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# Transportation Chapter

# Purpose of the Transportation Chapter

The purpose of the *Transportation Chapter* is to guide the further development of a citywide multi-modal transportation system integrated with the city's land use plans. It is based on the philosophy and strategies of the 2003 Council-adopted *Comprehensive Transportation Plan*. The intentions of the Elements within this chapter are to:

- Coordinate local and regional land use and transportation decisions
- Achieve a more balanced transportation system and reduce reliance on the automobile
- Preserve neighborhood character
- Enhance streets to maximize safe and efficient use by all users such as pedestrians, bicyclists, transit riders, and motorists
- Enhance the ability to drive to, from and within Tempe, but not through Tempe

The Transportation Chapter highlights the ability to move people, instead of focusing solely on improving the ability to move vehicles. In order to maximize the safety and efficiency of the transportation system in Tempe, objectives and strategies encourage the use of a variety of transportation options and a reduction in single occupancy vehicle trips. Effective land use planning that takes advantage of a development site's proximity to public transit furthers the plan's objectives. Integration of advanced transportation technology will also help to achieve the plan's objectives.

# Background, Existing Conditions, and Opportunities

Historically, transportation and land use planning have focused on the automobile as the primary mode of travel. For example, Tempe's streets were developed within a grid pattern of one-mile-square sections of land with major arterials at one-mile intervals. Disconnected collector and local streets, as well as other transportation features such as freeways and railroad rights-of-way, created barriers to pedestrian, bicycle, and transit modes of transportation.

Decades of federal policies that fostered automobile-dependent development at the expense of other modes such as pedestrian, bicycle, and transit, encouraged development sprawl, traffic congestion, and the denigration of air quality in the majority of this country's urbanized areas. More recent federal legislation such as the Clean Air Act Amendments (CAAA) and surface transportation acts (ISTEA and TEA 21) recognized that communities cannot build their way out of the problems associated with traffic congestion and poor air quality through roadway expansion. These legislative acts mandated that modes of transportation other than automobiles be given greater funding and development priority, that local needs be addressed in the planning process, and that all modes of transportation be integrated. These new directions have supported the efforts of cities to more effectively integrate land use and transportation planning.

Today, Tempe provides a desirable quality of life for its residents, employees, and guests. The city has a strong commitment to maintaining the characteristics that enhance livability and contribute to making it one of the best places in the country in which to live, learn, work, and play. The policies established by this element of the plan reinforce this commitment and will help ensure that Tempe preserves its quality of life and becomes a sustainable community that offers a variety of transportation options to its residents.

The City of Tempe and the surrounding region face significant challenges in meeting the growth and mobility demands anticipated during the next thirty years. Population and employment in the region are projected to increase substantially, with a somewhat lower growth rate occurring in Tempe. The *Transportation Chapter* addresses these challenges by providing a long-range, strategic approach to implementing transportation improvements, services, and programs. The *Transportation Chapter* was guided by the following considerations:

## Sustained Mobility / Greater Accessibility

Emphasize movement of people and goods instead of movement of cars, thereby encouraging reduction of single occupancy vehicle (SOV) trips. No single mode of transportation will be sufficient to meet the mobility needs of Tempe. Investments in rail and bus transit improvements, technological innovations, transportation system management and public policies and strategies that discourage use of the SOV will all be necessary to meet the mobility needs of the community.

# Enhanced Quality of Life and Preservation of Neighborhood Character

Provide transportation options for access to work opportunities, essential services and recreational opportunities. Preserve, enhance and/or create conditions amenable to pedestrians; encourage people to walk and shop in areas near their workplaces, transit stops, residences or schools; ensure that basic universal accessibility needs are met; preserve the city's neighborhoods and minimize the intrusion of additional traffic into neighborhoods.

## Enhanced Environmental Quality

Encourage a variety of travel modes and reduce reliance on the automobile in order to enhance environmental quality. Sustained commitments to improve air quality must be made and significant progress must be achieved in order to meet state and federal mandates. Continue strong commitments to areas such as clean fuels and advanced telecommunication infrastructure. Further progress will require a regional approach: Tempe's land locked central location warrants Tempe taking a leadership role.

