Getting Around: Transportation and Mobility

personal vision statements:

"A family-friendly, safe community with easy access to schools, parks, libraries, shopping, and restaurants by car, public transportation, bikes...and for pedestrians."

Chapter Summary

Shreveport has an extensive road network that allows motorists to access most areas in approximately twenty minutes. However, the cost of maintaining that network with a static population has proven to be difficult and continued extension of the road network will promote sprawl and strain budgets. This chapter focuses less on further expansion of the road network and more on integration of land use and transportation in order to provide opportunities for more transportation choice; improving maintenance and function of existing roadways; making travel more pleasant, attractive and environmentally sound through provision of amenities; and enhancing public transportation.

Strategies and actions include:

- Fix It First: develop a comprehensive pavement management program.
- Integrate transportation and land use planning, technology and management strategies for efficient roadway and transit networks to provide alternatives to auto travel, and establish roadway impact fees.
- Strengthen and enforce access management policies and ordinances.
- Adopt context-sensitive design frameworks and a "Complete Streets" policy that integrates various transportation modes in regulations.
- Improve conditions to encourage more trips by bicycle, walking and transit as part of the region's ozone conformity plan.
- Examine the feasibility of consolidating redundant and/or underperforming routes to add additional service on nearby principal routes, while developing system-wide standards for operational efficiency that will be used to make future decisions about route reductions, service enhancements, and long-range planning efforts for higher-frequency services like bus rapid transit (BRT).
- Designate specific staff personnel to work with state officials and garner legislative support for the restoration of passenger rail service through Shreveport.

GOALS	POLICIES FOR DECISION MAKERS
Roads and streets maintained to a high standard for long-term use that encourages sustainable development patterns.	• Support investment in a pavement management system.
	• Support smart growth through transportation initiatives that encourage infill development within the loop.
	• Support the context-sensitive solution approach to transportation planning and project development.
Improved design and function of arterial roads and neighborhood streets.	• Promote best practices in access management to help maximize street efficiencies.
	• Promote use of traffic calming techniques to reduce speeding and "cut through" traffic on residential/neighborhood streets.
	• Support policies/programs to create a better connected, more efficient road network.
	• Support the development of regional Intelligent Transportation System (ITS) improvements to facilitate better traffic circulation and coordinated traffic signals.
	• Support policies that make Shreveport's transportation infrastructure accessible to those with disabilities.
A safe and attractive pedestrian and bicycling network integrated with vehicle transportation.	• Support a "Complete Streets" policy that provides roadway space for bicycles, pedestrians, automobiles and transit vehicles and integrates greenway and off-road bicycle routes with the roadway system.
	• Integrate pedestrian networks and bikeways into the development of public spaces and link community destinations through on and off-street facilities.
A convenient, fast and efficient public transit system.	• Invest in transit system improvements to encourage more ridership, and reduce the number of single-occupancy vehicle trips.
	• Support investment in an asset management system for transit operation.
	• Integrate land use and transportation policies to support transportation choice.
Improved intercity transportation.	• Support initiatives to enhance commercial flight connections and explore potential regional passenger rail opportunities.

Findings

- 10 percent of all jobs within Shreveport are located within the downtown/waterfront planning area.
- Automobile congestion is minimal, yet there is room for improvement in mobility and accessibility for residents of all ages, capabilities and income levels.
- The few pockets of congestion result from an access management practice that has not produced the desired controls in commercial areas (e.g., Youree Drive).
- Funding allocations are not adequate to keep pace with the required maintenance of the entire existing roadway system.
- In 2000, the average Shreveport commute was approximately 17 minutes, significantly lower than the statewide average of 25 minutes.
- Public transit riders generally encounter travel times that are much longer than the average commute because current funding will not allow more frequent service.
- Many newer developments within the peripheral areas of the Master Plan Area lack pedestrian facilities that connect to retail, educational and/or recreational activity centers.
- Bicycle friendly infrastructure is limited throughout the Master Plan Area.
- The Caddo-Bossier area is expected to come under new federal regulations as an air quality ozone non-attainment area.

Challenges

- Developing a complete transportation system with adopted street design standards that promote safety and amenity for all users, such as a "Complete Streets" policy.
- Identifying a stand-alone funding source for SporTran to maintain current operational levels, and to support the expansion of service which includes new/more frequent routes.
- Improving transit service given the Master Plan Area's extensive geographical size and relatively low population densities.
- Adding bicycle and pedestrian amenities throughout the city given its geographical scale and limited roadway funds.
- Maintaining the existing street network should development, and associated roads, continue in the periphery of the city and unincorporated edges of the Master Plan Area.
- Developing programs and policies to meet federal requirements under ozone non-attainment status.

A. Current Conditions

CREATING A MODERN TRANSPORTATION SYSTEM FOR SHREVEPORT-CADDO

An excellent transportation system provides an efficient and effective balance between access and mobility. The overall goal of transportation is access: we travel to reach destinations and the opportunities that those destinations represent. Transportation is accomplished through mobility: our physical movement through space. We often hear about the importance of integrating transportation decisions and investments with land use choices. This means that transportation systems should serve land use choices—not the reverse. In making transportation decisions, it is important to weigh potential conflicts and trade-offs according to the specific community goals for a particular area. If we always opt for increased auto-travel mobility—that is, higher speeds and shorter travel times—land use access needs to be reduced, as in a limited-access interstate highway. Enhanced auto travel tends to reduce other types of access, while enhanced nonmotorized travel and public transit can result in less speed for auto travel.

Over the last 30 years, transportation investments within the Master Plan Area have primarily focused on the automobile, with roadway infrastructure increasing significantly outward. Coupled with the area's lack of population growth, the result is a system where most roadways have excess capacity, even during evening peak-travel times, with pockets of congestion only at specific intersections where improvements are needed, or along corridors with heavy commercial activity and poor access management. A roadway system with these characteristics is very expensive to maintain, and indeed the City of Shreveport Department of Operational Services (DOS) has repeatedly reported a lack of funds to adequately maintain the system.

Integrating transportation and land use planning is essential to providing the transportation choice, alternatives to auto travel, and increased walkability that Shreveporters identified among their goals for the future. Transportation infrastructure investments needed to provide those alternatives depend on development patterns and population densities, as do improvements in public transit service.

Changes in transportation policy are underway at the federal level that will affect communities around the country. Roadway level of service, a grading scale assigned to roadways based on congestion levels, will soon cease to be the sole force behind transportation funding decisions. The Federal Highway Administration has sent communities and Metropolitan Planning Organizations (federally-designated regional transportation planning groups) six Livability Principles adopted by the federal Departments of Transportation, Housing and Urban Development, and the Environmental Protection Agency:

- **Provide more transportation choices.**
- **Promote equitable, affordable housing.**
- **Enhance economic competitiveness.**
- **Support existing communities.**
- **Coordinate policies and leverage investment.**
- **Value communities and neighborhoods.**

The overall objectives and performance measures for these new criteria have not been solidified, but as these criteria continue to be refined, it is important that the Master Plan Area make its transportation initiatives compatible with the Livability Principles because they will ultimately affect federal transportation funding decisions.

Finally, the Environmental Protection Agency (EPA) has proposed a new way of determining ozone conformity under the Clean Air Act for Metropolitan Areas around the country. The new standards will automatically classify the Shreveport-Bossier Metropolitan Statistical Area (MSA) in non-attainment status. This means that the region will need to begin to examine methods for reducing, or not further worsening, low-level atmospheric ozone generation.

These factors must be kept in mind in developing transportation strategies for the future. The City has built and taken over maintenance of many miles of roadway infrastructure, and the costs of maintaining this

system have reached a critical point in the infrastructure life cycle. Overall, the region will need to rely less on single-occupancy vehicles as it works to comply with the Ozone Non-Attainment Plan to be developed. Key recommendations for addressing these issues are highlighted under the "Strategies and Actions to Achieve the Goals" of this chapter, with particular focus on:

- Integrating transportation and land use planning, technology, and management strategies for efficient roadway and transit networks to provide transportation choices, alternatives to auto travel, and increased walkability.
- Establishing a "complete streets" policy for road improvements in order to provide for pedestrians, bicyclists, transit and other motorized vehicles.

At the same time, policies to target redeveloping areas for infrastructure needs before problems arise, as well as the ability to proactively plan for reinvestment in infrastructure when funds are available, will ultimately place the City in a stronger fiscal position over the years to come.

TRANSPORTATION PLANNING IN THE SHREVEPORT-CADDO MASTER PLAN AREA

Transportation planning in the Shreveport-Caddo area involves several agencies with a variety of implementation responsibilities. The federally mandated Metropolitan Planning Organization (MPO) covers Caddo and Bossier parishes and is administered by the Northwest Louisiana Council of Governments (NLCOG), whose membership covers seven parishes. The NLCOG Caddo-Bossier MPO provides both long-range and short-range roadway and transportation plans, selects and approves projects for federal funding based on regional priorities, and develops ways to reduce traffic congestion for the metropolitan area, including the full Master Plan Area.

The City of Shreveport manages local streets and traffic signals, pedestrian facilities, and the transit system through several departments. The City Council provides general transportation direction to the different departments, such as the Department of Operational Services, the Shreveport Area Transit System, and the Shreveport Parks and Recreation Department (SPAR). Departments compete for the local share of funds associated with desired projects to develop the needed program of projects and services as defined by the City Council. Caddo Parish is responsible for roads in the unincorporated parts of the Master Plan Area.

