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8.0 TIER 3 ANALYSIS - LOCALLY PREFERRED ALTERNATIVE

The Tier 3 process presents a detailed description of the land use and transportation alternative selected in the Tier 2 analysis for final development as the Locally Preferred Alternative. The Locally Preferred Alternative was developed in conjunction with the project Steering Committee that includes representatives of the Winston-Salem Department of Transportation (WS DOT), Winston-Salem/ Forsyth County Planning Department and the North Carolina Department of Transportation (NCDOT). The US 52 Steering Committee determined the inclusion or elimination of specific transportation and land use elements to produce a single comprehensive, long-range development plan for the US 52 Corridor that is considered reasonable and feasible for the Tier 3 analysis. The transportation improvements, land use and economic development opportunities, and the environmental considerations for the Locally Preferred Alternative for the US 52 Corridor is described in the following sections.

8.1 Overview of the Locally Preferred Alternative

8.1.1 Alignment/Interchanges/Cross-Streets

The Locally Preferred Alternative calls for the widening of US 52 to a continuous six-lane freeway between I-40 and the northern project limits with additional lanes provided between the following interchanges:

- Between I-40 and Waughtown Street provide auxiliary lanes in both directions;
- Between (future) Salem Creek Parkway and Business 40 provide auxiliary lanes in both directions;
- Between Business 40 and Martin Luther King, Jr. Drive provide auxiliary lanes in both directions; and
- Between University Parkway and Hanes Mill Road provide a northbound collector-distributor road and a southbound auxiliary lane.

Generally, the Locally Preferred Alternative follows the existing US 52 highway alignment except at three locations:

- Between I-40 and Mock Street, US 52 is realigned to the west of the existing highway to improve the horizontal geometrics to meet interstate standards;
- Between Business 40 and Martin Luther King, Jr. Drive, the highway is realigned and shifted to the west;
- Between 19th Street and 30th Street. US 52 is realigned to the west of the existing highway. Within this area, Liberty Street is relocated to the east of US 52 and becomes a continuous thoroughfare east of US 52 from 12th Street to the airport. An improved interchange at 27th/28th Streets will provide excellent access to the Liberty Street corridor.

Interchange access is consolidated at 12 interchanges over a distance of 12 miles. Full interchanges will remain at eight locations: I-40; Business 40; Martin Luther King, Jr. Drive; 27th/28th Streets; Akron Drive; Germanton Road; University Parkway; and Hanes Mill Road. The Waughtown Street interchange is proposed to be upgraded from a partial diamond to a full diamond interchange. The Third Street interchange remains a partial diamond interchange and is proposed to have braided ramps with the Business 40 ramps to eliminate the high volume of weaving traffic traveling between Business 40, US 52 and Downtown Winston-Salem. The Salem Creek Parkway interchange replaces the existing interchange at Diggs Boulevard and Vargrave Street with a full-access interchange connected to a new east-west roadway. The interchange proposed at Motor Road replaces the existing Patterson Avenue interchange.

To qualify for interstate highway designation, the desirable interchange spacing is one mile. However, in areas of concentrated urban development, the desirable spacing may be difficult to attain. According to the AASHTO green book, in urban settings, the minimum spacing of arterial interchanges is determined by weaving volumes, ability to sign, signal progression, and lengths of speed-change lanes.¹ The average interchange spacing for the 12-mile US 52 Corridor is greater than one mile, although some interchanges are closer than the desirable distance. Table 8-1 is a list of existing and proposed interchanges for the Locally Preferred Alternative.

Table 8-1. Interchange Locations
Locally Preferred Alternative

Existing Interchanges			Proposed Interchanges		
Location	Type of Interchange	Distance Between (feet)	Location	Type of Interchange	Distance Between (feet)
I-40	Full cloverleaf	0	I-40	Full cloverleaf	0
Sprague Street	Half diamond	2375			
Waughtown Street	Half diamond	1625	Waughtown Street	Full diamond	4000
Diggs Blvd./ Vargrave Street	Half partial cloverleaf/ Half diamond	4100	Salem Creek Parkway	Partial cloverleaf	4100
Stadium Drive	Half partial cloverleaf/ Half diamond	2300			
Business 40	Full cloverleaf	1600	Business 40	Partial cloverleaf/ Partial freeway to freeway	3900
Third Street	Half diamond	2005	Third Street	Half diamond	2005
Fifth Street	Half diamond	660			
Martin Luther King, Jr. Drive	Half partial cloverleaf	1720	Martin Luther King, Jr. Drive	Full diamond	2380
Liberty Street @ 12th Street	Half partial cloverleaf/ Quarter diamond	1050			
Northwest Boulevard	Quarter diamond	1325			
Liberty Street @ 19th Street	Half diamond	2175			
25th/28th Street	Half partial cloverleaf/ Half diamond	2500	27th/28th Street	Full diamond	7050
Akron Drive	Full diamond	5700	Akron Drive	Full diamond	5700
Patterson Avenue	Half partial cloverleaf/ Half diamond	4200	Motor Road	Half partial cloverleaf/ Half diamond	8000
Germanton Road	Half partial cloverleaf/ Half diamond	8350	Germanton Road	Half partial cloverleaf/ Half diamond	4550
University Parkway	Partial cloverleaf/ Quarter diamond	7170	University Parkway	Half partial cloverleaf/ Half diamond	7170
Hanes Mill Road	Partial cloverleaf	2815	Hanes Mill Road	Half partial cloverleaf/ Half diamond	2815

A more detailed description of the proposed transportation improvements is provided in Section 8.2 of this report.

8.1.2 Economic Development and Land Use

A significant part of the US 52 Corridor Plan is the consideration of the land use and economic development impacts associated with the reconstruction of the highway and the redevelopment and revitalization opportunities that will be created with the upgrading of this corridor to an urban interstate facility. The proposed upgrading of US 52 to interstate highway standards - including the reconfiguration of interchanges and associated linkages to local roadways - and the overall regional economic growth will result in enhanced economic and land use development within the Corridor.

The economic development program concepts created for the US 52 Corridor have a primary emphasis on industrial development; however, the proposed development program also suggests the development of residential, various types of retail businesses, and lodging facilities and restaurants in various parts of the corridor. The primary opportunities for office space development are anticipated for the new Piedmont Triad Research Park in the downtown area and some minor support services. The market assessments conducted for the US 52 Corridor Plan recommended an economic development approach as follows:

- A mixed-use development strategy should be used for the US 52 Corridor.
- The focus of the industrial development initiative should be a mix of business parks and warehouse and distribution facilities. There will be strong opportunities for industrial development based on state employment projections and the strategic location of Winston-Salem in the region and the country. Industrial development opportunities should be targeted as a part of the initiative to balance the economy of the City and County as it transitions from a dependence on tobacco and textiles to a more diverse economy.
- In addition to warehouse and distribution, several new themed business parks should be developed targeting growth markets such as fabricated metals, transportation equipment, paper products, printing, chemicals, rubber and plastics, trucking, and wholesale trade.
- Where possible, the US 52 Corridor Plan should act as a stimulus for neighborhood revitalization through the utilization of land resources for additional housing and retail businesses and other types of commercial development such as hotels and restaurants. While the market is basically in equilibrium at this time, over the next 15 to 18 years, given population and household growth assumptions, substantial additional retail demand will be generated. There will also be a need for replacement facilities driving demand.
- The US 52 Corridor Plan should, to the maximum extent possible, incorporate publicly supported pre-existing development initiatives undertaken by the City, such as the Downtown Plan, the Piedmont Triad Research Park Plan, the Goler Heights Plan, and the Southeast Gateway.

Throughout the land use analyses and recommendations of feasible economic development opportunities in this study, key policies contained in the Legacy Plan – the region’s “comprehensive plan” - are recognized as established policy building blocks for the US 52 land use planning effort. A major policy of the Legacy Plan that is supported throughout this study is the use of “Mixed Use Development” types of neighborhood and community centers. Mixed-use centers as posited in the Legacy Plan provide “varied residential types and densities, retail/office/services, and the incorporation of institutional facilities/housing in one area.” Building upon this definition in the Legacy Plan, the recommended mixed-use centers within the US 52 Corridor study area will vary in the range of services or focus depending on the individual needs and character of the surrounding neighborhood and community. In that context, and given the long-term time frame of this study, the specific mix will also be determined by market conditions and community objectives that will evolve over time. The central focus here is to identify development opportunity areas that will be generated by improved travel conditions and enhanced access as a result of the reconstruction of the US 52 Corridor.

The Locally Preferred Alternative transportation improvements have been coordinated with land use planning and economic development initiatives which will improve accessibility to key areas of the city, open up new markets and help to direct new employment to the corridor. Mobility and accessibility are among the most important land use and transportation-related issues to be considered in locating industrial, office and commercial developments, as well as for residential development. Improvements in the highway’s configuration and potential interstate highway designation will likely attract new land uses throughout the US 52 Corridor which may include development of industrial/business parks, retail and other commercial businesses, residential communities, and highway-oriented lodging and eating establishments.

Some examples of potential land use and economic development opportunities associated with the Locally Preferred Alternative are that the selected plan:

- Supports the Piedmont Triad Research Park within diversified economic downtown core.
- Targets Piedmont Triad Research Park supported land use development activities within East Winston.
- Reestablishes Liberty Street as a continuous linear thoroughfare supporting mixed use development opportunities and urban infill housing.
- Promotes a neighborhood activity center at Martin Luther King Jr., Drive and Waughtown Street.
- Promotes higher density mixed-use residential within the economic downtown core.
- Supports continued revitalization/enhancement of traditional neighborhoods with residential and commercial infill.
- Creates a highway commercial area at Akron Drive interchange.
- Provides industrial business park development with gateway entry at North Patterson Avenue corridor.
- Encourages open space greenway connections east and west of the US 52 Corridor.

- Promotes mixed-use residential/commercial development in North Hills Park area.
- Encourages highway commercial east of Germanton Road and Patterson Avenue intersection.
- Continues business park development at University Parkway and Hanes Mill Road area.
- Encourages greenway linkages along Muddy Creek under US 52.
- Supports industrial distribution uses of Airport Business Park.

Opportunities for enhanced land use and economic development are described in Section 8.3 of this report.

Table 8-2 provides a summary of the transportation and land use characteristics for the Locally Preferred Alternative for sections 1 through 6 of the Corridor. Table 8-3 is the evaluation matrix of the screening criteria that were used in evaluating the transportation, right-of-way, cultural and environmental impacts of the Locally Preferred Alternative.

8.2 Transportation Description of the Locally Preferred Alternative

Table 8-2. Summary Characteristics
Locally Preferred Alternative

Transportation	Land Use and Economic Development
SECTION 1: I-40 BYPASS TO DIGGS BOULEVARD	
This alternative would be designed to meet interstate standards for the entire length of the route. The one design exception is the spacing between interchanges is slightly less than one mile apart at several locations.	Mobility and accessibility are the two most important land use transportation issues for residential, commercial and industrial development. This alternative reestablishes Liberty Street as a continuous linear thoroughfare supporting storefront business development.
GEOMETRICS <ul style="list-style-type: none"> • US 52 proposed as new six-lane highway west of existing US 52 from I-40 to north of Waughtown Street. • US 52 widened to six lanes. • Auxiliary lanes are added in both directions between I-40 and Waughtown Street. • A full access interchange will be located at the future Salem Creek Parkway crossing in the vicinity of Diggs Boulevard. • Proposes full access interchange at Waughtown Street. • Meets interstate standards. • Improves safety. • Meets 2025 traffic demand. RIGHT-OF-WAY <ul style="list-style-type: none"> • May encroach on Diggs Elementary School. • Does not encroach on Liberia Baptist Church cemetery. • WSSB RR Bridge over US 52 must be replaced. • To maintain access along Vargrave, Carolina Steel may be impacted. • Affects several businesses east and west of US 52. ENVIRONMENTAL <ul style="list-style-type: none"> • At Salem Creek, floodplain, wetland, utility and railroad crossing issues must be addressed. • May encroach on Superfund site on Vargrave Street. 	<ul style="list-style-type: none"> • Continue residential (R5) development of northwest quadrant I-40/US 52. • Provide neighborhood gateways at Waughtown and Sprague Street underpasses. • Open space enhancement of Corridor through landscape buffering. • Revitalization/enhancement of traditional neighborhoods with residential infill east and west of US 52. • Mixed-use community retail/housing through Hope VI activities of the Happy Hill neighborhood. • Provide neighborhood gateways east and west of Salem Creek Parkway interchange. • Provide community mixed-use center at intersection of Main and Waughtown Street. • Provide intersection improvements, traffic calming, roundabout at intersection of Main and Waughtown Street. • Provide greenway linkages along Salem Creek Parkway, Martin Luther King, Jr. Drive and Waughtown Street. • Community mixed use infill development at Martin Luther King, Jr. Drive and Williamson Street. • Community mixed use infill development at Martin Luther King, Jr. Drive and Waughtown Street area. • Encourage tech-research park within diversified economic downtown core. • Facilitate master plan phases of Winston Salem State University. Promote Skyline Village redevelopment. • Neighborhood Activity Center at Martin Luther King, Jr. Drive and Waughtown Street. • Promote Neighborhood Activity Center at Main and Waughtown Streets. • Industrial Redevelopment/Revitalization of Carolina Steel.

Table 8-2 (Continued). Summary Characteristics
Locally Preferred Alternative

Transportation	Land Use and Economic Development
SECTION 2: DIGGS BOULEVARD TO NORTHWEST BOULEVARD	
<p>GEOMETRICS</p> <ul style="list-style-type: none"> Widens US 52 to six lanes adjacent to the existing highway. Auxiliary lanes are added in both directions between future Salem Creek Parkway and Business 40 and Business 40 and Martin Luther King, Jr. Drive. US 52 proposed on new six-lane highway west of existing US 52 from Business 40 to Northwest Boulevard. Full access interchanges will be located at Business 40 and Martin Luther King, Jr. Drive. Weaving conflicts eliminated by use of braided ramps for 3rd Street and Business 40. Meets interstate standards. Improves safety. Meets 2025 traffic demand. <p>RIGHT-OF-WAY</p> <ul style="list-style-type: none"> US 52 shifted to west to minimize impacts to Kennedy Middle School (possible Section 4(f) property). May affect county office building to the east. May affect RJR property to the west (surplus property). Right of way minimized in northwest quadrant of US 52 and Business 40 interchange to lessen impacts to future Research Park development. Weaving conflicts reduced by removing Stadium Drive ramps, 5th Street ramps and closely spaced interchange at Liberty Street. <p>ENVIRONMENTAL</p> <ul style="list-style-type: none"> At Salem Creek, floodplain, wetland, utility and railroad crossing issues must be addressed. Possible floodplain impacts in vicinity of Business 40 interchange. 	<ul style="list-style-type: none"> Reinforce historic Old Salem District. Supports Piedmont Triad Research Park within diversified economic core. Provide overland greenway linkages along Patterson Avenue to Salem Creek greenway. Institutional health care services at area bordered by East 5th street and Martin Luther King, Jr. Drive. Create freeway cap/park between 3rd and 4th Streets. Encourage mixed-use office residential retail around Transit Center. Provide neighborhood gateway at eastern terminus of freeway cap. Facilitate master plan phases of Winston Salem State University. Promote higher density mixed use residential within downtown core. Revitalization/enhancement of traditional neighborhoods with residential and commercial infill. Provide landscape enhancement/management. Create Community Activity Center at New Walkertown Road and Martin Luther King, Jr. Drive. Industrial/business development revitalization of Patterson Avenue corridor. Big box retail development north of Piedmont Triad Research Park. Piedmont Triad Research Park supported land use development activities. Establish JFK Middle School Research Magnet.
SECTION 3: NORTHWEST BOULEVARD TO GLENN AVENUE	
<p>GEOMETRICS</p> <ul style="list-style-type: none"> US 52 proposed as new six-lane highway approximately midway between the RR tracks and the existing alignment. Liberty Street relocated to the east of US 52. Locate interchange at 27th/28th Streets. Widen 27th/28th railroad underpass to four lanes. Maintain US 52 underpass at 25th Street. Proposed bridge(s) over Norfolk Southern RR on US 52 and ramps will be on new location west of existing US 52. Can incorporate interchange at 27th/28th Streets with new crossing over RR tracks, improving access across US 52. Meets interstate standards. Improves safety. Meets 2025 traffic demand. <p>RIGHT-OF-WAY REQUIREMENTS</p> <ul style="list-style-type: none"> Affects businesses between existing US 52 alignment and RR. Liberty Street realigned east of US 52, providing opportunities for redevelopment. May affect Canaan Baptist Church. <p>ENVIRONMENTAL</p> <ul style="list-style-type: none"> Does not affect Fairview Park (possible Section 4(f) property). 	<ul style="list-style-type: none"> Reestablish neighborhood business development of Liberty Street. Revitalization/enhancement of traditional neighborhood with mixture of residential and neighborhood retail. General business development land use along Liberty Street corridor. Business park development use west of US 52 and Patterson Avenue. Promote mixed-use community retail infill at 26th Street and Cleveland Avenue. Provide neighborhood gateway at 26th Street and Patterson Avenue. Industrial distribution at Airport Industrial Park. Mixed-use community retail/residential infill at Patterson Avenue and Trade Street. Provide park and recreation linkages of Blum Blanding Park and Hanes Middle School. Create gateway district and highway commercial area at Akron Drive. Provide neighborhood gateway at Patterson Avenue and Indiana Avenue. Provide urban infill housing within Liberty Street corridor.

