

### **Transportation and Infrastructure**

Transportation and infrastructure investment is fundamental to meeting the challenges of growth, development and changing priorities in the Airline community. Strategic transportation and infrastructure investments will enable Airline to achieve economic, housing, and quality of life goals concurrently.

#### **Transportation**

Transportation is a determining factor for community growth and situating economic activity in communities. Industries must be readily accessible to raw materials while maintaining a profit. Residences must have access to employment throughout a region and will develop near major highways, interstates and other arterials. Commercial areas require access to high volumes of people to have enough demand to make businesses profitable and prefer city centers and commercial districts where there is a high traffic volume. Improving access will make further development possible and interrupting it will have a negative effect, thereby eliminating profitable areas from the regional economy and halting community development.

#### ***Main Thoroughfares***

*The 2005 Urban Mobility Report*, prepared by the Texas Transportation Institute of the Texas A&M University System, states that “urban areas are not adding enough capacity, improving operations or managing demand well enough to keep congestion from growing.”<sup>1</sup> Thus, a balanced approach to the planning, maintenance and improvement of major corridors, arterials and thoroughfares in Airline is necessary.

Major thoroughfare planning in Airline is imperative to ensure the development, maintenance and improvement of an appropriate and efficient street system to meet existing and future commuter and land use needs. A major thoroughfare system is comprised of existing and proposed freeways, major streets, highways, collector and local streets that may or may not need widening or a new right of way.

Airline is bordered by two freeway corridors, Interstate 45 to the west and Hardy Toll Road to the east. Major thoroughfares in Airline include: Airline Drive, W. Mount Houston Road, West Road, Aldine Mail Road, and W. Gulf Bank Road.

Traffic is particularly problematic along Airline Drive on weekends. Not only is Airline Drive the hub of commercial businesses in Airline, but is inundated with vehicular traffic from the flea markets. Residents consistently stated at community meetings that the noise, criminal element and pervasive traffic issues commonly leave residents trapped in their homes on the weekends as they are unable to leave their driveways. Many flea market patrons speed through Airline

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<sup>1</sup> Texas Transportation Institute – Texas A&M University System. (2005). *The 2005 Urban Mobility Report*. Accessed September 16, 2005 from the Texas Transportation Institute Web site: [http://tti.tamu.edu/documents/mobility\\_report\\_2005.pdf](http://tti.tamu.edu/documents/mobility_report_2005.pdf)

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neighborhoods and create further traffic congestion on connector streets to Airline Drive.

Traffic counts further confirm Airline Drive's significance and resident commentary. Table 3.1 identifies the 24-hour traffic volume for segments of Airline Drive. Note the 24-hour traffic volume count for Mitchell Road to W. Gulf Bank Road. Approximately 21,000 cars traveled this segment of Airline Drive. While it is not reflective of current weekend flea market traffic and the common occurrence of jaywalking pedestrians, it does indicate a significant amount of vehicular traffic along this major thoroughfare. These traffic counts also indicate the need of sidewalks and other street calming elements for pedestrians.

**Table 3.1: Traffic Volume Counts for Airline Drive**

| <b>Date of Count</b>     | <b>Direction</b>                     | <b>24-Hour Volume</b> | <b>Count Location Description</b>                        |
|--------------------------|--------------------------------------|-----------------------|--|
| 5-22-1995<br>(Monday)    | Northbound/<br>Southbound<br>(NB/SB) | 20,559                | Mitchell Road to<br>W. Gulf Bank<br>Road                 |
| 11-14-1996<br>(Thursday) | NB/SB                                | 16,177                | Aldine Mail Route<br>Road to Bluebell<br>Road            |
| 9-16-2003<br>(Tuesday)   | NB/SB                                | 18,399                | W. Gulf Bank<br>Road to Hill Road                        |
| 9-16-2003<br>(Tuesday)   | NB/SB                                | 20,356                | Hill Road to W.<br>Mount Houston<br>Road                 |
| 9-16-2003<br>(Tuesday)   | NB/SB                                | 19,177                | W. Mount<br>Houston Road to<br>Aldine Mail Route<br>Road |
| 9-16-2003<br>(Tuesday)   | NB/SB                                | 19,570                | Bluebell Road to<br>West Road                            |
| 9-16-2003<br>(Tuesday)   | NB/SB                                | 16,074                | East Canino Road<br>to Mitchell                          |

