so doesn't have all the details.

Company, Name, Title, Contact Information	Distribution Center Location	Constr. Period	Opening Date	How far in advance does search begin?	Initial Search Area	Basic community characteristics sought	How do you select a site?
Retailer #11	Roanoke (former overflow facility, expanded in 2006) and Fort Worth	Not sure	Roanoke: expansion completed 2006. Fort Worth: 1995	Location process generally takes several months; function of whole distribution system.	For main warehouse, took proposals from several 3rd-party logistical consultants, whose initial search was U.S. wide. For overflow facility, looked in 5-mile radius around main warehouse in Fort Worth. Anticipation of growth/customer requirements drives the distribution system and its locations – e.g., for appliances, their customer sites now place orders by 2 p.m. for delivery the following morning.	Look for distribution areas that are well-served by truck and rail. Much of product imported by containers from Far East. Want to be close to major terminals where containers leave rail for trucks (if not directly on rail line).	See previous responses.
Retailer #12	Alliance (Haslet)	About 1.5 years	2000	About two years	Not sure (he wasn't there at the time); retailer wanted a location in central U.S. near a large rail hub with good interstate highways.	See previous.	See previous.
Retailer #13	Mount Vernon	About 1 year	1996	1.5-2years	Depends on a number of factors.	Interstate and major highway access, major thoroughfares, labor availability and wages.	Road infrastructure, commitments from state and local communities and agencies, geographic location based on stores, labor availability.

DC Summary Page 2

Company, Name, Title	How do you decide what road to locate on?	Which agencies do you first approach, and for what information?	What role did you play in the negotiation process?	Who else was involved in the negotiation process?	What requests were made of TxDOT and why?	What incentives were offered?
Retailer #1	See previous response.	• Local municipalities for building codes and requirements • Local communities, assessors regarding possible incentives • Regional utilities for availability of power, etc. • Local/state DOTs only if infrastructure change is needed or if permits needed for driveways, etc.	Came on after search was started, was involved in entitlements, land acquisition. Once construction begins, responsibility shifts to design/construction group. Consultants usually assist with incentives, entitlements, etc.	• Texas Department of Economic Development • Waxahachie Economic Development • Waxahachie building, fire, and other city departments	None that she recalls. May have needed a driveway permit but that was all. Improvements made to intersection by the City of Waxahachie.	• $1.367 M to build roads, install water/sewer infrastructure ($400K loan; rest grant) • 60% tax abatement for 7 years • Access to Texas Smart Jobs Program (workforce training program)
Retailer #2	Good road, no schools, RR crossings or residential along access route.	• Start with state economic development department (confidentially; often through 3rd party); state involves local ED agency. • Usually start with about 6 sites (may be in more than one state), then involve local public works, planning departments after selecting potential site (usually after taking option to purchase.)	Real estate department does negotiation; design team provides much of the specific information needed. Talk to real estate department if we do any case studies.	Depends on infrastructure needs. If little needed, then negotiations go through permitting process. If major, relevant agency is involved – after option is obtained on site.	• Road improvements if needed; otherwise access at permitting time. • Rarely seek specific safety improvements. • Sometimes use traffic impact studies to determine needs.	• This company considers incentives to be feasibility enhancers (needs to make site viable – usually infrastructure) • Job creation tax credits • Property tax abatements (not usually pursued due to impact on community)

Company, Name, Title	How do you decide what road to locate on?	Which agencies do you first approach, and for what information?	What role did you play in the negotiation process?	Who else was involved in the negotiation process?	What requests were made of TxDOT and why?	What incentives were offered?
Site selection consultant	See site selection criteria.	Local economic development agency	Facilitator; worked along with retailer's representatives.	For DC in Seguin: • City • TxDOT • Governor's office (Phil Wilson, chief of staff), water/sewer authority, power company • Texas Workforce Commission	For DC in Seguin: • Deceleration lanes • Traffic signal TxDOT committed to do these.	• Free site • 10-year local property tax abatements • 10-year inventory tax abatement • Utility extensions • Drainage improvements • Other minor incentives
Retailer #3	Existing facility was adjacent to I-10, close to rail spur that crosses Hwy 90.	Waller County and Royal ISD, regarding property tax abatements. TxDOT, regarding intersection improvement/ completion on I-10.	Involved in entire negotiation and decision process. Vice President of company is a member of local COC.	Waller County, other property owners adjacent to planned highway intersection.	To move up construction of I-10/ access road intersection (was scheduled for 2018). Also, to install traffic light at intersection of Hwy 90 and a second access road, which was the main entrance to the site prior to I-10 intersection.	County tax abatement, Freeport zone
Retailer #4	Look for major highway.	Real estate brokers for initial search.	Found potential sites and negotiated the entire deal.	Economic development directors, local planning agency	Possibly approvals for curb cuts; nothing significant.	Tax abatements (sometimes get job credits; can't remember if this site qualified for those)
Retailer #5	See previous response (interstate access).	Real estate broker to research potential sites that meet size requirements.	Baytown site selection had been made when he got there; was involved from beginning for Corsicana site.	Baytown: Economic development agency Corsicana: local municipality	Baytown: approvals for signalization and deceleration lanes near facility Corsicana: none	Tax credits, training grants, abatements

Company, Name, Title	How do you decide what road to locate on?	Which agencies do you first approach, and for what information?	What role did you play in the negotiation process?	Who else was involved in the negotiation process?	What requests were made of TxDOT and why?	What incentives were offered?
Retailer #6	n/a	n/a	n/a	n/a	Not sure; nothing done to roads or access then or since.	Tax abatements, triple Freeport zone
Retailer #7	n/a	n/a	n/a	n/a	None that he knows of.	n/a
Retailer #8	Look for roads that are capable of carrying large amounts of heavy truck traffic and that provide quick access to interstate travel.	For GA DC: approached State Eco. Dev. Agencies in three states with criteria; the state agencies then started a search among local ED agencies.	Headed project up from beginning.	Eco. Dev. Agencies and local consultants helped to identify locations. State DOTs (GA DOT mentioned specifically) provided information on current and planned/ proposed future transportation infrastructure at the sites being considered.	Katy facility is on a county road. Have talked with TxDOT about getting a traffic light at one of the egress points; improvements to I-10 have been proceeding (already planned) and those have benefited the Katy facility. For GA facility, one interchange was old and needed improvements (that were already planned); that was one of the things that the retailer looked at (the fact that the infrastructure was in place or in process).	All three state offered incentives; tax abatements, grant funding for infrastructure (utilities, power), port credits.

Company, Name, Title	How do you decide what road to locate on?	Which agencies do you first approach, and for what information?	What role did you play in the negotiation process?	Who else was involved in the negotiation process?	What requests were made of TxDOT and why?	What incentives were offered?
Retailer #9	Close to freeway/ interstate	Start at state level; look at cities and regions. Interested in community development information; looking at cost of living, etc.	None in selecting location; he worked on the development side but got the location information and decision from elsewhere in the company.	Not sure	Site was selected because it was in a growing area where highway improvements were going to be made anyway.	Not sure but probably incentives were offered.
Retailer #10	Close to I-35 and I-45 and other major roadways	Local economic development; TXI Railport group (facility is located in business park developed by TXI)	none	TXI	None that he knows of for this facility.	Not sure; tax abatements of some sort.

Company, Name, Title	How do you decide what road to locate on?	Which agencies do you first approach, and for what information?	What role did you play in the negotiation process?	Who else was involved in the negotiation process?	What requests were made of TxDOT and why?	What incentives were offered?
Retailer #11	Prefer on major highways or near highways with good access; generally in an industrial park.	In search for overflow space, they had to act quickly in response to sudden overflow of products in warehouse. They did not talk to EDAs, though probably should have. Chose main warehouse site 12 years ago for its position in relation to manufacturing sites (distance for a minimum cost shipment; in those days, a 500-mile minimum shipping cost). Had one manufacturing plant in Juarez, one in Reynosa. Fort Worth was a natural DC location. For overflow facility, talked to current landlord (Alliance area) and found suitable space. Considered some outside sites, but their best bet (particularly on such short notice) was Alliance.		Not sure about main site; for overflow site, dealt mainly with current landlord at Alliance.	No requests made. The needed roads and access existed already.	None. This retailer's warehouses typically don't have a large employment base, which is the main reason for local areas to provide incentives.