Table 8-2 (Continued). Summary Characteristics
Locally Preferred Alternative

Transportation	Land Use and Economic Development
SECTION 4: GLENN AVENUE TO MOTOR ROAD	
<p>GEOMETRICS</p> <ul style="list-style-type: none"> US 52 widened to six lanes utilizing the center median. Patterson Avenue interchange removed. Interchanges would be located at Akron Drive and Motor Road. Meets interstate standards. Improves safety. Meets 2025 traffic demand. <p>RIGHT-OF-WAY</p> <ul style="list-style-type: none"> Minimal additional right-of-way needed at interchanges. <p>ENVIRONMENTAL</p> <ul style="list-style-type: none"> Leak Fork Creek floodplain may be affected by improvements to the Motor Road interchange. 	<ul style="list-style-type: none"> Open space enhancement and linkages through landscaping and greenway connections at Patterson Avenue and US 52. Create highway commercial district at Akron Drive interchange. Park and recreation development at intersection of Reynolds Boulevard and Indiana Avenue. Provide gateway treatment east and west of Akron Drive and Motor Road interchange. Revitalization/enhancement of traditional neighborhood with residential infill. Provide industrial business park development w/gateway entry of north Patterson Avenue. Mixed-use residential/commercial development in North Hills Park area. Open space enhancement of Corridor through landscape buffering.
SECTION 5: MOTOR ROAD TO OAK SUMMIT ROAD	
<p>GEOMETRICS</p> <ul style="list-style-type: none"> US 52 widened to six lanes utilizing the center median. Interchange located at Germanton Road. Meets interstate standards. Improves safety. Meets 2025 traffic demand. <p>RIGHT-OF-WAY</p> <ul style="list-style-type: none"> Minimal additional right-of-way needed at interchanges. <p>ENVIRONMENTAL</p> <ul style="list-style-type: none"> May affect Leak Fork Creek floodplain at Germanton Road. 	<ul style="list-style-type: none"> Provide industrial business park corridor development of north Patterson Avenue. Residential infill and revitalization of existing neighborhoods east and west of US 52. Provide retail center at Oak Summit Road and Germanton Road. Provide gateway treatments east and west of the Germanton Road interchange. Mixed-use residential development at University Parkway and Oak Summit Road. Encourage open space greenway connections east and west of US 52 Corridor. Provide multi-family development east of Patterson Avenue corridor. Highway commercial east of Germanton Road/Patterson Avenue intersection.
SECTION 6: OAK SUMMIT ROAD TO NORTHERN PROJECT LIMIT	
<p>GEOMETRICS</p> <ul style="list-style-type: none"> US 52 widened to six lanes utilizing the center median. To meet interstate interchange spacing requirements, the interchanges at University Parkway and at Hanes Mill Road would be connected by a collector-distributor road. Hanes Mill Road will be widened to four lanes with a center turn lane. University Parkway will be six lanes with a center turn lane. Meets interstate standards. Improves weaving conditions between interchanges. Meets 2025 traffic demand. <p>RIGHT-OF-WAY</p> <ul style="list-style-type: none"> Minimal additional right-of-way needed at interchanges. <p>ENVIRONMENTAL</p> <ul style="list-style-type: none"> May affect Mill Creek floodplain at University Parkway. 	<ul style="list-style-type: none"> Continue business park development at University Parkway and Hanes Mill Road area. Encourage greenway linkage along Muddy Creek under US 52. Open space enhancement of Hanes Mill Road landfill. Commercial office development at University Parkway. Provide gateway treatment east and west of University Parkway interchange. Continue gateway enhancement of University Parkway to proposed Northern Beltway. Provide big box development opportunities within University Parkway corridor. Encourage Neighborhood Activity Center south of Hanes Mill Road and University Parkway. Provide highway commercial east of University Parkway interchange gateway.

Table 8-3. US 52 Corridor Land Use and Transportation Plan
Evaluation Matrix
Locally Preferred Alternative

	Section 1: I-40 to Diggs Blvd. (w/Waughtown St. Interchange)	Section 2: Diggs Blvd.to Northwest Blvd. (w/2 Bridges over Liberty St.)	Section 3: Northwest Blvd. to Glenn Ave.	Section 4: Glenn Ave. to Motor Rd.	Section 5: Motor Rd. to Oak Summit Rd.	Section 6: Oak Summit Rd. to Northern Project Limit	Corridor Summary
PHYSICAL IMPACTS							
Horizontal Alignment							
Vertical Alignment							
Structures/ Railroad Conflicts							
Constructability							
Meets Interstate Standards							
ENVIRONMENTAL CONSIDERATIONS							
Wetlands							
Noise							
Visual Impacts							
Air Quality							
Contamination Sites							
Floodplains							
CULTURAL IMPACTS							
Historical Sites							
Displacements							
Community Facilities							
Redevelopment Opportunities							
TRAFFIC AND SAFETY IMPACTS							
Safety Improvements							
Ability to Accommodate Freight							
Ability to Serve Through-Traffic							
Meets 2025 Traffic Forecast							
OVERALL							
RIGHT-OF-WAY ACQUISITIONS							
Buildings Taken	18	9	36	17	4	6	90
Parcels Affected	97	91	155	61	10	28	442
COSTS (in millions \$)							
Bridges not at interchanges	\$13.7	\$36.4	\$28.9	\$4.4	\$1.3	\$0.0	\$84.7
Roadway including interchanges	\$55.7	\$110.3	\$43.1	\$62.9	\$26.9	\$42.4	\$341.3
Right-of-Way Costs *	\$5.8	\$9.0	\$8.9	\$3.9	\$3.2	\$4.3	\$35.1
TOTAL	\$75.2	\$155.7	\$80.9	\$71.2	\$31.4	\$46.7	\$461.1

* Does not include relocation costs



The US 52 Corridor transportation analyses has been divided into the following six sections:

- Section 1 - I-40 to Diggs Boulevard
- Section 2 - Diggs Boulevard to Northwest Boulevard
- Section 3 - Northwest Boulevard to Glenn Avenue
- Section 4 - Glenn Avenue to Motor Road
- Section 5 - Motor Road to Oak Summit Road
- Section 6 - Oak Summit Road to Northern Project Limits

The proposed transportation improvements for each of these sections listed above are shown on Figure Series 8-1 and described below.

8.2.1 Section 1 - I-40 to Diggs Boulevard

8.2.1.1 Alignment/Interchanges/Cross-Streets

Between I-40 and Mock Street, US 52 is widened to six through lanes and realigned to the west, lengthening the two substandard horizontal curves to meet interstate standards. Between Mock Street and Business-40, the highway is widened symmetrically along the centerline and the substandard vertical curve at the Diggs Boulevard/ Vargrave Street interchange is raised to improve vertical sight distance. The partial diamond interchanges at Sprague Street would be removed and the Waughtown Street interchange would be improved to a full diamond interchange that meets interstate design standards. Because interchange spacing is closer than one mile, auxiliary lanes are included in the segment between I-40 and Waughtown Street. The Diggs Boulevard/ Vargrave Street interchange would be replaced by a partial cloverleaf whose ramp lengths, loop radii and acceleration/ deceleration lanes meet interstate standards. This new interchange would provide access and egress to a new east-west roadway, tentatively called Salem Creek Parkway. This route (to be developed as part of another project) would provide a new direct link between Salem Avenue to the west and Martin Luther King, Jr. Drive to the east. With this design, US 52 meets interstate highway standards, improves safety and meets 2025 traffic demand.

In addition to the proposed Salem Creek Parkway, Sprague Street, Waughtown Street and Mock Street are the east-west streets crossing US 52. The nearest parallel north-south street is Vargrave Street. Vargrave Street is divided into two separate segments; one segment is located between I-40 and Waughtown Street running parallel to and west of US 52; and the other segment is located between Waughtown Street and Salem Creek Parkway running parallel to and east of US 52. It continues to provide a parallel north-south local access route in the Corridor. Other north-south streets farther away include Martin Luther King, Jr. Drive to the east and Waughtown Street/ Salem Avenue and Main Street to the west, all of which are linked to US 52 via Waughtown Street and the proposed Salem Creek Parkway.

To accommodate the six-lane cross-section of this segment of US 52, all of the bridges over US 52 would have to be replaced, including the Winston-Salem Southbound railroad bridge north of Mock Street. One bridge would be removed at Vargrave Street. The Waughtown Street bridge would be significantly shortened when US 52 is relocated farther west of its current alignment.

8.2.1.2 Travel Analysis

A mainline capacity analysis of the Locally Preferred Alternative shows that if US 52 is widened to six through lanes, with auxiliary lanes in both directions between I-40 and Waughtown Street and between Business 40 and Salem Creek Parkway, traffic on US 52 will operate at level of service D or better which is an acceptable rate of traffic flow. The ramp analysis indicates that single lane ramps can accommodate 2025 travel demand at the I-40, Waughtown Street, and Salem Creek Parkway interchanges with one exception. This exception pertains to the I-40 interchange at which the westbound I-40 to southbound US 52 travel demand exceeds the capacity of a loop ramp.

8.2.1.3 Right-of-Way Acquisitions

The right-of-way to be acquired for the Locally Preferred Alternative would affect 97 parcels in this area with either full or partial takes, including 18 buildings, none of which are residences. Depending on a more detailed survey to be conducted in a later phase of study, either Diggs Elementary School and the Liberia Baptist Church graveyard or the Carolina Steel fabricating plant may be affected. Every effort will be made to avoid taking these facilities.

8.2.1.4 Construction and Right-of-Way Costs

Construction and right-of-way costs are estimated at \$75.2 million. Because the Locally Preferred Alternative takes no homes and only smaller businesses that should be easier to relocate, relocation costs (which are not part of the cost estimate) should be low. Vargrave Street will be difficult to relocate because of the proximity of the new alignment to the steel mill. This section of the US 52 Corridor should be relatively straightforward to construct because the widening of the Corridor occurs either along the outside lanes or on a new alignment to the west of the existing highway.

8.2.2 Section 2 - Diggs Boulevard to Northwest Boulevard

8.2.2.1 Alignment/Interchanges/Cross-Streets

US 52 is widened to six lanes plus auxiliary lanes symmetrically along the centerline between Diggs Boulevard and Business 40. Between Business 40 and Northwest Boulevard, the highway is widened along the western edge of pavement to six lanes plus auxiliary lanes. The vertical curve between Second Street and Martin Luther King, Jr. Drive will be flattened to improve sight distances. The horizontal and vertical alignment will be designed to meet freeway design standards. The Stadium Drive, Fifth Street, Liberty Street (at 12th Street) and Northwest Boulevard ramps will be removed. Full interchanges will remain at Business 40 and at Martin Luther King, Jr. Drive. The Business 40 interchange would be redesigned with two flyover ramps to eliminate weaving sections on US 52. The Third Street northbound exit and southbound entrance ramps will be retained and braided with the Business 40 ramps to eliminate a dangerous weaving section. The ramp lengths, loop radii and acceleration/ deceleration lanes will be designed to meet freeway design standards. The route will meet interstate standards, improve safety, and meet 2025 traffic demand.

With respect to connectivity of local streets, the Locally Preferred Alternative will maintain east-west connections across US 52 at Stadium Drive, Third Street, Fourth Street, Fifth Street, Martin Luther King, Jr. Drive, Liberty Street and Northwest Boulevard. The one exception is at Greyhound Court where the bridge would be removed to improve sight distances on US 52 and because it is underused today. Parallel north-south local access routes in the Corridor that will be maintained include Metropolitan Avenue (which functions as a frontage road today), Highland Avenue, Cleveland Avenue and Martin Luther King, Jr. Drive to the east. To the west, Maple Street (which functions as a frontage road today), Linden Street, Ivy Avenue, Patterson Avenue and Salem Avenue are north-south parallel routes.

This study recommends the creation of two improved parallel routes to US 52 in the downtown area. Ivy Avenue should be extended south to intersect with the proposed north-south roadway planned for the new Piedmont Triad Research Park and Patterson Avenue should be rerouted through the Research Park to provide a more direct connection to Salem Avenue.

Other north-south streets farther away include Church Street, Main Street, Liberty Street, Trade Street, Cherry Street and Marshall Street downtown. As part of the Locally Preferred Alternative, access to US 52 will be via Third Street (to and from the south), and Martin Luther King, Jr. interchanges. It should be noted that, because the Third Street ramps are braided, traffic using US 52 to travel between Business 40 and downtown would have to use the Martin Luther King, Jr. Drive interchange. Traffic using the Third Street ramps will only have access to and from US 52.

To accommodate the eight-lane cross-section of this segment of US 52 (including auxiliary lanes), all of the bridges over US 52 would have to be replaced, including the Norfolk Southern railroad bridge crossing US 52 south of the Business 40 interchange.

8.2.2.2 Travel Analysis

A mainline capacity analysis of the Locally Preferred Alternative shows that if US 52 is widened to eight lanes downtown and six lanes elsewhere, traffic on US 52 will operate at level of service D or better throughout the day which is an acceptable rate of traffic flow. The ramp analysis indicates that with the proposed improvements, single lane ramps can accommodate 2025 traffic demand at the Business 40, Third Street and Martin Luther King, Jr. Drive interchanges.

8.2.2.3 Right-of-Way Acquisition

The right-of-way to be acquired for the Locally Preferred Alternative would affect 91 parcels and nine (9) buildings with either full or partial takes. Depending on a more detailed survey to be conducted in a later phase of study, the playground at John F. Kennedy, Jr. Middle School may be affected. Every effort will be made to avoid taking property at this facility.