*Source: Harris County Public Infrastructure Department – Engineering Division, 2005*

Table 3.2 illustrates the 24-hour traffic volume counts for other major thoroughfares in Airline. These traffic counts will assist in developing viable transportation options for the Airline community.

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**Table 2.2: Traffic Volume Counts for Major Thoroughfares in Airline**

| <b>Date of Count</b>     | <b>Direction</b>               | <b>24-Hour Volume</b> | <b>Count Location Description</b>  |
|--------------------------|--------------------------------|-----------------------|--|
| 4-30-1997<br>(Wednesday) | Eastbound/Westbound<br>(EB/WB) | 11,279                | Aldine Mail Route Road from Airline Drive to Hardy Street                  |
| 1-21-1998<br>(Wednesday) | EB/WB                          | 6,867                 | Canino Road from Sweetwater Lane to Northline Drive                        |
| 4-26-1999<br>(Monday)    | EB/WB                          | 9,287                 | W. Gulf bank Road from Hardy St. to Airline Drive                          |
| 4-26-1999<br>(Monday)    | EB/WB                          | 10,753                | W. Mount Houston Road from Sweetwater Lane to Airline Drive                |
| 4-26-1999<br>(Monday)    | EB/WB                          | 12,480                | W. Gulf Bank Road from Airline Drive to Sweetwater Lane                    |
| 12-9-2004<br>(Thursday)  | ES/WS                          | 19,022                | Hardy Road (Service Road) from W. Gulf Bank Road to Aldine Mail Route Road |
| 1-4-2005<br>(Tuesday)    | EB/WB                          | 5,723                 | Canino Road from Northline Drive to Airline Drive                          |

*Source: Harris County Public Infrastructure Department – Engineering Division, 2005*

There are several transportation plans and improvements to major streets in Airline currently proposed, under consideration or in the development process:

1. The Houston-Galveston Area Council (HGAC), The Texas Department of Transportation (TXDOT), and the Metropolitan Transit Authority of Harris County (METRO) have joined together to conduct a planning study to determine future mobility improvements and transit alternatives for the North Hardy Corridor. The North Hardy Corridor stretches approximately 30 miles from downtown Houston to The Woodlands and State Highway 242 in Montgomery County, along and between Interstate 45 North and the Hardy Toll Road.

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2. The Harris County Public Infrastructure Department – Engineering Division is installing a pedestrian signal and crosswalk on Airline Drive between Mitchell and W. Gulf Bank Roads to accommodate the increasing pedestrian traffic from the flea markets. Construction is slated to begin in 2006.
3. The Texas Department of Transportation is widening W. Gulf Bank Road from Sweetwater Lane to the Hardy Toll Road. TXDOT is currently negotiating with property owners on the sale of property in the right of way. Construction is scheduled to begin in spring/summer 2007. The widening of W. Gulf Bank Road will improve traffic flow along this corridor of the community and improve accessibility to schools, businesses, and neighborhoods.

### *METRO Bus Routes in Airline*

The Airline community is served by four METRO bus routes. The Airline target area METRO bus routes are: (8) South Main/Yale, (9) North Main/Gulfton, (56) Airline Limited, and (59) Aldine Mail Crosstown. Airline residents state that the current public transportation routes do not adequately serve the population. The Airline Improvement District and residents should work with METRO to procure shelters, wastebaskets, and benches for key bus stops.