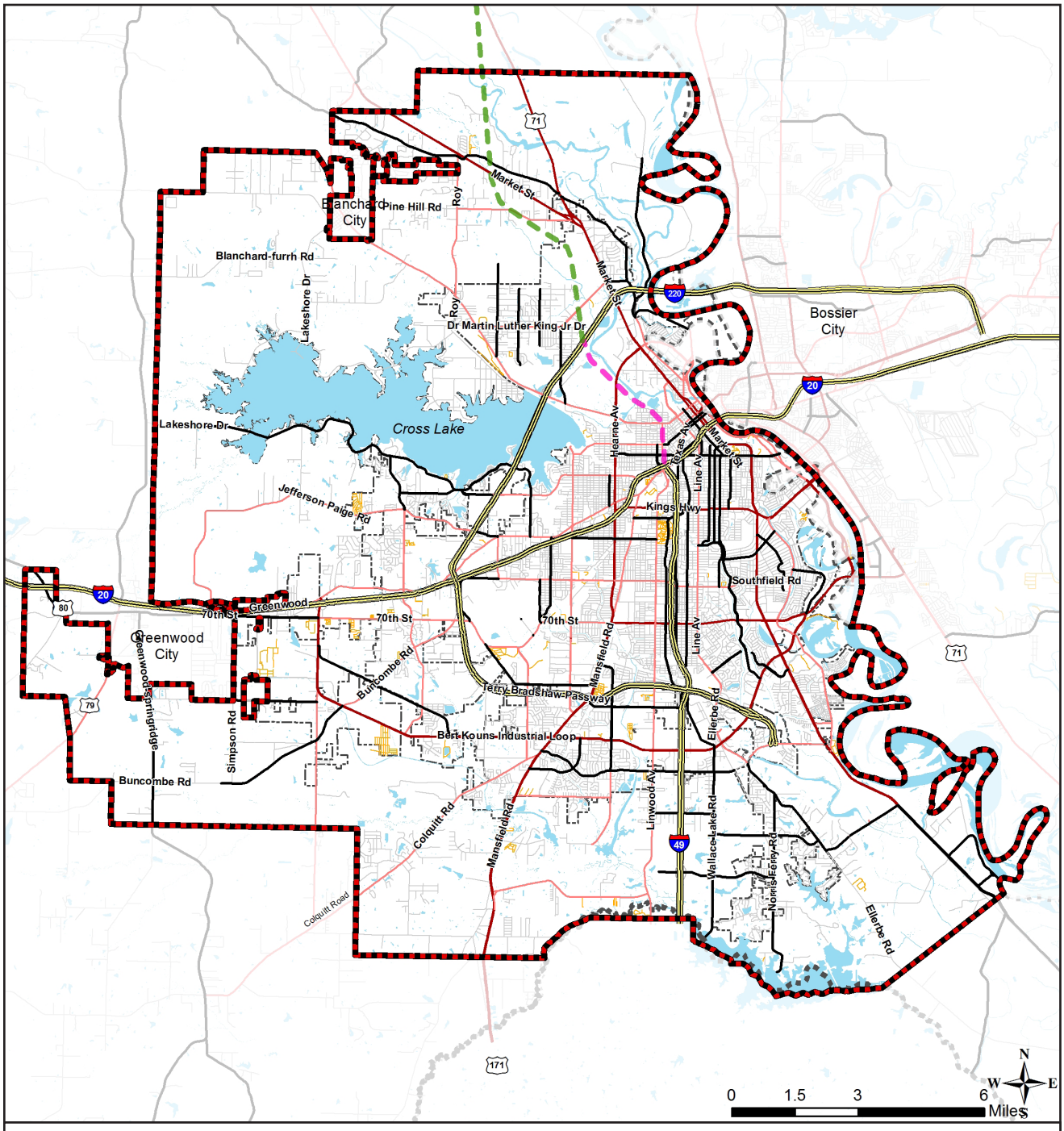
STREETS AND MAINTENANCE

Road network and classification

The dominant feature of Shreveport's transportation network is roads. The city contains approximately 1,050 lane-miles of concrete streets and 1,200 lane-miles of asphalt streets, including local, arterial, and collector streets, as well as federal highways I-20, I-220 and I-49. Much of today's roadway infrastructure was laid out in the 1956 master plan, including recommendations for a network of streets with arterial roadways and secondary or feeder streets in a grid-like framework. Also included were recommendations for an expressway corridor (I-20) and four main parkway routes—the Clyde Fant Memorial Parkway, the inner and outer loop roadways, and a parkway around Cross Lake (Lakeshore Drive). The City of Shreveport established its current Major Street Plan in the late 1970s in response to local development patterns witnessed over the previous 20 years, an era characterized by enthusiastic road building both locally and nationally. This document serves as the framework by which the City approves, constructs, and maintains streets. Technical specifications of this document can be found in Section 82-72 of the City's code of ordinances. A general summary of the policy direction and plan follows.

> *Sec. 82-72. Streets.*
> *(a) Circulation. The street pattern shall provide ease of circulation within the subdivision as well as convenient access to adjoining streets, thoroughfares, or unsubdivided land, as may be required by the planning commission. Minor residential streets in new developments, and other new streets that will connect to existing streets in adjacent residential subdivisions, should be so planned as to discourage their use by non-local traffic, and to discourage motorists from driving at unsafe speeds.*

MAP 8.1 **ROADWAY NETWORK AND CLASSIFICATIONS**



ROADWAY NETWORK AND CLASSIFICATION

- Freeway/Expressway/Interstate
- Collector
- Principal arterial
- Minor arterial
- Local road
- Private road
- I-49 future right-of-way
- I-49 Inner City proposed right-of-way
- Planning area
- Shreveport boundary

Source: NLCOG GIS, Goody Clancy 2010

The roadway functional classification system is a hierarchy of streets, defined by the type and typical trip length of the traffic usually found on each roadway category.

- **Interstate:** Continuous routes with trip lengths and volumes that show substantial statewide or interstate travel. I-20 and I-49 are examples in the Shreveport area.
- **Freeway:** Divided highways with partial (freeway) or full (expressway) control of access. These routes primarily serve through traffic and major circulation movements within federally defined urban areas. Portions of 3132 and Clyde Fant Parkway have characteristics of a freeway.
- **Principal Arterial:** Highways that provide long-distance connections but do not fit the two categories above.
- **Minor Arterial:** Continuous routes that provide for relatively high travel speeds and minimum interference for through-movements.
- **Collector:** Streets that primarily serve intra-parish rather than statewide routes and travel distances that are shorter than those on arterial routes.
- **Major Collector Roads:** (a) Serve larger towns not directly served by higher systems; (b) link nearby larger towns, cities, or routes of higher classifications; or (c) serve more important intra-parish travel corridors that could connect consolidated schools, shipping points, important agricultural areas, etc.
- **Minor Collector Roads:** Spaced to reflect population density and to accommodate local roads within reasonable distance of collector roads, provide service to smaller communities, and link locally important traffic generators with the arterial system.
- **Local Streets:** Provide access to adjacent land and provide service to travel over relatively short distances as compared to higher-level roads.

While the creation of a road hierarchy of this type, combined with stable population, has helped the city to preserve an average commute time of roughly 17 minutes, it has also led to a decline in the ability to maintain streets, since growth of the roadway network and costs for maintenance have outstripped available maintenance funding.

Auto traffic congestion is not an issue throughout most of the city, with most roadways having excess capacity, even during rush hour. The most congested corridors within the city during the peak period tend to be interstates and arterials, especially those leading to and from downtown (I-20, I-220, I-49), and areas with high concentrations of commercial activity (such as Youree Drive and 70th Street). Peak travel hours do not last very long, and congestion on the arterials is aggravated by poor access management, particularly from numerous curb cuts and lack of cross-access along commercial corridors.

Access management

Access management is a method of controlling vehicular access points to specific parcels of land throughout a transportation corridor. Access-management techniques include driveway spacing requirements, network spacing requirements, channelized turning lanes, median treatments, and right-of-way management. These techniques help increase the capacity of roadways by reducing the number of conflict points throughout a transportation corridor. As a result, they can improve the operating efficiency and speed of a corridor. Although access management policies exist in Shreveport, the City has not always followed its own rules, particularly along Youree Drive, where numerous curb cuts and lack of internal site circulation creates traffic congestion despite more than sufficient road capacity for existing demand.

Access-management practices, like internal circulation between commercial centers, have sometimes not been enforced—as seen in the well-known barrier to circulation between Target and Sam's Club on Youree Drive.

Commute times

The street network in Shreveport is frequently described as so efficient that residents can get anywhere by car within twenty minutes. According to the Census, average commute times are 17 minutes, far lower than the state average of 25 minutes. Nearly 90 percent of Shreveport commuters drive to work, with nearly 80 percent of them driving alone. Although these rates are characteristic of the kind of auto-oriented development patterns in the Master Plan Area, they fall at the high end of the range for national and statewide averages.

Maintenance

The Streets Section of Shreveport's Department of Operational Services is responsible for maintenance of roadways and streets within the city. In general, residential and other low-volume streets tend to be asphalt-paved; arterials and high-volume streets are usually paved with concrete. While the department prefers concrete for paving, exceptions can be found throughout the city.

Current maintenance needs throughout the city are estimated to include $30 million for concrete streets and $30 million for asphalt streets. According to the Streets Section, 35–40 miles of roadway in the city are in such poor condition that maintenance would actually be a waste of money; these streets need complete rebuilding. Despite a growing backlog of unmet needs, the budget for street maintenance has been shrinking. In 2010, the Streets Section had slightly less than $2 million for street maintenance. It estimates that about $5.5 million would be required each year to make a dent in the growing maintenance backlog. Exacerbating this problem is the steady rise in the unit cost of both concrete and asphalt. Thanks to these factors, the maintenance backlog extends an estimated 15 or more years—and continues to get worse.

Subdivision regulations now prohibit the City's acceptance for perpetual maintenance of streets in newly-annexed subdivisions. However, the acceptance of substandard streets in the past continues to result in a disproportionate burden on street-maintenance funding.

Despite a growing backlog, the City currently allocates less than $2 million annually to street maintenance.

In most communities around the country, the decision to spend maintenance/repair funds on a city street is made using an empirical decision-making matrix that scores or sets priorities. Though Shreveport has yet to take this step, the City is considering moving in that direction. In 2010, traffic, underlying ground or base conditions, and a supervisor's opinion all play a role in setting priorities. Shreveport assesses ground conditions with the help of the California Bearing Ratio[1] (CBR), which it employs to evaluate the mechanical or load-bearing strength of soil subgrades or base courses.

In new development, engineers focus on assuring that streets are designed to match the underlying subgrade weight-bearing capacity. The CBR of the underlying soil—along with expected volume and types of traffic—helps determine the thickness of pavement and/or amount of reinforcement needed in designing a new street. Using these design standards will reduce the need for unexpected maintenance in the near future and allow the City to adopt a more empirical approach to establishing street-maintenance requirements in the future.

Intelligent Transportation Systems (ITS)

Intelligent transportation systems (ITS) incorporate information and communications technologies in transportation infrastructure (such as signal timing) and vehicles (GPS

[1] Developed by the California Department of Transportation prior to World War II, the bearing ratio corresponds to surface hardness—a higher CBR means a harder surface. In other words, a subgrade with a CBR 2 will not support a roadway or street design as well or as long as one with a CBR 15.

and other devices) to reduce transportation times, improve safety, reduce fuel consumption, and decrease wear and tear. Shreveport's limited ITS capabilities have been greatly diminished by damage to the mainframe computer and older back-up systems, which provided real-time monitoring and calibration of signals in parts of the city. Recent small projects to improve the city's ITS capabilities have included upgraded signal systems along Youree Drive and I-20, which represent roughly fifteen percent of the system. These upgrades cost more than $7,000,000. Additionally, natural gas-powered generators at each intersection will help ensure system operation during power outages caused by storms or larger natural disasters.

Traffic calming

Cities increasingly employ traffic-calming elements at strategic locations to moderate speeds and discourage cut-through traffic without constant enforcement, stop signs, or traffic signals. These interventions are relatively inexpensive to build and maintain, and include roundabouts, raised crosswalks or speed tables, wide intersections, chicanes, and other elements. Determining which traffic-calming strategies make the best sense for specific roads and intersections requires analysis of each location.

Successful design of traffic calming elements depends on discussions with the surrounding community. Pilot traffic calming elements in Shreveport have not all been successful, leading some to lack confidence in traffic calming methods. Residents and some nonprofit organizations, such as A Better Shreveport have promoted the idea of placing traffic-calming devices at several locations, including Gilbert Drive. Additionally, the Gladstone Neighborhood Improvement Plan (2003) recommended traffic calming as a way to curb excessive speeding. Future efforts must incorporate a public process into traffic calming projects. One way to increase confidence in traffic calming methods is to set up test locations with removable elements so that the impact of the traffic calming interventions can be evaluated before final installation.

Traffic-calming techniques have been used on a pilot basis to slow traffic through Shreveport neighborhood streets.

CURRENT TRANSPORTATION PROJECTS AND INITIATIVES

Bridge and congestion improvement projects

The regional long-term transportation plan prepared by NLCOG for 2005–2030 includes several improvements intended to address Shreveport-Caddo transportation system deficiencies, including:

- I-20 bridge across the Red River—Constructing a new adjoining bridge and reconfiguring exit and entrance ramps will decrease congestion, but not fully eliminate it.
- LA 173-Caddo/Ford Street west of Allen Ave.—Widening to four lanes will significantly decrease, and potentially eliminate, congestion.
- LA 511 (Jimmie Davis) Bridge—Constructing a new four-lane bridge, including bicycle and pedestrian facilities and new approaches will significantly decrease congestion.
- LA 511 (70th St.)—Intersection improvements and realignment at 3132.