8.2.2.4 Construction and Right-of-Way Costs

Construction and right-of-way costs are estimated at \$155.7 million; \$146.7 million for construction costs (of which \$36.4 million is for structures crossing US 52 and \$110.3 million is for the highway and interchanges) and \$9.0 million for right-of-way acquisition. Because the Locally Preferred Alternative requires land that has been identified as surplus property, and is also scheduled for redevelopment as part of a proposed research park, the relocation costs (which are not part of the cost estimate) should be low. This section of the US 52 Corridor should be relatively straightforward to construct because widening is either symmetrical along the outer lanes of US 52 south of Business 40 or along the outside of the southbound lanes downtown. However, reconstruction of the Business 40 interchange will be extremely complex.

8.2.3 Section 3 - Northwest Boulevard to Glenn Avenue

8.2.3.1 Alignment/Interchanges/Cross-Streets

In Section 3 of the US 52 Corridor, the existing highway is widened to six lanes and relocated to the west of the existing alignment, approximately where Liberty Street is located today. Liberty Street is then relocated to the current US 52 alignment. Both the vertical and horizontal alignment is improved to meet interstate highway standards. The Liberty Street ramps at 19th Street and at the airport would be removed. (Note: the airport ramp will be removed as part of another project replacing the US 52 bridges over Liberty Street and the rail yards.) A full interchange would remain at 27th/28th Streets, replacing the existing substandard ramps with an improved urban diamond. These improvements would meet interstate standards, improve safety, and meet 2025 travel demand.

With respect to connectivity of local streets, the Locally Preferred Alternative would maintain east-west connections across US 52 at Liberty Street, 25th Street, 28th Street/ Indiana Avenue and Glenn Avenue. Twenty-Seventh Street and 28th Street would be realigned to join into a single east-west route just west of the Norfolk Southern railroad tracks. A new underpass at the rail crossing and continuing through the interchange would be four lanes wide and would be constructed as part of the project to provide sufficient access to the nearby interchange. Parallel north-south local access routes in the Corridor that would be maintained include Liberty Street and Cleveland Avenue to the east and Indiana Avenue, Glenn Avenue and Patterson Avenue to the west. As part of the Locally Preferred Alternative, these streets would be linked to US 52 via the 27th/28th Streets interchange. Street connectivity is best with the Locally Preferred Alternative because the east-west connection at 25th Street is maintained and because the connection at 27th/28th Streets is widened from two to four lanes under the rail lines. Also, all of the east-west neighborhood streets east of US 52 would be reconnected with Liberty Street as part of these improvements.

To accommodate the six-lane cross-section of this segment of US 52, all of the bridges over US 52 would have to be replaced. It should be noted that the US 52 bridges over Liberty Street and the rail yards are scheduled for replacement as part of another project. However, this design would require that a new but shorter bridge be built to accommodate the changed alignment of US 52.

8.2.3.2 Travel Analysis

A mainline capacity analysis of the Locally Preferred Alternative shows that if US 52 is widened to six lanes, traffic on US 52 will operate at level of service D or better throughout the day which is an acceptable rate of traffic flow for peak hour conditions. The ramp analysis indicates that single lane ramps can accommodate 2025 travel demand at the 27th/28th Streets interchange.

8.2.3.3 Right-of-Way Acquisition

The right-of-way to be acquired for the Locally Preferred Alternative would affect 155 parcels and 36 buildings in this area. Sensitive sites within this area include the Canaan Baptist Church, Fairview Park, and some buildings in the Piedmont Park public housing development.

8.2.3.4 Construction and Right-of-Way Costs

Construction and right-of-way costs are estimated at \$80.8 million; \$72.0 million for construction costs (of which \$28.9 million is for structures and \$43.1 million is for highway and interchange) and \$8.9 million for right-of-way acquisition. Because the Locally Preferred Alternative takes land in an area of town needing redevelopment, relocation costs (which are not part of the cost estimate) should be reasonable. This section of the Locally Preferred Alternative should be relatively straightforward to construct because much of the highway is on new alignment.

8.2.4 Section 4 - Glenn Avenue to Motor Road

8.2.4.1 Alignment/Interchanges/Cross-Streets

US 52 is widened to six lanes symmetrically along the centerline between Glenn Avenue and Motor Road. Between Glenn Avenue and Patterson Avenue, the widening of US 52 occurs adjacent to the outside lane. Between Patterson Avenue and the northern project limits, widening of US 52 occurs mostly in the center median. The horizontal and vertical alignment will meet freeway design standards. The full diamond interchange would remain at Akron Drive. The Patterson Avenue interchange would be removed and a new interchange (half partial clover, half diamond) would be located at Motor Road. At Akron Drive the southbound exit and entrance ramps are redesigned to extend as one-way ramps directly to Akron Drive thereby eliminating their current intersections with Leo Street. These improvements would meet interstate standards, improve safety, and meet 2025 travel demand.

The new interchange at Motor Road would support the Winston-Salem/Forsyth County Long-Range Transportation Plan that specifies the upgrade of Motor Road to an east-west connector route for the northern portion of the City. An interchange at Motor Road would provide direct access between Motor Road and US 52.

With respect to connectivity of local streets, the Locally Preferred Alternative would maintain east-west connections across US 52 at Akron Drive, Patterson Avenue and Motor Road. As stated above, the new interchange at Motor Road would link that east-west route directly to the freeway. Parallel north-south local access routes in the Corridor that would be maintained, including Liberty Street to the east and Patterson Avenue to the west. As part of the Locally Preferred Alternative, these streets would be linked to US 52 via the Akron Drive and Motor Road interchanges.

To accommodate the proposed six-lane cross-section of this segment of US 52, all of the bridges over US 52 would have to be replaced.

8.2.4.2 Travel Analysis

A mainline capacity analysis of the Locally Preferred Alternative shows that if US 52 is widened to six lanes, traffic on US 52 will operate at level of service C or better throughout the day which is a good rate of traffic flow. The ramp analysis indicates that single lane ramps can accommodate 2025 travel demand at the Akron Drive and Motor Road interchanges.

8.2.4.3 Right-of-Way Acquisition

Because of the amount of developed property located in the vicinity of the new interchange proposed at Motor Road, the right-of-way to be acquired for the Locally Preferred Alternative would take 17 buildings and affect 61 parcels.

8.2.4.4 Construction and Right-of-Way Costs

Construction and right-of-way costs are estimated at \$71.2 million; \$67.3 million for construction costs (of which \$4.4 million is for structures not included in interchanges and \$62.9 million is for highway and interchange costs) and \$3.9 million for right-of-way acquisition. Because the Locally Preferred Alternative requires minimal right-of-way acquisition, the relocation costs (which are not part of the cost estimate) should be reasonable. These improvements should be relatively straightforward to construct because the widening of this segment of US 52 is symmetrical either along the outer lanes or within the median.

8.2.5 Section 5 - Motor Road to Oak Summit Road

8.2.5.1 Alignment/Interchanges/Cross-Streets

US 52 is widened to six lanes symmetrically along the centerline between Motor Road and Oak Summit Road, with most of the widening occurring in the center median. The horizontal and vertical alignment will meet freeway design standards. A full interchange would remain at Germanton Road with a new northbound-to-eastbound ramp added to the partial cloverleaf. This would eliminate the left turn maneuver from the northbound loop onto Germanton Road. These improvements would meet interstate standards, improve safety, and meet 2025 travel demand.

With respect to connectivity of local streets, the Locally Preferred Alternative would maintain east-west connections across US 52 at Germanton Road and Oak Summit Road. Patterson Avenue would be maintained as the parallel north-south local access route in the Corridor. The new northbound exit ramp will eliminate conflicts with the nearby Patterson Avenue intersection. As part of the Locally Preferred Alternative, Patterson Avenue would be linked to US 52 via the Germanton Road interchange.

To accommodate the proposed six-lane cross-section of this segment of US 52, all of the bridges over US 52 would have to be replaced.

8.2.5.2 Travel Analysis

A mainline capacity analysis of the Locally Preferred Alternative shows that if US 52 is widened to six lanes, traffic on US 52 will operate at level of service C or better throughout the day which is a good rate of traffic flow. The ramp analysis indicates that single lane ramps can accommodate 2025 traffic demand at the Germanton Road interchange.

8.2.5.3 Right-of-Way Acquisition

The right-of-way acquisition for the Locally Preferred Alternative would affect ten (10) parcels and four (4) buildings would be taken along Patterson Avenue where the new ramp is located. Because the Locally Preferred Alternative requires minimal right-of-way acquisition, few relocations would be necessary.

8.2.5.4 Construction and Right-of-Way Costs

Construction and right-of-way costs are estimated at \$31.4 million; \$29.2 million for construction costs (of which \$1.3 million is for structures not at interchanges and \$26.9 million is for roadways and interchange costs) and \$3.2 million is for right-of-way acquisition. Because the Locally Preferred Alternative requires minimal right-of-way acquisition, relocation costs (which are not estimated in this project) should be low. These improvements should be relatively straightforward to construct because the widening of this section of US 52 is symmetrical within the median.

8.2.6 Section 6 - Oak Summit Road to Northern Project Limit

8.2.6.1 Alignment/Interchanges/Cross-Streets

US 52 is widened to six lanes symmetrically along the centerline between Oak Summit Road and the northern project limit with widening occurring mainly in the center median. The horizontal and vertical alignment will meet freeway design standards. The interchanges at University Parkway and Hanes Mill Road would be connected with a northbound collector-distributor road and a southbound auxiliary lane because of the closely spaced interchanges. These improvements would meet interstate standards, improve safety, and meet 2025 travel demand.

With respect to connectivity of local streets, the Locally Preferred Alternative would maintain east-west connections across US 52 at University Parkway and Hanes Mill Road. Patterson Avenue would be maintained as the parallel north-south local access route in the Corridor. As part of the Locally Preferred Alternative, this street would be linked to US 52 via the University Parkway interchange.

To accommodate the proposed six-lane cross-section of this segment of US 52, all of the bridges over US 52 would have to be replaced.

8.2.6.2 Travel Analysis

A mainline capacity analysis of the Locally Preferred Alternative shows that if US 52 is widened to six (6) lanes, traffic on US 52 will operate at level of service C or better throughout the day which is a good rate of traffic flow. The ramp analysis indicates that single lane ramps can accommodate 2025 travel demand at the University Parkway and Hanes Mill Road interchanges with one exception: at the northbound entrance ramp at Hanes Mill Road. This northbound ramp will have to be two lanes to accommodate the PM peak hour travel demand.

8.2.6.3 Right-of-Way Acquisition

The right-of-way to be acquired for the Locally Preferred Alternative would affect six buildings.

8.2.6.4 Construction and Right-of-Way Costs

Construction and right-of-way costs are estimated at \$46.7 million; \$42.4 million for construction costs (of which all is for the highway) and \$4.3 million for right-of-way acquisition. Because the Locally Preferred Alternative requires minimal right-of-way acquisition, the relocation costs should be low. These improvements should be relatively straightforward to construct because the widening of this section of US 52 is symmetrical within the median.

8.3 Land Use and Economic Development Plan for the Locally Preferred Alternative

8.3.1 Economic Development

The economic development assessments conducted for the US 52 Corridor Plan have projected market demand for various types of potential development including industrial, retail, residential, and hotel/restaurant facilities. There is little potential for further office development in the Corridor. Taken together with other improvements planned for the study area, these types of markets offer ample opportunity to make the US 52 Corridor one of the City's premier development areas.

The US 52 Corridor study area offers numerous advantages to developers, such as a central location within Forsyth County and easy accessibility to north/south and east/west Interstate highways. With a concerted planning and design effort, the area could build on these strengths and become an attractive area for intensive economic development. The economic analyses examined the projected future demand for the following types of development uses:

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Figure 8-1
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8.3.1.1 Industrial

Forsyth County is forecast to be competitive in the coming decades in several key industrial sectors, such as high-value-added manufacturing, and distribution/trucking. These are sectors, among others, that could be attracted to the study area.

- Forsyth County can capture a significant amount of statewide growth in these sectors.
- The study area, with developable land and a central location, would be a very competitive site within the County.
- As the County's existing industries modernize, there will also be "replacement demand" as employers seek new facilities within the county.
- Total demand for industrial acreage between 2015 and 2045 would be approximately **564 acres**.

8.3.1.2 Retail

The analyses examined two discrete types of retail demand, that of convenience goods retailing (everyday items such as groceries) and value-oriented retailing (stores such as big boxes that sell shoppers' goods).

- Demand for convenience goods increases roughly with population.
- The population of the study area is projected to increase, particularly as the area becomes more desirable in light of the planned infrastructure improvements.
- There is projected to be some demand for new convenience goods retail space within the study area, estimated to be about **159,000 square feet** of space by 2020.
- Value-oriented retailers look for sites with certain characteristics, like a large parcel size, good accessibility to customers from a wide areas, and adequate regional demand. A revitalized US 52 Corridor would satisfy these requirements.
- There is projected to be an unmet demand for value-oriented merchandise in Forsyth County by 2020; the study area could realistically capture about one-fifth of this countywide demand.
- Total projected demand for value-oriented retail is estimated at about **195,000 square feet** by 2020.

These two types of retail amount to approximately **354,000 square feet** in projected demand for the study area by 2020.

8.3.1.3 Residential

The residential market was evaluated at to gauge a rough level of demand for housing within the study area through 2020.

- Forsyth County will experience considerable growth over the next two decades. A revitalized US 52 Corridor area should be able to capture an equitable share of this projected growth in households.
- There is estimated to be an increase in the number of households within the study area of between 5,100 and 5,700 households through 2020.
- Much of this demand could be met through the construction of new housing. The estimated demand for new housing through 2020 is between 4,600 and 5,200 units.
- For-sale housing price points based on the projected target markets would be in three ranges – a low price range (around \$50,000), a mid range (\$75,000 to \$87,500), and a high range (\$87,500 to \$125,000).

8.3.1.4 Hotel/Restaurant

Another aspect of potential demand will be from hospitality services (hotels) and restaurant services. This is summarized below:

- Demand for hospitality services often follows increased commercial and industrial development. With the projected increase in commercial/industrial development in Winston-Salem, there will likely be hotel demand as well.
- The current hotel market is relatively soft, due to much recent construction. It will take some time for the current supply to be absorbed by the market.
- By the time the US 52 Corridor project is completed, there is projected to once again be unmet hotel demand.
- By 2020, there is projected to be demand for between **130 and 198 rooms** of new hotel construction within the study area. This could be met by the construction of a business hotel and a budget-oriented motel.
- Restaurant demand could increase due to increased population and increased business activity.
- Total demand in the ideal locations close to the highway (US 52) is projected to be from **21,000 to 26,000 square feet** of restaurant space. This could be met through the construction of 4 or 5 restaurants of about 5,000 square feet each.

8.3.1.5 Other Considerations

One potential use that was not analyzed in detail was that of office development. The review of the current office market in terms of existing vacancies in the downtown suggests a relatively weak office real estate market. In addition,

- Discussions with people within the commercial real estate community have confirmed this suggestion.
- The recent consolidation between Wachovia and First Union is expected to result in a further loss of leased office space in the Winston-Salem market.
- A review of the US 52 Corridor did not result in the identification of prime potential office sites.
- Should the office market rebound, it is considered preferable that any new demand would locate in the downtown area.

8.3.1.6 Summary

The revitalization plan for the US 52 Corridor has the potential to make available prime land for development that spans a variety of uses. There is projected to be substantial demand in the coming years for development of industrial, retail, residential, and hotel/restaurant uses. With a concerted redevelopment effort, the US 52 Corridor can become one of Forsyth County's preeminent development areas.