Map 3.1: Bus Routes in Airline



Source: Metropolitan Transit Authority of Harris County (METRO), 2005

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### *Light Rail Service in Airline*

In November 2003, METRO service area residents narrowly approved (52 percent) its transit expansion referendum, METRO Solutions 2025 Transit System Plan. The proposed plan authorized METRO to issue \$640 million in bonds to accelerate construction of 22 miles of light rail on five segments/corridors (including the North Corridor and Airline Dr. routes), 14 miles of signature/suburban bus rapid transit (BRT), and no commuter rail—36 miles of rapid transit at a cost of \$1.72 billion.

However, in 2005, METRO officials claim it was necessary to submit a revised plan to the Federal Transit Administration (FTA) in response to the 'medium-low' ratings the North Corridor and Southeast Corridor light rail extensions received. The FTA advised a 'medium' rating was need for federal funding; thus their [North Corridor and Southeast Corridor] deletion from the annual funding recommendation report to Congress.

METRO is still committed to building the four light rail segments identified in the initial plan, but insists it is doing it in a way to ensure it can position itself to get federal funding and not delay providing 'rapid transit services' for the METRO service area.

The revised METRO Solutions Phase 2 Implementation Plan proposes 30 miles of light rail or BRT, 40 miles of signature/suburban BRT, and 28 miles of commuter rail—97 miles of rapid transit at a cost of \$1.3 billion. Fifty-five percent of the cost (slightly more than \$700 million) is committed to rapid transit rail services and the balance of approximately \$575 million will be allocated to rapid transit bus systems. The Airline community is proposed to have bus rapid transit service along Airline Drive. METRO maintains that once ridership in the North Corridor grows sufficiently to support light rail, the conversion will be made. METRO anticipates completion of all elements of the Phase 2 Implementation Plan to be built by 2012; three years earlier than the initial referendum. Preliminary engineering was scheduled to begin in summer 2005 and construction is to start within two years.

### Infrastructure

Infrastructure represents the most tangible physical elements of community -- primarily water and sanitation systems, housing, transportation systems, power plants, transmission lines and other improvements. Infrastructure is interconnected to all aspects of community development and growth.

Airline's development occurred during an era when local governments were financially unable to provide water and sewer infrastructure. During its infancy, Airline's population and density did not warrant the major financial expense of water and sanitation installation; it was a quiet and rural farming community dependent on septic tanks that could easily handle generated waste. Vehicles were much smaller during Airline's formative years. The road widths, as

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originally designed, could accommodate low/moderate levels of traffic and small vehicles.

Infrastructure problems have plagued the Airline community for decades. As the population and its density has continued to flourish, the imminent need for a community water and sewer system is more evident. Concomitantly, traffic and vehicle size have increased, thus requiring wider roads for safer navigation and the installation of sidewalks for pedestrians. A dearth of sidewalks forces pedestrians into ditches or onto roads with cars and multi-axle vehicles. Additionally, streetlights are also required for community visibility, safety and security.

### *Water and Sewer Service*

Water and sewer service is perhaps the most seriously delinquent public infrastructure item in Airline. The 2000 U.S. Census states that 98.76 percent of Airline housing units have complete plumbing facilities; however there are a significant number of housing units without public water or sewage services. Airline residents that are provided water and sewer infrastructure receive their service from either the Sunbelt Freshwater Supply District, Nitsch & Sons Industries or other privately managed water providers (many mobile home communities have water service only for their respective community) in the community. The privately managed water providers are challenged by the multiple households on a single lot. The existing systems are taxed and unable to manage the current and increasing population density. Residents without access to public water or sewage services use underground water wells and septic tanks. These underground water wells are subject to the noxious runoff and pollution from the neighboring salvage yards in Airline; thus posing as a potential health risk.

During the late 1980s, residents were propositioned to create a municipal utility district in the Airline community, but it was vehemently contested by residents and failed to muster a viable constituency. Nevertheless, a unified and coordinated water and sewer district/entity is a necessity for the Airline community. A municipal utility district has the authority to tax local constituency for water/sewer service, the ability to finance bonds, and are eligible for state and federal loans and grants to finance the development and maintenance of a water and sewer system.

