8.0 TRANSPORTATION

8.1 Overview

***Goal:** A multi-modal transportation network with enhanced features that support the City of Portsmouth's quality of life and economic vitality.*

This element addresses the components of an integrated transportation system for Portsmouth, including the City's road network, pedestrian and bicycle facilities, transit service, parking, and the relationship between transportation and land use. As indicated by the high percentage of workers who drive to work (Table 8), the predominant means of transportation in Portsmouth is the automobile. While only about four percent of Portsmouth workers bike or walk to their jobs, the Virginia Department of Conservation and Recreation's *2002 Virginia Outdoors Plan* notes that alternative means of transportation are important to people who recreate (67% of whom walk as a leisure activity, 40% bike, 22% jog, and 11% skate).

Table 8. Means of Transportation to Work, 2000

Means	Portsmouth	Virginia	United States
Drove Alone	72.8%	77.1%	75.7%
Carpooled	15.6%	12.7%	12.2%
Public Transportation	3.0%	3.6%	4.7%
Bicycled or Walked	3.9%	2.5%	3.3%
Worked at Home	2.7%	3.2%	3.3%
Motorcyle or Other Means	1.9%	0.9%	0.8%

Source: Hampton Roads Planning District Commission (HRPDC), based on U.S. Census

Road Network

As a fully developed city, Portsmouth has a relatively complete road network consisting of freeways, arterial and collector streets, and local roads serving residential neighborhoods. Congestion occurs along major routes during peak commuting hours. Segments of Portsmouth's regional road network (freeways and arterials) with current (2004) levels of service C and

below during the PM peak hour are shown on Map 8 (source: HRPDC).[1] As can be seen, the worst congestion (levels of service E and F) is experienced by road segments that connect Portsmouth to the regional road system, in particular the Downtown and Midtown Tunnels. Aside from the more heavily traveled corridors, the majority of Portsmouth's internal road network functions reasonably well and does not need major capacity improvements (e.g., widening of roads to add lanes) in order to alleviate congestion. Congestion is projected to significantly worsen in the future if improvements are not made to the regional transportation system. Map 9 shows regional roadway segments projected by HRPDC to have level of service C or below in 2026 (the timeframe of the long-range regional transportation plan) assuming no such improvements are made.[2]

Portsmouth has several employment centers that are major generators of traffic, such as the Downtown, Norfolk Naval Shipyard, and the Naval Medical Center. According to the 2000 Census, there are 43,922 workers in the City, of which 19,875 work in Portsmouth and 24,047 commute elsewhere to work. The number of persons who commute to Portsmouth to work (29,994) exceeds out-commuters by approximately 25%. In 2000 the percentage of vehicles passing through Portsmouth (as opposed to beginning and/or ending their trip in the City) was 47% on I-264 between Deep Creek Boulevard and Frederick Boulevard, 58% at the Downtown Tunnel, and 58% on Western Freeway between Cedar Lane and Town Point Road.

Programmed roadway improvement projects include (see Map 10):

- Turnpike Road improvements from County Road to Alexander's Corner (first phase to Frederick Boulevard scheduled to be completed in 2006-2007)
- Pinner's Point connector from Western Freeway to Martin Luther King Freeway and the Midtown Tunnel
- Victory Boulevard improvements between I-264 and Greenwood Drive

Pinner's Point connector

At the regional level, the *Hampton Roads 2026 Regional Transportation Plan* completed by the Hampton Roads Planning District Commission (HRPDC) projects increasing vehicle miles traveled and associated congestion over the next 20 years, particularly if key roadway projects are not constructed due to lack of funding. The following regionally significant projects that are critical to alleviating traffic congestion associated with commuter and truck traffic in Portsmouth are currently unfunded:

[1] Used as an indicator of the operation of a roadway and measured on a scale of A to F, level of service (LOS) is a qualitative measure of a driver's comfort and safety perception as related to speed, travel time and delay, traffic interruptions, freedom to maneuver, driver frustration, comfort, convenience, and safety. LOS "A" represents free flow, where drivers are unaffected by others in the traffic stream. LOS "B" represents stable flow; however, the presence of others in the traffic stream is noticeable. LOS

- Extension of Martin Luther King Freeway south to I-264
- A second tube at the Midtown Tunnel
- A third crossing of the James River north from Western Freeway

Other major issues include:

- ***The need to adequately maintain the City's aging roadway infrastructure.*** Current state and city funding for repaving and reconstruction of deteriorated streets is not sufficient to keep up with the need, resulting in increased deferred maintenance. A related issue is the need to coordinate street reconstruction with upgrades to other infrastructure systems (water, sewer, and stormwater).