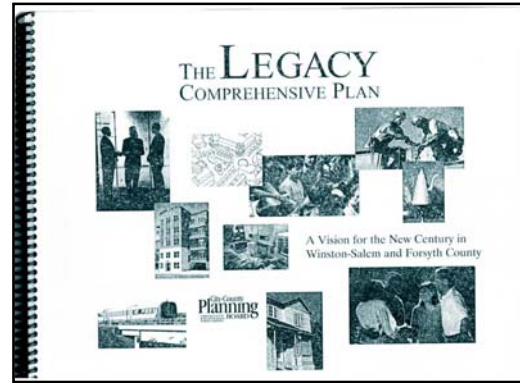
8.3.2 Land Use Plan

The US 52 Corridor Land Use and Transportation Plan was specifically undertaken to provide a strategy through which enhancement of the highway could be strongly influenced by opportunities to simultaneously produce positive land use and economic development enhancements within the US 52 urban corridor. Throughout the Tier 1 and Tier 2 Analyses Phases, land use and economic development considerations played an important role in selecting among alternative highway configurations. In Tier 2 Analysis, an initial set of land use concepts was developed, with minor variations that were responsive to the two highway configuration alternatives being considered. These land use concepts were reviewed by the Steering Committee and by the general public through general community workshops as well as focus workshops with selected community organizations.

This process is described in Section 3.0 Community Involvement. Also, during this timeframe, an economic development analysis was conducted that has served as guidance in refining the Tier 2 land use concepts into the following land use and development concepts that are proposed to accompany the Locally Preferred Alternative for the US 52 Corridor. These concepts also define several land use and economic development policy and program actions for the City of Winston-Salem to implement in advance of and/or in concert with the highway improvement program.

Figure Series 8-2 illustrate the opportunities for enhanced land use and economic development.

8.3.2.1 Basis for Land Use Development Strategy



Legacy Plan

The *Legacy Plan* is Winston-Salem's (and Forsyth County's) "comprehensive plan". While it does not contain a future land use map, it is a very sound policy plan that provides a solid framework for more detailed planning. As stated in the Introduction, the Plan "is a general long-range policy guide for decisions concerning the overall growth and development of the community" (page 1). Further stated, the Plan: "focuses on the physical growth of our community but also addresses quality of life issues like education, community safety, citizen involvement, diversity and integration" (page 1).

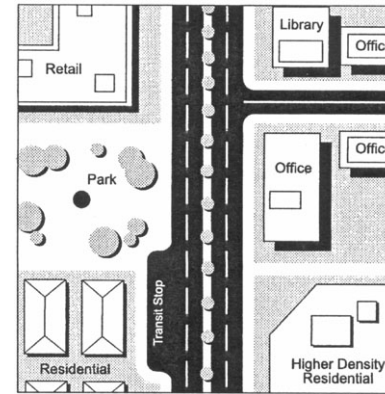
The redevelopment of US 52 to current NCDOT freeway standards reinforces an opportunity for the City to apply these basic precepts of the *Legacy Plan* in the upgrading of a significant corridor that exhibits many signs of decline, abandonment and underutilization. A revitalized US 52 Corridor will also provide further support to key planning and development initiatives that are already in

place. Some additional key *Legacy Plan* policy features that form the base for the US 52 land use plan and impact analysis include:

- Building upon existing areas with infill development, redevelopment, revitalization, etc., to use urban land "more intensively, reducing pressures on rural areas". (page 5)
- Mixed-use development with "a balance of services, together with efficient provision of public services and facilities." (page 5)
- "...improved coordination between land use and transportation" ...to reduce dependence on the automobile. (page 6)
- Pedestrian-oriented development. (page 5)
- An emphasis on "attractiveness and vitality of (the) community." (page 9)
- "Building better neighborhoods." (page 10) "Urban neighborhoods" that provide "quality infill development, greater residential densities", and "where appropriate, neighborhood retail and community services" are provided. (page 30)
- Economic development strategies focused on specific Area Plans (page 77), "redevelopment of abandoned industrial and brownfield sites" (page 78), and "economic diversification" (page 79).

The *Legacy Plan* also contains specific design policies that are followed and built upon in the recommendations of this plan:

- "... attractive roadways that are handsomely landscaped, well lighted, and have underground utilities." (page 13)
- "Attractive gateways" to "welcome visitors to our community." (page 14)
- The "Urban Boulevard Concept." (page 32) While the *Legacy Plan* utilizes this concept for corridors serving specific linkage functions, it is very applicable, with variations, to a number of roadways in the US 52 Corridor study area and is applied herein on the basis of its landscape character and the orientation of building in close proximity to the right-of-way to support pedestrian circulation and connectivity. For purposes of this US 52 Corridor Plan, this "Urban Boulevard" concept has been utilized to build a further hierarchy of street types that provides concepts for enhancements to smaller streets that can be improved to support the land use, gateway and general land use enhancement recommendations of the corridor. They include:



Urban Boulevard from Legacy Plan

Urban Boulevard: In this study the term "Urban Boulevard" applies this site design feature to four-lane streets with a landscaped median.

Urban Street: An "Urban Street Concept" is also used to denote two-, three- or even four-lane roadways that do not have a median but would be developed to provide those "attractive roadways" and "gateways" that have the same site planning emphases on building setbacks and pedestrian-orientation.

Neighborhood Street: The "Neighborhood Street Concept" is used to denote what are typically two-lane streets that are predominantly residential serving but which are also likely to experience some change in role in supporting land use improvements related to the upgrade of US 52 and associated land use recommendations. The intent is that residential character be preserved and vehicular speeds kept to appropriate levels through emphases on building setbacks, on-street parking, street-tree planting, and pedestrian-orientation.

Within the Winston-Salem/Forsyth County Planning Board's planning strategy, the *Legacy Plan* has provided the basis for the more detailed planning of selected areas and a number of "Area Plans" have been prepared, some of which are summarized in Section 1 of this report, and which directly affect the land use and community development recommendations of the US 52 Corridor Plan. While the Area Plans that have been reviewed vary in format and approach, the *South Central Area Plan* (Draft, March 22, 2002) contains components that also provide a base for the planning approach used for the Tier 3, Locally Preferred Alternative, component of this study.

The *South Central Area Plan* provides a format for defining and describing development area patterns and centers that is used in this section of the plan:

- Mixed Use Development Opportunity Areas (page 1)
- Commercial/Office Land Use in "Neighborhood Activity Centers" and "Community Activity Centers" (page 7)

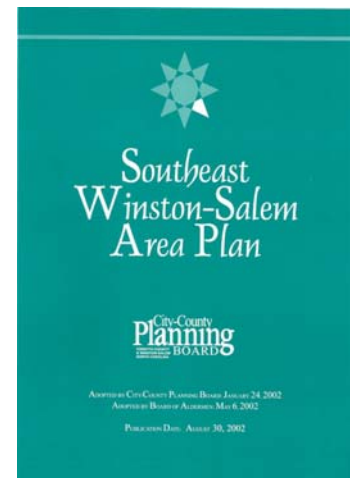
The use of this format provides a very logical extension of the policies of the *Legacy Plan* as well as a clear connection of the recommendations of this study to the level of detail and approaches to which the Winston-Salem/Forsyth County Planning Board and staff are accustomed. Therefore, there will be a consistent basis for detailed planning studies and strategies leading to implementation of the recommendations of this plan.

8.3.2.2 Land Use and Development Program for the US 52 Corridor

Given this "Basis for Land Use Development Strategy" a recommended Land Use and Development Program has been prepared for the US 52 Corridor and is described in the following narrative and in Figure Series 8-2 above. Following the format established throughout this report, this discussion of land use opportunities and recommendations for the corridor proceeds from I-40 northward to the northern project limit.

Section 1: I-40 to Diggs Boulevard

The *South Central Area Plan* covers the area west of the US 52 Corridor from I-40 to Business-40, while the *Southeast Area Plan* covers the area east of US 52 this section of the Corridor. As discussed above, the *South Central Area Plan* is a well-conceived plan on which the City is proceeding with implementation. While formatted differently from and not offering the same level of detail as the *South Central Area Plan*, the *Southeast Area Plan* is also a guide to on-going implementation strategies by the City. The proposed improvements to US 52 present opportunities for refinement of these plans in the following areas:



Southeast Winston-Salem Area Plan

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Sprague Street Neighborhood Gateway: The elimination of the partial interchange at Sprague Street and the reconstruction of the US 52 alignment and overpass present opportunities for very positive impacts on the area. Elimination of the partial interchange will remove through traffic, including trucks, from a predominantly residential street that also includes several important churches. Construction of the new overpass provides an opportunity for “architectural” and landscape treatment of the overpass as a dual “Neighborhood Gateway” (Gateways are discussed in greater detail in Section 8.3.2.5) for the Sunnyside neighborhood on the west and the Goldfloss neighborhood on the east.

Waughtown Street Urban Street: The provision of a new full interchange at Waughtown Street properly focuses highway related traffic on a predominantly business/commercial roadway. It presents an opportunity for Waughtown Street to be upgraded as an “Urban Street” that serves as a significant Gateway into the communities flanking US 52 as well as for the North Carolina School of the Arts (NCSA) and Old Salem. It is recommended that Waughtown Street be upgraded with an urban streetscape from at least the Martin Luther King, Jr. Drive area on the east to the recently completed roundabout near Old Salem. This Urban Street/Gateway would support development of the Southeast Gateway Neighborhood Activity Center contained in the *South Central Area Plan* and an enhanced Neighborhood Activity Center at Waughtown Street and Martin Luther King, Jr. Drive. This enhancement would build upon recent improvements to Waughtown Street and the roundabout with Fayetteville Street.

Industrial/Commercial Improvement and Redevelopment Opportunities: The provision of the full interchange at Waughtown Street and relocation of US 52 will provide improvement and redevelopment opportunities for at least three predominantly industrial and commercial areas:

1. Along Waughtown Street in the area defined by Wood Street and Fayetteville Street: It is recommended that the land uses provided in the *South Central Area Plan* for this area be reviewed and updated to take advantage of this opportunity.
2. Area defined by Vargrave Street and the Norfolk Southern Railroad east of US 52 and north of Waughtown Street: The predominant use in this area is Carolina Steel’s fabricating facility. At this level of study, the facility must be considered as a “full taking” as part of the reconstruction of US 52 even though only a small portion of the building is potentially impacted. The area also contains some minor industrial sites that are derelict and seriously deteriorated that will be more significantly impacted by the realignment of Vargrave Street. This area has significant potential for either redevelopment into more modern industrial uses or, if later in the roadway design process only a minor “partial taking” of Carolina Steel is possible, upgrading and expansion by Carolina Steel.
3. Area east of the Norfolk Southern Railroad, north of Waughtown Street and west of Althea Street: The southern approximately two-thirds of the area contains a variety of older, low-intensity industrial uses dominated by large truck service businesses. There are portions of the area that are unused with abandoned buildings. The northern portion of the area contains an RJR Packaging plant. The RJR facility is only accessible from the north via Cunningham Street from Vargrave Street. While the *Southeast Area Plan* provides for industrial uses, it is recommended that further economic development actions be considered to stimulate infill and redevelopment of the area for higher intensity, modern industrial uses, or at least to build upon the trucking emphasis of the existing users. Old Lexington Road “dead-ends” into the south end of the area. Consideration should be given to extending Old Lexington Road northward then eastward to tie to Martin Luther King, Jr. Drive to support further improvement of the properties. This extension would greatly enhance the redevelopment potential of the area and at the same time provide enhanced access to the RJR Packaging plant (which would in turn remove commercial traffic from the Skyline Village neighborhood area).



Carolina Steel

Waughtown Street/Martin Luther King, Jr. Drive Neighborhood Activity Center: Given the different format of the Southeast Area Plan, it is unclear what is the intent of the Area Plan is for this intersection. It is recommended that consideration be given to upgrading the area surrounding this intersection to a Neighborhood Activity Center as defined in the South Central Area Plan. The area already contains a full service grocery and a variety of other food service facilities. Specific additional uses that will meet the Neighborhood Activity Center needs of the area would be determined by City/County Planning Staff through its ongoing community involvement process. Development of the Waughtown Street Urban Street and Martin Luther King, Jr. Drive/Thomasville Road Urban Street as recommended herein will contribute greatly to the overall enhancement of the area.

Skyline Village Neighborhood Redevelopment: The residential portion of Skyline Village should receive neighborhood improvement activities similar to those being utilized in the Happy Hills area. The more commercial area that fronts on Martin Luther King, Jr. Drive provides an opportunity for continued upgrading and infill of the light industrial/commercial uses that are predominant in the area. The lower land area associated with the branch of Salem Creek should be enhanced as passive community open space containing a trail that would link the Forest Park and Goldfloss area to the Salem Creek Greenway.

Skyline Village Commercial/Industrial Infill and Redevelopment: The Commercial/Industrial portion of Skyline Village presents opportunities for additional infill and enhancement. Further studies should be undertaken to determine specific opportunities and the potential for these opportunities to be targeted at support of Winston-Salem State University, particularly the adjacent athletic facilities. A portion of the University’s stadium parking bridges a branch of Salem Creek. Relocation of this parking away from the creek and opening up the enclosed creek would greatly contribute to the environmental quality of the Salem Creek Greenway system as discussed below.

Martin Luther King, Jr. Drive/Thomasville Road Urban Street: This roadway alignment provides a valuable artery paralleling US 52, serves the several neighborhoods in the Southeast Area, services the Waughtown/Martin Luther King, Jr. Drive Neighborhood Activity Center proposed above, and provides linkage to Winston-Salem State University and the downtown area. It is recommended that this route be landscaped as an Urban Street to support the revitalization of the area.

Salem Creek Greenway and Park: The excellent existing trail and recreational facilities along Salem Creek combined with the floodplain that is associated with the creek should be further enhanced as a major open space spanning the US 52 Corridor study area and providing non-vehicular linkages between a number of special use areas (Winston-Salem State University, Salem College, Old Salem) as well as the adjoining neighborhoods. It



Salem Creek Trail Enhancements



Salem Creek Greenway

is recommended that such enhancements be incorporated into appropriate Area Plans as well as in the planning and design activities for the Salem Creek Parkway. A branch of the creek flows from the south between the residential and industrial portions of the Skyline Village area. Unfortunately, a parking lot for Winston-Salem State University’s stadium has covered the stream. If it were opened, a significant greenway amenity into the Skyline Village neighborhood could be provided. The construction of the proposed Salem Creek Parkway and a new interchange with US 52 should be closely coordinated with enhancement of this major open space.

Salem Creek Parkway and US 52 Interchange Gateway: The combined proposal by the City to build a Salem Creek Parkway and the recommended replacement of the existing Vargrave Street and Stadium Drive interchanges with one at the new Parkway will provide a significant enhancement of access to this portion of the corridor. While there are few land use development opportunities associated with this interchange and the Parkway, it will provide a definitive Gateway to Winston-Salem State University, Salem College, Old Salem and North Carolina School of the Arts. These institutions all have current master plans, which relate well to the proposed improvements of this study. The Winston-Salem State University student population is projected to grow to 4,200 students by the year 2006. The campus master plan depicts residential dormitory and classroom expansion south of Martin Luther King, Jr. Drive and encompassing Civitan Park. Crossing the access ramps at Stadium Drive will bring focus to a university gateway entrance at the proposed Salem Creek Parkway interchange while relieving through-traffic on Martin Luther King, Jr. Drive. These improvements will provide the southern Gateway to the Piedmont Triad Research Park, as discussed below, and also provide enhanced access to the Skyline Village and Happy Hill neighborhood areas.