A full list of the projects to be completed during the next 25 years is updated periodically by NLCOG (every four or five years, depending on ozone-attainment status).[2]

I-49 corridor

The Interstate 49 corridor currently terminates on the south side of downtown Shreveport. A long term effort by Parish and City officials, NLCOG, and the Louisiana Department of Transportation and Development (LA DOTD) has resulted in a project to continue this interstate

[2] Because the list evolves, and funding changes occur at the state and federal levels. Refer to the most current list for additional roadway projects that will occur throughout the time horizon of this master plan.

corridor north to the Arkansas border. Advocates within states along the remainder of the corridor are working to extend the corridor to Kansas City, Missouri. As of 2010, the majority of the corridor from Shreveport to the Arkansas state line has received funding. Two defined segments of the corridor within the planning area have yet to receive funding for construction, and a third segment, the Inner-City Connector, described below, is still in the planning stage.

The I-49 north extension project provides an important link for Shreveport to the rest of the country. Potential benefits of the multi-state project listed within the approved final environmental impact statement, not all of which are applicable to Caddo Parish, include:

- potential attraction of new businesses to the rural areas of Caddo Parish
- facilitation of local, regional, and national economic development
- provision of sufficient capacity for a growing population within the study area
- improved access to medical facilities and other social services
- congestion relief on existing north-south routes
- improved efficiency of transportation for the trucking industries and businesses dependent on trucking,
- Provision of a critical trade corridor for the North American Free Trade Agreement (NAFTA)
- improved safety through diversion of trucks from local routes.

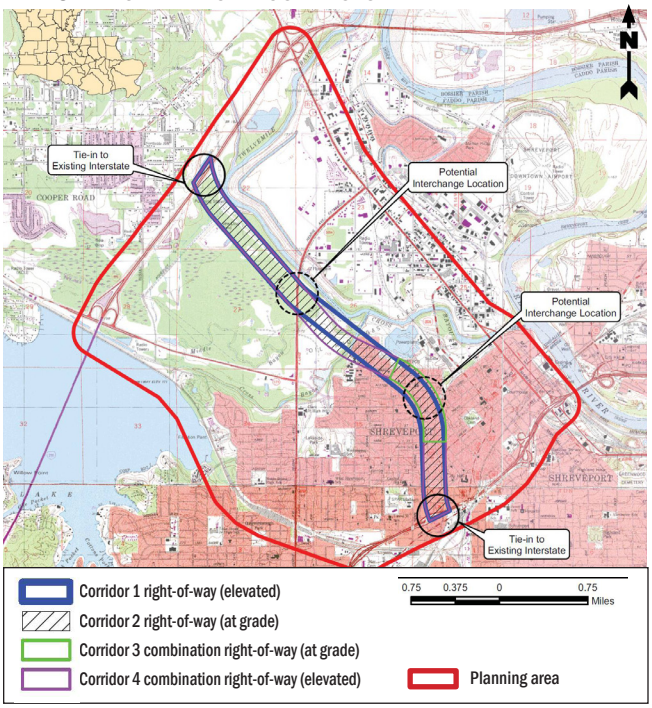
This corridor also provides a missing link in the national Interstate system, enhancing access needed for economic development and strengthening national defense. The estimated cost of construction for 5.25 miles of unfunded segments from I-220 to LA-1 is roughly $130 million. Identifying the funding sources needed to complete this project is a priority for many agencies in and around Shreveport. Completion of this corridor will likely occur within 20 years, the planning horizon of this master plan.

I-49 Inner-City Connector (ICC)

The Interstate 49 Inner-City Connector Stage 0 Feasibility Study and Environmental Inventory was completed in May 2010 under the sponsorship of NLCOG and LA DOTD to examine potential routes and impacts of an approximately 3.8-mile segment of freeway that would traverse the geographic area immediately west of downtown Shreveport. The proposed freeway would connect the I-49/I-20 intersection and the approved alignment of I-49 north of I-220. The project report summarizes the findings:

> *Three Build Corridors were developed with input from the public, local officials, state and federal agencies, and other interested parties. A traffic analysis was conducted in the study area to evaluate existing traffic operations and future traffic projections for all alternatives, and an environmental inventory was prepared to compare how the various alternatives would impact the natural and human environment. While the community has voiced concerns about community disruption and safety associated with Build Corridor 2, the cheaper cost and comparable footprint continue to make this a feasible alternative. Therefore, all three corridors were determined to be feasible by the North Louisiana*

MAP 8.2 **I-49 INNER-CITY CONNECTOR**



The I-49 Inner-City Connector, which would be located just west of downtown, is currently under study.

Source: Stage 0 Feasibility Study and Environmental Inventory

Council of Governments (NLCOG) and the Louisiana Department of Transportation and Development (LA DOTD). During the next step, a Stage 1 analysis, multiple build alternatives and a no build alternative will be studied within the selected corridors. This document has been designed to be incorporated into the Environmental Assessment (EA) or Environmental Impact Statement (EIS) report to be prepared as the next step (Stage 1) for this proposed project. [3]

This means that more studies will be pursued before a final determination of the overall benefit provided to the community can be made. Some of the questions that remain to be answered are similar to those raised during the 1970s when this project was first discussed.

A new "purpose and need" statement was prepared for the 2009-2010 study of the proposed connector:[4]

1. *To provide connectivity between the existing I-49 and the future presently designated I-49 North that is proposed to terminate at I-220 in Shreveport.*
2. *To improve the safety of present routes (I-20 at I-49) and to provide an alternate route for hazardous materials, currently being transported across Cross Lake, the designated water supply for the City of Shreveport.*
3. *To support economic development by providing improved access to downtown from the west and a continuous I-49 route through Shreveport-Bossier to encourage development through Louisiana, Arkansas, and Texas.*

Urban freeways represent one of the most controversial issues in planning today. Many communities are fighting to tear down roads that have divided neighborhoods since their construction in the 1950s, and some have successfully eliminated elevated highways within city centers. Other communities, such as Fort Worth, have worked though the development process and involved the community immediately adjacent to a proposed highway corridor (Texas 121) to define options acceptable to residents that promise an overall benefit to the community.

In Shreveport, the corridor process will now shift to a feasibility analysis of the two interchanges proposed within the I-49 Inner-City Connector corridor. The analysis will examine current and future demand for grade-separated access points to I-49, a major component of the ICC analysis, since an important element of the purpose and need is access from the west to downtown. Assuming the need for the interchanges can be documented, once Interchange Justification Reports are filed the project will move to a Stage 1 feasibility analysis. In that round of studies, if the interchanges that would provide access to the surrounding community cannot be justified, it is likely that the project will not move forward due to the impact it will have on residents and businesses close to the proposed corridor. Stage 1 analysis will include significant additional public outreach and workshops to make the design sensitive to its context. If the interchanges are justified, the application of context-sensitive design principles (described later in this chapter), the inclusion of linear parks, pedestrian-crossing provisions, and the promotion of redevelopment at a community scale may promote a spirit of renewal and vibrancy within the ICC corridor. Should the connector proceed to implementation, it is critical that design enhancements, public open space, and land use planning be included in the design and construction budget and not be eliminated through "value engineering" cost cuts. Safeguarding these elements against elimination is essential to making sure that the project would not further isolate downtown and Allendale.

I-69 corridor

The I-69 Corridor proposal extends from South Texas to either Carthage or Texarkana; through Shreveport near the Port of Shreveport; into Memphis; and from Memphis to Indianapolis. Plans for the corridor in the Shreveport area call for access only at the Port of Shreveport, and much of the road would run south of the MPC planning area. This project has received little funding to date, and the state of highway funding across the country suggests that funding for design and construction remains at least a decade away. Given this reality, introduction of a new corridor or widening of the existing one would likely take place beyond the time horizon of this master plan. As plans evolve and funding for design and engineering becomes available, however, local plans along the corridor should be updated.

[3] Executive summary, page ES-1, *Caddo Parish I-49 Inner City Connector—State Project Number 700-09-0171: Stage 0 Environmental Inventory* (May 2010). Available at *www.i49shreveport.com/documents.php*.
[4] *Ibid.*

Ozone non-attainment status

The Environmental Protection Agency (EPA) has proposed revising the way it calculates ozone conformity status for metropolitan areas around the U.S. Elevated ozone levels at lower atmospheric (ground) levels are hazardous for individuals with respiratory infections or chronic respiratory conditions, children, and elderly people. EPA's proposed new standards would automatically classify the Caddo-Bossier MPO area in non-attainment status, adding it to the roster of metropolitan areas throughout the South in non-attainment status. This means that the region will need to begin looking at methods by which it can reduce, or not further raise, levels of low-level atmospheric ozone.

Classification of ozone non-attainment will require the development of an ozone conformity plan as a part of NLCOG's long-range transportation planning, and it will trigger a review of the long-range plan every four years, rather than the current five. Efforts must be undertaken within the region to minimize single-occupancy vehicle trips, expand transit ridership, and promote bicycle and pedestrian travel. Failure to develop a specific ozone conformity plan could jeopardize future federal funding for projects ranging from roadways to transit operating subsidies.

BICYCLE AND PEDESTRIAN NETWORK

Bicycle network and facilities

Participants in the master planning process have expressed a desire for more bicycle and walking facilities. Despite a few lengthy improved trails, such as those adjacent to Clyde Fant Parkway, Shreveport's off-road facilities are limited and the current roadway network fails to provide designated bike lanes or wide shoulders, both of which would reassure inexperienced roadway riders uncomfortable cycling in mixed-flow traffic.

Residents desire a robust network of on- and off-street bicycle facilities that can be used for recreation, commuting, or other utilitarian trips. Advocacy groups, such as A Better Shreveport, have focused on identifying potential trail locations and links in various parts of the city. Shreveport Public Assembly and Recreation (SPAR) has also proposed new greenway bike connections. (See Chapter 4 for more information.) These networks, and others, could be constructed using techniques such as facilities parallel to drainage-ways (where slopes allow), on-street facilities along roadways where the posted speed is 35 mph or less, or off-street facilities that parallel major thoroughfares, such as Youree Drive, where the amount of traffic and the speed at which the traffic flows would create an unsafe cycling environment. One key to providing off-street paths for corridors like Youree Drive is to find back access into the developments, since adding another conflict point within the existing corridor only serves to worsen corridor congestion. Other concepts include development of trails along utility easements, provided that trails do not interfere with maintenance of drainage systems or on pipeline easements, which often have significant development restrictions that must be examined before implementation can take place.

LA DOTD recently finalized a statewide bicycle plan for state-maintained roads, with several in Shreveport suggested as potential routes. This could include wider paved shoulders allowing for bicycle access on LA-1, US-71, LA-526 and LA-169. LA DOTD also identified state routes that would not work, given traffic volumes or operating speeds, such as LA-525 and LA-3132. This process provides a framework from which to build a local complementary system.

Sidewalks

Existing pedestrian infrastructure within the Master Plan Area divides easily into two categories, each with a distinct approach to pedestrian-friendly environments. Most areas built before 1970 provide for sidewalks and welcoming, pedestrian-scale amenities. Post-1970 development patterns, including separated subdivisions, and corridor-focused commercial development, severely diminished the effectiveness or even the desirability of pedestrian connections and sidewalks.

Much existing sidewalk infrastructure outside of downtown is in poor condition, given the limited number of infrastructure dollars available to fund sidewalk improvements. The Code of Ordinances also limits the City's responsibility, placing maintenance responsibility

on landowners within their parcel boundaries. (Sec. 78-136 of the Municipal Code). In practice, however, the City has not followed the ordinance, often maintaining sidewalks throughout the city, resulting in a larger-than-anticipated maintenance costs. This pattern makes the City understandably reluctant to construct new facilities, given the costs of taking on all repairs.