- ***The need to improve the visual appearance of roadway corridors and gateway entrances throughout Portsmouth.*** This issue is addressed in Chapter 10.0 (Community Appearance).

Pedestrian and Bicycle Facilities

Portions of Portsmouth, such as the Downtown, are well served by sidewalks. However, gaps in the sidewalk network occur in many parts of the City. A survey of sidewalks in the Port Norfolk neighborhood found that these gaps ranged from one to four blocks in length. In addition, many existing sidewalks are in poor condition or have physical obstructions to use by pedestrians. The City does not have a sidewalk plan or a dedicated funding source for the reconstruction of existing sidewalks or the construction of new ones.

There are currently no designated bicycle routes or facilities in Portsmouth or an overall city plan for providing such facilities. However, the Multi-City Bicycle Trail Project is planned to develop a 29-mile bikeway connecting the Cities of Suffolk, Chesapeake, Portsmouth, and Norfolk. In addition, accommodations for bicycles are beginning to be programmed into roadway improvement projects (e.g., the Clifford Street bridge replacement).

Bike lane concept

Source: Hampton University Department of Architecture: Envisioning Portsmouth

"C" is within the limit of stable flow, where maneuvering within the traffic flow requires significant vigilance. LOS "D" represents high density but stable flow, where freedom and speed to maneuver are highly restricted. LOS "E" represents operating levels at or near capacity. Comfort and convenience levels are very low, driver frustration is high, and very long delays ensue. LOS "F" is used to define a breakdown of flow. The amount of traffic arriving at a point exceeds the amount departing and queues begin to form. Extreme delays are encountered.

Current City of Portsmouth policy is to maintain level of service C during the peak hour. However, many other urban communities use level of service D as the minimum acceptable standard.

[2] The HRPDC study does not address minor arterial and collector streets that are not part of the regional road network but may also be subject to congestion.

Transit Service

Transit service in Portsmouth is provided by Hampton Roads Transit (HRT). Five bus routes link major destinations within the City, including one route that connects to the Sentara Norfolk General Hospital in Norfolk and Chesapeake Square Mall in Chesapeake, a second that connects to Downtown Norfolk, and a third that connects from Churchland to Tidewater Community College (TCC) in Suffolk. The Downtown Norfolk route runs seven days a week with reduced service on Sunday. Three of the routes provide service from Monday through Saturday, while the TCC route runs on weekdays only.

The bus system serving Portsmouth includes two transfer stations, one on County Street in the Downtown and the other on McLean Street next to the Victory Crossing Shopping Center. The proper location, design, and appearance of these transfer stations in the context of development or redevelopment in the surrounding areas is an issue, as is the capacity of roadways connecting to the stations to support bus traffic.

In addition to bus service, HRT provides ferry service between the High Street Landing and North Landing in Portsmouth and Waterside in Downtown Norfolk. HRT also maintains two park-and-ride lots in Portsmouth and offers paratransit service to people with disabilities.

HRT is in the planning stages of a light rail project to extend 7.4 miles from the Eastern Virginia Medical Center through downtown Norfolk to Newtown Road. However, HRT has no current plans to provide light rail service to Portsmouth.

Parking

Public parking in Portsmouth is concentrated in the Downtown. Downtown parking facilities, including parking garages, surface lots, parking meters, and parking districts, are administered by the City of Portsmouth Parking Authority. While the overall supply of parking appears to be adequate for present needs, the location of facilities in relation to key destinations is an issue that will grow in importance as visitation increases. The visual appearance of both public and private parking facilities is another issue of concern. Enhanced design standards for parking lots should be enacted in the Zoning Ordinance and opportunities sought to improve the functionality and appearance of parking lots serving older commercial uses as they are redeveloped. Another issue is the need to ensure that the design of parking garages and other parking facilities accommodates access by handicapped vehicles.