Section 2: Diggs Boulevard to Northwest Boulevard

Piedmont Triad Research Park: In the early research and Tier 1 planning phases of this study, the Piedmont Triad Research Park was recognized as a significant future land use that would expand into major portions of the underutilized lands lying between US 52 and the core of Downtown Winston-Salem. However, during the Tier 2 phase of this study, the Piedmont Triad

Research Park announced a very significant expansion of its land area so that it now extends from the north side of the Salem Creek floodplain area on the south to Martin Luther King, Jr. Drive on the north, and from US 52 on the east to blend into the downtown area in the Chestnut Street and Patterson Avenue area. At the same time, Piedmont Triad Research Park announced that a master-planning program to implement a program encompassing some 10 million square feet of building space and parking for 15,000 cars. The Piedmont Triad Research Park is closely associated with Wake Forest University, the University's Bowman Gray School of Medicine and the Baptist Hospital complex located on the southwest edge of the downtown area. Piedmont Triad Research Park is also developing or expanding relationships with Winston-Salem State University. Research emphasis will be in biomedical fields and some level of outpatient medical services is expected to be provided within the Park. In a coordination meeting of the US 52 Project Team and City Staff with the Piedmont Triad Research Park President and planning team, it was determined that the Martin Luther King, Jr. Drive and Salem Creek Parkway upgraded interchanges would provide the northern and southern gateways for Piedmont Triad Research Park, and that improvements in the 3rd Street partial interchange would support the development objectives of the Piedmont Triad Research Park. The Piedmont Triad Research Park was also made aware that reconstruction of US 52 will require additional right-of-way on the west side of US 52, thereby having potential impacts on planning for Piedmont Triad Research Park. In subsequent information exchanges, it was learned that in their early studies, the Piedmont Triad Research Park planning team had determined that a north/south "Research Park Road" could be sited to extend from Martin Luther King, Jr. Drive to Salem Creek Parkway, providing an internal spine for the park. Although the Piedmont Triad Research Park's plans are still being formulated, it is clear that this is a major development opportunity that will be supported by the proposed US 52 improvements and that will in turn support further growth in the central Winston-Salem area. Planning for the two facilities should continue to be closely coordinated.



Piedmont Triad Research Park

activity areas on both sides of the highway. Design of this park/open space should be executed with maximum community and Piedmont Triad Research Park involvement.

East Winston Institutional/Health Care District: The area bounded by US 52 on the west, Martin Luther King, Jr. Drive on the north, Cleveland Avenue on the east, and Fourth Street on the south contains a variety of uses, including: Forsyth County public health (which is currently undergoing expansion); multi-family public housing; and social service-related facilities, churches and other public facilities. It is expected that these would continue to function unless the respective agencies determine future needs that would lead to replacement. At the same time, it contains some vacant land and underutilized sites that have infill and redevelopment potential. It is recommended that infill development (as well as possible reuse of some of the public facility sites) be undertaken to focus on businesses that would provide support services to the Piedmont Triad Research Park. This opportunity should be particularly focused and structured to provide economic development opportunities for the businesses and residents of the East Winston neighborhoods. Additionally, economic development efforts in this area, as well as the Piedmont Triad Research Park itself, will provide employment opportunities for the public housing residents and employment training programs should be targeted toward them. The area could potentially support a hotel/motel that would support the Research Park.

Martin Luther King, Jr. Drive Community Activity Center: The area straddling Martin Luther King, Jr. Drive and defined generally by Cleveland Avenue, Mt. Zion Place, Cameron Avenue and East Fifth Street contains a variety of commercial, service and residential uses. The commercial center on the north side of New Walkertown Road contains viable community and neighborhood commercial uses that can be expanded on. The older strip center on the west side of Martin Luther King, Jr. Drive and other site provide redevelopment and infill opportunities. This area should be the focus of redevelopment and infill activities to strengthen it as a community activity center. This development could also include business opportunities that would provide support services to the Piedmont Triad Research Park.

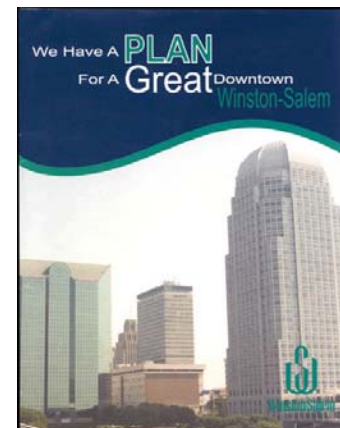
JFK Middle School – Medical Research “Magnet” School: The JFK Middle School, located in the northeast quadrant of US 52 and Martin Luther King, Jr. Drive, has been converted to special uses. Given the proposed development of Piedmont Triad Research Park, it is recommended that the possibility of converting JFK Middle School to a “magnet school” that is tied to the research emphasis of and sponsored by Piedmont Triad Research Park be considered. A new north-south connector road linking Martin Luther King, Jr. Drive to Liberty Street could improve connecting in East Winston.

Liberty Street Corridor – Vicinity of 12th to 20th Streets: This area has been addressed in the Liberty Street Corridor Plan and recommended improvements to Liberty Street and its streetscape have been implemented. The Plan calls for the revitalization of storefront uses along the street and some successes have been achieved. It is recommended that the area be reevaluated in light of the recent expansion of the Piedmont Triad Research Park. The proximity of the area to Piedmont Triad Research Park should provide opportunities for revitalization of at least the southern half of the area to provide supportive uses related to Piedmont Triad Research Park, similar to the recommendations made above for the Southeast Winston Research Park Support District.



Liberty Street Corridor Infrastructure Improvements

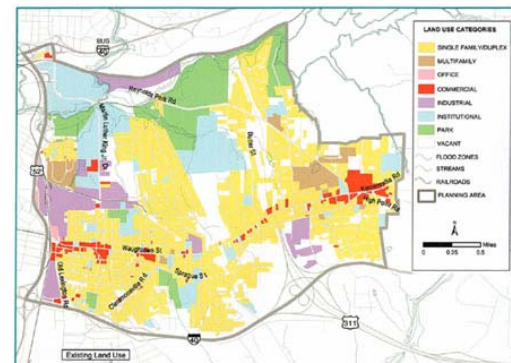
Liberty Street – Patterson Avenue – Ivy Street Big Box Specialty Retail Area: The area defined by Martin Luther King, Jr. Drive on the south, Patterson Avenue on the west, approximately 14th Street or Northwest Boulevard on the north and US 52 on the east, could potentially be redeveloped as a specialty retail area featuring select “big box” retail facilities that have continually moved outward into the suburbs as the retailing format has evolved. There are some cases around the country where such retailers are returning to the core of the metropolitan area in response to changing markets and realization that their outward expansion pattern has created a void. Such retailers as Office Max and Office Depot can respond to the office supply market of downtown and Piedmont Triad Research Park. Others, such as Target and Home Depot, are seeking such locations in response to the nearby market represented by the concentration of downtown employees. Alternatively or in addition to these uses, this area could also contain other uses that are supportive of the Piedmont Triad Research Park.



Winston-Salem Downtown Master Plan

Downtown Winston-Salem: A master plan for Downtown Winston-Salem has been developed recently and a variety of implementation actions are underway. The recently proposed expansion of the Piedmont Triad Research Park and announcement of their aggressive development program will fill in a very unattractive expanse of underutilized land located between the US 52 Corridor and the downtown area. With proper design, the Piedmont Triad Research Park should form a new front door for downtown that will be consistent with the new “address” provided by an upgraded US 52 and its potential Interstate Highway designation. The proposed reconstruction of US 52 and associated interchange improvements will directly support implementation of the Downtown Master Plan.

East Winston Neighborhood Redevelopment: The area generally bounded by US 52, Fourth Street, Cameron Avenue and Business 40 is a predominantly residential area straddling Martin Luther King, Jr. Drive. It is experiencing a variety of neighborhood improvement activities. These activities should continue. Development of the Third Street – Fourth Street Highway Cap Park proposed below should contribute to this effort as well as provide a linkage to the Research Park. This linkage between housing in the neighborhood and jobs in the Research Park should have positive impacts for both efforts. The development of the proposed Martin Luther King, Jr. Drive Urban Boulevard should likewise support this effort.



Southeast Winston-Salem Area Plan

Third Street – Fourth Street Highway Cap Park: US 52 has long been perceived as a barrier between the activities on the east and west sides of the highway. The depressed alignment of US 52 in the 3rd, 4th and 5th Streets area presents an opportunity to bridge the highway with a “cap” that would support an open space/recreational area that would extend into the

Liberty/Patterson Neighborhood Revitalization Area: This small residential area bounded approximately by Patterson Avenue, 13th Street, US 52 and 17th Street is an enclave surrounded by industrial uses and US 52. It contains a number of churches, day care centers and other service facilities. It is also experiencing positive improvements to the housing stock which is clearly “affordable housing” that is located in close proximity to a variety of employment opportunities. The recommended enhancements to the South Patterson Avenue Urban Street and the Patterson Avenue Industrial/Business Infill and Revitalization Area should be scaled to support and further enhance these local efforts. Additional community effort should be exerted to support these positive trends.

Patterson Avenue Area Industrial and Business Infill Areas: The areas situated both north and south of the Liberty/Patterson Neighborhood Revitalization Area, and further defined on the west and north by the Norfolk Southern Railroad, the east by US 52 and the south by the Big Box Specialty Retail Area as defined above, contains a mixture of industrial, distribution and service uses, many of which appear to be quite viable businesses. Additional effort should be undertaken to enhance this employment area and buffer it from the Liberty/Patterson Neighborhood Revitalization Area. It is recommended that this area be studied in further detail to determine specific revitalization, redevelopment and infill needs and opportunities as well as infrastructure improvements that are needed to support such enhancements. The proposed enhancement of the Patterson Avenue Urban Street should provide a positive image improvement for the area. Additionally, Ivy Avenue should provide an opportunity for alternative north-south circulation to support further improvement of the area.

South Patterson Avenue Urban Street: This roadway alignment provides a valuable north/south artery paralleling US 52, serves the several neighborhoods from downtown to US 52, services the Liberty/Patterson Neighborhood Revitalization Area and the Patterson Avenue Area Industrial and Business Infill Areas discussed above, and relates strongly to the Akron Drive interchange area. It is recommended that this route be upgraded as an Urban Street to enhance its traffic flow characteristics, and support the revitalization of the areas that it serves.

Section 3: Northwest Boulevard to Glenn Avenue

North Winston/Kimberly Park Neighborhood Activity Center: The area surrounding the intersection of Glenn Avenue and Patterson Avenue has been defined as a minor neighborhood supporting commercial area. It is recommended that consideration be given to further defining the area surrounding this intersection as a Neighborhood Activity Center as defined in the *South Central Area Plan*. Specific additional uses that will meet the Neighborhood Activity Center needs of the area would be determined by City/County Planning Staff through its on-going Small Area planning process.



North Winston/Kimberly Park Neighborhood Activity Center

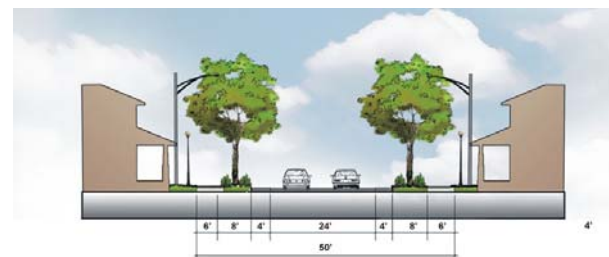
Public/private improvements needed include:

- Upgrading Patterson Avenue as an Urban Street, as discussed above.
- Creation of a “community/economic development” program to support local community involvement in the business opportunities associated with the redevelopment program.

Planning actions needed include:

- Preparation of an “Area Plan” encompassing the Neighborhood Activity Center and the surrounding North Winston/Kimberly Park Traditional Neighborhood, as presented below.

North Winston/Kimberly Park Traditional Neighborhood Preservation/Revitalization: The reconfiguration of the US 52 interchange serving 25th, 26th, 27th and 28th Streets will introduce more traffic to this stable neighborhood and could serve as a catalyst for change in the area. It is recommended that a Small Area Plan be



Neighborhood Street Rendering

prepared to address the potential impacts of increased traffic be developed in conjunction with the Neighborhood Activity Center as discussed above.

Public/private improvements needed include:

- Upgrading the one-way pair of 27th and 28th Streets as Neighborhood Streets.
- Upgrading Patterson Avenue as an Urban Street as discussed above.
- Development of a “Gateway Park” with linkage between Hanes Middle School and Blum Blanding Park (incorporating joint uses and upgrades to the school, if appropriate).

Planning actions needed include:

- Preparation of an “Area Plan” encompassing the Neighborhood Activity Center and the North Winston/Kimberly Park Traditional Neighborhood.
- Development of land development regulations to protect the housing along Patterson Avenue and 27th and 28th Streets.

Indiana Avenue Industrial/Business Infill and Revitalization Area: The area defined by Indiana Avenue, Glenn Avenue and US 52, contains a mixture of very heavy industrial uses that appear to be viable, and some vacant or underutilized lands. It is recommended that this area be studied in further detail to determine specific revitalization, redevelopment and infill needs and opportunities as well as infrastructure improvements that are needed to support such enhancements. The proposed enhancement of access from US 52 to Indiana Avenue should help support an enhancement program. Streetscape improvements along Indiana Avenue would benefit the visual character of this area as well as Hanes Middle School on the opposite side of Indiana Avenue.

Cleveland Avenue Traditional Neighborhood Preservation/Revitalization/Cleveland Avenue Neighborhood Street: Cleveland Avenue is an important neighborhood-serving roadway that provides north/south parallel capacity to US 52. The various activities recommended for the surrounding areas could induce additional traffic on the roadway. It is recommended that a Small Area Plan to address the potential impacts of increased traffic be developed in conjunction with preparation of the plan for the Liberty Street/25th Street Mixed Use Neighborhood Activity Center. See specific recommendations presented in the following Liberty Street/25th Street Mixed Use Neighborhood Activity Center project area.

Liberty Street/25th Street Mixed Use Neighborhood Activity Center: A reconfigured interchange serving 25th, 26th, 27th and 28th Streets will serve as a catalyst for redevelopment of the Piedmont Park public housing project and adjacent lands into a mixed-use retail and residential community center. The reconfiguration of the transportation network in this vicinity involves three key elements that can form the basis for developing a significant Community Activity Center on the east side of the corridor:

1. The interchange will enhance east-west linkage;
2. The interchange will provide a clear focus on 25th Street to the east; and
3. The relocation of Liberty Street to the east side of US 52 will reconnect Liberty Street to the neighborhood and allow it to support redevelopment opportunities in the area.

A Community Activity Center provides for the sale of commercial goods and personal services for nearby residents. The Activity Center encompasses the Piedmont Park Public Housing project and the blocks flanking Cleveland Avenue to the south of 25th Street. The Center should be developed in a mixed-use, pedestrian-oriented pattern as posited in the *Legacy Plan*. Commercial, office and service uses would be oriented to Liberty and 25th Streets in an urban setting. This pattern would support continuation of the City’s efforts in upgrading Liberty Street south of this area. Multi-family housing would be provided on upper floors of retail and services mixed-use buildings as well as in apartment and condominium formats on the Piedmont Park property and adjacent to the commercial/mixed use core of the center.

Uses needed include:

- Grocery store
- Pharmacy – full service drug store
- Specialty food service stores – bakery, restaurants, deli, etc.
- Personal services facilities – dry cleaner, video store, sundries, etc.
- Professional services offices – Doctors, dentists, insurance

Public/private improvements needed include:

- Redevelopment of the Piedmont Park Public Housing project utilizing “HOPE VI” or a model closely patterned on HOPE VI wherein replacement public housing would be provided on a more dispersed basis and a mixture of market rate and specialty (elderly) housing would be provided in an integrated pattern.
- Creation of a “community/economic development” program to support local community involvement in the business opportunities associated with the redevelopment program.
- Development of the grid street pattern that exists in the North/East Winston neighborhood to the south of 26th Street into the Piedmont Park property and the provision of linkages into the Airport Industrial Park.
- Development of a focal neighborhood park or plaza.
- Continuation of the Liberty Street Urban Street streetscape format through the area.
- Continued development of the Airport Industrial Park with modification to the street pattern as discussed above and siting of buildings on parcels nearest the Activity Center to continue the urban, pedestrian-oriented pattern.
- Upgrading 26th Street as a Neighborhood Street with appropriate streetscaping, building on the Liberty Street format.
- Upgrading Cleveland Avenue as a neighborhood-serving collector street with streetscape features that will support enhancement of the single-family character of the area.