Company, Name, Title	How do you decide what road to locate on?	Which agencies do you first approach, and for what information?	What role did you play in the negotiation process?	Who else was involved in the negotiation process?	What requests were made of TxDOT and why?	What incentives were offered?
Retailer #12	Road that provides good access to interstate, railyard.	Don't know	none	Hillwood Development, City of Fort Worth	Not aware of any special requests made.	Tax rebate for hiring Fort Worth residents. Alliance airport is also a free trade zone, though retailer is not a designated free trade site at this time.
Retailer #13	Decision is not road-specific.	State and local Economic Development Agencies	n/a	TxDOT, local industrial foundation secured land, COC, Swepco (power company), utilities/water	There was already an underpass at the site; TxDOT installed an entrance and exit ramp on each side of I-30.	n/a

DC Summary Page 4

Company, Name, Title	Did TxDOT provide improvements/ approvals as promised? If not, what did not happen?	At what point would it have been most beneficial for TxDOT to become involved?	What transportation concerns do you now have with this site?	Any traffic, safety, road conditions, other concerns?	Actions being taken to resolve concerns	Other comments	Case Study Site?
Retailer #1	None needed.	TxDOT wasn't involved with this one; in situations where road improvements are needed, retailer involves DOTs as early as possible.	None	None	•	•	

Company, Name, Title	Did TxDOT provide improvements/ approvals as promised? If not, what did not happen?	At what point would it have been most beneficial for TxDOT to become involved?	What transportation concerns do you now have with this site?	Any traffic, safety, road conditions, other concerns?	Actions being taken to resolve concerns	Other comments	Case Study Site?
Retailer #2	• Usually will make road improvements, but very slow (only Oklahoma DOT is timely). • They try to avoid locations on state highways needing major road improvements due to slow response by state DOTs. • Local agencies more timely. • This company willing to front end costs of improvements and recover over time.	After site is identified (based on desire to keep site exploration confidential).	Occasionally have facility or road construction deficiencies that have to be remedied.	Sometimes increase in truck traffic volumes added to existing traffic.	As normal practice, they initiate operations over three years: Year 1 – ½ capacity Year 2 – 2/3 capacity Year 3 – full capacity	• They use own, shipper, and 3rd party trucking; may come from anywhere (could go from DC to stores to manufacturer to DC). • DC service area usually about 125 miles but can be up to 250 miles. • Usually serve about 100 stores • Have gen'l merchandise, food, special DCs • Typical DC nominally generates 900 daily truck trips.	Suggested 3 sites; asked for written request if we wish to do.
Site selection consultant	Improvements committed but DC construction deferred 5 years; improvements not yet made.	When needed	NA	NA	NA	One retailer wanted all commitments made without time limits (since DC construction deferred). City declined.	

Company, Name, Title	Did TxDOT provide improvements/ approvals as promised? If not, what did not happen?	At what point would it have been most beneficial for TxDOT to become involved?	What transportation concerns do you now have with this site?	Any traffic, safety, road conditions, other concerns?	Actions being taken to resolve concerns	Other comments	Case Study Site?
Retailer #3	Yes to I-10 intersection at access road, with financing from retailer and other business owners. No to stoplight (conducted study and found that intersection did not need light).	From the beginning, as they were.	Some safety concerns with the intersection at Highway 90; not a huge issue now that I-10 intersection is open. Logistical difficulty with I-10 intersection; no westbound exit due to one landowner's refusal to sell or donate land for it.		I-10 intersection opened September 2007.		yes
Retailer #4	No improvements needed.	In this case, no major action was needed; however, the due-diligence approval process always includes TxDOT and equivalent agencies, so they are involved early in the process.	none	no	n/a		no

Company, Name, Title	Did TxDOT provide improvements/ approvals as promised? If not, what did not happen?	At what point would it have been most beneficial for TxDOT to become involved?	What transportation concerns do you now have with this site?	Any traffic, safety, road conditions, other concerns?	Actions being taken to resolve concerns	Other comments	Case Study Site?
Retailer #5	Yes, TxDOT provided approvals. Retailer paid for the improvements.	As needed; in this case, only for approvals.	none	no	n/a	Retailer pays for roadway/infrastructure improvements in some cases (like Baytown); some communities can help with funding, which is a valuable incentive.	doubtful
Retailer #6	n/a	n/a	Not a terrible problem; they run 24-hours, so trucks are spread out. Some growth in immediate area (mostly retail); some congestion. He'd give the access a 3, maybe 2, on a scale of 1 (bad) to 5 (good).	Trailers often jackknife or block that intersection, shares the exit with a high school, which is a safety problem.	Discussed with TxDOT, city, for years about potential to upgrade highway and intersection. Funding issue; upgrade is on TxDOT's plan, but not high priority.	General growth pattern around McKinney since 1997 is part of the problem; also, Hwy 75 is essentially a suburban highway. In hindsight, should have put DC along one of the interstates.	Maybe
Retailer #7	n/a	n/a	Nothing major; traffic congestion likely to get worse as area continues to grow.				Maybe

Company, Name, Title	Did TxDOT provide improvements/ approvals as promised? If not, what did not happen?	At what point would it have been most beneficial for TxDOT to become involved?	What transportation concerns do you now have with this site?	Any traffic, safety, road conditions, other concerns?	Actions being taken to resolve concerns	Other comments	Case Study Site?
Retailer #8	TxDOT approved new traffic light; retailer will need to pay for it.	Early; e.g., Georgia DOT was very involved and proactive in supplying information on infrastructure plans for sites in Georgia.	Nothing major; added infrastructure on their own property (additional lanes, etc.); TxDOT is usually very easy to deal with; they are involved in many of the transportation infrastructure operations for retailer's stores.			Get involved with eco dev up front to help get people into the state to begin with. Stay involved with the companies to see if needs are being serviced and to potentially partner on future expansions and additional business.	Yes, probably
Retailer #9	n/a	n/a	n/a	No	n/a	Look out in the future; if an area is starting to grow, what would be the impact of a bunch of DCs wanting to locate there? What if an area grows by 30%? TxDOT should work with local areas to figure out how to "prime" an area for potential DCs or other desired businesses.	Possibly
Retailer #10	n/a	n/a	Nothing significant; railroad occasionally causes delays.	no	n/a		Probably not

Company, Name, Title	Did TxDOT provide improvements/ approvals as promised? If not, what did not happen?	At what point would it have been most beneficial for TxDOT to become involved?	What transportation concerns do you now have with this site?	Any traffic, safety, road conditions, other concerns?	Actions being taken to resolve concerns	Other comments	Case Study Site?
Retailer #11	n/a	n/a	One concern; retailer is developing a new manufacturing plant in Mexico to ship exclusively by rail; would have been helpful to have rail directly to warehouse but don't have that where they are in Texas.	no	n/a	(See interview document for full comments.) Big impact for importers is customs department; huge changes in process in recent years because of security needs; important to understand what's happening with inspections, security processes. Companies need free trade zones, company certifications/status that help to streamline that process: CTPAT-certified (see customs for requirements).	Maybe

Company, Name, Title	Did TxDOT provide improvements/ approvals as promised? If not, what did not happen?	At what point would it have been most beneficial for TxDOT to become involved?	What transportation concerns do you now have with this site?	Any traffic, safety, road conditions, other concerns?	Actions being taken to resolve concerns	Other comments	Case Study Site?
Retailer #12	n/a	n/a	Maintenance issues – potholes, etc. Trying to work through Hillwood to get roads fixed; one concern is route of TTC – current plan is to build TTC east of Dallas with spur to West (to Alliance/Ft. Worth area); concerned now that the west spur (and Alliance) will be left out of TTC plan (if it gets built at all).	Interested in I-35W improvement project (already planned); would be nice if TxDOT or someone fixed some of the roads around the Texas Motor Speedway (traffic congestion is currently a concern).	None at the moment that retailer is aware of.		Possibly
Retailer #13		Yes, we do involve the state DOT on most sites. We will typically get them involved once a site plan is established.	Nothing serious. Sometimes get heavy traffic; ramps are great but now find that they could have used longer entryways to accommodate truck volumes during certain times of the day; if too many trucks at once, they back up all the way onto the access road.		As retailer does more just-in-time inventory, trucks are assigned arrival and departure times to minimize queuing on entrance ramp.	Transportation is second biggest cost for DCs. Also need to include rail; companies will often look to RR first and TxDOT second, especially with fuel costs climbing. Close proximity to container hub (rail to truck and vice versa).	Possibly

Table B-2. Interview Summaries – TxDOT Representatives.

TxDOT Summary Page 1

District Area Office, Name, Title	Major DC(s) in Area (company, city)	At what point in the development process did you learn of DC's possible location in the area?	What was TxDOT District's initial approach upon hearing about possible DC?	Did DC developer approach TxDOT before starting construction? About what?	What role (if any) did you play in negotiation process?	What agency/title got you involved?
TxDOT Government & Public Affairs, Helen Havelka, (512) 475-1812	Statewide resource involved with Governor's Office of Economic Development	She is the TxDOT liaison with the Governor's office and attends weekly economic development meetings. Receives calls in between meetings if transportation question or need arises. She then links up appropriate district offices. She also tells DC representatives what to expect from TxDOT.	Districts are asked to do all work specific to a district or site.	NA	On occasions she may help with requests for funding of previously unplanned or unfunded projects (as facilitator at administrative level).	Governor's Office of Economic Development
Lubbock District Steve Warren, TPD Director	Wal-Mart, Plainview	Built over 20 years ago, no local knowledge of process				
Tyler District Randy Redmond, TPD Director	Target, Lindale (near Tyler)	When road improvements were requested – very late in the process (DE was involved to at least some point earlier in the process)	How much will DC, et al. contribute.			