Transportation/Land Use Connection

Because Portsmouth is an older developed city with disparate uses often located in close proximity to one another, a key land use/transportation issue is the need to minimize the transportation impacts of more intensive on less intensive uses. In general, transportation facilities and services should support desired land use patterns and meet objectives such as providing citizens with alternatives to automobile usage (walking, bicycling, transit).

Container shipping

A key issue related to the transportation/land use connection is the need to minimize the impacts of truck and rail traffic generated by waterfront industrial uses on Portsmouth's local streets and neighborhoods. An immediate priority is the provision of adequate access to and from the regional road network for the deepwater container terminal planned on the Elizabeth River in Churchland. Access improvements required to serve this development include new road connections, improvements to existing roads, and designation of truck routes that exclude truck traffic from surrounding neighborhoods. Another important priority is the need for a rail corridor within the median of the Western Freeway to move freight rail traffic generated by waterfront industrial uses away from Portsmouth's street network. It is critically important that this rail corridor be in place to serve the future Craney Island Terminal planned by the Virginia Port Authority.

In general, the effects of industrial rail lines and truck traffic on land use and quality of life in Portsmouth is an issue that will need to be closely monitored and addressed as portions of the City are redeveloped and as new facilities such as the deepwater container terminal are opened. Rail lines impact the City's roadway network at at-grade crossings, create physical constraints and opportunities for development, and pose safety, environmental, and aeasthetic issues. Container truck traffic is integral to the types of waterfront industrial uses that Portsmouth supports and will continue to grow along with associated impacts on the local and regional road networks in the future. This trend underscores the need for regional projects such as the Martin Luther King Freeway extension to direct truck traffic away from Portsmouth's local streets. In addition, the City should work with major generators of truck traffic such as the Port Authority on management measures to minimize impacts on land uses in Portsmouth.

The policies and action strategies laid out in Section 8.2 address each of the above aspects of Portsmouth's transportation system. Policies #1 to 3 deal with the City's road network. Given that the City is largely built out and the constrained funding available for major transportation improvements, Policy #1 identifies measures to improve the operational efficiency of existing roads as a priority over major new construction projects to address congestion. However, several major roadway improvement projects that are currently unfunded are vitally important to sustaining Portsmouth as an employment center and to maintaining access for the City's residents to the surrounding region. The need to vigorously support these projects – extension of Martin Luther King Freeway south to I-264, the second tube of the Midtown Tunnel, and the third crossing of the James River north from Western Freeway – is addressed in Policy #2. Policy #3 addresses traffic calming as a potential way to reduce traffic impacts in appropriate locations, such as neighborhoods experiencing "cut-through" traffic or streets adjacent to schools. Traffic calming involves changes in street alignment, installation of barriers, and other physical measures to reduce traffic speeds, and/or cut-through volumes, in the interest of street safety, livability, and other public purposes.[3]

[3] Definition from Institute of Transportation Engineers.

Policy #4 advocates development of more complete pedestrian and bicycle networks as part of a multi-modal transportation system. This effort should begin with planning to identify key corridors within which to provide enhanced bicycle and pedestrian facilities, as well as critical gaps in the sidewalk network that should be filled. One approach that has been used in other communities that could be considered for adaptation to Portsmouth is the use of performance measures to measure pedestrian and bicycle levels of service. As an ongoing policy, roadway improvement projects should incorporate accommodations for pedestrians and bicyclists.

Policy #5 recommends a partnership with HRT to explore opportunities for enhanced transit service in the City. This should include exploring the possibility of incorporating light rail capability into capacity improvements to the Midtown Tunnel to enable a future link to Portsmouth from the light rail system planned by HRT for Norfolk.