First Ward, Hope VI Redevelopment
Charlotte, North Carolina

Planning actions needed include:

- Preparation of an “Area Plan” encompassing the North/East Winston neighborhood, Piedmont Park and the Airport Industrial Park.
- Preparation of land use regulations to protect and enhance the character of the North/East Winston neighborhood.
- Preparation of a “HOPE VI-type” redevelopment plan for the Activity Center.

Smith Reynolds Airport Industrial Park: As discussed in connection with the Liberty Street/26th Street Mixed Use Neighborhood Activity Center, the City has prepared a master plan for and has commenced development activities for the development of the Airport Industrial Park that extends from Liberty Street to 26th Street in an arc around the Piedmont Park public housing project. These efforts will continue and will provide employment opportunities for the area. The primary entrances into the Airport Industrial Park will from Liberty Street and 26th Street. However, as discussed above with the Liberty Street/25th Street Mixed-Use Neighborhood Activity Center, and if still possible, the street pattern of the Airport Industrial Park should be modified to provide more direct connectivity with the surrounding area.

Section 4: Glenn Avenue to Motor Road

Glenn Avenue Industrial/Business Infill and Revitalization Area: This triangular-shaped area defined by US 52 on the west, Glenn Avenue on the north and the Norfolk Southern Railroad on the east, contains a mixture of industrial, distribution and service uses, with the major use being a materials recycling facility. It is recommended that this area be studied in further detail to determine specific revitalization, redevelopment and infill needs and opportunities as well as infrastructure improvements that are needed to support such enhancements. Glenn Avenue should be upgraded to become an Urban Street that would provide enhanced linkage between Indiana Avenue and Akron Drive, and, thereby, improved access to this recommended revitalization area as well as the Indiana Avenue Industrial/Business Infill and Revitalization Area as defined above.

Akron Drive Interchange Community Activity Center: The area surrounding the Akron Drive interchange presents a variety of opportunities for redevelopment and for the creation of new gateways to serve significant facilities that are located outside of the immediate corridor. These opportunities include:

Community Gateway/Urban Boulevard: It is recommended that Akron Drive be upgraded to an Urban Boulevard to provide gateway entrances to the immediate area as well as linkages to significant nearby facilities. The Boulevard should contain a landscaped median with dedicated turning lanes, and intensive landscaping and sidewalks on both sides of the road. Site planning standards should be prepared that place the building near the front property line with parking and service to the rear and side of the road. The overall design pattern is intended to support pedestrian utilization for circulation between uses and sub-areas. To the east, the Boulevard would provide an upgraded approach to the Smith Reynolds Airport. To the west, with an enhanced connection to Reynolds Boulevard (also upgraded to Urban Boulevard standards), Akron Drive/Reynolds Boulevard would provide a new gateway route to the sports and entertainment venue complex associated with the Dixie Classic Fairgrounds as well as an enhanced route to the Wake Forest University Campus.



Northside Shopping Center

Southwest Quadrant: The Northside Shopping Center is the predominant user in the southwest quadrant and it appears to have undergone some upgrading recently. Additional properties in the southwest quadrant to the south of the Northside Shopping Center are candidates for further infill and revitalization. Multi-family housing is recommended for the southern portion of this area. The enhancement of Patterson Avenue as an Urban Street in this area will make a significant contribution to the recommended revitalization efforts. The area across Patterson Avenue and further defined by Indiana Avenue and Reynolds Boulevard is deteriorated and should be redeveloped as predominantly multi-family housing with a small area retail and office uses. These multi-family housing developments will be supportive of the uses in the Northside Shopping Center.

Northwest Quadrant: A mixed-use development of highway-oriented uses, lodging and food service is recommended for development in the northwest quadrant of the interchange, between Patterson Avenue and US 52. In combination with the existing motel in the northeast quadrant, these facilities would provide the largest concentration of highway-oriented lodging within the study area. These uses would also be supportive of the Fairgrounds and entertainment venues on Reynolds Boulevard to the west of the area.

Multi-family residential development is recommended for the land to the north of this motel/restaurant area to fill out the area defined by US 52 and Patterson Avenue. There is a large church complex in this area, known as the Montview Neighborhood. A small amount of neighborhood retail space on the ground floor of residential building should also be encouraged to provide some mixed-use character for the area.

The area west of Patterson Avenue and north of Akron Drive has an emerging pattern of business park uses focusing along Perimeter Point Boulevard. This use should continue to develop with additional compatible uses filling in the land area from Akron Drive northward to encompass the Patterson Avenue frontage to rear lot lines of the residential units on Burnham Road.

Northeast Quadrant: The commercial uses in this quadrant should be restrained to the immediate vicinity of the existing motel, with attention being given to maintaining and upgrading the Ogburn Station Neighborhood extending northward along Ogburn Avenue.

Southeast Quadrant: The site located in the immediate vicinity of the interchange is recommended for continued use by highway oriented uses with some expansion. The Glenn Avenue Industrial/Business Infill and Revitalization Area discussed above fills out the balance of the quadrant.

Forest Hills/North Hills Neighborhood Preservation: The predominant land use on the west side of Patterson Avenue and US 52 extending northward to Motor Road is single family residential of varying age and density in the Forest Hills and North Hills neighborhoods. These are stable residential neighborhoods, and specific actions should be taken to protect and enhance them.

Patterson Avenue Mixed-Use Business Park Corridor: This corridor and a series of recommendations for it begins at the crossing of Patterson Avenue and US 52 and continues northward to Oak Summit Road. Please refer to the recommended strategies for all of this corridor under Section 5 below.



United Parcel Service

Trucking Service Complex/Industrial Infill: This large area bounded on the west by US 52 and Patterson Avenue, the east by Ogburn Avenue and extending northward to Motor Road is an industrial and distribution area dominated by a variety of trucking operations (including the United Parcel Service distribution center). The vacant area within this district should be developed in these and related uses in response to trends that have been identified in the Technical Appendix-Economic Development Models report. It is recommended that this area be studied in further detail to determine specific needs and opportunities as well as infrastructure improvements that are needed to support such enhancements. The land fronting Patterson Avenue should be developed in either uses that are supportive of the primary trucking uses or the office/public contact components of the existing and future trucking uses. The area is served by Kapp Street, which extends from Patterson Avenue to Ogburn Avenue, and Park Plaza Drive. As further development is achieved, additional internal street

connections should be planned to increase internal connectivity. The development of the Patterson Avenue Urban Boulevard as described in Section 8.3.6 will provide a new visual image for this area.

Section 5: Motor Road To Oak Summit Road

Retnuh Hills/Hunter Hills Neighborhood Protection and Maintenance: The predominant land use on the west side of US 52 from Motor Road northward to Oak Summit Road is single family residential of varying age and density in the Retnuh Hills and Hunter Hills neighborhoods. These are stable residential neighborhoods, and specific actions should be taken to protect and enhance them.

Public/private improvements needed and recommended include:

- Motor Road Neighborhood Street: The Motor Road location was selected for a new interchange to replace the existing Patterson Avenue interchange because Motor Road provides a better east-west thoroughfare alignment providing traffic service to US 52. To help protect the residential character of Motor Road, it is recommended that it be upgraded as a Neighborhood Street. The installation of curb and gutter, street trees and sidewalks will enhance and maintain the residential character in the face of increased automotive traffic.
- Germanton Road Neighborhood Street: To similarly enhance the neighborhood in the face of potential increases in traffic, Germanton Road should be addressed with similar improvements as recommended for Motor Road.
- Oak Summit Road Neighborhood Street: To similarly enhance the neighborhood in the face of potential increases in traffic, Oak Summit Road should be also addressed with similar improvements as recommended for Motor Road.

- Neighborhood Gateways: It is recommended that Gateway landscaping and signage on the west side of US 52 at Motor Road, Germanton Road, and Oak Summit Road be in keeping with the neighborhood scale of Retnuh Hills and Hunter Hills and that these neighborhoods be specifically identified in gateway signage.
- Infill of vacant lots and sites with housing that is compatible with the existing character of the area.
- Development of an environmental open space system utilizing the ravines and waterways, including Leak Fork Creek and Mill Creek, incorporating a trail system that ties the system together with alternative connectivity as well as recreational opportunities.

Planning actions needed include:

- Attention to zoning and other development requests to prevent incursion of incompatible uses.
- Planning of a continuing infrastructure maintenance program to support the quality of the program.

Patterson Avenue Mixed-Use Business Park Corridor: The Patterson Avenue corridor, as Patterson Avenue parallels the east side of US 52 from its crossing of US 52 north to Oak Summit Road, provides a significant opportunity to develop a mixture of uses that is based primarily on attracting a variety of high-quality business/industrial uses that can take advantage of the accessibility provided by the reconstruction of US 52 and its potential Interstate designation. The several mobile-home sales facilities and other low-intensity uses of land that make up the current uses of the majority of this area provide significant opportunities for new development, redevelopment and infill with clusters of specialized business/industrial parks, supporting mixed-use service centers, and multi-family housing.



Clayton Mobile Homes, Patterson Avenue

Given the linear geography of this corridor and given the major roadways crossing it, the area lends itself to the development of at least three specialized business parks, supporting commercial service centers and multi-family housing. The conceptual framework for the Patterson Avenue Mixed Use Business Park Corridor consists of the following elements.

- Patterson Avenue Urban Boulevard: It is recommend that Patterson Avenue be developed as an Urban Boulevard, from US 52 northward to University Parkway, as defined in The Legacy Plan (page 32) and as recommended for Akron Drive in the discussion of the Akron Drive Interchange area above.
- US 52, Motor Road, Germanton Road Gateways: Landscape and graphic improvements on the east side of US 52 at these locations should focus on defining the Patterson Avenue Business Corridor and be consistent with the amenities designed for the Urban Boulevard.
- Specialized Business Park Clusters: Within the Patterson Avenue Mixed-Use Business Park Corridor three specific areas are recommended for redevelopment as specialized business park areas.
 - US 52 to Motor Road
 - Motor Road to Germanton Road
 - Germanton Road to Oak Summit Road

The recommended uses are based on the economic development program models prepared as part of the economic development opportunities analysis of the study and include:

- Warehousing and Distribution Center
- Printing and Paper Products
- Transportation Equipment/Primary Metals
- Rubber, Plastics and Chemicals

Specific uses and desirable siting characteristics for these specialized areas are defined in the Technical Report-Economic Development Market Assessment. Existing businesses that are housed in substantial facilities would be expected to remain in operation.

Motor Road/Patterson Avenue Business Support Activity Center: The parcels surrounding the intersection of Patterson Avenue and Motor Road present an opportunity for the development of specialty retail and service uses that are oriented to the business park emphasis of the Patterson Avenue Corridor. These uses should be in multi-use and multi-story buildings sited in accordance with the Urban Boulevard concept.



*Neighborhood Retail, Sharon Corners
Charlotte, North Carolina*

Potential uses include:

- Office and computer supplies and services facilities
- Insurance, accounting and other business service offices
- Beauty and barber and other personal services facilities
- Lunch oriented restaurants and delis
- Packaging and shipping services stores
- Small gifts and sundries stores
- Dry cleaning operations



*Urban Housing, Vermillion
Huntersville, North Carolina*

Multi-Family Residential Development and Open Space: An area on the east side of Patterson Avenue, and lying north and south of Jessica Lane, is recommended for development of multi-family housing to provide supporting residential opportunities in close proximity to the business park parcels. The sites will likely support more than one housing project. Design standards as discussed below should follow the Urban Boulevard concept and require connections between multiple projects.

An undeveloped area to the east of the proposed multi-family site is defined by steeper topography: This area provides a recreational opportunity that would serve the proposed multi-family area as well as the existing single-family areas lying to the east and south of this recreational amenity. A trail system in this site could be linked to the system that is proposed to follow Leak Fork Creek in the business park areas between Patterson Avenue and US 52 as described below.

Southeast Quadrant of Patterson Avenue and Germanton Road: This quadrant contains an old motel (it is not clear that it is operational as a motel) and other deteriorated uses. The area should be redeveloped in highway-oriented commercial uses and other commercial uses that are supportive of the Patterson Avenue Business Corridor theme.

Retail Facility defined by Patterson Avenue, Germanton Road and Oak Summit Road: This triangle contains a motel and an existing retail facility that appears to be occupied by “second-generation” users. The development of higher quality business uses as described for the Patterson Avenue corridor should attract new and upgraded retail establishments to the center. The motel should continue as a use that is supportive of the Patterson Avenue Business Corridor theme.

Potential uses include:

- Office and computer supplies and services facilities
- Insurance, accounting and other business service offices
- Beauty and barber and other personal services facilities
- Lunch oriented restaurants and delis

- Packaging and shipping services stores
- Small gifts and sundries stores
- Dry cleaning operations

Public/private improvements needed include:

- Development of Patterson Avenue as an Urban Boulevard.
- Definition of a greenway spine following Leak Fork Creek as a central amenity for the parcels between Patterson Avenue and US 52.
- Development of a recreational trail following the Leak Fork Creek amenity area.
- Development of a resource-based recreational facility east of the proposed multi-family area as described above.

Planning actions needed include:

- Completion of an Area Plan to define the uses and character recommended for the Patterson Avenue corridor which is underway.
- Development of design standards/land development regulations for sites abutting Patterson Avenue to support site development consistent with the Urban Boulevard concept.
- Creation of some form of “Special Improvement District” that would develop a specific action plan for implementation of the Corridor concept.

Section 6: Oak Summit Road to Northern Project Limit

University Parkway/Oak Summit Road Neighborhood Activity Center – Business Support: The underutilized/vacated “big-box” retail site located at the intersection of University Parkway and Oak Summit Road presents a redevelopment opportunity for a specialized mixed-use Neighborhood Activity Center. Given the extensive higher quality business park uses to the north (influenced by Sara Lee office and production uses), such a center could be directed at business support types of uses. It could also provide opportunities for vertical mixed-use with the development of general office and multi-family housing units above some of the retail uses.



Sara Lee Manufacturing District

Potential uses include:

- Office and computer supplies and services facilities
- General office - Insurance, accounting and other business service offices
- Beauty and barber and other personal services facilities
- Lunch oriented restaurants and delis
- Packaging and shipping services stores
- Small gifts and sundries stores
- Dry cleaning operations
- Multi-family housing on upper levels



*Mixed-Use Development, Phillips Place
Charlotte, North Carolina*

Planning actions needed include:

- Preparation of a Conceptual Redevelopment Plan to define the uses and character recommended for the mixed-use service center.

- Development of design standards/land development regulations for sites abutting Patterson Avenue to support site development consistent with the Urban Boulevard concept.
- Creation of some form of “Special Improvement District” that would develop a specific action plan for implementation of the Corridor concept.

University Parkway Interchange and Hanes Mill Road Interchange Areas: The US 52 interchanges with University Parkway and Hanes Mill Road occur in very close proximity to each other and, given the terminus of Patterson Avenue at University Parkway, a major employment and commercial center is developing within the area. In fact, the area is clearly the primary activity center in the US 52 Corridor outside of the Downtown area. With the exception of the site recommended above as the University Parkway/Oak Summit Road Neighborhood Activity Center – Business Support site, the land uses surrounding this interchange area are relatively stable, and growing. Sci-Works, a family-oriented science museum, represents a significant public use that is a major attraction in the area. Sara Lee production, corporate headquarters, and office facilities represent a major employment concentration in the area. The two interchanges will be improved by “interlocking” them with a collector-distributor road and an auxiliary lane along US 52. These improvements will provide improved traffic flow to support the recommendations that follow. The primary uses in this area and recommended improvements include the following:

University Parkway West of US 52: University Parkway west of Hanes Mill Road is flanked by a variety of highway commercial and business uses. The development of the University Parkway/Oak Summit Road Neighborhood Activity Center – Business Support as site recommended above, is intended to complement the development in this area, including the introduction of some multi-family housing.