District Area Office, Name, Title	Major DC(s) in Area (company, city)	At what point in the development process did you learn of DC's possible location in the area?	What was TxDOT District's initial approach upon hearing about possible DC?	Did DC developer approach TxDOT before starting construction? About what?	What role (if any) did you play in negotiation process?	What agency/title got you involved?
Tyler District Randy Redmond, TPD Director	Wal-Mart on US 79, Palestine	Main issue was expansion of US 79 (widening from 2 to 4-lane and new interchange) – TxDOT offered to build a turnaround at new interchange if Wal-Mart would pay for it (4-5 years ago) at cost of ~$100,000; Wal-Mart refused; new DC manager now – wants to know why no turnaround being built as part of interchange				
San Antonio District Clay Smith, TPD Director (210) 615-5920	None Specific, but mentioned Wal-Mart DC in New Braunfels, Toyota plant, Southwest Intermodal facility, Rack Space high tech facility, and Lowe's in Seguin that was not built	Varies – can be close to the beginning, particularly if larger DC	N/A – no specific DC referenced	N/A – no specific DC referenced	Typically none – we simply tell what we can do	N/A – no specific DC referenced

District Area Office, Name, Title	Major DC(s) in Area (company, city)	At what point in the development process did you learn of DC's possible location in the area?	What was TxDOT District's initial approach upon hearing about possible DC?	Did DC developer approach TxDOT before starting construction? About what?	What role (if any) did you play in negotiation process?	What agency/title got you involved?
Yoakum District Lonnie Gregorcyk, District Engineer	Wal-Mart, Sealy	Very late; probably 1 ½ years late	N/A	Yes. Road improvements	Access, road improvements	City – wanted traffic volumes
Houston District Jim Heacock, Asst Director Project Development	Academy - Katy	Never really became involved; no direct access to state highways; no improvement to state highways requested; no impacts observed; Improvements were being made to nearby IH 10 anyway, nothing required by DC				
Houston District Jim Heacock, Asst Director Project Developer; Manny Francisco; Stuart Corder	99 Cent Only (originally built as Albertsons)	Never really became involved; no direct access to state highways; no improvement to state highways requested; no impacts observed Improvements were being made to nearby Grand Parkway and IH 10 anyway, nothing required by DC				

District Area Office, Name, Title	Major DC(s) in Area (company, city)	At what point in the development process did you learn of DC's possible location in the area?	What was TxDOT District's initial approach upon hearing about possible DC?	Did DC developer approach TxDOT before starting construction? About what?	What role (if any) did you play in negotiation process?	What agency/title got you involved?
Houston District Jim Heacock Can follow up with Montgomery Co Area – have tried, but have not been able to talk with yet	Wal-Mart, New Caney	Wal-Mart and/or Montgomery County requested road improvements				
Houston District Jim Heacock	Igloo, Brookshire	Existing DC; in last few months, put ramps at IH 10 @ Igloo Road; ramps planned for IH 10 @ Woods Road				
Odessa District Gary Law, TPD Director and Mike McAnnaly, TRF Director	Family Dollar - Odessa	After it was a done deal.	We are happy you are coming; how much money are you bringing to the table to help with the costs?	No.	TxDOT reviewed driveway locations and designs, as well as drainage.	City of Odessa

District Area Office, Name, Title	Major DC(s) in Area (company, city)	At what point in the development process did you learn of DC's possible location in the area?	What was TxDOT District's initial approach upon hearing about possible DC?	Did DC developer approach TxDOT before starting construction? About what?	What role (if any) did you play in negotiation process?	What agency/title got you involved?
Fort Worth Jimmy Bodiford, Trans Ops Director; Theresa Lopez, Asst Director Trans Ops; Ronald Robinson, Johnson Co AE; Richard Schiller Maint Director; Bill Riley, TPD Director	Mattel, Fort Worth	When city wanted to move money around.	This is an MPO issue.	No	None	N/A
Fort Worth Ronald Robinson, Johnson Co AE	Wal-Mart, Cleburne	When Tax Increment Finance (TIF) organization began – formed by Johnson County; first heard about it by word of mouth; later, a county commissioner called me and told me about DC.	We wanted a traffic impact analysis; "They will have to pay for any road improvements they want" (they includes DC company and local agencies).	Yes – turn lanes on SH 171 at Windmill Rd	None	Johnson County commissioner
Fort Worth Theresa Lopez, Asst Director Traffic Ops	Mouser Electronics, Mansfield; Bus US 287 @ FM 157	Signals were requested by City of Mansfield – *This is a much smaller DC type facility; we can follow up if necessary.*				

District Area Office, Name, Title	Major DC(s) in Area (company, city)	At what point in the development process did you learn of DC's possible location in the area?	What was TxDOT District's initial approach upon hearing about possible DC?	Did DC developer approach TxDOT before starting construction? About what?	What role (if any) did you play in negotiation process?	What agency/title got you involved?
Fort Worth Jimmy Bodiford, Trans Ops Director; Theresa Lopez, Asst Director Trans Ops; Ronald Robinson, Johnson Co AE; Richard Schiller Maint Director; Bill Riley, TPD Director	Saltwater disposal sites at various locations throughout the FTW District; there are at least 6-8 around Johnson County, including one north of City of Grandview on I-35W; another near Wal-Mart DC in Cleburne.	We typically hear about these when driveway requests are made; challenge is that we have to be reactionary to these and drill sites; many overloaded trucks tear up roads not designed for those loads; some drill sites are productive and result in continued traffic – we have to react to those; others are not productive and trucks do not return.				
Paris District Earnest Teague Area Engineer Sulphur Springs (903) 885-9514	Lowe's, Mount Vernon	In the planning and site selection phase.	Responded to Lowe's requests for ramps at existing overpass on IH 30.	Yes, requesting ramps at an overpass on IH 30.	No role in the negotiations to bring the DC to Mount Vernon, other than providing information for the site selection process when it was narrowed to Sulphur Springs and Mount Vernon.	Franklin County (to best of memory).
Dallas District Bill Pierce Area Engineer Waxahachie (972) 938-1570	Target and Toys R Us, Railport Industrial Park, Midlothian	Began talking about developing the industrial park (before it was known who would locate there)	Approved the signal that was to be installed (at no TxDOT expense) at US 67 @ Railport Pkwy	Yes, the signal at US 67 @ Railport Pkwy	No role in negotiations to bring DCs to Midlothian.	City of Midlothian, Ellis County, local development authority

District Area Office, Name, Title	Major DC(s) in Area (company, city)	At what point in the development process did you learn of DC's possible location in the area?	What was TxDOT District's initial approach upon hearing about possible DC?	Did DC developer approach TxDOT before starting construction? About what?	What role (if any) did you play in negotiation process?	What agency/title got you involved?
Dallas District Bill Pierce Area Engineer Waxahachie (972) 938-1570	Walgreens, Waxahachie	Apparently fairly late into the process		Walgreens asked if a short section of FM 664, a load zoned road, would be rebuilt to handle trucks; TxDOT replied no and Walgreens and/or City of Waxahachie paid to have it done	No role in negotiations to bring DC to Waxahachie	Walgreens, City of Waxahachie

TxDOT Summary Page 2

District Area Office, Name, Title	Major DC(s) in Area (company, city)	At what point did you become involved in the negotiation process?	Who else (agencies, names) was involved in the process?	What specific requests were made of TxDOT related to attracting the DC to the area or locating a site?	What input did you provide?	Where else was the DC company considering locating this DC?
TxDOT Government & Public Affairs, Helen Havelka, (512) 475-1812	Statewide resource involved with Governor's Office of Economic Development	Only as facilitator at administrative level for unplanned or unprogrammed projects.	Districts handle details of requests and determine what improvements are to be pursued and when. Districts handle negotiations.	NA	See other responses.	NA
Tyler District Randy Redmond, TPD Director	Target, Lindale (near Tyler)	N/A	City of Lindale	Improve existing interchange at adjacent county road – rebuild wider bridge		Not aware
San Antonio District Clay Smith, TPD Director (210) 615-5920	None Specific, but mentioned Wal-Mart DC in New Braunfels, Toyota plant, Southwest Intermodal facility, Rack Space high tech facility, and Lowe's in Seguin that was not built	N/A – no specific DC referenced	N/A – no specific DC referenced	N/A – no specific DC referenced	N/A – no specific DC referenced	N/A – no specific DC referenced
Yoakum District Lonnie Gregorcyk, District Engineer	Wal-Mart, Sealy	~1 ½ years into the process; they had started clearing the land	County; Economic Development Corporation	Initially, "you need to do all of this . . ."; Turn lanes at FM 3013 @ SH 36; new FM road (3538) – result of volumes @ I-10 ramp in Sealy	Analyzed signal; volumes; told them what FM design should look like	Several cities in YKM and other districts, including El Campo, possibly Wharton – along US 59 and IH 10

District Area Office, Name, Title	Major DC(s) in Area (company, city)	At what point did you become involved in the negotiation process?	Who else (agencies, names) was involved in the process?	What specific requests were made of TxDOT related to attracting the DC to the area or locating a site?	What input did you provide?	Where else was the DC company considering locating this DC?
Houston District Gabe Johnson, TPD Director	Academy - Katy					
Houston District Jim Heacock Can follow up with Montgomery Co Area – have tried, but have not been able to talk with yet	Wal-Mart, New Caney			Turn lanes on FM 1314, FM 1485, and Gene Campbell Road		Not aware
Odessa District Gary Law, TPD Director and Mike McAnnaly, TRF Director	Family Dollar - Odessa	Site plan approval – driveway locations and design	City of Odessa, Odessa Development Corporation (ODC)	ODC wanted to know when the IH 20-JBS Parkway interchange (adjacent to the site) would be built, so they could tell Family Dollar	Replied that it would be built when there is a need and money is available	TxDOT response – didn't know; previous interview with Mike George of Odessa Chamber of Commerce indicates that San Antonio was the other short list city.