Middle Street parking garage

Policy #6 supports a proactive approach to planning for Portsmouth's parking supply to accommodate needs in the Downtown and other key areas. It also recommends review and updating of the parking standards contained in the Zoning Ordinance to fit present conditions in Portsmouth and the types of development desired.

Policy #7 addresses the connection between transportation and land use, including mitigating the impacts of major traffic generating uses and creating bicycle and pedestrian friendly environments for land uses. It is intended to complement Land Use Policy #7, which addresses the same topic. Finally, Transportation Policy #8 recommends enhanced communication of information on Portsmouth's transportation system to the public (e.g., improved, attractive signage).

The following are proposed as indicators to be tracked to measure the success of the City's transportation policies and programs:

- Percentage of total trips to work made in single-occupancy vehicles
- Average travel time for selected trips/congestion delay at key locations in road network
- Levels of service on key roadway segments (measured by HRPDC)
- Length of sidewalks built or reconstructed, total and system gaps filled in
- Miles of bicycle lanes and other facilities developed
- Transit boardings per capita

8.2 Policies and Action Strategies

Policy #1: Roadway Network
Enhance the existing roadway network to optimize operational efficiency.

Action Strategies

- Increase the efficiency of existing roadways through measures such as up-to-date signalization and timing, improved access management (i.e., managing the locations of curb cuts/driveways of adjacent land uses), and geometric improvements
- Carry out capacity improvements within the constraints created by Portsmouth's existing street network, including the historic grid pattern. Seek to reduce the overall amount of impervious surface in the City, adding pavement to increase capacity only as a last resort
- Develop a Long-Range Transportation/Master Street Plan to identify and program needed improvements
- Continue to upgrade and expand the existing Traffic Operations Center
- Coordinate with the Virginia Department of Transportation (VDOT) to provide a communications link to the regional Smart Traffic Center, thus allowing for the sharing of information with VDOT and surrounding cities
- Continue to pursue alternative funding sources to install variable message signs (VMS), video detection, and observation cameras for incident management or emergency evacuation
- Develop and fund a maintenance program to strategically improve substandard infrastructure (roadways, water and sewer lines contained within road rights-of-way) and to maintain areas in acceptable conditions (minor pavement overlay, new signing, and refurbished pavement markings)
- Implement strategies to improve the visual appearance of gateway entrances and roadway corridors throughout Portsmouth *[Policy Link: Community Appearance #2]*

Policy #2: Regional Roadway Improvement Projects
Continue to support additional regional facilities (e.g., second tube of Midtown Tunnel, Third Crossing, Martin Luther King Extension, Downtown Tunnel). *[Policy Link: Economic Development #5]*

Action Strategies

- Consider alternate funding possibilities/options as evaluated by the Hampton Roads Planning District Commission (HRPDC)
- Continue lobbying VDOT, State, and federal representatives for the prioritization of critical regional transportation projects and the allocation of transportation funds
- Explore interim strategies, such as ferry service to accommodate truck/container traffic, to relieve congestion on existing roads during the time it takes to secure funding, design, and construct regional facilities

Policy #3: Traffic Calming
Develop traffic calming standards and procedures appropriate to certain locations within Portsmouth.

Action Strategies

- Define measurement procedures such as traffic counts, speed studies, and criteria for application of traffic calming measures. Use this data to validate the need for and level of implementation of traffic calming in specific locations.
- Develop and implement a public education process regarding traffic calming measures
- Adopt or implement traffic calming measure thresholds for undesirable cut-through traffic in residential neighborhoods
- Evaluate the need for additional traffic calming efforts in and around neighborhood schools to enhance student and traffic safety

Policy #4: Pedestrian and Bicycle Facilities
Promote pedestrian and bicycle facilities and usage throughout the City.
[Policy Link: Parks, Open Space, and Environment #2]