#### Increased Economic Opportunities

Support redevelopment efforts and promote sustained economic growth in selected areas of the city. Transportation planning and programming decisions should support the economic development/employment strategies of the city. Support for all facets of the city's economy, the efficient movement of people and goods, and access to major intermodal transportation facilities (such as airports/freight/rail yards) must be consistently maintained. The continued economic vitality of the community is essential to the city's overall development goals. Opportunities for economic development linked to transportation improvements should be vigorously pursued. Encourage and improve existing economic ties with Phoenix Sky Harbor International Airport and other regional airports. Maximize the city's economic opportunities with all airports in the valley to take advantage of the city's central location. Promote the city's proximity to airports, to visitors and prospective companies locating in the valley.

# Guiding Principles & Policy Directions

- Support the city's commitment to accommodate additional regional travel demand by transit and other modes, as alternatives to street widening, to address capacity needs
- Obtain regional funding for regional traffic and transit investments to meet future and current travel needs/demand
- Accommodate additional demand through new technology, such as Intelligent Transportation System (ITS) and Travel Demand Management (TDM) programs
- Ensure that arterial classifications will not promote the development of overpasses or rights-of-way greater than 110 feet

Consider alternatives to freeway widening such as high-capacity transit and/or high occupancy vehicle
lanes. (If widening is deemed necessary, implementation plans will include commitments to mitigate all
negative impacts, including noise and air quality deterioration, aesthetic degradation, and disruption of
neighborhoods. City Council will review all proposals to widen freeways.)

#### Overall Goal

Develop an effective multi-modal transportation system integrated with sound land use planning, thereby creating safe, efficient and accessible mobility for persons, goods and commerce within the city and region.

# **Overall Objectives**

- Develop a functional relationship between the diverse land uses in Tempe and the transportation system that serves them
- Identify strategies for strengthening cooperative land use and transportation planning and design efforts among the City of Tempe, Arizona State University, and other public and private stakeholders
- Continue to involve neighborhood and community representatives in ongoing planning and design of transportation systems, facilities and services
- Work to ensure that transportation solutions preserve and enhance Tempe's neighborhoods
- Coordinate Transportation Plan and project development with Tempe's ordinances and relevant codes to ensure consistency among city goals
- Establish a strong visual identity and aesthetic image for Tempe, its gateway entrances, and its neighborhoods
- Discourage the use of single occupant vehicles (SOV's)
- Encourage the use of alternate modes of transportation and provide incentives to increase the number of transit trips
- Promote and provide incentives to potential attendees of special events to use alternate modes of transportation (transit, bike and/or walk)

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# Pedestrian Network

Every trip begins and ends as a pedestrian trip. The City of Tempe recognizes that pedestrian travel is an integral part of the citywide transportation system. The city is committed to improving conditions for pedestrians citywide. Pedestrian activity in the city is for both recreation and commuting. ASU and Downtown Tempe generate significant pedestrian traffic. 2000 Census data shows four percent of Tempe residents commute primarily by walking to work. Public involvement efforts have confirmed that the community is strongly interested in improving conditions for pedestrians citywide, and in more fully incorporating pedestrians as an integral component of the transportation system. The city needs to guarantee a safe, secure, comfortable and attractive environment for walking to achieve its transportation goals. As part of the city's commitment to pedestrians, a Transportation Overlay District was approved to promote walking as an alternative mode of commuting.

The goal of the Pedestrian Network Element is to recognize and encourage pedestrian travel as an important part of the transportation system.