District Area Office, Name, Title	Major DC(s) in Area (company, city)	At what point did you become involved in the negotiation process?	Who else (agencies, names) was involved in the process?	What specific requests were made of TxDOT related to attracting the DC to the area or locating a site?	What input did you provide?	Where else was the DC company considering locating this DC?
Fort Worth Jimmy Bodiford, Trans Ops Director; Theresa Lopez, Asst Director Trans Ops; Ronald Robinson, Johnson Co AE; Richard Schiller Maint Director; Bill Riley, TPD Director	Mattel, Fort Worth	Did not get involved	N/A	Facilitate moving the money to the specific project; we let the project	N/A	Do not know
Fort Worth Ronald Robinson, Johnson Co AE	Wal-Mart, Cleburne	Did not get involved	Johnson County, City of Cleburne (not aware of specific people)	None	N/A	Do not know
Fort Worth Theresa Lopez, Asst Director Traffic Ops	Mouser Electronics, Mansfield	Traffic signal request	City of Mansfield	Traffic signals	Reviewed signal request	Do not know
Paris District Earnest Teague Area Engineer Sulphur Springs (903) 885-9514	Lowe's, Mount Vernon	Site selection and planning process	Franklin County, City of Sulphur Springs, City of Mount Vernon	Lowe's asked for ramps at an existing overpass over IH 30; it was an unnamed county road	First response was that TxDOT could not build the ramps, because there was no traffic to support them.	Sulphur Springs, approximately 20 miles to the west. Not aware of other potential sites further away.

District Area Office, Name, Title	Major DC(s) in Area (company, city)	At what point did you become involved in the negotiation process?	Who else (agencies, names) was involved in the process?	What specific requests were made of TxDOT related to attracting the DC to the area or locating a site?	What input did you provide?	Where else was the DC company considering locating this DC?
Dallas District Bill Pierce Area Engineer Waxahachie (972) 938-1570	Target and Toys R Us, Railport Industrial Park, Midlothian	Was never involved in negotiations	No specific names provided; best of his recollection – City of Midlothian, Ellis County, and Midlothian Development Authority	Not so much related to attracting a specific DC, but more in regards to developing the industrial park – grade separation to take US 67 over Railport Pkwy; requested $6 million in pass-through funds; they are paying the remainder of costs	Helped process the application for the pass-through funds (Pierce noted that this was to come from Texas Transportation Commission discretionary funds, but that those funds are now "tapped out")	Not aware
Dallas District Bill Pierce Area Engineer Waxahachie (972) 938-1570	Walgreens, Waxahachie	Was never involved in negotiations	No specific names; City of Waxahachie	Not directly related to attracting the DC, but Walgreens asked for segment of FM 664 to be rebuilt to handle large trucks; possibly asked for right-turn lane on US 287 frontage road	Told them TxDOT would not be able to pay for those improvements	Not aware

TxDOT Summary Page 3

District Area Office, Name, Title	Major DC(s) in Area (company, city)	What role (if any) did you play in location and design negotiation process?	What authority did you have in considering and/or granting those requests?	What concerns did the DC developer express about a site in your area? About the site being proposed or considered?	How did you address the road/traffic concerns?	What requests were made that were not previously planned? What did you do in response?
TxDOT Government & Public Affairs, Helen Havelka, (512) 475-1812	Statewide resource involved with Governor's Office of Economic Development	None	None	NA	NA	NA
Tyler District Randy Redmond, TPD Director	Target, Lindale (near Tyler)	N/A – possibly DE had some involvement				Building new, wider bridge at existing interchange; built it (City of Lindale contributed ~$100,000 out of $2 million required)
San Antonio District Clay Smith, TPD Director (210) 615-5920	None Specific, but mentioned Wal-Mart DC in New Braunfels, Toyota plant, Southwest Intermodal facility, Rack Space high tech facility, and Lowe's in Seguin that was not built	N/A – no specific DC referenced	N/A – no specific DC referenced	N/A – no specific DC referenced	N/A – no specific DC referenced	Typically ramp configurations, driveway access, truck travel patterns, intersection improvements. We convey our limits, suggest pass-through and other local finance options.

District Area Office, Name, Title	Major DC(s) in Area (company, city)	What role (if any) did you play in location and design negotiation process?	What authority did you have in considering and/or granting those requests?	What concerns did the DC developer express about a site in your area? About the site being proposed or considered?	How did you address the road/traffic concerns?	What requests were made that were not previously planned? What did you do in response?
Yoakum District Lonnie Gregorcyk, District Engineer	Wal-Mart, Sealy	Had staff review design details; YKM did PS&E for turn lanes	Was TPD Director at the time; kept D.E. informed; was able to tell what TxDOT/district could do – up to certain amount of $ - recommended to D.E. – he approved after meeting with state representative	Access to IH 10 or US 59	Discussion of potential new FM road to IH 10	Turn lanes. Told them how much TxDOT would pay
Houston District Jim Heacock	Academy - Katy					
Houston District Jim Heacock Can follow up with Montgomery Co Area – have tried, but have not been able to talk with yet	Wal-Mart, New Caney					Turn lanes on three roads
Odessa District Gary Law, TPD Director and Mike McAnnaly, TRF Director	Family Dollar - Odessa	Direct suggestions regarding driveway locations and design	Full authority to approve driveway locations and design			

District Area Office, Name, Title	Major DC(s) in Area (company, city)	What role (if any) did you play in location and design negotiation process?	What authority did you have in considering and/or granting those requests?	What concerns did the DC developer express about a site in your area? About the site being proposed or considered?	How did you address the road/traffic concerns?	What requests were made that were not previously planned? What did you do in response?
Fort Worth Jimmy Bodiford, Trans Ops Director; Theresa Lopez, Asst Director Trans Ops; Ronald Robinson, Johnson Co AE; Richard Schiller Maint Director; Bill Riley, TPD Director	Mattel, Fort Worth	None	N/A	N/A	Not involved	Road improvement project – widening of Meacham Rd from Gold Spike to Main and an interchange at Main to be built instead of previously planned widening on another segment of the Meacham Road; we facilitated moving funds and let the project.
Fort Worth Ronald Robinson, Johnson Co AE	Wal-Mart, Cleburne	None	N/A	Do not know	N/A – other than facilitating improvements on SH 171 – built by Wal-Mart	None
Fort Worth Theresa Lopez, Asst Director Traffic Ops	Mouser Electronics, Mansfield	Reviewed signal warrants	*Mark Price of South Tarrant County Area Office – can discuss further with him*			Traffic signals, reviewed warrants
Paris District Earnest Teague Area Engineer Sulphur Springs (903) 885-9514	Lowe's, Mount Vernon	We negotiated access (driveway) locations and they took our recommendations.	I worked out the agreements with Lowes and their consultant engineer/architect, then passed it up to the District for review.	Access to IH 30, primarily; also access to SH 37 for routing to Tyler and points south.	There was not anything we had to do.	

District Area Office, Name, Title	Major DC(s) in Area (company, city)	What role (if any) did you play in location and design negotiation process?	What authority did you have in considering and/or granting those requests?	What concerns did the DC developer express about a site in your area? About the site being proposed or considered?	How did you address the road/traffic concerns?	What requests were made that were not previously planned? What did you do in response?
Dallas District Bill Pierce Area Engineer Waxahachie (972) 938-1570	Target and Toys R Us, Railport Industrial Park, Midlothian	Did not participate in location or design negotiation processes	Approved signal request for US 67 @ Railport Pkwy	Not aware of any	There were no specific concerns to address.	Grade separation for US 67 to go over Railport Pkwy
Dallas District Bill Pierce Area Engineer Waxahachie (972) 938-1570	Walgreens, Waxahachie	Did not participate in location or design negotiation processes	Changed FM 664 @ US 287 frontage road from two-way stop to four-way stop	Not aware of any	There were no specific concerns to address	Change two-way stop control to four-way; possibly right-turn lane on US 287 frontage road

TxDOT Summary Page 3

District Area Office, Name, Title	Major DC(s) in Area (company, city)	What incentives were offered to locate locally (by any entity)?	Did requests require TxDOT potential funding that had not previously been programmed?	At what point would it have been most beneficial for you to have become aware of efforts to locate/attract the DC?	At what point would it have been most beneficial for you to have become involved in negotiations to locate/attract the DC?	Was TxDOT consulted on site location, incentives, access, road improvements, safety concerns, congestion potential, other?
TxDOT Government & Public Affairs, Helen Havelka, (512) 475-1812	Statewide resource involved with Governor's Office of Economic Development	NA	Several are referred to administration as unprogrammed needs.	NA	As needed to facilitate district involvement or administrative approval of funding	Done at district level when requested.
San Antonio District Clay Smith, TPD Director (210) 615-5920	None Specific, but mentioned Wal-Mart DC in New Braunfels, Toyota plant, Southwest Intermodal facility, Rack Space high tech facility, and Lowe's in Seguin that was not built	N/A – no specific DC referenced	N/A – no specific DC referenced	Early as possible would always be best	Early in the planning, so we can respond – environmental, ROW, identify funding. Most will let TxDOT in on confidentiality – often will have meeting with company rep and local elected official.	N/A – no specific DC referenced