Action Strategies

- Identify key corridors to enhance and improve pedestrian and bicycle facilities as part of the regional network and the HRPDC Regional Plan
- Undertake a citywide sidewalk inventory and implementation plan. Emphasize segments that provide greater connectivity, especially around schools, neighborhoods, and recreational areas
- Promote placement of related land uses adjacent to one another to encourage walking and bicycle activity
- Define pedestrian paths and bikeways with landscaping, lighting, and adequate signage
- Implement pedestrian safety measures (e.g., clearly demarcated crosswalks, countdown signals) where appropriate, such as around schools and in the downtown
- Coordinate the design and construction of roadway improvement projects to include bicycle and pedestrian facilities, adequate lighting, and Americans with Disabilities Act (ADA) compliant features
- Develop bikeways that connect neighborhoods and neighboring communities to recreation facilities and/or large employment centers such as the Norfolk Naval Shipyard, starting with a demonstration project(s)

Policy #5: Transit Service
Enhance transit service (bus, ferry, and potential future light rail service) and usage throughout the City by increasing ridership opportunities to activity centers and special event attractions.

Action Strategies

- Work with Hampton Roads Transit (HRT) to identify:
  - areas and routes with the highest ridership and potential for enhanced service (e.g., to serve activity/employment centers)
  - ways to make transit service more comfortable and attractive for users
- Coordinate with HRT to promote and advertise the coverage and attractiveness of the transit system
- Work with HRT and Traffix to promote public transportation incentives and the use of alternative commuting modes (park-and-ride, ride sharing, bus rapid transit (BRT), express routes, etc.) to both employers and employees
- Evaluate the potential for a downtown shuttle if opportunities arise related to special events or the type, size, and location of future redevelopment
- Explore the need for and feasibility of an additional landing to expand ferry service
- Evaluate the potential of park-and-ride lots for shipyard and downtown Portsmouth employees
- Coordinate with HRT to ensure adequate accessibility of the transit system to seniors, persons with disabilities, etc.
- Encourage the use of environmentally friendly (e.g., electric or natural gas powered) transit vehicles throughout the City

Policy #6: Parking
Provide for parking adequate to meet needs within the context of Portsmouth's roadway network and urban/historic character.

Action Strategies

- Undertake a parking study in the downtown and in other key areas as needed to address various users (commercial, business, residential) and to adequately relate the type of demand (convenience, cost, availability, time limits, etc.) with supply
- Review and update the parking standards in the Zoning Ordinance, including:
  - Evaluate the appropriateness of standards for specific uses
  - Improve design standards for parking facilities
  - Explore opportunities such as shared and off-site parking
- Investigate the strategic use of structured parking to maximize the economic potential of undersized and underutilized properties
- Ensure accessibility of parking facilities for handicapped vehicles