In addition, many sidewalks were built before passage of the Americans with Disabilities Act. The City has complied with the letter and intent of the act by developing an ADA transition plan for public buildings, rights-of-way, and gathering spaces. This document requires constant monitoring and updates as revisions are made at the federal level. The City has an established practice of providing these retrofits as projects arise within areas still in need of transition to full ADA accessibility. Limited infrastructure dollars have largely restricted redevelopment of ADA-compliant pedestrian areas to Shreveport's downtown and riverfront areas. When roadway corridors that include sidewalks are redeveloped, however, pedestrian provisions are automatically made based on the new design criteria established by the City and LA DOTD.

Safe Routes to Schools Program

The Safe Routes to Schools program is a program of the U.S. Department of Transportation's Federal Highway Administration (FHWA) and administered by LA DOTD. Its funding was recently extended and will likely be included in all future federal surface transportation bills. The program provides funds to states to support investments in and around primary and middle schools to:

- enable and encourage children, including those with disabilities, to walk and bike to school safely
- make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age
- facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity (approximately 2 miles) of primary and middle schools (Grades K-8).

Each state administers its own Safe Routes to Schools program and develops its own procedures to solicit and select projects for funding. The program establishes two types of funding opportunities: infrastructure projects (engineering improvements) and non-infrastructure-related activities (education, enforcement and encouragement programs). While implementation of the program within Caddo Parish has been difficult, given the magnet school system, provisions can be included for schools that serve neighborhoods (mainly elementary schools). Further, revision of the grant process at the state level is yielding a greater focus on region-wide solutions that may help Caddo Parish implement a network of bicycle trails and provide necessary sidewalk connections that will help children from throughout the city access their school or a school near them when looking for recreational opportunities.

The Caddo-Bossier Metropolitan Planning Organization has completed several of these projects, including four in Shreveport, and has programmed several additional projects within the latest Transportation Improvement Program (the four-year funded project list). More routes are under evaluation within the region.

PUBLIC TRANSPORTATION

The majority of Shreveport residents use personal vehicles to move about the area. According to census estimates, however, roughly 13 percent of households (over 10,400 people) reported not having access to an automobile, a high percentage for an auto-oriented community. These residents rely on other means of transportation, including bicycling, walking, ride-shares, and public transportation. In Shreveport, only 3.5 percent of workers reported using public transportation to get to work, suggesting that public transit is an option of last resort for many of the city's residents.

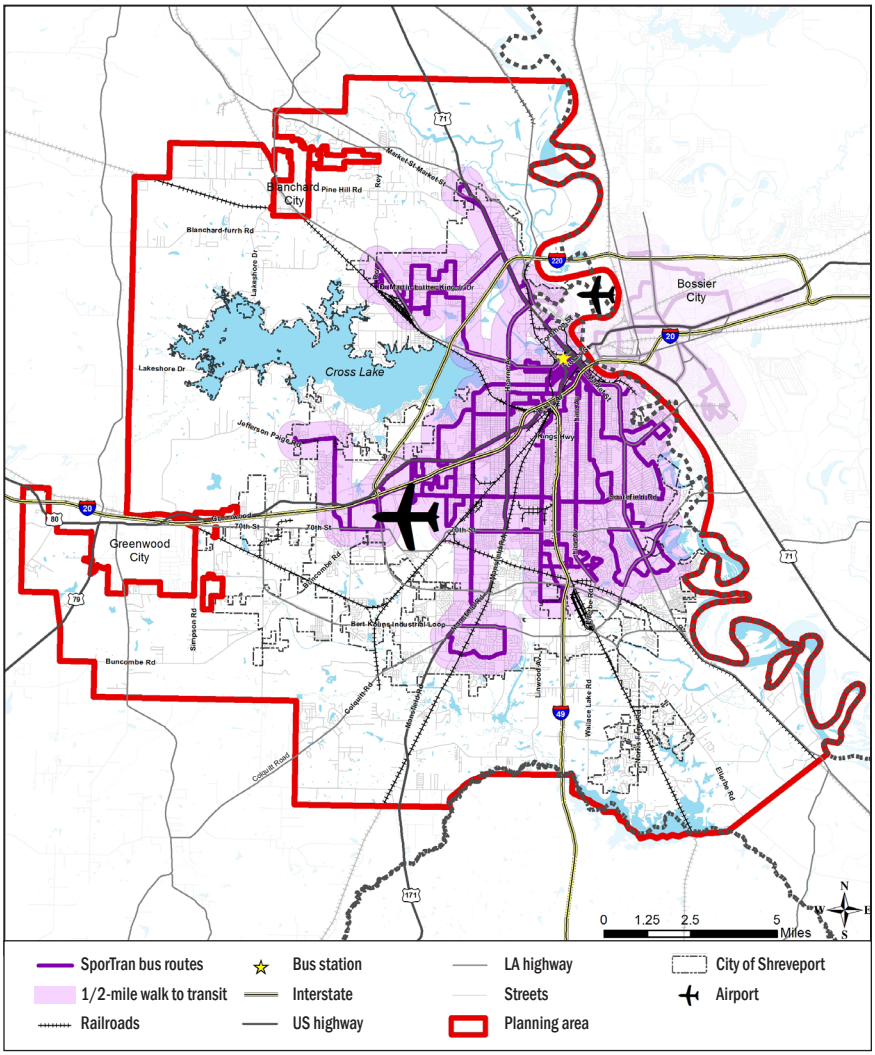
SporTran

SporTran operates as a division of the City and provides public transit service within the incorporated city limits and in Bossier City. SporTran provides both bus (fixed-route) and demand-responsive services (para-transit for residents with disabilities). At the peak of daily operations in 2008,

SporTran operated 37 buses with an average age of 6.2 years—roughly half of the useful life for a bus—and nine para-transit vehicles for individuals with a disability who did not live close to an existing bus route.

The system attempts to provide service throughout the city, with 17 routes, even in the face of a the city's geographic growth (See Map 8.3). The system configuration reflects a hub-and-spoke system centered in downtown. Few routes provide crosstown access, often resulting in long trips that require riders to travel into downtown, transfer at the hub, and travel back out to reach their final destination. This system is not efficient for many individuals in the city, particularly those who do not work downtown. Low-density development patterns, combined with budget cuts, have further limited SporTran's ability to provide service at the desired frequency levels to attract riders who have a choice to the system.

MAP 8.3 **PUBLIC TRANSPORTATION SYSTEM**



Source: NLCOG 2009

Ridership

Ridership estimates for 2009 suggest that SporTran carries five to seven percent of Shreveport's population. From 2003 through 2008, ridership increased nearly twenty-two percent to more than 3.5 million passengers annually.[5] Statistics for 2009 show a decline in ridership, although much of the decline is attributable to higher unemployment rates and cheaper gasoline prices compared to previous years. Ridership results from the last quarter of 2009 suggest that use is again on the rise. Although ridership has increased since 2003, the system's large service area has limited growth. In an attempt to provide transit service within one-quarter mile of as many

The downtown bus station is the central transfer point of SportTran's hub-and-spoke system.

[5] Ridership is measured by unlinked passenger trips, and figures do not include the demand-responsive system operated by SporTran.

residents as possible, SporTran has been forced to open headways (the time between buses) to about 30 minutes, which makes attracting ridership difficult beyond a captive customer base.

Financing

While most capital costs of a transit system, such as the buses themselves, are largely borne by the federal government, operating costs remain largely the responsibility of local government and continue long after buses have been paid for. Since 2003, fare box revenues have averaged about 21.5 percent of total revenues. Over the same time period, federal operating subsidies have averaged slightly more than 21 percent of operating expenses. The gap is filled by City funding.

Natural gas fueled buses

In early 2010 SporTran received funding to build a compressed natural gas (CNG) fueling station and convert the 40-plus vehicles within its fleet to run on CNG. This conversion reduces costs, makes use of locally-generated fuel resources, and reduces ozone emissions, a key part of the ozone-reduction strategies that will be required once the EPA places the Shreveport area on the air-quality non-attainment list for ozone.

Air quality non-attainment status and transit

Much of the effort to improve air quality on the national level is driven by reducing single-occupant vehicles (SOV), promoting transit use, examining source-related pollutants such as refineries and factories, and improving fuel efficiency of government vehicles. More information will be required about the specific limitations that will be set for the Shreveport-Caddo area; however, planning for increased transit, fewer SOV, fewer vehicle-miles of travel, and reduced congestion are likely candidates for areas of improvement.

INTERCITY PASSENGER TRANSPORTATION

Air transportation

Shreveport is served by two airports, the Shreveport Regional Airport, its primary airport, and a general aviation field, Downtown Airport. The Shreveport Airport Authority—a City department that operates as an enterprise fund and is financially self-sufficient—manages both facilities

Shreveport Regional Airport

Located four miles southwest of downtown and served by both I-20 and I-49, Shreveport Regional Airport is the primary airport for the ArkLaTex region. The airport features two runways, one more than 6,000 feet long and the other more than 8,000 feet long. It is a primary commercial-service airport, served by major airlines and their affiliates, including American, Delta, Continental, Allegiant Air and Branson Air Express, with non-stop flights to Dallas-Ft. Worth, Atlanta, Houston, Memphis, and Las Vegas. The airport is an alternate destination for American Airlines flights that cannot land at Dallas-Fort Worth due to bad weather. At present, commercial flights account for about half of all operations; of the remainder, general aviation accounts for nearly 40% and military operations for 10%. The annual average passenger enplanements has remained steady over 40 years at roughly 350,000 passengers, although recent trends have yielded 325,000 or fewer passengers in six of the last eight years.

Shreveport Regional Airport is served by many of the major air cargo companies, including United Parcel Service, UPS Supply Chains Solutions, Federal Express, and Airborne Express. Located less than 20 miles from the port, the airport can accommodate some of the largest operating commercial and cargo aircrafts. To assist cargo carriers, a U.S. Customs port of entry office is located at the facility where foreign goods may be brought into a foreign trade zone (FTZ) without paying formal customs fees or duty and excise taxes unless they leave the zone and enter the U.S. The airport owns industrial park land available for cargo businesses.

Downtown Airport

Shreveport Downtown Airport is located on the Red River, five minutes northeast of the central business district. Opened in 1931, it was the city's original commercial airport. Today, it functions as a general aviation/reliever facility. Numerous owners of small private planes house their aircrafts at the facility. The airport has a united

operating tower and could accommodate more movement if it were to be updated. Many corporate jets land there because of easy access to downtown.

Bus and rail

Intercity passenger service beyond the airlines is very limited, and travel times encourage those who have an automobile to choose driving as their primary method of traveling if they are not flying. Bus service to and from Shreveport is available at the downtown bus station. Greyhound provides service through the Kerrville Bus Company to Houston and Dallas several times a day, with less-frequent service to Baton Rouge and New Orleans, often involving a transfer and long travel times. In 2010–2011, Greyhound operations are expected to be relocated within the city to a new terminal along Texas Avenue near I-20. In addition, several Shreveport businesses offer coach service to and from Dallas to attract patrons to the city's casinos.

Shreveport currently has no passenger rail service, although Motor Coach, a van service, offers two daily connections from Shreveport Regional Airport to Amtrak service at Longview, Texas. From Longview, passengers can reach Dallas, where a transfer connects them to the Amtrak system. Plans for revitalizing the Amtrak route from Longview to Meridian, Mississippi, have been approved at the federal level, but no funding stream or operating subsidy has been identified, meaning no realistic implementation schedule yet exists.

Other than changes in Greyhound operations and ensuring regular service through Motor Coach, Shreveport's greatest intercity passenger service enhancements can occur through more cost-effective and quick service to Dallas and Houston. The City should examine potential intercity passenger service enhancements as opportunities present themselves. National initiatives such as the high-speed intercity passenger rail concept routes, revisions of Amtrak services, and the Livable Communities programs from the EPA, HUD, and US-DOT, provide opportunities for the City and Parish to voice their desires and position Shreveport for future implementation.