#### **Objectives**

- Increase awareness that pedestrians are a priority in Tempe, and that pedestrian travel is an important part of the overall transportation system
- Provide convenient and safe pedestrian access to destinations to promote neighborhood sustainability
- Ensure accessibility for all

# Strategies

- Raise awareness about the characteristics and needs of pedestrians, including accessibility goals that go beyond mere compliance with the Americans with Disabilities Act (ADA)
- Develop public education and outreach techniques to promote pedestrian safety and compliance with pedestrian-related laws and regulations
- Implement a transportation overlay district
- Develop pedestrian network plans as part of neighborhood and other planning efforts.
- Implement programs and projects that increase pedestrian accessibility, safety, and security; enhance the pedestrian environment; and create engaging and interesting experiences for pedestrians
- Improve the pedestrian network to include sidewalks on all streets in accordance with prescribed standards; street crossing improvements, as well as crossings at railroad rights-of-ways, canals, freeways, and other barriers to travel; and additional multi-use paths and crossings
- Improve shading on all pedestrian facilities to encourage pedestrian traffic
- Implement improvements on designated Transit Streets and Green Streets to increase use by pedestrians, bicyclists and public transit
- Encourage planning that provides a diversity of land uses (employment, shopping, businesses, services, parks, schools) within a five to ten-minute walk for all Tempe residents
- Encourage development patterns and site configurations that maximize pedestrian access and circulation
- Evaluate the sidewalk system and pedestrian network to assess adequacy and implement specific improvements, such as eliminating gaps, removing barriers, and widening sidewalk capacity to facilitate and thereby encourage increased pedestrian travel
- Improve the pedestrian network in Tempe to accommodate all types of pedestrians

#### Sources

- City of Tempe Comprehensive Transportation Plan
- City of Tempe Zoning and Development Code
- Transportation Design Toolbox
- U.S. Access Board Public Rights-of-way Guidelines

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## **Bikeways**

The City of Tempe's bicycle program has a long history, beginning with the first Bicycle Plan and Citizen Advisory Committee in Arizona. In 1971, the City of Tempe striped its first bike lanes on College Avenue. In 1997, Tempe was the first city in the Phoenix metropolitan area to be honored by the League of American Bicyclists with the designation of "Bicycle Friendly Community." By 1998, the city had built more than 100 miles of bike lanes, routes and paths. The city also completed the *Multi-Use Path System Plan*, which identifies path projects in the city. The city has built bike facilities for all types and levels of bicyclists. *2000 Census* data indicates that 3.4 percent of all commute trips are by bicycle, the largest proportion of bicycle commuters among all the cities in the Phoenix metropolitan area. Bicycling is an important mode of travel throughout Tempe, and the city has a long-standing commitment to encouraging bicycling through the development of bikeways and various educational and promotional programs. The city is committed to implementing the *Multi-use Path Plan* and the projects identified in the *Tempe Bicycle Facilities Plan Update* and *Multi-Use Path System Detailed Plan*.

The goal of the Bikeways Element is to recognize and encourage the use of the bicycle as an important part of the transportation system.

### *Objective*

 Provide safe and convenient bicycle access from neighborhoods to schools, parks, shopping, transit, employment, and other destinations

# Strategies

- Implement the provisions of the city's adopted Bicycle Plan and Bicycle Facilities Plan Update
- Adopt and implement design and development standards that require secured bicycle parking
- Improve the bikeway system in Tempe to ensure that the travel network and facilities will accommodate all types and levels of bicyclists
- Improve the bikeways network by including: bike lanes on all arterial streets; street crossing improvements, crossings at railroad rights-of-ways, canals, freeways, and other barriers to travel; and additional multiuse paths and crossings
- Implement improvements on designated Transit Streets and Green Streets to encourage increased pedestrian and bicycle travel and transit use
- Participate in regional bikeway planning efforts to ensure that Tempe's bikeways connect with those of neighboring communities and that Tempe's system is an integral part of the overall regional system
- Continue to implement programs and special events that raise awareness about bicycling safety, the
  needs of bicyclists, and the availability of bicycling opportunities in Tempe, including special events
  related to bicycling in the community
- Implement a pedestrian overlay district

#### Sources

- Tempe Comprehensive Transportation Plan
- Tempe Bicycle Plan
- Bicycle Facilities Plan Update
- Multi-Use Path System Detailed Plan