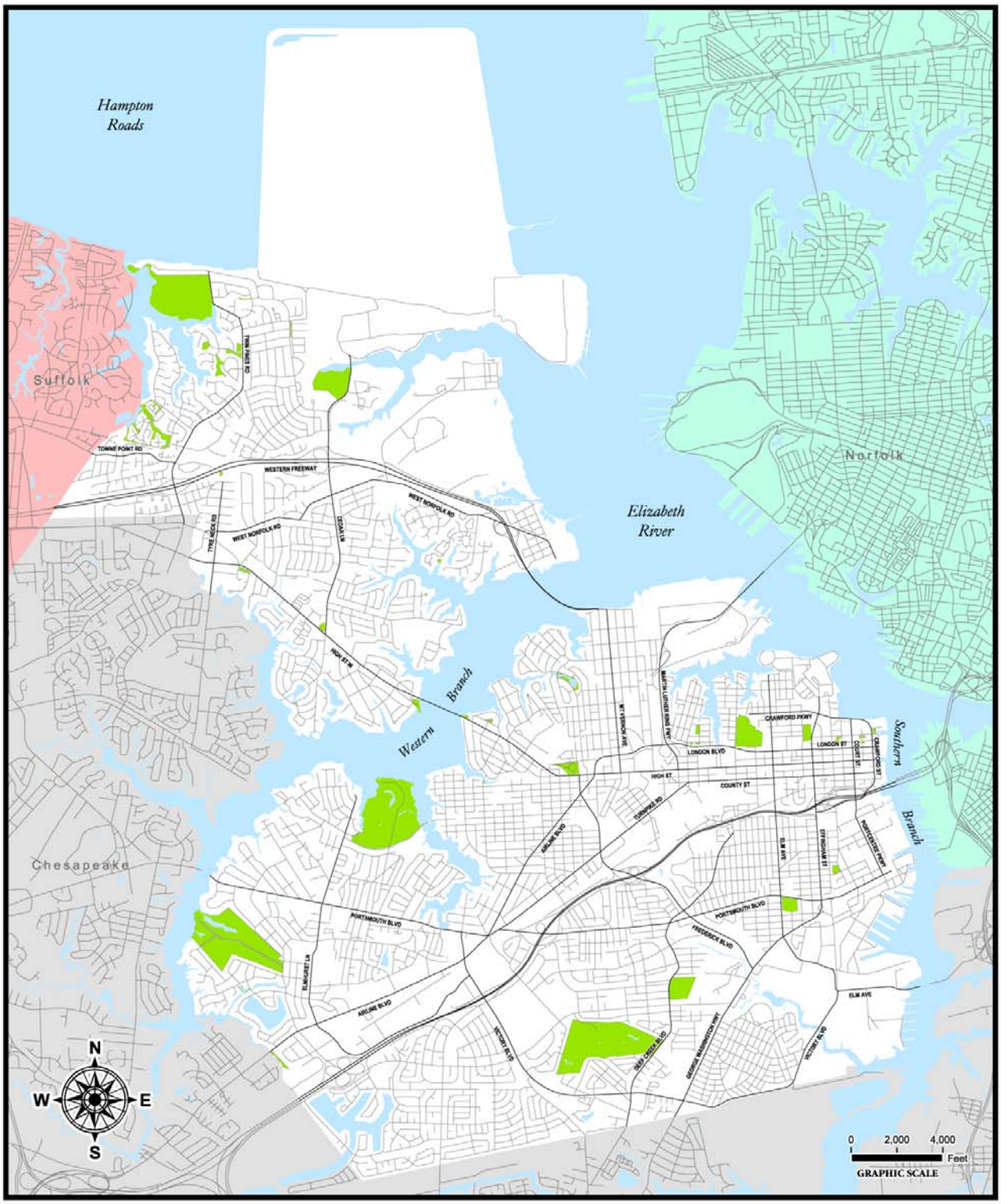
Policy #7: Transportation/Land Use Connection
Coordinate land use strategies with the existing and future multi-modal transportation system. *[Policy Link: Land Use #7]*

Action Strategies

- Review proposed developments from a transportation perspective to ensure that major traffic generating uses such as industrial and employment areas have the necessary quantity and type of access (signalized intersections, interstate access, and parking facilities) to minimize impacts to the existing roadway network *[Policy Link: Economic Development #4]*
- Monitor the effects of industrial rail and truck traffic on the City's land uses and work with other entities (e.g., the Virginia Port Authority and Department of Transportation) to implement measures to minimize adverse impacts
- Create a pedestrian and bicycle friendly environment with sidewalk, trail, and bike lane connections to complement proposed land uses and minimize the need for vehicles, particularly in locations such as schools, recreation areas, and the downtown
- Provide convenient, multi-modal access (i.e., that accommodates transit, pedestrians, and bicycles in addition to vehicles) to and from high traffic generating uses and attractions

Policy #8: Communicating Transportation Information
Enhance communication with the public regarding the transportation system.

- Develop coordinated, attractive signage standardized by type of trip (roadway directional signage; employment, commercial, recreational destinations; etc.) *[Policy Link: Community Appearance #2]*
- Provide adequate signage for pedestrian and bicycle facilities (Policy #4)
- Seek opportunities to provide transportation information (e.g., transit routes/schedules, directions to key destinations) in convenient public places (e.g., web access, malls, transit stops, parking garages, City Hall, community centers, public attractions such as the nTelos Pavilion). Partner with agencies such as HRT in these efforts.



EXISTING PARKS AND OPEN SPACE LAND

PORTSMOUTH COMPREHENSIVE PLAN

MAP 11

DESTINATION 2025
Setting A Bold New Course