FREIGHT TRANSPORTATION

Freight rail

The Union Pacific Railroad and the Kansas City Southern Railroad operate freight rail infrastructure and provide shipping within greater Shreveport. Much of the cargo handled within the region is generated at the Port of Shreveport and other industrial concentrations throughout the community, including the GM plant, the KCS Switching Yard, and Barksdale Air Force Base.

The tracks in and around Shreveport transport a significant quantity of through-freight originating from the ports of New Orleans and Houston. Notable destinations for this traffic include the Dallas Logistics Hub, Little Rock, Memphis, Mississippi, and points beyond.

Rail moves significant volumes of freight to, from, and through the Master Planning Area.

The Port

Although Shreveport has served as a major shipping point since the 1830s, originally moving bales of cotton, tobacco and furs from downtown locations, in the twentieth century the Port of Shreveport-Bossier, the most inland Red River port, welcomed its first load of cargo in 1995 after the Army Corps of Engineers completed a project to make the fluctuating river more easy to navigate. Since the dredging and locks were completed, the Port has received more than 5 million tons of freight. The 2,000-acre port, which houses more than 13 corporations, lies within the Master Plan Area about four miles south of the city limits. The port links customers throughout the ArkLaTex region to domestic and international markets via the Mississippi River and the Gulf Intracoastal Waterway. In 2009, the

port experienced an overall tonnage growth of more than 15 percent. Rail tonnage alone increased 29 percent, following an increase of 46 percent in 2008.

The Red River provides reliable barge connections throughout the year thanks to a modern lock-and-dam system and the well-maintained navigation channel of the J. Bennett Johnston Waterway, formerly the Red River Waterway, operated jointly by the Army Corps of Engineers and the Red River Waterway Commission.

Roadway and freight connections to the Port

The Port of Shreveport-Bossier is easily accessible by ground transportation and is strategically located near interstate, federal and state highways, and freight rail routes. The port complex is serviced by the Union Pacific Railroad and offers local access to the Kansas City Southern Railroad. The port complex includes 22 miles of industrial-grade track and rail on dock. Approximately 1.2 additional miles of track are under construction, and five miles are in the planning stage. Three port-owned and -operated locomotives are available for immediate rail car switching. Approximately 20 trucking lines fan out from the Port of Shreveport-Bossier to markets across North America, and major routes for those services utilize these highways:

- Interstates 20 and 49
- two interstate connectors (I-220, LA 3132)
- two federal highways (US 71, US 171)
- LA 3132

Current projects and initiatives

Recent improvements and initiatives at the port designed to increase capacity include completion of a re-use water line and pump station and final designs for Pratt Rail Spurs A & B. In late 2009, the port authorized $9 million in financing through the Louisiana Community Development Authority (LCDA) to expand the Red River terminals with a slack-water harbor dock and crane, and to add a truck warehouse and distribution terminal.

In 2009, the Caddo-Bossier Parishes Port Commission began developing a master plan for the port complex and surrounding property. The port's major focus continues to be jobs and total investment, and the plan will include both an economic-impact analysis of all port operations and a strategic economic development component. The plan will also focus on all transportation mode requirements and will identify the most beneficial layout of roads, rail, utilities, subdivisions, and zoning on newly acquired land.

B. Community Issues and Concerns

Public opinion survey

A public opinion survey conducted at the start of the planning process for the master plan revealed that Shreveport residents consider transportation critical to the future prosperity and livability of the city, parish and region. Key findings included:

- 67 percent felt that Shreveport's future should include more and better public transportation.
- 75 percent said "the government should promote development with incentives and public investments, where needed" and 79 percent felt development should be "promoted in downtown and central areas that have vacant housing or land."
- Approximately half of all survey respondents ranked both "ease of getting around by car" and "transportation alternatives to the car" as "very important" to Shreveport's future.
- Nearly 70 percent of all respondents agreed that more and better sidewalks, walking paths, trails, and bicycle paths/trails should be part of Shreveport's future. (Ranked 5th overall as a priority for the city.)
- Over 40% of survey respondents agreed that "less sprawling growth" should occur in the future.

Visioning forum for the 2030 master plan

Participants at the forum identified better transportation planning as one of the key opportunities for Shreveport's future to better connect neighborhoods. Public transportation in particular was described as inconvenient, not comfortable or safe, and lacking posted schedules. During small-group discussions, the most commonly mentioned themes included:

- improve mass transit dramatically
- implement a connecting system between casinos and other places of local interest
- complete I-49 project to attract business
- add a span to create four lanes for the Jimmie Davis Bridge.

Respondents also stated that the road network is strong and people can reach anywhere within 20 minutes.

"Speak Out!" neighborhood vision meetings

Nearly a quarter of all participants in these sessions identified "Infrastructure" as one of the top two challenges the city and parish face, including transportation choice and better connections as key to the area's future. Transportation issues noted during the session included completion of I-49, improved road maintenance, bike lanes/pedestrian trails, public transportation, rail, ports, airport, and the area's potential as a distribution center because of good regional transportation connections.

District and neighborhood meetings

Neighborhood workshops held in four geographic areas of the city (north, central, east, and west) and downtown were held to discuss a range of topics, including transportation. Comments included:

- Resurface/improve streets
- Enhance traffic flow on streets
  - > Better traffic signalization/synchronization
  - > Too much truck traffic on residential streets
- Create bike/pedestrian master plan
  - > Sidewalks and wider sidewalks
  - > Bike lanes, major trails and linear parks
  - > Need for interconnected multi-use paths
- Improve the public transit system to be convenient and inviting
  - > Route alterations to provide better, faster service in and out of neighborhoods
  - > Express bus service to downtown
  - > Bus shelters
- Improved intra-regional transportation
  - > High speed rail service
  - > An improved airport with better/more connections

Transportation in the vision and principles

- **Transportation in the Vision:** "Our neighborhoods—safe, clean and welcoming—are connected by shared civic spirit and by a network of inviting public spaces and transportation choices… As a transportation crossroads of rail lines and highways, including an extended I-49, and with a successful river port, we reach out to the nation and the world."
- **Transportation in the Principles:**
  - > Connected people and places.
  - > Provide safe and efficient transportation choices including alternatives to the car, such as bicycle and pedestrian routes, and enhanced public transit.
  - > Make every neighborhood a "neighborhood of choice" with excellent infrastructure, services and amenities.
  - > Maintain and improve existing infrastructure before expansion to new areas.
  - > Make public investments a model of quality, excellent design, and long-term vision.
  - > Foster collaboration among governmental entities as well as communities across the entire metropolitan region to work toward a shared vision.

C. Strategies And Actions to Achieve the Goals

Principles for transportation best practices

The following principles, based on best practices tested in many communities and consistent with state and federal transportation policies, inform the strategies and actions recommended below to achieve the master plan's transportation goals:

- **Enhance regional coordination.**
  - > The Shreveport-Caddo transportation system should coordinate with and support a regional multimodal

system that connects activity centers through the linkage of regional and local corridors.

- **Provide transportation choices.**
  - > A community's or neighborhood's vitality depends on providing a variety of connections and options for mobility, including transit, walking, biking, and driving.
- **Provide access for all users.**
  - > Every road does not need to accommodate every travel mode, but the road network should be designed and constructed to serve all users safely and comfortably.
- **Provide access to parks and open space.**
  - > Community and neighborhood access to parks, trails, and urban green space is desirable and depends on pedestrian and bicycle system links, both on-street and through dedicated trails and pathways.
- **Integration with land use to leverage investment and provide prosperity.**
  - > Shreveport-Caddo and its regional partners must link their transportation investments to walkable, mixed-use, transit-friendly development patterns and the resulting tax base and job creation in order to create greater opportunity for supportive and sustainable public investments in infrastructure. This will also make the community more attractive for funding under the new federal programs and priorities for livability.
- **Optimize efficiency**
  - > To maximize the value obtained from the existing and future transportation systems, Shreveport-Caddo and its regional partners should invest in technologies and management strategies that optimize the efficiency of the roadway and transit network through both direct and indirect capacity enhancements.
- **Ensure safety and security**
  - > Community livability and vitality are directly tied to the user's perception of safety and security of the transportation system. Shreveport-Caddo and its regional partners should work to develop a multimodal transportation system that improves transportation safety where possible and creates a sense of personal security across all travel modes.
- **Implement environmental stewardship**
  - > In the development of multimodal transportation solutions, Shreveport-Caddo and its regional partners should be sensitive to long term environmental needs including air quality, storm water volume and quality, and work to protect natural habitat within the urban environment.
- **Focus on sustainable growth**
  - > Infill generally should be based on redeveloping major transportation corridors to enhance the potential for transit-oriented development in order to accommodate regional growth sustainably, provide options for non-vehicular travel, and lessen direct pressures on single-family neighborhoods.

"Context-sensitive solutions" as the foundation of the transportation planning process

The context-sensitive solutions approach to the transportation planning process can provide Shreveport-Caddo with a long term strategy for implementing roadway infrastructure that meets the needs of residents today and well into the future.

> *"Context-sensitive solutions" (CSS) is a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic and environmental resources, while maintaining safety and mobility. CSS is an approach that considers the total context within which a transportation improvement project will exist." —Federal Highway Administration*

The context-sensitive solutions approach to transportation planning and project development emerged in 1998 from an innovative transportation planning conference called "Thinking Beyond the Pavement." The title of the conference conveys the change in thinking represented by this approach: instead of the traditional emphasis on moving traffic as fast and safely as possible, focusing only on the "pavement," there must be a balance with other desirable outcomes related to the context (the world

outside the pavement), such as city or town character and sustainability. For example, if a state highway passes through a downtown, a context-sensitive solution would be to create a street that preserves urban character, including safe pedestrian activity and access to businesses—not a project to widen and straighten the street to increase speed and capacity only for vehicles.

The context-sensitive solutions approach is collaborative and interdisciplinary, involving residents, businesses and other stakeholders, as well as a broad mix of technical disciplines, not just traffic engineers. While in the past, pro forma stakeholder meetings were typically held at the very end of a project after all important decisions were made, this new approach emphasizes an iterative feedback process of dialogue with stakeholders from the beginning of the planning process and through all subsequent phases, including construction, operations and maintenance.

The context-sensitive solutions approach to transportation improvements is now the preferred approach of the American Association of State Highway Transportation Officials (AASHTO) and the Federal Highway Administration (FHWA), the organizations that set the framework for transportation planning and engineering in government and private industry. According to a 2007 AASHTO/FHWA joint statement, the core principles of the context-sensitive solutions approach to transportation processes, outcomes, and decision-making are:

- Strive towards a shared stakeholder vision to provide a basis for decisions.
- Demonstrate a comprehensive understanding of contexts.
- Foster continuing communication and collaboration to achieve consensus.
- Exercise flexibility and creativity to shape effective transportation solutions, while preserving and enhancing community and natural environments.

Goal 1

Roads and streets that are maintained to a high standard for long-term use, and that encourage sustainable development patterns.

Policies:

- ***Support investment in a pavement management system to help maximize pavement life.***
- ***Support smarter growth through transportation initiatives that encourage infill development inside the loop.***

STRATEGIES

A. Develop a comprehensive pavement management and maintenance priority-setting process to maximize investment in streets.

Pavement management and maintenance systems allow communities to allocate resources to repair or improve roadway infrastructure through an analysis of pavement/concrete condition, condition of the roadway base (the fill underneath the pavement), and the depth of pavement/concrete remaining. The purpose behind implementing these systems is to promote the proper allocation of resources within the general fund annual allocation process. By targeting streets for maintenance and rehabilitation based upon quantitative values, Shreveport can work towards a system of roadways that are maintained at proper levels given the overall life-cycle of the infrastructure.