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# **Transit**

In 1996, Tempe passed a dedicated sales tax (one-half of one percent) for transit improvements. The City of Tempe's transit program promotes the use of alternative modes of transportation and helps to create a livable community with a balanced transportation system. Both the City of Tempe and Valley Metro provide fixed-route transit service within Tempe. Valley Metro provides regional routes that link Tempe to activity centers throughout the region. The City of Tempe operates routes that supplement regional bus service and provide bus access to Scottsdale, Phoenix, Chandler, Gilbert and Mesa. Tempe also provides free highfrequency bus circulator services (Flash Forward, Flash Back and Neighborhood Flash), serving downtown Tempe, Arizona State University (ASU), and neighborhoods east and west of these destinations. Tempe also provides a bike-on-bus program with bike racks on buses, as well as lockers and racks located in areas served by transit. Special event transit service is provided from designated park-and-ride lots in Tempe. ASU provides campus shuttles between the main campus in Tempe and the east and west campuses in Mesa and Phoenix, as well as to Mesa Community College. Transit transfer centers provide a high concentration of bus routes for passenger connections. As of 2003, Tempe has two transit transfer centers: ASU at 5th Street and College Avenue and at Arizona Mills Mall off of Priest Drive south of the Superstition Freeway. Valley Metro coordinates a system of publicly and privately owned park and ride lots throughout the metropolitan area. Tempe funds regionally-oriented Dial-a-Ride service for senior citizens and people with disabilities.

The Central Phoenix/East Valley Light Rail Transit (LRT) project is planned to be in service in late 2006. Planned rail alignments and stations are identified, and station areas are designed in concert with community planning efforts. The light rail line will connect north Phoenix, downtown Phoenix, ASU's downtown Phoenix campus, Papago Park Center, Tempe Town Lake, downtown Tempe, ASU, Apache Boulevard, and the East Valley Institute of Technology. Nine stations are planned in Tempe. Phoenix Sky Harbor International Airport will be accessible by a people-mover connection.

The Maricopa Association of Governments (MAG) initiated the *High Capacity Transit Study* in 2002, considering feasibility for commuter rail along existing freight rail corridors, light rail and bus rapid transit as regional alternatives. A north/south major investment study is being conducted jointly by the cities of Tempe and Scottsdale to determine transit options linking Scottsdale, Phoenix and Tempe. The City of Chandler also initiated a major investment study looking at high capacity transit connections from Chandler to downtown Tempe and the Central Phoenix/East Valley Light Rail Transit project.

The city has a nationally recognized Art in Transportation Program, which supports its commitment to cultural amenities, incorporating art to create unique and aesthetic character in transportation facilities. In every element of the transportation chapter, public art is incorporated into designs of buses, shelters, bike lockers, racks, street crossings, sidewalks and mixed-use paths. The city will continue to implement art projects as an integral part of the overall transportation program.

Based on the 2000 Census data, approximately 3 percent of all work trips to, from and within Tempe were made by transit. In 1990, transit share was 1.5 percent. Transit ridership in Tempe increased 417 percent over six years, from 1,227,972 total annual boardings in 1996 to 6,349,098 in 2002.

Plans for transit improvements in Tempe include increased peak-period service on all routes, extended hours on all routes, implementation of new routes, ongoing bicycle and pedestrian improvements and bus pull-outs where possible. Design and construction of a downtown Transit Center, additional transfer facilities where needed and continued planning and implementation of light rail, commuter rail and bus rapid transit are also identified. Operational plans include ongoing public outreach and education, service performance evaluation, express route improvements, regional major investment studies, neighborhood traffic calming and regional transportation planning coordination.

The goal of the Transit Element is to coordinate Tempe's Transit Plan with the overall transportation plan to support increased ridership.

# **Objectives**

- Increase available transit modes and services to support ridership increases and an expanded transit mode share
- Facilitate connections among transportation modes