Oak Summit Business Park



Fulton Family YMCA

Hanes Mill Road West of US 52: The southwest quadrant of the US 52 interchange is occupied by a viable industrial use. SciWorks is immediately west of this use and a modern business park occupied primarily by Sara Lee facilities lies west of SciWorks. The northwest quadrant of the interchange contains the entrance into the Hanes Mill Road Landfill and a YMCA facility. Immediately west of these uses is a large Sara Lee production facility. All of these uses appear to be stable and are likely to function over the long term.



SciWorks

East Side of US 52: This area is divided into multiple parcels by the proximity of Patterson Avenue and the fact that University Parkway swings northward to nearly parallel US 52 and appears very much as a continuation of Patterson. Significant development of “big-box” retail recently occurred on the east side of University Parkway, representing the continued movement of such facilities outward from the core of the urban area. Unfortunately, over the long term, the development/abandonment cycle of such uses could result in additional abandonment on this site as it has to the west. These conditions together with the configuration of Hanes Mill Road define the following sub-areas or parcels:

Office Facility Defined by US 52, University Parkway and Patterson Avenue: This small parcel is fully developed by professional offices that appear to be stable.

Retail Area Defined by US 52, University Parkway and Hanes Mill Road: This area contains a variety of smaller scale strip commercial units and free-standing retail buildings. The age and condition of some of the uses suggest that some evolution of

the area is possible. As this occurs, development standards should be enforced to accomplish greater internal circulation and improvement of the overall visual quality of the area.

Area Defined by US 52, Hanes Mill Road, University Parkway and Northern Project Limit: This area, which has no clear northern definition contains a mixture of small commercial uses and a variety of multi-family units. It should be targeted for further intensification as a multi-family housing area. Such housing would be well located to support the extensive employment and commercial facilities located nearby.



Vulcan Quarry Operations

Quarry Operations: There is a very large quarry operation on the east side of Patterson Avenue at the south end of this planning section. The offices and operational facilities for the quarry front on Patterson Avenue and are well landscaped to create an attractive business facility. Discussions with representatives of the company suggest that there is significant mining life left in the quarry.

Business Park: A large triangular parcel defined by the quarry property on the south, Mill Creek on the north and Hanes Mill Road on the east is developing as a suburban-style office park. It fronts on Hanes Mill Road and appears to be developing westward from that front door.



Lowe's Home Improvement, Big Box Retail

“Big Box” Retail Center: Another triangular area defined on the west by the Patterson Avenue/University Parkway alignment, the south by Mill Creek and the north and west by Hanes Mill Road has been recently developed as a typical suburban big-box retail center with Lowe's and Sam's Club as the major tenants. A variety of strip commercial uses and “out-parcel” uses have also been built to date. There is room for additional development that will likely follow the same retail theme.



Sams' Club, Big Box Retail

Wal-Mart “Big Box” Retail Center: There is a second big box center, anchored by a Wal-Mart facility and containing additional smaller users. It also contains vacant sites with the potential for additional development that will likely follow the same retail theme.

Multi-Family Opportunity: Finally, there is a site north of Hanes Mill Road, with University Parkway defining the west boundary and the Wal-Mart “Big Box” Retail Center defining the east. The area contains a few older single-family residential units. It is recommended that this area be redeveloped with multi-family housing. Grading for the Wal-Mart Center has lowered that property to create a strong physical separation between it and the recommended housing site. As with the multi-family site recommended for the west side of University Parkway, such a housing complex would be well located to support the extensive employment and commercial facilities located nearby.

Public/private improvements needed include:

- Development of gateway statements and landscaping at both interchanges.
- Development of University Parkway from US 52 to the proposed eastern leg of the Northern Beltway as an Urban Boulevard. This action would continue the Urban Boulevard character as recommended for Patterson Avenue as well as continue the very positive landscape treatment that has been accomplished on University Parkway from the Downtown area northward.

- Development of University Parkway as an Urban Boulevard southward from US 52 to the present beginning of the University Gateway landscaping.
- Development of a greenway and trail system taking advantage of Mill Creek and Muddy Creek to provide open space as well as recreational linkages across US 52 corridor and connecting SciWorks to surrounding uses.
- Development of the Hanes Mill Road Landfill as a visual open space with a trail system around the base of the eventual built-out configuration of the landfill and linking to Mill Creek greenway/trail system.

Planning actions needed include:

- Preparation of a plan and implementation program for the open space and greenway/trail system described above.
- Establishment of a coordinated use and activity program between the Recreation Department and the Solid Waste Department to provide for appropriate evolution of the landfill to passive open space.
- Establishment of a Special Improvement District to maintain and enhance the development quality of the area.
- Preparation of planning and design standards for the Special Improvement District to guide the long-term evolution of the area from a suburban, “big-box” character to a more urban and pedestrian-compatible zone.

8.3.2.3 Urban And Community Impacts

In general, the design of the long-term enhancement of US 52 has been undertaken with the objective of minimizing community impacts, mitigating unavoidable impacts, and developing land use and economic development strategies that will create positive community impacts.



Happy Hill Gardens

As described in earlier sections of this report, a very broad-based land use and economic development program and strategy is recommended to take advantage of opportunities that will be presented by the reconstruction of US 52 Corridor, as well as significant planning and development initiatives that are underway in the corridor. Conditions throughout the Corridor present opportunities for a variety of land use changes. In the southern half of the Corridor (from approximately Akron Drive southward), numerous opportunities exist to enhance land use through infill, rehabilitation, infrastructural upgrades and redevelopment. North of Akron Drive and predominantly on the east side of US 52 (along Patterson Avenue), large tracts of land are being utilized for marginal or interim uses, most notably mobile home sales lots, that will be available for more permanent uses with changing market conditions and focused community efforts.

As has been described earlier, the southern half of the corridor contains a predominance of minority and lower-income households and businesses. While there will be direct and secondary impacts, including displacements created by the construction of the US 52 Corridor, improvements associated with intersecting roadways and redevelopment of land uses, the overall objective of the land use and economic development strategies recommended in this Plan is to maximize opportunities for the improvement of these communities and businesses to the greatest extent possible. The recommendations of this Plan build directly on the *Legacy Plan*, recommend continued implementation of and improvements to specific Small Area Plans that have been developed by the City for the improvement of these areas, and apply improvement strategies provided in adopted Small Area Plans that have not yet received similar detailed planning attention.

Specific community improvement strategies of this plan that will have positive benefits on the community include, proceeding from south to north along the US 52 Corridor are as follows:

Sprague Street: The removal of traffic, especially truck traffic, from the partial interchange at Sprague Street will directly enhance the residential quality of the Sunnyside and Goldfloss neighborhoods. This improvement will also support implementation of the City’s *South Central Area Plan* and *Southeast Area Plan*.

Waughtown Street Interchange: The provision of a full interchange on this predominantly commercial street will provide opportunities for the business community to upgrade its facilities. Specific recommendations for the enhancement of Waughtown Street as an Urban Gateway Street also support these opportunities as well as specific opportunities to enhance industrial sites, including some that are blighted and blighting influences, in the immediate vicinity of US 52. This improvement will also support implementation of the City’s *South Central Area Plan* and *Southeast Area Plan*.

Salem Creek Parkway Interchange: The provision of a full interchange connected to a new east-west parkway will provide greatly enhanced access to the Happy Hill and Skyline Village neighborhoods. Such improved access will strengthen the implementation program for the community enhancement plan for the Happy Hills area, including a HOPE VI public housing redevelopment effort. The development of the Parkway and associated open space will provide initial improvements for the Skyline Village area’s revitalization as provided in the *Southeast Area Plan*.

Uses to Support the Piedmont Triad Research Park: The Plan recommends two areas on the east side of US 52 in which business opportunities that are supportive of the Piedmont Triad Research Park can be developed. The recommendations include specific economic development services to be provided for local residents and business interests so that they might benefit directly from the service needs generated by expansion of the Piedmont Triad Research Park. Additionally, the proposed 3rd – 4th Streets Park and Open Space “Cap” over US 52 will improve access between these service opportunities and a large supply of low- and moderate-income housing located on the east side of US 52 and the expanding Piedmont Triad Research Park employment opportunities on the west side.

Liberty Street/25th Street Mixed Use Neighborhood Activity Center: The proposed realignment of US 52 and Liberty Street so that Liberty Street is entirely on the east side of US 52 will “reconnect” Liberty Street to its traditional neighborhood. It will also enable Liberty Street to be a strong supportive element for the redevelopment of the Cleveland Avenue and 25th Street area into a mixed-use Neighborhood Activity Center. The proposed Neighborhood Activity Center includes redevelopment of an aging, deteriorating public housing project under a HOPE VI format that will greatly enhance housing opportunities for current and future residents. The Neighborhood Activity Center will provide retail and personal services that are greatly needed by the area. Additionally, the Neighborhood Activity Center development program will provide enhanced linkages to the Airport Industrial Park, simultaneously improving resident access to employment and Industrial Park employee access to commercial and personal services in the Neighborhood Activity Center.



Pedestrian Scale Mixed-Use Development

North Winston/Kimberly Park Neighborhood Revitalization Program: The improved interchange at 27th and 28th Streets will improve access to this stable neighborhood while the recommended Small Area Plan will establish programs for its continued enhancement as a moderate-income residential neighborhood.

Industrial/Business Infill and Revitalization Areas: Three such areas are proposed within the segment of the US 52 corridor between Liberty Street on the south and Akron Drive on the north. These business area revitalization programs are targeted as increasing economic development and employment opportunities in the South Patterson Avenue, Indiana Avenue and Glenn Avenue Industrial/Business Infill and Revitalization Areas. Supportive programs of the Winston-Salem Development Office will focus on opening and expanding business and employment opportunities to residents of the immediate community.

8.3.2.4 Cultural Features

As reviewed in Section 2.0 Existing Conditions, there are numerous and varied cultural features and important historical features throughout the US 52 Corridor, particularly in the southern half of the study area. Throughout the three-tier process of developing and evaluating freeway alignment alternatives, consideration has been given to the protection and enhancement of these important community assets. Direct impacts of right-of-way expansion and highway reconstruction have been minimized, or mitigating programs have been identified.

Specific strategies of this Plan that will have positive benefits on cultural features or mitigate unavoidable impacts include, proceeding from south to north along the US 52 Corridor are as follows:

Sprague Street: The removal of traffic, especially truck traffic, from the partial interchange at Sprague Street will directly enhance the environment of the Sunnyside Neighborhood, located west of US 52.

Waughtown Street Interchange: The provision of a full interchange at Waughtown Street will provide greatly enhanced access to the North Carolina School of the Arts and the Old Salem historic site, two very significant cultural and community resources. Access to both facilities from US 52 is currently hindered by the lack of clear access routes to and from the highway.



Salem College

an important local recreational resource. The City will similarly design the Salem Creek parkway to protect, and potentially enhance, these important resources.

Liberty Street/27th/28th Street Interchange: As discussed earlier, the proposed realignment of US 52 and Liberty Street so that Liberty Street is entirely on the east side of US 52 will potentially impact Piedmont Park, an aging, deteriorating public housing facility. The City of Winston-Salem can mitigate potential impacts on this facility in advance of roadway development through implementation of the



Wake Forest University

Salem Creek Parkway Interchange: The provision of a full interchange connected to a new east-west parkway will provide enhanced access to and greatly improved visual gateways for several important cultural resources, including Winston-Salem State University, Old Salem, and Salem College. The design of US 52 in this area will specifically protect Salem Creek and the associated Salem Creek Greenway, an important local recreational resource. The City will similarly design the Salem Creek parkway to protect, and potentially enhance, these important resources.

redevelopment of the Cleveland Avenue and 25th Street area into a mixed-use Neighborhood Activity Center, as proposed herein. The proposed Neighborhood Activity Center includes redevelopment under a HOPE VI format that will greatly enhance housing opportunities for current and future residents. Additionally, potential negative impacts of the highway reconfiguration will be mitigated by “reconnecting” Liberty Street to the neighborhood streets that it traditionally served.

Akron Drive Interchange: The upgrading of the Akron Drive interchange and improved linkage of Akron Drive to Reynolds Boulevard will provide greatly enhanced access from US 52 to several important cultural and community resources, including Wake Forest University, Lawrence Joel Veterans Memorial Coliseum, Groves Stadium, Ernie Shore Ball Park, the Dixie Classic Fairgrounds and Smith Reynolds Airport.



Historic Old Salem



Winston-Salem State University

8.3.2.5 Gateway and Landscape Features

Gateways may be defined as points of interest, small districts or communities along a corridor that clearly mark or signify entrance into an activity center or neighborhood. The proposed interchanges of US 52 provide the opportunity to create clear east and west gateway entrances into adjacent urban and suburban neighborhoods, the center city, metro activity centers and future growth areas of Winston Salem. Gateways can function as neighborhood/community nodes, centers of community life where residents come to shop, do errands, and get together to enjoy leisure time.



Institutional Gateway
North Carolina School of the Arts
Winston-Salem, North Carolina

The *Legacy Plan* supports the creation of gateways in association with urban boulevards and corridors. *Forsyth County Growth Management Plan* further identifies these urban boulevards as special corridors.

The urban design vision of the proposed gateway development areas is based on the creation of “thresholds” that are associated with east and west cross streets of US 52 corridor. Gateways define these thresholds as distinct districts reflecting the character of the diverse neighborhoods and urban activity centers the corridor traverses.

Viewing the corridor as a pattern across the landscape gives focus to an overarching landscape development plan that introduces and reinforces vivid gateway views along the corridor’s length.

The southern section of US 52 represents an urban landscape context requiring sound landscape management practices for corridor plantings, roadside/embankment planting of shrubs, grasses, groundcovers, wildflowers and associated streetscaping. The northern section presents the opportunity to accentuate existing naturalistic/indigenous plantings and landforms, large scale landscape settings and distant views.

Section 1: I-40 to Diggs Boulevard

The proposed Sprague and Waughtown Street neighborhood gateways will accommodate through traffic while slowing passing cars entering the Goldfloss, Sunnyside, Forest Park and Southside neighborhoods as destinations in themselves and create a greater sense of security and orientation for the pedestrian.



Neighborhood Gateway Destination Opportunities
Exists with Bridge Structure Design

The overpasses provide the opportunity for the design articulation of the imposing structural support members under US 52. The design of the structural members should speak to area neighborhood history and local context. While the overpasses structural members serve as the beginning entry sequence to people passing through, the adjacent intersections of the neighborhood street grid such as Old Lexington Road and Waughtown Street will host mixed-use nodes containing a combination of industrial revitalization/redevelopment, neighborhood retail and infill housing opportunities. Landscape enhancement of the US 52 corridor’s remnant urban land vestiges frame and buffer the adjacent neighborhoods of Goldfloss, Sunnyside and Southside. Site furnishing such as sign banners, pedestrian and overhead lighting, planter walls and site art softens the visual impact of the corridor.