By funding and implementing a pavement management system, in addition to the Geographic Information System (GIS) necessary to catalog the data associated with this asset management approach, the City and Parish can begin to address infrastructure needs in an informed fashion, rather than simply responding when residents and business owners call to complain about the state of repair for a specific facility. This type of system also provides the information necessary to educate citizens when bond referendums arise to generate additional capital to support the roadway

maintenance programs that the City or Parish has established. Finally, a pavement management system helps the staff provide more empirically based explanations as to why certain roadways are receiving attention over others.

Actions

1. **"Fix It First"—develop, implement and maintain a pavement management system to maintain existing roads and transportation facilities.** Shreveport currently does not have a pavement management system. By investing in a system as part of a larger asset management system tied to GIS, the City will be able to better allocate the resources it currently provides for roadway maintenance and construction, and advocate for increased needs more effectively, resulting in savings over the long term. Additionally, as part of this system, Shreveport should prioritize deferred maintenance needs to better support redevelopment in areas inside the loop.

   A pavement management system based on the one used by the Louisiana Department of Transportation and Development (LA DOTD) would help Shreveport maintain its roadway infrastructure and provide a higher level of service in a cost effective manner over the life cycle of its roadways. The overall system should include network, program, and project level activities that address all pavement related functions, including planning, design, construction, maintenance and rehabilitation. State of the art pavement concepts should be incorporated into the system as appropriate. Data collected will consist of traffic, soil, ride or roughness, skid, rut, condition survey and inventory information. While the State recommends data collection every two years, Shreveport's system should identify appropriate frequency by road classification. For example, data should be collected more frequently for heavily traveled arterial routes than for collector roadways, and rural roadways.

2. **Consider a joint City/Parish pavement management system.** By partnering to promote the adoption of a parish-wide program, the City and Parish would see some efficiency in procuring the services and vehicles necessary to operate a pavement management system. Another option to explore is a regional pavement management system run by NLCOG.

B. Encourage infill redevelopment inside the loop through the use of roadway impact fees.

Over the last several decades, Shreveport has extended or acquired roadway facilities to provide access and capacity to new developments and/or annexations along the periphery of the City at a significant cost, both fiscally and physically. While Shreveport's population has not expanded significantly, its overall lane miles of roadway have grown, increasing needed maintenance on more roads. The result is a deteriorating road system and insufficient funds to properly maintain them, particularly within older parts of the city. As it takes new areas of development time to establish a property and sales tax benefit to the City, the City will not recoup additional roadway costs for several years to come. (See Chapter 13 and the Revenue Strategies Report in the Appendix.)

To mitigate the up-front costs of extending infrastructure to new developments, many communities have examined the implementation of roadway impact fees with a tiered structure of geographic zones that promotes development in areas where roadway infrastructure and capacity currently exist and creating greater fees for new developments requiring entirely new infrastructure.

Actions

1. **Establish roadway impact fees to help pay for new roadway infrastructure.**

In order to implement such fees, a study would be required to develop a fair system of evaluating fees and ensure that administration of impact fees meets the legal test of a "nexus" between the impacts on City services caused by new development and the fee.

2. **Establish impact fee abatement strategies, such as geographic zones, for areas within designated development areas.**
   This initiative would be one way of discouraging leapfrog development in areas further from the city core, where extending roadways is more costly to maintain over the long term, and incentivizing redevelopment within the loop.

3. **Increase and leverage the funding available for system maintenance.**
   Increasing funding for maintenance is crucial to preventing system-wide pavement failures as Shreveport's roadway infrastructure continues to age. Regular maintenance can lengthen the life of concrete streets well beyond 50 years, maximizing the system's life span and allowing critical repairs to be made so that the system never reaches the point at which maintenance no longer provides a valuable solution.

Goal 2

Improved design and function of arterial roads and neighborhood streets.

Policies:

- *Promote best practices in access management to help maximize street life.*
- *Promote the development and implementation of a City/Parish/region-wide Intelligent Transportation System*
- *Promote use of traffic calming techniques to reduce speeding and "cut through" traffic on residential/neighborhood streets.*
- *Support policies/programs to create a better connected, more efficient road network.*
- *Support policies that make Shreveport's transportation infrastructure accessible to all users, including to those with disabilities.*

STRATEGIES

A. Strengthen existing access management ordinances and enforcement in order to limit individual driveway access directly to thoroughfares.

Access-management techniques help to increase the throughput capacity of roadways by eliminating some of the conflict points throughout a transportation corridor, thus helping to improve the operating efficiency and speed of the corridor. Several techniques are available, including driveway spacing requirements, requirements for internal circulation, median treatments, and channelized turning lanes.

Action

1. **Adopt, codify, and enforce a local access-management policy that conforms with state policy.**
   The codification of an access management policy within the zoning and subdivision regulations enables planning and engineering staff to review development plans and provide desired driveway spacing and cross access elements for new developments. Staff currently review plan sets for these items, but policies are not always enforced in final project approvals. Putting these elements into an ordinance creates a legal requirement to ensure that developments occur with proper access controls and promotes maximized roadway operational efficiencies. LA DOTD currently has policies in place for thoroughfares that are in their system, but implementation has proven difficult on major commercial corridors because the City and LA DOTD do not currently have similar policies.

B. Enhance the existing Intelligent Transportation Systems (ITS) infrastructure and backbone to support the implementation of ITS-based technologies throughout the Master Plan Area.

ITS benefit travelers by enabling signal timing and other improvements that enhance traffic flow. Current infrastructure includes ITS-capable signal operations on about 15 percent of the signals within the city. This capability is greatly diminished by the lack of a centralized mainframe computer capable of processing the citywide traffic data and providing real-time signal phasing modifications to handle peak period traffic. The high cost of a complete ITS system should be balanced with other needs as long as the Shreveport-Caddo area remains relatively free of significant traffic congestion.

Intelligent transportation systems (ITS) technologies, such as computerized traffic-signal modifications, can help alleviate traffic congestion where it exists.

Actions

1. **Complete a citywide infrastructure upgrade in a phased manner to provide true ITS.**
   Overcapacity is not causing traffic congestion in Shreveport; rather, poor signalization and access management are the main culprits. By developing citywide ITS architecture and implementation standards and focusing the first phases of implementation on higher traffic areas, the City will be able to effect a greater change on localized congestion, and then finish the citywide system as funding becomes available. In addition, the initial public investment can be leveraged to provide the local-match requirements that are attached to state and federal monies.

   The ITS devices will consist of CCTV cameras, advanced transportation controllers, video detection, and dynamic message signs. The communication network must support video data from CCTV cameras and video detection cameras; data from all ITS devices such as traffic signals, school zone flashers, and dynamic message signs; and data from utility meters. The future communications network must include a highly reliable backbone/trunk line over fiber optic cable, fiber optic cable along most section line roadways with traffic control and ITS devices, use of wireless communication to remote intersections, and support IP over Ethernet.

2. **Work with NLCOG to obtain funding for ITS and signal timing.**
   City staff and Department of Operational Services (DOS) members should work with NLCOG to find state and federal monies available to construct the remainder of the necessary ITS improvements to facilitate signal timing and prioritization. To complete the ITS system throughout the city, via rehabilitation and replacement of equipment, the total long term cost is estimated to be $60,000,000. Signal timing project should be prioritized according to need.

3. **Continue to partner with Bossier through NLCOG to implement a regionwide ITS Control Center.**
   NLCOG has developed a regional ITS plan. The development of ITS capabilities throughout the region would help traffic congestion on major routes, particularly key commercial corridors, by ensuring that the signal systems in Shreveport

and Bossier were operating in conjunction with one another during peak traffic times, rather than getting people through Shreveport quickly only to have them stuck in a different pattern of signal progression on Bossier City.

C. Use effective traffic-calming techniques in neighborhoods throughout the Master Plan Area.

Traffic-calming techniques focus primarily on controlling the speed and volume of vehicles traversing neighborhood streets to improve safety. These techniques can be integrated into network and pavement design standards for developing areas or they can be added as retrofits for areas that have already developed.

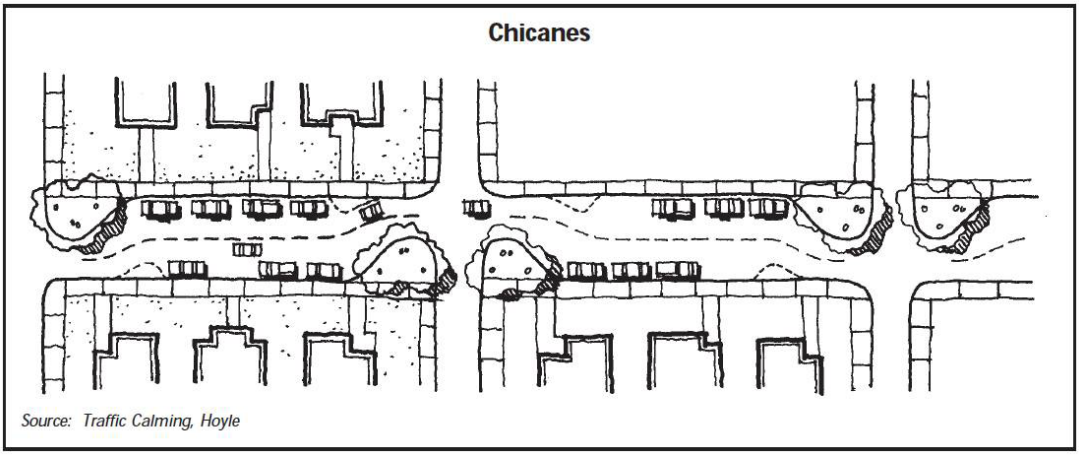
Actions

1. **Develop a traffic-calming plan as part of a larger Complete Streets program.**
   A lack of citywide traffic-calming standards has led to some test cases that did not succeed because they were planned poorly or did not include neighborhood input. By creating a traffic-calming plan and applying it to local streets that accommodate pedestrians, cyclists and automobiles, techniques for different situations can be developed that could be implemented more strategically.

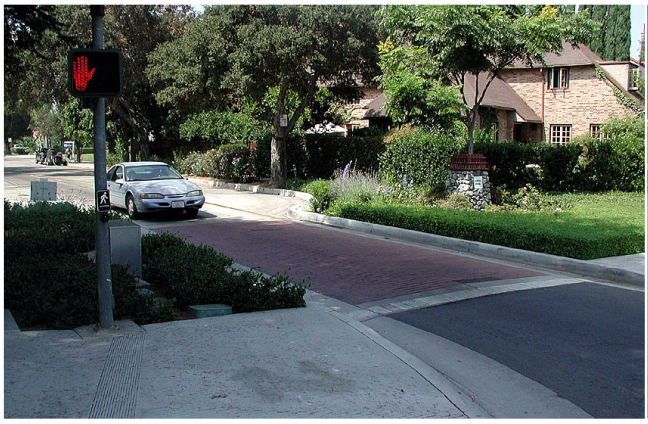
   An effective traffic-calming strategy has these characteristics:
   - The prevailing speed becomes the desired speed for the road.
   - Drivers tend to choose speeds within a narrow speed distribution.
   - A constant speed is possible over the entire length of the road segment with traffic-calming elements.
   - The strategy is compatible with all transportation modes.
   - It is effective 24 hours a day.
   - There are no parking impacts.
   - Convenient access to adjacent streets and properties is maintained.
   - There is no negative impact on emergency response.

   Neighborhood traffic-calming examples and typical application situations should be included in subdivision regulations.