District Area Office, Name, Title	Major DC(s) in Area (company, city)	What incentives were offered to locate locally (by any entity)?	Did requests require TxDOT potential funding that had not previously been programmed?	At what point would it have been most beneficial for you to have become aware of efforts to locate/attract the DC?	At what point would it have been most beneficial for you to have become involved in negotiations to locate/attract the DC?	Was TxDOT consulted on site location, incentives, access, road improvements, safety concerns, congestion potential, other?
Yoakum District Lonnie Gregorcyk, District Engineer	Wal-Mart, Sealy	Tax abatements, utility extensions, possibly annexation	State level and district discretionary funds were use. Doesn't want to say that any specific project was delayed due to this issue – but possibly were.	Prior to site plan development – we could have helped with access options. They came to us with a set site plan.	Early as possible, to help with planning issues.	Site location – very little (worked some with El Campo – primarily because of existing working relationship). Road improvements, geometric improvements, safety concerns (DC wanted signal; city concerned with entrance ramp and trucks merging onto IH 10.
Houston District Gabe Johnson, TPD Director	Academy - Katy					
Odessa District Gary Law, TPD Director and Mike McAnnaly, TRF Director	Family Dollar - Odessa	Not aware of local incentives	Yes – funding for adjacent interchange came from District Discretionary funds – several years worth	"I would just as soon stay out of it; the platting process is probably the best" time to get involved; tell them when you come, do impacts studies before you expect to make improvements.	"don't care"	No

District Area Office, Name, Title	Major DC(s) in Area (company, city)	What incentives were offered to locate locally (by any entity)?	Did requests require TxDOT potential funding that had not previously been programmed?	At what point would it have been most beneficial for you to have become aware of efforts to locate/attract the DC?	At what point would it have been most beneficial for you to have become involved in negotiations to locate/attract the DC?	Was TxDOT consulted on site location, incentives, access, road improvements, safety concerns, congestion potential, other?
Fort Worth Jimmy Bodiford, Trans Ops Director; Theresa Lopez, Asst Director Trans Ops; Ronald Robinson, Johnson Co AE; Richard Schiller Maint Director; Bill Riley, TPD Director	Mattel, Fort Worth	Not aware	Yes – desired project was built in place of previously planned project on another segment of the same road	Did not matter much, mainly an MPO issue	Did not matter much	No
Fort Worth Ronald Robinson, Johnson Co AE	Wal-Mart, Cleburne	Do not know	No	N/A	As early as possible, so we can give the pros and cons of impacts on road way system; when locals first met with Wal-Mart	Only about the turn lanes on SH 171
Fort Worth Theresa Lopez, Asst Director Traffic Ops	Mouser Electronics, Mansfield	Do not know	No			City of Mansfield brought TIA and signal request to TxDOT

TxDOT Summary Page 4

District Area Office, Name, Title	Major DC(s) in Area (company, city)	Were TxDOT's advice, recommendations, requests followed? If not, why not?	What impacts has DC had on state highway system?	Any traffic, safety, road condition, other concerns associated with the DC?	What actions have or are being taken to resolve them?	Other comments
TxDOT Government & Public Affairs, Helen Havelka, (512) 475-1812	Statewide resource involved with Governor's Office of Economic Development	NA	NA	NA	NA	When DC representatives inquire at the Governor's office, Helen is the first TxDOT contact. If DC reps start locally, she rarely is involved.
San Antonio District Clay Smith, TPD Director (210) 615-5920	None Specific, but mentioned Wal-Mart DC in New Braunfels, Toyota plant, Southwest Intermodal facility, Rack Space high tech facility, and Lowe's in Seguin that was not built	N/A – no specific DC referenced	N/A – no specific DC referenced	N/A – no specific DC referenced	N/A – no specific DC referenced	None
Yoakum District Lonnie Gregorcyk, District Engineer	Wal-Mart, Sealy	DC developer – No, site plan was already set. Local agency – Yes.	Some changes in travel characteristics – IH 10 & SH 36; there was already lots of truck traffic. New FM road – opened up land for development.	Turning issues – trucks.	Redesigned intersection – SH 36 @ FM 3013; new FM 3538 built.	TxDOT needs to be brought into the process early, before site plans are set so that TxDOT can work with the DC company to get the best road improvements/designs.
Houston District Gabe Johnson, TPD Director	Academy - Katy					

District Area Office, Name, Title	Major DC(s) in Area (company, city)	Were TxDOT's advice, recommendations, requests followed? If not, why not?	What impacts has DC had on state highway system?	Any traffic, safety, road condition, other concerns associated with the DC?	What actions have or are being taken to resolve them?	Other comments
Odessa District Gary Law, TPD Director and Mike McAnnaly, TRF Director	Family Dollar - Odessa	N/A	Deterioration of pavement on frontage roads and volumes that required a signal at the IH 20 – Grandview interchange (~1½ mi to the west)	Same as previous question	Improved frontage road pavement during construction of JBS Parkway interchange; rebuilt sections of frontage roads	
Fort Worth Jimmy Bodiford, Trans Ops Director; Theresa Lopez, Asst Director Trans Ops; Ronald Robinson, Johnson Co AE; Richard Schiller Maint Director; Bill Riley, TPD Director	Mattel, Fort Worth	N/A	None	No	N/A	We would like to be involved; the cities don't want us involved, because we will tell them how much it will cost (and that we won't pay for it). The other segment of Meacham Road still has not been widened.
Fort Worth Ronald Robinson, Johnson Co AE	Wal-Mart, Cleburne	N/A	The pavement at the nearby US 67/SH 171 interchange was not designed for heavy truck traffic.	No	Rebuilt connections from US 67 to SH 171 – used Maintenance funds	Wal-Mart paid for all turn lane improvements, including consultants, plans, and construction.

District Area Office, Name, Title	Major DC(s) in Area (company, city)	Were TxDOT's advice, recommendations, requests followed? If not, why not?	What impacts has DC had on state highway system?	Any traffic, safety, road condition, other concerns associated with the DC?	What actions have or are being taken to resolve them?	Other comments
Dallas District Bill Pierce Area Engineer Waxahachie (972) 938-1570	Target and Toys R Us, Railport Industrial Park, Midlothian	N/A	None	No	N/A	The Midlothian Development Authority is very good to work with.
Dallas District Bill Pierce Area Engineer Waxahachie (972) 938-1570	Walgreens, Waxahachie	N/A	None	No	N/A	"Pretty good experience"; no TIA required; there are no problems there today.

Notes:
Also asked FTW group about Nestle, Albertsons, Radio Shack, and Whirlpool DC; they did not know about their development; some didn't even know one or more of them exist – this seems to speak to the varying impacts of DCs in larger or smaller areas. TxDOT developed frontage roads for SH 170 and DCs (Nestle and LG Electronics) followed; City of Fort Worth added traffic signals at SH 170 @ Park Vista after DCs were built. FTW group noted that City of Fort Worth has leverage to request TIA if DC does not have direct access to state highway; City gets TxDOT review and input. The FTW group mentioned that Beach Street was widened near the Dillards DC, but was going to happen regardless of the DC construction; there were concerns related to access after changes to the IH 35W/IH 820 interchange

Bill Pierce (AE – Ellis County) also brought up the Sterilite facility in Ennis; said that City of Ennis requested a traffic signal; warrants for signal were not met, so flashing light installed (paid for by City and Walgreens); City of Ennis is quicker to ask for improvements that other cities. Bill Pierce also mentioned a truck driving school in Palmer; City of Palmer wanted TxDOT to pay for some road improvements; TxDOT politely told them they would have to fund it; most cities seem to know this, but some small towns still think TxDOT has unlimited funds.

Some interviewees were reluctant to share information about all or about certain subjects.

Table B-3. Interview Summaries – Local Agency Representatives.

Local Agency Representatives Summary Page 1

Agency, Name, Title, Contact Information	DC Company, Location	Opening Date	How far in advance were you aware of possible DC location?	Did you or another local agency try to attract DC? How?	Where else was DC company considering locating the DC?	What concerns did DC developer express about a site in your area?	How did you address traffic/road concerns?
Governor's Office of Economic Development, Scott Smith, Location Specialist, (512) 936-0278	All that inquire; this office handles statewide or initial inquiries.	NA	At initiation of site search	To Texas. They hand off to local areas of interest for site proposals once criteria are known.	Can be in or outside Texas; some DCs serve multiple states.	Interests are most frequently for site on interstate highway or 4-lane state highway. Some also want rail access. Labor force and incentives are also sought during initial inquiries to state.	Not usually discussed at this level, but are once DC representatives are handed off to locals.
Tyler Chamber of Commerce and Econ. Devel. Corp. Tom Mullins (903) 593-2004	Target, Lindale	June 1998	Contacted 1994, selected in 1995	No, they were approached by Target initially.	Waco	Needed a site that didn't have more than 10% elevation and was at least 100 acres (later expanded to 150-acre site); found four suitable sites in East Texas	Rebuilt overpass bridge and extended entrance ramps on Harvey Road.
Waxahachie Economic Dev. Dept. Doug Barnes (972) 937-7330 Ext. 276	Walgreens, Waxahachie	2000 (const. began in 1999)	One year ahead of construction.	Yes; city keeps an information packet updated to circulate to prospective developers.	Don't know specific competing locations; Walgreens wanted to be close to I-35 and to D/FW metroplex	No concerns expressed; selling points were proximity to I-35, D/FW and Hwy. 287	Not much to address; site was already on Hwy 287 close to its intersection with I-35. Upgraded entrance ramp to Hwy 287 to accommodate weight of trucks.