Developers commonly situate commercial and residential development in communities with water and sewer service and adequate, well-maintained roads. While public infrastructure does not create economic growth in a community, it does influence the location of growth. New and maintained roads and water/sewer lines in a freestanding community with a stagnant or moderately active economy, such as Airline, will not necessarily magically create economic development, but it is necessary for community growth and improvement.

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Maps 3.2 and 3.3 denote Nitsch & Sons Industries water and sewer service areas in the Airline community.

Map 3.2: Nitsch & Sons Industries Water Service Area



Source: Nitsch & Sons Industries, 2006

Map 3.3: Nitsch & Sons Industries Sewer Service Area

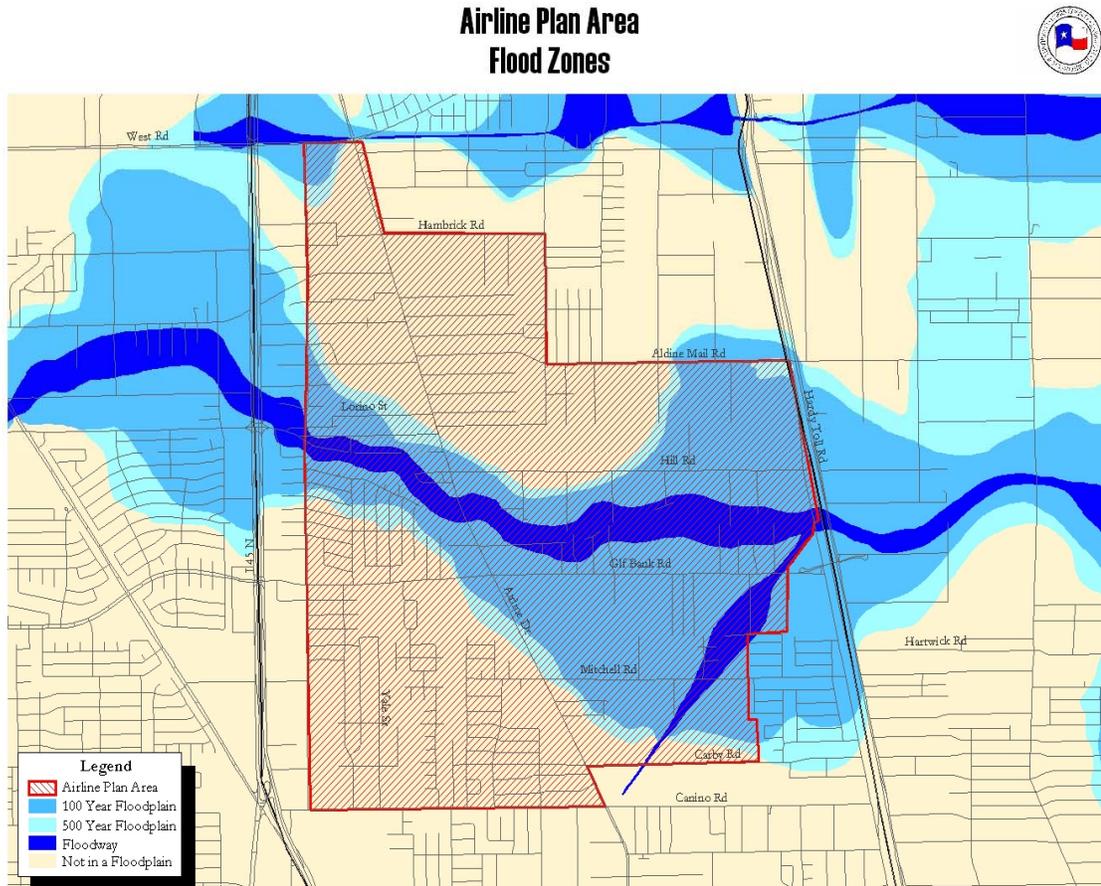


Source: Nitsch & Sons Industries, 2006

### Drainage

Airline's drainage system consists of ditches, driveway culverts and road crossing culverts. Poor drainage exists throughout the community. While the Bellmar and Northline Terrace subdivisions have curbs and gutters, many homes in Airline consist of shallow roadside ditches with no grade and are filled with garbage and other debris. It is common for a light to moderate rainfall to overflow the ditches and culverts in the community. This inevitably leads to flooding. Map 3.4 illustrates the flood zones in Airline. Notice that the eastern portion of the Airline community (closest to the Hardy Toll Road) is either in a floodway or in the 100 or 500 year flood plain. Airline has several drainage bayous in the community; yet, many are inundated with trees, branches, garbage and other debris. Their close proximity to residences also leads to flooding in the community. Debris removal from the bayous and ditches will improve drainage conditions in the community.

Map 3.4: Flood Zones in Airline



*Source: Harris County Flood Control District, 2005*

### ***Roads and Sidewalks***

The Airline community is virtually void of sidewalks. Walking is the most basic, affordable, and environmentally friendly form of transportation for a community. It is not only healthy for residents, but treads lightly on the urban infrastructure, and gives ample opportunity for social interaction. A lack of sidewalks in the community is particularly difficult and dangerous for children as they are commonly forced to walk on streets or in deep, trash filled ditches to avoid traffic accidents. Pedestrians are essential for social, cultural and economic vitality and must be considered a priority in any plans for infrastructure development.

The condition of roadways in Airline is of concern to Airline residents. Parents and residents complain that children are forced to wait for school buses on streets without sidewalks or shelter of any kind. Many children walk to school along the road next to cars without any traffic calming elements such as

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crosswalks or flashing school zone lights. These conditions are heightened in the evening hours as there are commonly no street lights for pedestrians.