2. **Incorporate neighborhood participation into traffic-calming planning to identify the most effective strategies and techniques to satisfy neighborhood needs.**
   Speeds and traffic conditions vary throughout Shreveport, as do neighborhood road use patterns. Traffic-calming techniques that work within one particular area may not work in others. Community participation can help identify techniques to



Chicanes are an effective traffic calming technique that use curb extensions, landscaping islands, and on-street parking to slow traffic through neighborhoods.




Efficient well-designed traffic calming requires a plan and neighborhood input.

provide a desired but context-sensitive effect. For example, bulb-outs may effectively slow traffic along main-street-style commercial corridors in redeveloping areas of the city, whereas speed tables at intersections may work more effectively in neighborhoods with cut-through streets.

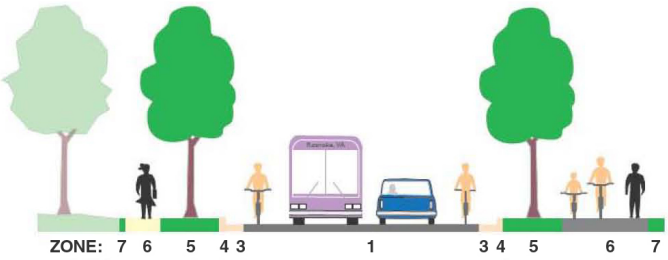
D. Establish standards for connectivity in new development projects and improvement projects.

Street networks should provide a high level of connectivity so that pedestrians, bicyclists, drivers and transit users can choose the most direct routes and access urban properties. Highly connected networks of roads and pedestrian facilities distribute traffic, reduce travel distances and times, improve routing for transit, reduce walking distances, and also provide better routing opportunities for emergency and delivery (solid waste, recycling, mail) vehicles. Connectivity is achieved by providing links within individual neighborhoods and between neighborhoods and by having a well planned collector road network to complement the arterial highway network.

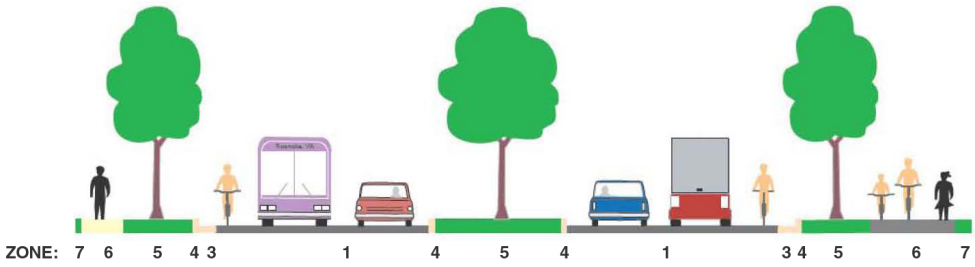
Currently, the city's street network within the loop exhibits the qualities of a well-connected system of arterials and collectors. However, the prevailing development model of subdivisions with limited access has restricted the movement of pedestrians and bicyclists within subdivisions. Codification of more street connections can enhance access to and within subdivisions. (See "Complete Streets" strategy below.) Connectivity requirements are contained within the MPC's existing subdivision standards, but modifications should be made to support better circulation and access—for example, new subdivisions should be required to have more than one point of entry in order to provide improved traffic flow. Enforcement of the patterns of transportation hierarchy that are established within the ordinance is crucial to ensuring the desired outcome.

Action

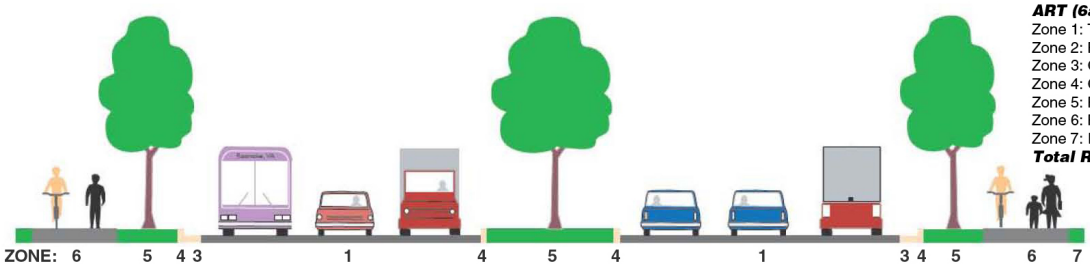
1. **Develop network connectivity indices as part of a larger "Complete Streets" program.** Connectivity of an area can be measured using a network connectivity index—commonly defined as the ratio of links to nodes. An often-cited rule of thumb is to have arterials spaced approximately ½ mile apart and collectors every ¼ mile. A network connectivity index policy would allow establishment of desired transportation hierarchies among the various transportation systems within the Master Plan Area. Rather than allowing a subdivision with



ART (2a)
Zone 1: Travel – 28' (11' lanes w/striped bike lane)
Zone 2: Parking – 0'
Zone 3: Gutter/Drainage – 4'
Zone 4: Curb – 1'
Zone 5: Planter/Utilities – 14'
Zone 6: Pedestrian – 15' (5'/10')
Zone 7: ROW Edge – 3' (6"/2'-6")
Total ROW: 65'



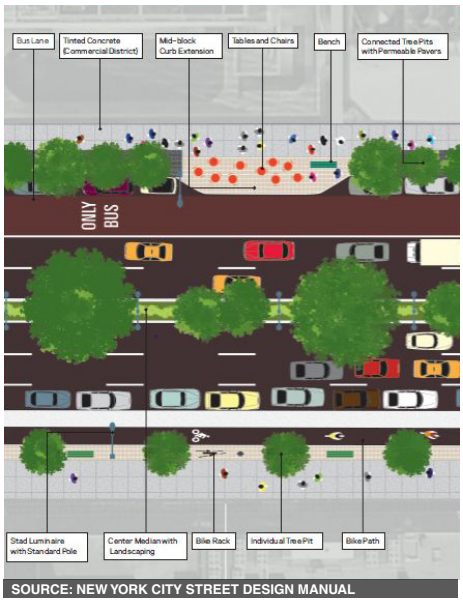
ART (4a)
Zone 1: Travel – 50'
(11' lanes w/striped bike lane)
Zone 2: Parking – 0'
Zone 3: Gutter/Drainage – 4'
Zone 4: Curb – 2'
Zone 5: Planter/Utilities – 31' (8'/15'/8')
Zone 6: Pedestrian – 15' (5'/10')
Zone 7: ROW Edge – 3' (6"/2'-6")
Total ROW: 105'



ART (6a)
Zone 1: Travel – 66'
Zone 2: Parking – 0'
Zone 3: Gutter/Drainage – 4'
Zone 4: Curb – 2'
Zone 5: Planter/Utilities – 31' (8'/15'/8')
Zone 6: Pedestrian – 20'
Zone 7: ROW Edge – 5'
Total ROW: 128'

City of Roanoke, VA
Street Design Guidelines

Complete Streets policies have been adopted throughout the U.S. Complete Streets approaches, such as those here, focus design and operation to enable safe access for all users—motorists, pedestrians, bicyclists, and transit riders.



SOURCE: NEW YORK CITY STREET DESIGN MANUAL

SOURCE: NEW YORK CITY STREET DESIGN MANUAL

a series of cul-de-sacs to take access from a thoroughfare at one point and require everyone within that subdivision to use that single point of access, the use of network connectivity indices would require additional access points and connectivity within the subdivision through trails or roadway grids.

E. Develop a "road diet" program that enables efficiency in the adaptive re-use of existing pavement through re-striping rather than reconstruction.

A "road diet" takes an existing road with extra capacity—generally with a traffic load of no more than 20,000 vehicles per day—and reorganizes the lanes to provide room for vehicles, a turning lane, and bicycles to share the road. The road diet improves traffic flow and safety while conserving capacity

.

Action

1. **Create citywide road diet street cross sections.** Given the ample capacity that exists on four-lane undivided roads throughout the city and the desire for increased bicycle facilities, revisions can be made by re-striping current roadways. By performing road diets, the City and Parish can promote safer left turns and provide on-street bicycle facilities, which provide a cost-effective way to promote safer, multimodal streets. This treatment is not recommended for roadways with posted speeds greater than 35 mph, given the safety conflicts that arise from cyclists operating close to motor vehicles at higher speeds. A number of roads within the city are viable candidates for road diets.

F. Update the Americans with Disabilities Act Transition Plan (ADA Plan) to help obtain funding for transportation-improvement projects.

The Americans with Disabilities Act requires access for disabled persons within public infrastructure, buildings, and services. Access includes physical access described in the ADA Standards for Accessible Design and programmatic access that might be obstructed by discriminatory policies or procedures. Through regulations written by the U.S. Department of Transportation, Title II applies to public transportation provided by public entities. Title II requires provision of para-transit services by public entities that provide fixed-route services.

Action

1. **Continue the implementation and update of the City's ADA Transition Plan.** Many places within the Shreveport-Caddo Master Plan Area, particularly those that have not undergone redevelopment, lack the infrastructure to support the pedestrian movements of individuals with disabilities; sine areas lack

Many four-lane roads within Shreveport have excess capacity and could inexpensively provide safe turn-in and bicycle lanes through restriping—with no increase in congestion.

infrastructure for any person. By continuing to implement the agreed-upon transition plan, the City can further these areas' compliance with the intent of the federal legislation, while also establishing a set of projects and priorities for implementation. Sites that serve many people like a crossing on Clyde Fant at Sci-Port should receive high priority.

G. Develop an up-to-date Major Street Plan to guide future road development patterns.

Shreveport has been operating for years without an updated Major Street Plan. As a result, new streets and roads have been built in reaction to sprawling development pressures. A new Major Street Plan should be integrated with the Future Land Use Plan to set forth a desired pattern of road development.

Action

1. **Create a new Major Street Plan.**

Goal 3

A safe and attractive pedestrian and bicycling network integrated with vehicle transportation.

Policies:

- ***Support a Complete Streets policy that provides roadway space for bicycles, pedestrians, automobiles, and transit vehicles, and integrates greenway and off-road routes with the roadway system.***
- ***Integrate pedestrian networks and bikeways into the development of public spaces throughout the community and provide linkages between housing and these spaces through on/ and off-street facilities.***

STRATEGIES

A. Adopt a Complete Streets policy that integrates various transportation modes.

Complete streets policies promote the development of roadways that are accessible to all users and all modes. Roadways in Shreveport and Caddo Parish are designed primarily for the automobile, often making them unsafe or uninviting for pedestrian and bicycle traffic. It is unwise to assume that an improvement in pedestrian conditions would not yield greater numbers of pedestrians simply because Shreveport has few pedestrians today. By constructing facilities that accommodate automobiles, bicycles, and pedestrians, the City/Parish can help to ensure that all individuals can use the roadways safely and comfortably, thus maximizing the city's investment.

Actions

1. **Adopt a Complete Streets policy and include examples of complete streets design in regulations for every street functional classification except limited access roadways.** The City and Parish should adopt these policies in conjunction with the complete streets policies currently being drafted and adopted by LA DOTD. Some cities have found success in focusing on roadways with a posted speed of less than 35 mph, given that pedestrians and bicyclists feel safer when motor vehicles travel at or below this speed. Along higher-speed roadways, communities often provide parallel facilities such as multi-use paths or greenway networks.

   Complete streets policies should include the following:
   - Require design engineers to incorporate Complete Streets guidelines in roadway project development.
   - Examine retrofit opportunities and standards within the existing curbs (i.e., road diets) for roadways that have ample projected capacity.

- Require training on the design of Complete Streets of all transportation consultants doing business with the city.
- Emphasize pedestrian-, bicycle-, and transit-facility linkages in planning efforts through improved design, maintenance, enforcement and education.