Agency, Name, Title, Contact Information	DC Company, Location	Opening Date	How far in advance were you aware of possible DC location?	Did you or another local agency try to attract DC? How?	Where else was DC company considering locating the DC?	What concerns did DC developer express about a site in your area?	How did you address traffic/road concerns?
New Braunfels Chamber of Commerce Rusty Brockman, Eco. Dev. Dir. (830) 625-2385	Wal-Mart, New Braunfels	1993	Not sure	Yes; tax abatement incentives.	There was competition in South Texas; don't know details.	None that he's aware of; when freeway feeder roads changed from 2-way to one-way, (following DC opening) it became slightly more inconvenient for DC's trucks to enter highway, but nothing major.	No problems to fix.
Seguin Economic Devel. Corp., Ramon Lozano, (888) 473-4846; **Seguin City Planner** Don Smith, (830) 401-2306	Lowe's, Seguin	Project deferred by Lowe's after all approved	About 1-1½ years before intended construction	Yes. Offered numerous incentives	Was looking east Lytle was last other city; Lowe's was looking Houston or west	Given area, wanted access to both I-10 and future SH 130. Site size was also important to accommodate proposed 2 million sq. ft. DC serving 80 stores in south Texas and western Louisiana.	Located and acquired site on state highway close to I-10 and future SH 130. No significant improvements were needed.
City of Sealy, John Marsh, City Manager, (979) 885-3511 Ext. 0.	Wal-Mart, Sealy	April 2005	2-3 years	Yes	Other late alternatives were Wharton, Rosenberg	Wanted site on FM road, site large enough and right shape for DC plan (inflexible), require no RR crossing, utilities available. Not concerned with visibility. Found outlying site that was large enough and met other needs.	Wal-Mart commissioned a traffic impact study;

Agency, Name, Title, Contact Information	DC Company, Location	Opening Date	How far in advance were you aware of possible DC location?	Did you or another local agency try to attract DC? How?	Where else was DC company considering locating the DC?	What concerns did DC developer express about a site in your area?	How did you address traffic/road concerns?
Cleburne Office of Economic Development, Jerry Cash, Director, (817) 645-8644	Wal-Mart, Tree of Life, several combination manufacture-DCs in Cleburne.	Wal-Mart - 2002	18-24 months	Led by economic development office or City manager.	Eldorado was finalist. Most companies want <1 mile to 4-lane highway and <10 miles to interstate highway.	Top selection criteria he hears are: 1. Utility availability 2. Labor force 3. Incentives	Improve main county road providing access to SH 171; add deceleration lanes on SH 171.
Corsicana Department of Economic Development, Lee McCleary, Director,[1] (903) 645-4806	Home Depot, Kohl's, True Value Hardware	HD – 2005 (replacement for departed K-Mart Kohl's – 2003 TVH – 1998	Usually 12-16 months	Starts with economic development office; others involved as needed.	Usually DFW region and along I-45 or US 187.	Usually within certain number of miles of I-45 and along a good highway.	Was not there at time; would search files if we do case study.
McKinney Economic Development Corporation, Chris Potter, Director of Marketing, (972) 562-5430	Blockbuster	Fall 1997	Fall 1996	Yes; offered incentives	unknown	n/a	n/a

[1] Recently replaced deceased predecessor who handled the three DC listed. McCleary was previously Director of Economic Development in Ennis where he was involved in attracting DCs there (CVS and others). Some information shown is based on his total experience.

Agency, Name, Title, Contact Information	DC Company, Location	Opening Date	How far in advance were you aware of possible DC location?	Did you or another local agency try to attract DC? How?	Where else was DC company considering locating the DC?	What concerns did DC developer express about a site in your area?	How did you address traffic/road concerns?
Arlington Chamber of Commerce, Orlando Campos, Senior Director Business Development, (817) 459-6652	Rooms to Go	2002	Not sure; was not there when DC was built	n/a	n/a	n/a	n/a
Katy EDC, Lance LaCour, President, (281) 396-2200	99 Cents Only, Academy, new project TRG (code name)	Fall 2009 (TRG; all remaining answers are about this DC)	Summer 2006; if selected, construction will begin spring 2008	Yes; company also looked at several sites in Houston	Conroe, Pearland, Houston urban area	Needed frontage road to connect to I-10	Have a new I-10 interchange, which played a part in TRG's selection of site. Will have to build a frontage road, probably with local funds. Developer created a road improvement district in the area to fund the interchange, which TxDOT is building. Developers funded district; tax in district will reimburse developers.
Midlothian Corporation for Economic Development, Frank Viso, (972) 723-3800	Target, Toys R Us	Target: 2003 Toys R Us: 2001?	10 months to a year	Yes; always marketing to real estate developers	Fort Worth	Labor force; Midlothian is a small city (~13,000). However, the excellent roadway/highway network brings them workers from southern Tarrant and Dallas Counties – labor base close to 500,000.	Put in stoplight at RR crossing and worked to coordinate RR timing, currently designing overpass.

Local Agency Representatives Summary Page 2

Agency, Name, Title	DC Company, Location	What road improvements were requested? What was done?	What incentives were offered?	What role did you play in the negotiations?	At what point did you and your agency become involved in the process?	Who else was involved in the negotiation process?
Governor's Office of Economic Development, Scott Smith, Location Specialist, (512) 936-0278	All that inquire. Office role is to attract DCs to Texas (and not a specific site).	When DC interests turn to (state highway) road improvements or anything else associated with TxDOT, this office calls TxDOT GPA (always Helen Havelka who attends weekly ED meetings with this office) to respond. See Helen Havelka interview under TxDOT interviews.	The state has a standard set of incentives it can offer under law. Most incentives lie with local agencies. See this office's "Summary Of State Incentives & Programs" plus (2006) Texas *Economic Development Handbook*.[2,3]	Most often solicits proposals for candidate sites from locals. May also arrange site visits, link up DC representatives with local ED offices, help with (state) incentives (sometimes securing them).	At very beginning. May be contacted by DC owner's real estate rep, a developer, realtor, or site selection consultant.	First, local ED agencies who then involve those agencies that need to respond to specific needs. TxDOT is also involved once transportation questions or needs arise.
Tyler COC and EDC Tom Mullins (903) 593-2004	Target, Lindale	Rebuilt overpass bridge and extended entrance ramps on Harvey Road.	$14M incentive package, including rebuilding Harvey Road overpass and entrance ramps (one mile from US 69 and I-20) highway interchange)	Tyler COC and EDC led negotiations, sought assistance from City of Tyler (unsuccessful), then from City of Lindale (successful).	Responded to initial inquiry from Target through the Governor's office in 1994. Several months later, were contacted by Target directly.	City of Tyler initially; when that didn't work out, then City of Lindale.

[2] "Summary of State Incentives & Programs" Governor's Office of Economic Development, State of Texas, Austin, Texas, undated (obtained September 25, 2007).
[3] *Economic Development Handbook,* Office of the Attorney General, Austin, Texas, 2006.

Agency, Name, Title	DC Company, Location	What road improvements were requested? What was done?	What incentives were offered?	What role did you play in the negotiations?	At what point did you and your agency become involved in the process?	Who else was involved in the negotiation process?
Waxahachie Economic Dev. Dept. Doug Barnes (972) 937-7330 Ext. 276	Walgreens, Waxahachie	Upgrade to Hwy 287 entrance ramp.	• Tax abatement program for manufacturers/DC • Grant from Texas Capital Fund (infrastructure grant) • Skills development grant from Texas for training of employees (went to Navarro Community College to train Walgreens employees) $1500/employee • Freeport exemption – any goods shipped out of state w/in 175 days qualify	Eco. Dev. Dept led efforts.	When Walgreens first started looking at sites, Waxahachie prepared a spreadsheet summarizing available land, workforce, transportation corridor info, infrastructure and facilities.	• Industrial team: insurance, banking, utilities, other City departments • Industrial Commission – 3-person board that reviews tax abatements
New Braunfels COC Rusty Brockman, Eco. Dev. Dir. (830) 625-2385	Wal-Mart, New Braunfels	None needed; positioned along existing I-35 frontage road.	Ten-year tax abatement with all three taxing entities: city, county, school district (this was when it was legal to provide school tax abatement)	n/a	n/a	n/a
Seguin Economic Devel. Corp., Ramon Lozano, (888) 473-4846; **Seguin City Planner** Don Smith, (830) 401-2306	Lowe's, Seguin	1 signal, 2 deceleration lanes, (those for about $800,000), site access to SH 78.	Virtually all local incentives they had to offer. Included free site, 10 year local property tax abatements, 10 year inventory tax abatement, utility extensions, drainage improvements, other minor incentives. Rezoning was approved without opposition (rural site).	Involved in all of them; city manager and EDC board president did much of negotiating.	Very beginning; facilitated it all.	Primarily city manager and EDC board president.