Another common resident complaint is the condition of the Airline roadways. Many of the streets are paved, but some consist of rocks and concrete (mainly in the eastern portion of the target area). Many of the streets have potholes and ruts. Residents commonly state that the improvement of roads must not only be well paved and maintained, but have wider lanes, sidewalks, streetlights and general beautification: mowed grass, no trash or debris, and signage welcoming residents and visitors to the Airline community.

Picture 3.1: Ditch and Street Conditions on W. Gulf Bank Road



*Source: HCCEDD, 2005*

## ***Recommendations***

The following recommendations will assist the Airline community in developing an effective transportation network in the community to assist current and future residents.

### **1. Sidewalks**

The installation of sidewalks will not only provide an alternate route of transit for residents, but it provides protection for children and other residents in the presence of vehicular traffic. The installation of sidewalks must be phased over several years to manage expenses, acquire right of way, establish plan for maintenance, etc.

- The Airline Improvement District must develop a phased implementation program (budget, financing, location of sidewalks, design of sidewalks, acquiring right of way)
- Partner with Precinct One to acquire, install, and maintain sidewalks (particularly with the installation of stormwater drains)
- Apply for grants, fundraise from businesses, assess fees

### **2. Streetlights**

The installation of streetlights in Airline will not only provide additional lighting and serve as a deterrent to crime. The installation of streetlights must be phased over several years to manage expenses, acquire right of way, establish plan for maintenance, etc. To begin this project:

- The Airline Improvement District must develop a phased implementation program (budget, financing, location of streetlights, design of lights, operating costs)
- Partner with local energy providers and Precinct One to acquire, install, and maintain lights
- Apply for grants, fundraise from businesses, assess fees

### **3. Water & Sewer Service**

The installation of water and sewer service is crucial for economic development, public health, public safety and overall quality of life. The installation of water and sewer service must be phased over several years to manage expenses, acquire right of way, establish plan for maintenance, etc.

- The Airline Improvement District must hire a consultant to do a water and sewer feasibility study to assess installation of lines and linkage to current water and sewer lines, etc.
- The Airline Improvement District must develop a phased implementation program (budget, financing, location of water line and sewage lines, design of sidewalks, acquiring right of way)
- Contact the Texas Water Board to discuss the development of a water district and financial assistance
- Apply for grants, fundraise from businesses, assess fees

#### **4. Flooding and Drainage Issues**

Flooding and adequate drainage are critical issues for the Airline community. Flooding and inadequate drainage destroy private property, economic development opportunities, and infrastructure. The installation of adequate drainage must be phased over several years to manage expenses, acquire right of way, establish plan for maintenance, etc.