#### **Strategies**

- Ensure that fast and frequent transit service is provided, with service at 10- to 15-minute intervals with no more than a 5- to 10-minute walk from any location within Tempe
- Ensure that peak transit loads associated with special events can be accommodated
- Continue to develop programs that provide incentives for using transit, including use of transit to attend special events
- Expand and improve express bus service between Tempe and key regional locations and develop supporting facilities, including direct access ramps and HOV lanes
- Analyze the viability of, and develop, regional Bus Rapid Transit (BRT) corridors where appropriate
- Implement Central Phoenix / East Valley Light Rail Transit (LRT) project
- Implement final recommendations for the Scottsdale / Tempe High Capacity Corridor
- Coordinate and cooperate with the ongoing Chandler High Capacity Study
- Study the viability of commuter rail along the Union Pacific corridor
- Consider fixed guideway transit along Rio Salado Parkway
- Continue to coordinate with all neighboring cities and the region on regional transportation planning programs and projects
- Coordinate with land-use planning efforts to promote transit-oriented development, and enhance access to transit throughout the city
- Improve the transit system in Tempe to ensure that the network and facilities will accommodate all types
  of transit users
- Integrate Intelligent Transportation System (ITS) technologies into transit system plans and services
- Implement improvements on designated Transit Streets and Green Streets to encourage increased use by pedestrians, bicyclists and transit
- Implement the provisions of a pedestrian overlay district
- Modify bus routes to support future light rail stations
- Develop Regional Park and Ride facilities at regional centers or connection points
- Develop Transit/Transfer Centers in downtown serving LRT, and at other major transfer locations

#### Sources

- Tempe Comprehensive Transportation Plan
- Tempe Transit Plan

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# **Travelways**

The *Travelways Element* identifies existing and proposed routes of travel for vehicles and freight trains. Travelways include streets, freeways and freight rail lines. Tempe's current local roadway network is a developed grid system of north-south and east-west streets. The classification of these roadways includes freeways, arterials, collectors and local streets. The network makes the community accessible and provides multiple parallel routes. Several freeway facilities traverse the City of Tempe, including the Superstition Freeway (US 60), Red Mountain Freeway (202), Pima Freeway (101), and Interstates 10 and 143. These freeway facilities provide access at various interchanges and provide regional and interstate connections. As of 2002, there were 185 traffic signals in Tempe, 83 percent owned and maintained by the City of Tempe, 9 percent owned by ADOT and 8 percent owned and maintained by other agencies. As of 2002, the majority of high-volume traffic occurred on the east-west roadways serving Tempe and adjacent communities with access to the two north-south freeways. Rural Road and McClintock and Priest drives are the highest vehicle volume north-south arterials.

Union Pacific owns the right-of-way and controls operations along the freight railroad tracks in Tempe. The main line enters Tempe in the northwest, runs south through downtown Tempe and turns east, parallel to Apache Boulevard. The freight rail line also runs south, west of Mill Avenue and east of Kyrene Road within the municipal boundary. As of 2002, freight traffic averages eight trains per day, and often uses branch lines serving industrial areas within the city. There are 44 railroad/roadway crossings in Tempe. The City of Tempe is acquiring Union Pacific abandoned railroad right-of-way for bicycle, pedestrian and light rail corridors.

The Maricopa Association of Governments (MAG) and the Regional Public Transportation Authority (RPTA) have prepared a regional transportation improvement program, which includes municipal level transportation projects. Programmed projects in Tempe include improvements such as traffic calming, bike lanes, sidewalk improvements, street lighting, intersection improvements and landscaping, along several roadway corridors. ADOT projects in Tempe primarily focus on the construction of high occupancy vehicle (HOV) lanes, collector/distributor system, rubberized asphalt improvements, and interchange upgrades. ADOT is also preparing studies for regional modifications to the I-10 Corridor.

The goal of the Travelways Element is to encourage the development of a street and rail network in Tempe that balances the needs of various types of travelers and more fully serves all modes of transportation.

# **Objectives**

- Retain existing automobile traffic capacity while reducing reliance on the SOV
- Create a compatible relationship with adjacent land uses
- Achieve traffic speeds appropriate to adjacent land uses
- Mitigate heat and climate conditions along streets, where appropriate
- Provide safe pedestrian and bicycle environments along streets
- Avoid widening streets as a solution to traffic congestion
- Encourage and plan for rail uses

#### Strategies

- Utilize a travel demand model as one tool to measure street and travelway performance
- Continue to proactively repair and maintain the city's street system
- Develop and implement projects that offer and promote alternative transportation choices (such as walking, bicycling, transit) within the street network of Tempe
- Enhance the strong visual identity and aesthetic of Tempe, its gateway entrances, and its neighborhoods