Agency, Name, Title	DC Company, Location	What road improvements were requested? What was done?	What incentives were offered?	What role did you play in the negotiations?	At what point did you and your agency become involved in the process?	Who else was involved in the negotiation process?
City of Sealy, John Marsh, City Manager, (979) 885-3511, ext. 0.	Wal-Mart, Sealy	Needed left and right turn deceleration lanes and flashing signals on FM 3013. All were provided by TxDOT. Improve county road to employee entrance (county). Later TxDOT took over and extended county road as FM 3538 to I-10 and built new interchange (already grade separation).	See City website for city tax incentive policy. Texas Capital Fund (city/county) for infrastructure; road improvement funds; tax abatements to pay for off-site drainage improvements paid for by Wal-Mart; county improved road to employee entrance (second access road)	City Manager led negotiations for city.	Once city became involved in proposing sites.	TxDOT, County, 4B Economic Development, Texas Dept. or Agriculture
Cleburne Office of Economic Development, Jerry Cash, Director, (817) 645-8644	Wal-Mart, Tree of Life, several combination manufacture-DCs in Cleburne.	Improve main county road providing access to SH 171; add deceleration lanes on SH 171.	City-county property tax abatements (function of size of capital investment and FTE jobs) – up to 75%; TIFD to pay for infrastructure improvements ($2.5M); state incentive program, Texas capital Fund.	Involved in almost all.	Once Wal-Mart was interested in considering Cleburne.	ED office facilitated for other agencies.
Corsicana Department of Economic Development, Lee McCleary, Director, (903) 645-4806	Home Depot, Kohl's, True Value Hardware	Was not there at time; would search files if we do case study.	For these DCs, he was not there at time; would search files if we do case study. Usually consist of TIFD or Texas Capital Fund to cover infrastructure needs, property tax abatements based on size of capital investment and number of FTE jobs, enterprise zone location, and state incentive programs options.	Was not there at time; would search files if we do case study.	Leading role	City manager, other agencies

Agency, Name, Title	DC Company, Location	What road improvements were requested? What was done?	What incentives were offered?	What role did you play in the negotiations?	At what point did you and your agency become involved in the process?	Who else was involved in the negotiation process?
McKinney Economic Development Corporation, Chris Potter, Director of Marketing, (972) 562-5430	Blockbuster	n/a	MEDC incentives (unspecified), Freeport tax exemption	None; happened before his time.	1996	City of McKinney
Arlington Chamber of Commerce, Orlando Campos, Senior Director Business Development, (817) 459-6652	Rooms to Go	None that he knows of.	Most likely incentives (offered to similar companies/facilities): tax abatement and triple Freeport exemption.	None; happened before his time	n/a	n/a

Agency, Name, Title	DC Company, Location	What road improvements were requested? What was done?	What incentives were offered?	What role did you play in the negotiations?	At what point did you and your agency become involved in the process?	Who else was involved in the negotiation process?
Katy EDC, Lance LaCour, President, (281) 396-2200	99 Cents Only, Academy, new project TRG (code name)	New frontage road/ interchange, being built by TxDOT with local funds.	Property tax abatement; applied for enterprise project designation from the state; foreign trade zone; Chapter 3 A-1 agreement (property tax rebate on infrastructure); local Freeport exemption from emergency service district and road improvement district; state skills development fund grant; Workforce Commission will help screen applicants for jobs; small grant fund developed by EDC; goodwill incentives (discounted moving costs, banking costs for TRG supervisors and managers that will move to Katy).	Provided information and GIS illustration of potential site access, utilities.	Since they started search process; TRG company has a real estate broker that Katy EDC works with extensively.	Waller county commission; developer's engineering company; discussions with local TxDOT district but TxDOT hasn't been directly involved in process.
Midlothian Corporation for Economic Development, Frank Viso, (972) 723-3800	Target, Toys R Us	Red light installed at railway crossing; bypass constructed for trucks in 2005. 287 construction has been ongoing to make it 4-lane divided; 360 service roads constructed down to 287. Some projects may have been moved up, but bypass has been planned for 35 years – in fact, the bypass is basically in the middle of the town as a result.	Tax abatements; Texas capital funds for infra; forgivable loans; BUT transportation system was the big selling point (just a few miles from I-35E and W, few miles from I-20). From Mid, Target can serve whole metroplex area without traffic congestion.	They put the negotiation packet together, got county and city to provide incentives; worked with Midlothian Development Authority.	From beginning of process	Midlothian Development Authority (responsible for Railport tax reinvestment zone; infra funded through tax base that the infra creates – self-sustaining; MDA manages money and projects; TXI is land seller; MDA also includes school district, county).

Local Agency Representatives Summary Page 3

Agency, Name, Title	DC Company, Location	What requests were made of TxDOT?	What requests were made of TxDOT that were not previously planned?	Did requests require funding that had not been previously budgeted?	At what point would it have been beneficial for TxDOT to have become involved?	In the future, when should TxDOT ideally become involved?
Governor's Office of Economic Development, Scott Smith, Location Specialist, (512) 936-0278	All that inquire	At the early stages when this office is most involved, usually access needs.	Not usually handled through this office. If need arises, Helen Havelka is called and she links up DC interests with TxDOT district engineer or other staff.	NA	When transportation question or need arises.	Same
Tyler COC and EDC Tom Mullins (903) 593-2004	Target, Lindale	Harvey Road improvements (bridge rebuilt, ramps extended). These were on TxDOT's schedule for improvement, but moved up significantly to attract DC.	See previous response.	See previous response. TxDOT was willing to move up Harvey Road improvements; City of Lindale provided local match via sales tax.	TxDOT was approached as soon as the site was "in competition," which worked out very successfully.	At the same point, as soon as a site is looking like it might be competitive.
Waxahachie Economic Dev. Dept. Doug Barnes (972) 937-7330 Ext. 276	Walgreens, Waxahachie	Improved ramp to Hwy 287	See previous response.	Funded via Texas Capital Fund.	As soon as they know about the type of proposed facility and its transportation requirements (this was the case in this instance).	See previous response.
New Braunfels COC Rusty Brockman, Eco. Dev. Dir. (830) 625-2385	Wal-Mart, New Braunfels	Don't know	n/a	n/a	TxDOT is involved any time a new, large business/facility is in the works, from the very beginning of the process.	See previous response.

Agency, Name, Title	DC Company, Location	What requests were made of TxDOT?	What requests were made of TxDOT that were not previously planned?	Did requests require funding that had not been previously budgeted?	At what point would it have been beneficial for TxDOT to have become involved?	In the future, when should TxDOT ideally become involved?
Seguin Economic Devel. Corp., Ramon Lozano, (888) 473-4846; **Seguin City Planner** Don Smith, (830) 401-2306	Lowe's, Seguin	Nothing related to evaluating alternative sites. Requested 1 signal, 2 deceleration lanes, site access to SH 78.	Lowe's spoke early with TxDOT. TxDOT district engineer and area office was very responsive. Improvements not made since DC construction has been deferred.	All.	About one month into site selection process. Area Engineer Gary Malatec was involved as soon as asked.	See previous response.
City of Sealy, John Marsh, City Manager, (979) 885-3511, ext. 0.	Wal-Mart, Sealy	None for site location. FM 3013 improvements listed above.	All	Yes	TxDOT was involved after site was selected. Seemed right.	Did not appear to be needed for site selection.
Cleburne Office of Economic Development, Jerry Cash, Director, (817) 645-8644	Wal-Mart, Tree of Life, several combination manufacture-DCs in Cleburne.	See above. After those were completed, additional needs arose for a traffic signal, deceleration lanes for trucks going to oilfields.	Decelerations lanes and signal; still pending after long while.	Yes	As needed.	Not until there is a real chance that DC will locate in city.
Corsicana Department of Economic Development, Lee McCleary, Director, (903) 645-4806	Home Depot, Kohl's, True Value Hardware	Was not there at time; would search files if we do case study.	Was not there at time; would search files if we do case study.	Was not there at time; would search files if we do case study.	Was not there at time; would search files if we do case study.	When necessary improvements are identified.

Agency, Name, Title	DC Company, Location	What requests were made of TxDOT?	What requests were made of TxDOT that were not previously planned?	Did requests require funding that had not been previously budgeted?	At what point would it have been beneficial for TxDOT to have become involved?	In the future, when should TxDOT ideally become involved?
McKinney Economic Development Corporation, Chris Potter, Director of Marketing, (972) 562-5430	Blockbuster	n/a	n/a	n/a	n/a	n/a
Arlington Chamber of Commerce, Orlando Campos, Senior Director Business Development, (817) 459-6652	Rooms to Go	None that he is aware of.	n/a	n/a	n/a	n/a
Katy EDC, Lance LaCour, President, (281) 396-2200	99 Cents Only, Academy, new project TRG (code name)	Developer talked with TxDOT for approval for frontage road; now going to put road on private property instead of state ROW to simplify process; no specific requests made of TxDOT;	See previous; no requests made of TxDOT.	n/a	Not aware of TxDOT wanting to be involved, at least more than they are on this (TxDOT doesn't really want to be in the frontage road business)	Depends on type of project; probably as soon as negotiations/interest becomes serious.
Midlothian Corporation for Economic Development, Frank Viso, (972) 723-3800	Target, Toys R Us	Red light at intersection 67 & Railport Parkway; turn lanes developed; plans for eventual grade separation (not built yet).	See previous.	Yes; but MDA is also contributing.	Critical player; needs to be involved (and was) from day one of development of the business park.	