To combat flooding and drainage issues in Airline:

- The Airline Improvement District must develop a phased implementation program (budget, financing, location of drains and sewage lines, acquiring right of way)
- Partner with Precinct One, the Harris County Flood Control District, and water districts to deal with the installation of stormwater drains
- Apply for grants, fundraise from businesses, assess fees

#### **5. Bilingual signage**

Hispanics/Latinos comprise 60.98% of all residents in Airline. Thus, in an effort to meet the need of all members of the Airline community, bilingual signage must be a consideration.

- Investigate which streets/intersections will have bilingual signage
- Research other communities in the greater Houston area and the United States that have bilingual signage in their communities
- The Airline Improvement District must develop a phased implementation program (budget, financing, location of signage, design of signage)
- Apply for grants, fundraise from businesses, assess fees

#### **6. Restriping of major thoroughfares**

The restriping of major thoroughfares is necessary for traffic safety – pedestrian and vehicular. To begin the process of restriping the major thoroughfares:

- Determine which major thoroughfares or other streets need restriping
- Contact the appropriate jurisdiction to restripe roads (TXDOT or Harris County Precinct One).

#### **7. Flashing school zone speed signs**

To combat traffic violations (speeding, pedestrian right of way) and ease traffic flow (particularly along Gulf Bank Rd. with the impeding construction and the September 2005 death of a Bussey Elementary school student), and protect the safety of all children in school zones, the installation of flashing school zone speed signs and other traffic calming techniques is needed.

- Investigate which schools need flashing school zone speed signs
- Contact the appropriate school/school district to discuss their impending plans (if any) to locate flashing school zone speed signs or other traffic calming mechanisms
- The Airline Improvement District must develop a phased implementation program (budget, financing, location of flashing lights)

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- Partner with Aldine Independent School District, Houston Independent School District, and an engineering/architecture firm to determine design, height, etc.
- Apply for grants, fundraise from businesses, assess fees

### **8. Flea market traffic**

In collaboration with the flea market owners, civic associations, businesses, and residents the Airline Improvement District:

- Work with the flea market owners, engineering firms, and the Harris County Public Infrastructure Department regarding traffic on Airline Drive (develop alternate routes in and out the main area, provide more parking, work with METRO to use the nearest Park & Ride to alleviate congestion in the community)

### **9. Cross walk signals/Widening of streets**

- Investigate which intersections need cross walk signals and widening of streets (traffic feasibility studies done by an engineering or transportation firm)
- Meet with Harris County PID – Engineering to discuss the plans to put cross walk signals at target intersections in the Airline Improvement District; possible traffic feasibility study conducted by Harris County PID
- Meet with Harris County PID – Engineering and TXDOT to discuss projected and impending construction plans

### **10. Greater bus service in the Airline community**

- Discuss with METRO plans to add additional routes in the target area and increase frequency of pick-ups
- Discuss with METRO plans to include the Airline community its transportation plans for light rail and/or bus rapid transit (BRT)

### **11. Harris County Coordinated Transportation Program (HCCTP)**

To answer the transportation needs of the senior, disabled, and low-income population in Airline, the Harris County Coordinated Transportation Program (HCCTP), a coordinated transportation program, provides non-emergency transportation service to the elderly, disabled, and low-income residents in the underserved areas of Harris County (areas where METRO service is either unavailable or inaccessible by people who are elderly, disabled, or low-income of Harris County). This program can be used by the aforementioned populations to go to doctor's appointments, the grocery store, a pharmacy and other necessary trips. For Airline residents to use the service:

- Must be a Harris County resident
- Meet elderly, disabled, low-income criteria
- The Airline Improvement District should contact administrators of the program regarding rules and becoming a partner agency