- Work with neighborhoods to minimize negative impacts of transportation projects
- Consider noise mitigation strategies for freight activities
- Implement design guidelines for arterial and collector streets to calm traffic and meet the needs of each mode of travel
- Consider lowered speed limits (e.g., 35 mph on arterials) to promote efficiency and safety
- Increase street tree plantings and landscaping in medians and along arterials
- Encourage planning and development that is consistent with the street classification system, including the designation of Transit Streets and Green Streets
- Separate pedestrians and other modes of transportation where possible
- Implement the provisions of the proposed pedestrian overlay district
- Continually investigate new and emerging transportation technologies for use in the design and operation of streets and transit
- Coordinate with emergency services to ensure that proposed transportation projects maintain a high level of emergency response
- Integrate Intelligent Transportation System (ITS) technologies into the street network and traffic flow control system where appropriate
- Evaluate all other alternatives (HOV lanes, high capacity transit service, etc.) when considering freeway widening proposals
- Require that any proposal to widen or otherwise expand a freeway include, as part of the planning
  and design process, provisions for noise abatement, avoidance of impacts on air quality and
  neighborhoods, and consideration of aesthetics, landscaping, and public art

#### Sources

City of Tempe Comprehensive Transportation Plan

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# Motorists

The *Motorists Element* addresses privately owned vehicles (POVs) such as automobiles and motorcycles. For decades the streets and travelways of Tempe have been planned and constructed to accommodate an ever-increasing number of POVs. Both the numbers of POVs registered in Tempe and the number of miles traveled annually have continually increased.

Although Tempe is land-locked, as infill development proceeds, its population and the number of POVs registered within the city will continue to increase. It is reasonable to expect that the number of vehicles traveling on the city streets and freeways will continue to increase as the population of the city grows. In addition, the growth in the populations of cities adjacent to Tempe will also increase the number of automobiles traveling on Tempe streets. City planners and traffic engineers recognize the futility of building and widening freeways and city streets to accommodate greater numbers of vehicles each of which, on average, annually travels more miles.

Although it is likely that the City of Tempe can do little to prevent these annual increases, it can certainly mitigate the rate of growth. This will be accomplished through sound transportation-related planning that encourages alternatives to single occupant vehicle trips.

The goal of the Motorists Element is to ensure that persons who choose to travel in privately-owned vehicles on the streets and freeways of Tempe will be able to do so safely and efficiently.

# **Objectives**

- Provide safe streets and freeways for motorists traveling in Tempe
- Facilitate the efficient and safe movement of motorists on Tempe arterial and collector streets
- Coordinate with emergency services to ensure their ability to respond to emergency calls promptly
- Reduce the annual growth in the number of POVs traveling Tempe's streets and freeways
- Reduce the annual growth in miles traveled within Tempe per vehicle registered in Tempe
- Reduce cut-through traffic and speeding on neighborhood streets

## **Strategies**

- Maintain existing roadways
- Rely on a Travel Demand Model to measure street and travelway performance
- Integrate Intelligent Transportation System (ITS) technologies into the street network and traffic control system
- Promote use of the freeway system, rather than city streets, by motorists passing through without intending to stop in Tempe
- Develop alternative modes of transportation as described in the other sections of this chapter

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# Parking and Access Management

The parking facilities within Tempe range from non-managed residential areas in south Tempe to intensely managed parking at Arizona State University (ASU) and downtown Tempe. These distinct area issues result in varying needs for parking management. Downtown Tempe has metered on-street parking, fee parking off-street, free daytime parking, validated parking and a coupon redemption program. Parking in downtown is currently the responsibility of the City of Tempe, the Downtown Tempe Community (DTC) and private entities. ASU has developed an extensive parking infrastructure and management program to address the needs of students, faculty, staff and visitors, including metered on-street parking, fee parking off-street, permit parking in designated lots and special event parking.

The goal of the Parking and Access Management Element is to encourage project planning, design, and development incorporating parking and access management strategies to influence travel behavior and reduce congestion on busy streets.