2. **Identify appropriate streets to serve as potential "bicycle boulevards."**
   Bicycle boulevards are streets that have relatively light motorized vehicle traffic and are marked as bicycle routes with signs and pavement striping. Motorists expect to see bicyclists on these routes and proceed with appropriate caution. Bike boulevards rank as intermediate routes between bicycle paths with separate rights-of-way and streets where bicycles share the road with high volumes of vehicle traffic.

B. Improve the pedestrian environment by using a context-sensitive solutions (CSS) approach.

Actions

1. **Institutionalize, for example the ordinance, the CSS process by ordinance for streets designated as collectors, arterials, and highways.**
   A CSS project-development process ensures that all stakeholders are included in project design. In addition, it takes into account future development expectations.

2. **Encourage inclusion of bicycle amenities for commuter in new and redeveloped employment centers.**
   As bicycle routes are developed for commuters, explore incentives for provision of secure bicycle parking, commuter showers and similar amenities.

C. Continue to promote initiatives like "Safe Routes to Schools."

Safe Routes to Schools policies strive to create a roadway and trails network where school-age children can safely walk to neighborhood schools. When Safe Routes to Schools policies are designed in conjunction with the strategies mentioned above, including ADA Transition Plans, communities can create pedestrian and bicycle networks that serve many individuals accessing destinations throughout the city and parish.

Action

1. **Work with the MPO and the Caddo Parish School District to establish a more extensive Safe Routes to Schools program for neighborhood schools and potentially for magnet schools in Caddo Parish.**

Goal 4

A convenient, fast, and efficient public transit system.

Policies:

- *Invest in transit improvements to encourage more ridership and reduce the number of single-occupancy vehicle trips and provide coordinated transportation and land use planning.*

STRATEGIES

A. Reduce ozone emissions through the enhancement of public transit.

Under new EPA criteria, the Shreveport-Bossier area is likely to be categorized as an air-quality non-attainment area. Planning for increased transit to reduce single occupancy vehicle-miles of travel and relieve congestion, is one strategy for offsetting emissions.

Actions

1. **Continue to work with NLCOG as the ozone conformity plan is developed.**
   An ozone conformity plan provides a scheduled implementation of projects and initiatives designed to mitigate further increases in the ozone levels within the Metropolitan Statistical Area. Plan elements include projects that will reduce single-occupancy-vehicles, conversions to clean fuel sources such as compressed natural gas (CNG), reductions in point-source ozone contributions such as those generated by industrial users, improvements in the local vehicle fleet to enhance fuel efficiency and land use initiatives to support more transit use.

2. **Continue implementing the conversion of the bus fleet to CNG vehicles.**
   SporTran has received funding to convert its vehicle fleet to CNG fuel. In addition, funding has been allocated to construct the necessary fueling station. The completion of this project within the near term will help with operating costs, utilize local resources in the form of CNG, and promote cleaner air in accordance with the ozone conformity plan which is being developed.

3. **Provide public access to CNG fueling stations.**
   Public access to CNG fuel stations will encourage private use of CNG vehicles.

B. Improve the bus system in Shreveport for current riders and attract more "choice" riders.

Many Shreveport residents would like to see improvements in the transit experience. Currently, the system has long wait times between buses, poor signage, few bus shelters or benches, and no posted schedules at bus stops. To improve the transit experience and capture "choice" riders, SporTran will need to make improvements. Some of these actions would likely require higher population densities over time to be viable (see recommendation on coordinating land use and transportation policies below).

Actions

1. **Examine the feasibility of consolidating redundant and/or underperforming routes to add additional service on nearby principal routes while developing system-wide standards for operational efficiency that will be used to make future decisions about route reductions, service enhancements, and long-range planning efforts for higher frequency services like bus rapid transit (BRT).**
   Given the funding constraints of the system, it is important that all service decisions be based on operational efficiency and provision of services for residents who need access to transit services for a variety of reasons. By basing consolidations and frequency adjustments on a system-wide set of data, SporTran can ensure the most appropriate allocation of all funding sources that are currently utilized.

2. **Improve the frequency and convenience of existing SporTran service.**
   Continue to implement capital improvements, such as the GPS bus-tracking program that has already started within the para-transit fleet, signal-priority technology, and consolidation of stops to reduce travel times and improve

Express buses, or even bus rapid transit (BRT), which operates like a train, could connect higher-density residential areas to job centers.

efficiency along existing routes. Reducing headways to less than 20 minutes during peak periods would be a good initial goal for routes with the highest ridership volumes.

3. **Enhance the ease, convenience, and overall experience of using transit for both frequent and occasional riders.**
   Improvements such as bike racks on buses are underway. Additional improvements should include installation of more bus shelters and benches for rider comfort, posting of route maps and schedules at higher-traffic locations/major transfer points for convenience, and ultimately installing GPS tracking/real-time technologies to notify riders when the next bus will be arriving, either on personal mobile devices or on posted signage at key stops. The SporTran website schedule also upgraded to provide trip-planning capabilities and real-time tracking of buses.

C. Invest in a performance-management system.

Operational efficiency and on-time service are the main ways to ensure that the transit system continues to provide reliable service for those individuals who choose to use SporTran.

Action

1. **Install on-board GPS units on SporTran buses for performance-management purposes.**
   Transit vehicles can be equipped with on-board GPS units and computers that allow fleet managers and drivers to know how efficiently each route within the system operates. These data provide relevant information for each route that might suggest service improvements to improve efficiency. In addition, real-time tracking also allows for further enhancements such as "next bus" signage or web-based trip planning for individuals who use the system daily.

D. Integrate land use and transportation policies.

Recent development within the Master Plan Area does not facilitate transit service. Residential densities are too low and commercial developments that are large enough to attract people using transit do not place their entrances near bus stops. This is primarily a function of the development model that emerged in the 1960s. As new development occurs within the Master Plan Area, transportation and land use planning must be integrated as complementary systems that provide mutually-reinforcing characteristics.

Transit systems that offer service levels that are more than transportation of last resort can only be supported by sufficient population densities. Site-level densities are higher for rail than for buses. Seven to eight households per acre are needed to support bus stops. This is slightly above the average of five households per acre typical of the older, small-lot, single-family neighborhoods in Shreveport (assuming that all lots are occupied which is not the case in many areas). Rail requires a minimum of 15-20 households per acre, and to shift from cars to transit or walking, employment centers need to have approximately 50 employees per gross acre. Enhanced transit in Shreveport will depend on developing nodes of sufficient size and density of population to support it. New, denser developments should also be designed with buildings oriented to transit routes.

Actions

1. **Reconfigure transit operation to provide weekday peak-hour express bus service to/from job centers from peripheral residential areas.**
   SporTran has utilized a federal funding source known as the Jobs-Access Reverse Commute program to provide nighttime access to areas of the city where overnight crews clean offices and commercial locations. This program typically identifies corridors on a trial basis that are supposed to be implemented long-term with regular funding sources. Once these trial-period

funds are exhausted, the City will need to find permanent funding if these nighttime routes are to remain in service.

2. **Identify major intersections where "transit-ready development" pilot programs could be initiated.**
   Transit-ready developments are pedestrian-oriented, located at mixed-use nodes, and provide densities that can potentially support future transit service. The Future Land Use Plan identifies potential major mixed use centers within Shreveport that could support these densities and allow for faster transit routes in the future, including express service or bus rapid transit.

3. **Identify potential route corridors and mixed-use nodes that could support future bus rapid transit (BRT) service in the longer term.**
   Bus rapid transit combines the flexibility of buses, because it uses roadways, with the service advantages of rail. The best BRT systems have exclusive lanes on a roadway, stations where passengers pay before they board, multiple-door vehicles fueled by clean energy, and can offer express or local service. They are cheaper to build than trains and can be built more quickly. Population numbers, distribution and density would have to change significantly in Shreveport to support bus operations with service frequencies below fifteen minutes. Within the 20-year planning horizon of this master plan, the potential for BRT-level densities are possible only for two or three development areas, and then only with careful planning. However, land use and transportation policies should be coordinated with the long-term potential of BRT in view.

Goal 5

Improved intercity transportation.

Policies:

- *Support initiatives to enhance commercial flight connections and explore potential regional passenger rail opportunities.*

STRATEGIES

A. Advocate for increased air service at Shreveport Regional Airport.

Shreveport residents and workers have stated their desire for more service options from Shreveport Regional Airport, i.e., more direct flights to more places on more airlines. Improved service could also benefit the city economically, making it easier and faster for business travelers to travel to and from the area. Realistically, however, there are not enough passengers in 2010 to make it financially feasible for airlines to expand service without a subsidy. Therefore, over the short and medium terms, enhancements in intercity air service will require coordination among local service providers, regional mobility partners, and nearby cities with enough population and business interests to produce increased demand at Shreveport Regional Airport. An Airport Task Force Report released in late 2010 explained the options available to obtain more, and less expensive, air service.

Actions

1. **Work with economic development organizations to enhance marketing of Shreveport Regional Airport to increase regional air traffic.**
   Increased marketing of the airport could attract additional passengers who may tend to travel through DFW or other regional airports.

2. **Regularly track changing demand at the airport.**

B. Support and advocate for state and federal funding for regional passenger rail service through Shreveport.

Actions

1. **Designate specific staff to work with state officials and garner legislative support for the restoration of passenger rail service through Shreveport.**
   It is important that the passenger rail discussions stay in the forefront as decisions about transit services are made. By assigning a staff person to coordinate and track developing partnerships, the region can begin to take part in the discussions necessary to ensure that the it is not left out of possible expansions or new services in the future. NLCOG would be the appropriate agency to coordinate this advocacy effort.

2. **Include examination of high-speed intercity rail along the I-20 and I-49 corridors in a larger study effort in partnership with Dallas, Texarkana, and Little Rock.**

High-speed rail corridors have been identified at the national level for many major transportation routes. The proposed route nearest to Shreveport would connect Dallas and Little Rock through Texarkana. The specifics of this route have not yet been studied; however, a potential alignment could travel along improved freight-rail rights-of-way from Dallas to Longview along I-20; Longview to Shreveport along I-20; Shreveport to Texarkana along the future I-49 corridor; and then Texarkana to Little Rock along I-30. A dialogue between NLCOG and the City/Parish should be initiated with the regional planning organizations of Dallas/Fort Worth, Texarkana, and Little Rock as well as the freight railroad companies that operate within the rights-of-way described, to advocate for such an alignment. It would improve intercity travel between regional centers and add potential economic benefits. Studying the feasibility of this corridor in the future, the costs associated with the implementation of such infrastructure, and the travel benefits associated with high-speed intercity passenger rail should be explored.

D. Getting Started

Early actions that are not costly will provide a foundation for more ambitious activities.

ACTION	RESPONSIBLE PARTY
Adopt a context-sensitive solutions framework for major street improvement projects, working with the MPC and other agencies to convene stakeholders.	City Department of Operational Services, Streets Section (DOS); MPC
Adopt a "complete streets" policy and include examples of "complete streets" design in regulations for every street functional classification except limited-access roadways.	DOS Streets Section; MPC
Adopt, codify and enforce an access management policy that conforms to the statewide policy of reducing congestion on roadways with sufficient capacity.	DOS Streets Section; MPC; City Council
Examine the feasibility of consolidating redundant and/or underperforming routes to add additional service on nearby principal routes while developing system-wide standards for operational efficiency that will be used to make future decisions about route reductions, service enhancements, and long-range planning efforts for higher-frequency services like bus rapid transit (BRT).	SporTran
Designate specific staff personnel to work with State officials and garner legislative support for the restoration of passenger rail service through Shreveport.	NLCOG, Mayor's Office