Local Agency Representatives Summary Page 4

Agency, Name, Title	DC Company, Location	Impacts of DC on state highway system?	Traffic, safety, road condition, or other concerns associated with DC?	What actions are being taken to resolve them?	Other comments	Recommended contact from DC (if any)
Governor's Office of Economic Development, Scott Smith, Location Specialist, (512) 936-0278	All that inquire	NA	NA	NA	Conversations at early stages are often confidential and frequently involve 3rd parties to shield the DC company. This office has a small research staff to help answer questions about demographics and other preliminary data to help DC site selection get started. However, most of data comes from local ED offices. Office website is www.texaswideopenforbusiness.com	NA
Tyler COC and EDC Tom Mullins (903) 593-2004	Target, Lindale	No negative impacts that they know of; because of improvements to ramps and overpass bridge, other three corners of the intersection are already "primed" as future DC sites, if the opportunity arises.	No accidents or other problems associated with DC. I-20 has an overall high accident rate, but nothing associated with the DC, to his knowledge. 200 trucks in and 200 out per 24-hour day; no noticeable impact on local traffic.		NE Texas region has been ID'd as a prime DC location; places DCs close to where products are coming from and close to growing populations in the Southwest. Biggest challenge: as energy prices escalate, more companies are looking at rail to move goods, which is not available in sufficient capacity in their area. Would like to see a major intermodal facility in their area. Cooperation needed from TxDOT, Union Pacific, private industry to build this.	Wade Troxell; (903) 881-1000; mgr. of DC
Waxahachie Economic Dev. Dept. Doug Barnes (972) 937-7330 Ext. 276	Walgreens, Waxahachie	No significant impact. Walgreens DC has 40 trucks in and out per day; overall traffic count at 287/I-35 intersection is 80K per day.	None that they know of.		Has been an asset to the community, bringing jobs with good wages and an overall positive economic impact. To attract a DC, need to have an excellent transportation corridor. Most companies are looking along the I-35 and I-45 corridors.	

Agency, Name, Title	DC Company, Location	Impacts of DC on state highway system?	Traffic, safety, road condition, or other concerns associated with DC?	What actions are being taken to resolve them?	Other comments	Recommended contact from DC (if any)
New Braunfels COC Rusty Brockman, Eco. Dev. Dir. (830) 625-2385	Wal-Mart, New Braunfels	No significant impact.	None.		Positive effect on surrounding area; area around Wal-Mart DC is now growing. Have a couple of DCs/other large facilities and they've all been good neighbors, no serious issues that haven't been resolved.	
Seguin Economic Devel. Corp., Ramon Lozano, (888) 473-4846; **Seguin City Planner** Don Smith, (830) 401-2306	Lowe's, Seguin	NA; not yet built	NA; not yet built	NA; not yet built	Contact Lowe's DC consultant Bryan McClure.	Lowe's DC consultant Bryan McClure who was involved in almost everything.
City of Sealy, John Marsh, City Manager, (979) 885-3511, ext. 0.	Wal-Mart, Sealy	Much truck and employee traffic on SH 36, FM 3013 (most not Wal-Mart) was congesting SH 36 at I-10 interchange. I-10 interchange poor design for trucks. TxDOT took over county road, made it FM 3538, and extended it to new interchange on I-10 that could better handle trucks.	FM 3538 and new interchange, plus original improvements met needs and solved problems.	NA	Traffic impact study (TIS) really helped to define transportation needs. TxDOT responded very well once they understood and accepted TIS. Inquiries and negotiations started with TxDOT Yoakum District Engineer. There is now a shortage of employees for Wal-Mart.	John Hay (now with Academy) was real estate lead, Patricia Baggett handled government relations; Joe Loethen was project engineer.

Agency, Name, Title	DC Company, Location	Impacts of DC on state highway system?	Traffic, safety, road condition, or other concerns associated with DC?	What actions are being taken to resolve them?	Other comments	Recommended contact from DC (if any)
Cleburne Office of Economic Development, Jerry Cash, Director, (817) 645-8644	Wal-Mart, Tree of Life, several combination manufacture-DCs in Cleburne	More trucks on highway	Not due to this DC; more related to others. New DC manager is concerned about safety completion of decal lane and signalization projects.	NA	TxDOT is "bogged down" and unable to quickly respond to (safety) needs like a signal for a high accident location Takes too long even with local funding. SH 121 there still not built after being promised for over 5 years. ED office gets most leads from Governor's Office of Economic Development and Greater Dallas Chamber of Commerce.	Carter & Burgess handled site negotiation for Wal-Mart.
Corsicana Department of Economic Development, Lee McCleary, Director, (903) 645-4806	Home Depot, Kohl's, True Value Hardware	None	None	NA	Was involved with three DCs in Ennis (CVS, Lowe's, Sterilite-DC and manufacturing plant). Two DC owners handled negotiations by selves; CVS used 3rd party Ernie Veal. CVS and Sterilite along US 287. Sterilite needed traffic signal on US 287 that city paid for. Others needed no improvements on TxDOT road.	Was not there at time; would search files if we do case study.
McKinney Economic Development Corporation, Chris Potter, Director of Marketing, (972) 562-5430	Blockbuster	n/a	n/a	n/a	Unfortunately not a lot of information, as people who were involved in this DC negotiation have moved on. Available info is what he could find in the records.	

Agency, Name, Title	DC Company, Location	Impacts of DC on state highway system?	Traffic, safety, road condition, or other concerns associated with DC?	What actions are being taken to resolve them?	Other comments	Recommended contact from DC (if any)
Arlington Chamber of Commerce, Orlando Campos, Senior Director Business Development, (817) 459-6652	Rooms to Go	None that he is aware.	n/a	n/a	Arlington has areas for industrial development; some developers build "spec" buildings; distribution is one of the targeted industries that Arlington works with, unfortunately they're running out of land, so there probably won't be a lot more large centers built; now looking to fill in smaller sites. Most DCs built on Great Southwest Industrial Corridor (I-30 to I-20 along SH 360). About 2.5 million sq ft left. One property is being looked at by a major manufacturer. Don't think that transportation will be an issue for remaining sites; they are along I-20 and SH 360 with fairly direct access to the highway.	Jeff Finkel (678) 475-0499

Agency, Name, Title	DC Company, Location	Impacts of DC on state highway system?	Traffic, safety, road condition, or other concerns associated with DC?	What actions are being taken to resolve them?	Other comments	Recommended contact from DC (if any)
Katy EDC, Lance LaCour, President, (281) 396-2200	99 Cents Only, Academy, Igloo, new project TRG (code name)	Too soon to say	n/a	n/a	EDC has reached out to local TxDOT district office to keep them apprised of what's going on and keep communications open. Academy DC; trucking terminal that employs 300 people; safety access concern with road where they are (school across street); EDC is working with them on that. Igloo is across the interstate from TRG project; they put $750K into interchange. Trying to target more bulk distribution centers to the same area. These are tough projects to manage; always want to locate where there's no infrastructure. In long run, however, good for the community. TRG will have a large retail outlet center attached to it as well.	No one at this point from TRG project; maybe in November. From Academy, Michelle McKinney. 99 Cent: VP of Corp Real Estate- - Richard Frick. Igloo: Jim Vaughan.

Agency, Name, Title	DC Company, Location	Impacts of DC on state highway system?	Traffic, safety, road condition, or other concerns associated with DC?	What actions are being taken to resolve them?	Other comments	Recommended contact from DC (if any)
Midlothian Corporation for Economic Development, Frank Viso, (972) 723-3800	Target, Toys R Us	Because of the bypass (they were there before the bypass was completed), truck traffic has been mitigated within the city. More trucks on the highways now; not a negative to the communities because of all the new transp infrastructure; not a danger or a problem to the citizens.	Not since bypass constructed (within town); and the abundance of highways leading in and out disperses traffic within a couple of miles of Midlothian.		Have the capacity to do more. In negotiation with a couple more DCs. They attract the large-box operators; they attract buyers rather than people who want to lease. They attract businesses that want to serve Texas. Loop 9 is going to come down and improve the transp system even more. Would love to see 360 completed as a highway (not just a service road) – in Mansfield and Grande Prairie, lots of commute traffic congestion going north to DFW from residential areas bottlenecks at current end of 360.	Target – Dave Sarten (972) 351-5453 dave.sarten@target.com Toys – Howard Guren (972) 775-7730 gurenh@toysrus.com MDA – Jimmy Lou McClure , president (female) (972) 723-0009 Mary McDonald (admin asst for City of Mid (972) 775-3481

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