## **Objectives**

- Promote parking areas
- Enforce parking rules
- Address neighborhood parking issues
- Integrate land use policies with transportation and parking needs

### **Strategies**

- Improve the visibility and motorist awareness of downtown parking
- Improve way-finding for downtown parking
- Promote shared-use parking facilities
- Comply with development code updates that involve revisions to parking and access management provisions
- Expand the residential permit-parking program, where appropriate
- Implement on-street parking where appropriate in downtown and neighborhood commercial areas
- Encourage compliance with parking regulations, as well as other proposed parking strategies, by adopting development code updates and a pedestrian overlay district provisions
- Update the Downtown Parking Management Program to prepare for anticipated demand and to support automobile, transit, bicycle, and pedestrian goals
- Implement access management regulations, design standards, and review processes
- Continue agency coordination efforts related to parking issues among the City of Tempe, ASU and DTC

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# Aviation

Phoenix Sky Harbor International Airport is one mile from Tempe's border and three miles from downtown Tempe, ASU and Town Lake, three of Tempe's planned growth areas. Aviation is a critical component of the regional transportation system, and serves many businesses and residents in Tempe. With the benefits of this proximity also come several challenges. From 1990 to 2000, Phoenix Sky Harbor International Airport had a 32 percent increase in passengers. Cargo volume also increased 69 percent during this decade. By 1999 it served approximately 33.5 million passengers per year, making it the 12th busiest airport in the country and 17th busiest in the world for passenger volume. Aircraft passengers should be encouraged to link directly with other transportation modes such as light rail and bus. Aircraft freight cargo should link efficiently with ground freight facilities to minimize contributions to roadway congestion.

There are three private-use heliports in Tempe: the Cross Cut, Tempe Saint Luke's Hospital and Tempe Buttes. The Cross Cut is used by the Salt River Project (SRP) to facilitate power line inspections, Tempe Saint Luke's for air ambulance operations and Tempe Buttes for occasional sight seeing operations authorized by Westcor Aviation which is stationed at Scottsdale Airpark. Because the airspace over Tempe is within Class B controlled airspace, all helicopter operations within central Tempe need to be coordinated with the FAA tower control at Phoenix Sky Harbor International Airport. Helicopter altitudes depend on the operation, not including ingress and egress to and from the heliports. SRP line inspections in the field are conducted close to power line altitudes. Hover operations by news helicopters are typically conducted at 500 feet or at or above the minimum altitude for conducting a safe emergency landing through auto rotation if the engine fails.

The goal of the Aviation Element is to facilitate safe land uses, minimize noise impacts, and promote easy access to and between different modes of transportation, both within Tempe and in the larger regional context.

## *Objectives*

- Encourage regional approaches to multi-modal transportation
- Encourage the use of alternative reliever airports to disperse airport traffic and cargo
- Coordinate with regional and federal aviation authorities on aviation issues

## Strategies

- Work with planning staff to ensure that only compatible land use development occurs within the critical area
- Retain the Tempe Aviation Commission (TAVCO)
- Maximize economic benefits and minimize environmental impacts to Tempe residents
- Refer to the *Noise Element* for strategies pertaining to aviation noise
- Ensure that re-zoning to single-family residential zoning districts will not be allowed in the 65 DNL (Day-Night Sound Level) flight corridor
- Notify developers that may be within the airport's 65 DNL flight corridor and provide them with FAA design guidelines for sound attenuation standards

#### Sources

■ Intergovernmental Agreement (IGA) on Noise Mitigation Flight Procedures between City of Tempe and City of Phoenix

- Phoenix Sky Harbor International Airport Federal Aviation Regulations (F.A.R.) Part 150 Noise Compatibility Study Update, Noise Compatibility Program, September 2000. (Includes the noise exposure maps for 1999, 2004 and 2015 with land use recommendations and noise abatement measures.) (NOTE: In the Part 150 2000 update, Phoenix introduced more rigid land use recommendation standards, some of which go beyond FAA recommendations. Tempe opposes the new standards as being too restrictive.)
- Statistics cited from Phoenix Sky Harbor International Airport website: http://phoenix.gov/AVIATION/