The proposed Salem Creek Parkway and US 52 Interchange gateway contains primarily green preservation ecosystems as a gateway centerpiece. Taking full advantage of existing natural resources the gateway provides public access to the Salem



Neighborhood Activity Gateway Center
Charlotte, North Carolina

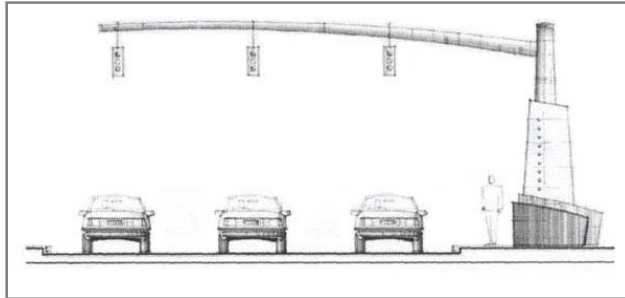


Residential Scale Gateway
Winston-Salem, North Carolina

Creek Greenway and the educational activity centers of Winston Salem State University and North Carolina School of the Arts. The incorporation of signage monuments reflecting educational facilities mascots, logos and colors is recommended. The gateway location east and west of the Salem Creek interchange will further provide a landscape extension of tree planting and green space linkages to Happy Hill, Skyline Village and the future Piedmont Triad Research Park.

Section 2: Diggs Boulevard to Northwest Boulevard

A main focus of the 3rd, 4th, and 5th Streets interchange gateway development will be the connection of the center city with urban neighborhoods and metro activity centers. The interchange improvements would support gateway development with a distinctive design orientation to the Piedmont Triad Research Park and the East Winston neighborhood. The design of these entry



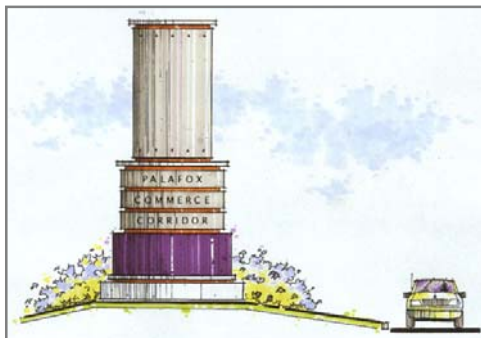
monuments should be enhanced by landscaping and integrated into traffic design themes. The proposed 3rd – 4th Street Highway Cap Park offers the continued provision of open space linkages across US 52. Gateway monuments, art banners, sculpture and site furnishing should celebrate the unity of East Winston and a vibrant center city core.

Traffic Design Themes: Gateway development is recommended within the center city core at the intersection of Chestnut Street with 3rd and 4th Street. Pedestrian scale and walkability is proposed for this gateway. Gateway monuments/sign features should interact with the

street offering a small-scale, pedestrian oriented face to the street. The *Legacy Plan* designates Martin Luther King, Jr. Drive as an urban corridor. The purpose of urban corridors is to create neighborhood scale, attractive pedestrian oriented corridors along major thoroughfares and stimulate new development or revitalization. The proposed gateway development east and west of the Martin Luther King, Jr. Drive interchange will reinforce the purpose of urban corridors. Gateway monuments with articulated design motifs reflecting the legacy of Doctor King and the Civil Rights movement are recommended. Design themes and landscaping should be coordinated with infrastructure improvements for Piedmont Triad Research Park. Landscape enhancement and buffering along US 52 is encouraged with the overall concept of improving the visual character of the right-of-way edges.

Section 3: Northwest Boulevard to Glenn Avenue

The Liberty Street corridor presents the opportunity for two gateway development areas. The central section is designated for neighborhood retail gateway development primarily from Northwest Boulevard to 17th Street. Ground level pedestrian oriented retail development and urban infill housing should be brought up to the street with an emphasis on pedestrian scale and walkability. A reconfigured interchange serving 26th, 27th and 28th streets will be a catalyst for the second gateway development area. The urban design vision for this gateway monument is entry signage pylons that clearly define access points to Hanes Middle School, Blum Blanding Park/Recreational development and the North Winston/Kimberly Park neighborhood.



Gateway Motifs

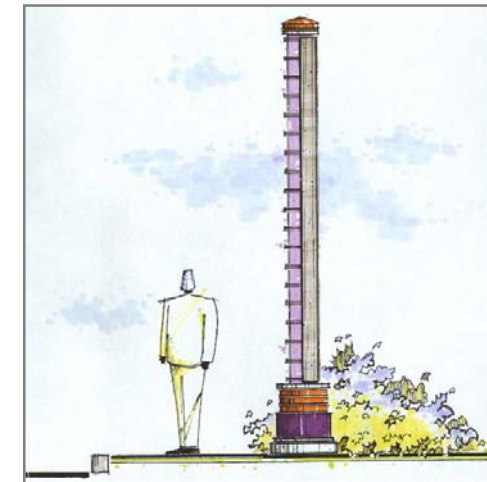
Gateway development at 25th Street and Liberty Street will support the *Liberty Street Corridor Study* through the provision of enhanced access with identifiable gateway signage monuments to proposed industrial business redevelopment, the Airport Industrial Park and the Piedmont Park Housing Redevelopment. Proposed roadway improvements to transform Patterson Avenue into an urban boulevard compatible with urban scale gateway development at the intersection of Indiana Avenue and Patterson Avenue. The residential character of the Greenway, Glenn Avenue and North Winston/Kimberly Park neighborhoods should be included into gateway design themes. Gateway design themes should be coordinated with the Arts community and local neighborhood groups. An increased pedestrian and transit oriented development pattern with infrastructure improvements and infill development is encouraged.

Sections 4 and 5: Glenn Avenue to Motor Road; and Motor Road to Oak Summit Road

Akron Drive interchange improvements make way for the inclusion of gateway motifs reflecting the proposed entertainment/hospitality district. Design themes should be integrated into sign banners, storefronts, site furnishings and infrastructure improvements. Upon approaching the Motor Road and Germanton Road interchanges, gateways east and west of US 52 should reflect a more naturalistic landscape with open space linkages. The use of indigenous plant material and quarried stone monuments is recommended. Sustainable growth through landscape preservation and water quality protection will be a main focus of proposed gateway development.



Mixed-Use Gateway Terminus of Entertainment/Hospitality District



Pedestrian Scale of Monuments Promotes Walkability

Section 6: Oak Summit Road to Northern Project Limit

The northern limit of the US 52 corridor supports continued enhancement of University Parkway as a gateway boulevard extending from the future eastern leg of the Northern Beltway to the center city core. Coordinated landscaping, infrastructure improvements and signage with emphasis on walkability and pedestrian scale are recommended. Gateway monuments east and west of the University Parkway interchange should respond to the street to offer safe and convenient pedestrian movement across and along University Parkway.



Art Elements Incorporated into Gateway Monument Themes that Respond to the Streetscape

8.4 Environmental Screening of the Locally Preferred Alternative

The US 52 Corridor study area was evaluated to identify potential environmental and community impacts that may be associated with the proposed project. An initial screening was conducted of the potential effects of the proposed reconstruction of US 52 on both the natural features and community resources of the area and are summarized below.

8.4.1 Natural Environment

8.4.1.1 Streams, Floodplains and Wetlands

There are three streams and their tributaries that must be taken into consideration in evaluating the potential impacts of the proposed project: Salem Creek, Leak Fork Creek, and Mill Creek. Floodplains and wetlands must be addressed at the proposed new parkway over Salem Creek just north of Diggs Boulevard. A possible floodplain in the vicinity of the Business 40 interchange should be investigated.

The Leak Fork Creek, which parallels US 52 to the east near the Patterson Avenue interchange and follows the route until it crosses under US 52 at the Germanton Road interchange, must be taken into consideration in defining the potential impacts of the project in the northern portion of the Corridor. It appears that wetlands may be outside of the project area in this

segment, but the stream crossing and floodplain must be considered at the Motor Road and Germanton Road interchanges. The reconstruction of US 52 will permit reevaluation of several structures carrying Leak Fork Creek and its tributaries under the freeway, thereby possibly improving stream flow in the area.

Mill Creek, which crosses under US 52 to the south of the University Parkway interchange, must be taken into consideration when defining the potential impacts of the Locally Preferred Alternative. It appears that wetlands may be outside of the project area in this segment, but the stream crossing and floodplain must be considered. The reconstruction of US 52 will permit reevaluation of several structures carrying Mill Creek and several smaller streams under the freeway, thereby possibly improving stream flow in the area.

8.4.1.2 Superfund Sites

The Locally Preferred Alternative is not likely to impact the Carolina Metalizing Company Superfund site located on Vargrave Street south of Waughtown Street.

8.4.1.3 Air Quality

For the Locally Preferred Alternative, the air quality throughout the US 52 Corridor should improve over the No Build Alternative because the increased traffic capacity of US 52 would increase average travel speeds, thus reducing the concentrations of pollutants from vehicle emissions along the Corridor.

8.4.1.4 Noise Impacts

Within the area between I-40 and Business 40, noise levels are anticipated to be increased in the Sunnyside neighborhood as compared to the No Build conditions because the widened freeway will be relocated closer to this neighborhood. The widening of US 52 is also anticipated to result in slightly increased noise levels near sensitive receptors at the Diggs Elementary School and in the Happy Hill neighborhood. The reconstruction of US 52 is planned to occur along the outside edge of the existing highway, thereby moving US 52 slightly closer to these sensitive receptors.

In the vicinity of downtown, the anticipated noise levels for the Locally Preferred Alternative are anticipated to be slightly increased as compared to the No Build conditions because ramp improvements to the Business 40 interchange will encroach on the neighborhood in the northeast quadrant of the Business 40 interchange.

For the Northeast Winston community, the noise levels should decrease as compared to the No Build Alternative because the widened freeway will be relocated to the west, farther away from sensitive receptors in the Piedmont Park Homes and Northeast Winston neighborhoods which are located near the existing highway.

At the Akron Drive interchange, noise levels are anticipated to increase slightly as compared to the No Build Alternative because the widened freeway will be slightly closer to sensitive receptors in the Montview and Ogburn Station neighborhoods.

North of Patterson Avenue, the noise impacts should be no worse than the impacts attributed to the No Build Alternative because most of the widening of the freeway occurs in the center median.

At Motor Road, the impacts to noise-sensitive receptors such as residences and churches will be minor because there are only one or two residences adjacent to the interchange. Likewise, improvements in the vicinity of Germanton Road, University Parkway, and Hanes Mill Road will not increase noise impacts to nearby sensitive receptors.

8.4.2 Human Environment

8.4.2.1 Community Impacts

The Locally Preferred Alternative will require acquisition of a total of 90 buildings and 442 parcels of property through either partial or complete takings as part of the reconstruction of the US 52 Corridor.

Between I-40 and Business 40, some right-of-way impacts will occur within the area of the Sunnyside neighborhood. Some businesses will be affected which serve the surrounding minority community and may be minority owned businesses. The proposed alignment may encroach on Diggs Elementary School and/or the Carolina Steel fabrication plant, a large industrial parcel on the eastern side of Vargrave Street. This alternative may not affect the Liberia Baptist Church graveyard (a historically black burial ground dating back to the early 20th century) on the western side of the right-of-way. Civitan Park to the east of US 52 may not be an issue as Winston-Salem State University is in discussions with the City to gain possession of the park in the near future (which would change the status of the public parkland to a privately-owned facility). This alternative offers some potential for redevelopment in the vicinity of Waughtown Street to the west of US 52 and to the west and south of Carolina Steel. Every care will be taken to minimize the impacts to minority homes, neighborhoods and businesses. Where a home or business is to be acquired, every effort will be made to find a suitable relocation site nearby.

In the vicinity of downtown, the Locally Preferred Alternative will require acquisition of some buildings to the west of US 52, all of which are businesses. To avoid possible Section 4(f) impacts, every effort will be made to eliminate impacts to the playground at John F. Kennedy, Jr. Middle School which is located northeast of the Martin Luther King, Jr. Drive interchange. This alternative offers some potential for redevelopment to the west of US 52 where the Piedmont Triad Research Park is planned. By widening US 52 to the west, every effort will be made to avoid impacts to East Winston, a minority community bordering US 52 to the east. However, a few buildings may be taken by the proposed westbound Business 40 to northbound US 52 ramp. Every effort will be made to relocate any displaced homes or businesses within the nearby community.

In the area of Northeast Winston, a number of environmental justice issues should be considered to avoid potentially adverse impacts to communities in this area. The Locally Preferred Alternative will take some buildings along both sides of US 52, which are a mix of businesses, residences and community facilities. To avoid possible Section 4(f) impacts, every effort will be made to avoid impacts to Fairview Park located on Liberty Street at New Hope Lane. The alternative could also impact Piedmont Park public housing development to the east of US 52 at 26th Street. It is likely that the housing will be eligible for replacement before this project is built and coordination with the City of Winston-Salem Housing Authority could alleviate any impacts from the proposed improvements to US 52. A third sensitive site is the Canaan Baptist Church that could be rebuilt or relocated nearby it's current site when US 52 is widened. This plan offers the greatest potential for redevelopment along Liberty Street, the traditional "Main Street" of the Northeast Winston community, which would be relocated to the east of US 52, reuniting it with that community.

Near the Akron Drive and the Motor Road interchanges, the Locally Preferred Alternative will affect both businesses and residences. This plan offers some potential for redevelopment to the west along Akron Drive, Leo Street and in the Montview neighborhood in the vicinity of the Motor Road interchange. At the Motor Road interchange, a power station is located in the southeast quadrant and a utility tower in the northeast quadrant, both of which must be taken into consideration when designing the interchange ramps.

8.5 Relationship to Multi-modal Facilities

When planning for the future, it is important to provide alternative means of travel in the Corridor. The improvements to US 52 recommended in this study are probably the maximum capacity that the facility can accommodate without severe impacts to surrounding communities. It is therefore important to plan for additional reserve capacity through use of alternative travel modes

in the Corridor. In addition, any travel that can be diverted to alternative modes will reduce automobile emissions and, since Winston-Salem is an air quality maintenance area for ozone, air quality is an important issue. This section discusses the potential for developing local bus transit service, intercity commuter and high-speed rail service, and bicycle and pedestrian facilities.

8.5.1 Local Transit Service

The Winston-Salem Transit Authority operates local bus service throughout Winston-Salem. As shown in Section 2.0 Existing Conditions, there is no express or local bus service using US 52 today. Because transit ridership amounts to 0.5 percent of all trips made in the urban area today, this study determined that there would be insufficient demand for express bus service on US 52 within the next 25 years. It is likely that the travel times by private vehicle between the farthest limits of the study corridor and downtown will continue to be less than 30 minutes for the next 25 years, discouraging modal shifts to transit. However, as business parks develop along Patterson Avenue and as multi-family housing increases in the Corridor, there may be a need for additional local bus service along Patterson Avenue and for express bus service along US 52. The Transit Authority should periodically re-evaluate the need for service, especially reverse commutes to the north.

8.5.2 Intercity Rail Passenger Service

The Piedmont Authority for Regional Transportation (PART) is currently conducting two studies for intercity rail service that could affect the US 52 Corridor.

Commuter rail service between Winston-Salem and Greensboro is currently being evaluated for the east-west Norfolk Southern rail line running in the study area just south of Business 40, crossing over US 52 at the Business 40 interchange and turning to the north just west of US 52. Possible stations in the US 52 study corridor are considered at the former Union Station passenger train depot on Martin Luther King, Jr. Drive at Excelsior Street and in the vicinity of Patterson Avenue at Third or Fourth Street. This route would connect with the extensive network of rail lines running through the City. Although passenger rail service will take years to develop, this network of rail lines should be protected as a means of preserving reserve capacity for the US 52 Corridor and for other transportation corridors throughout Winston-Salem.

High-speed intercity rail service is also under consideration. PART has conducted a study to determine the feasibility of extending the Southeast Regional High-Speed Rail corridor to include Winston-Salem. This corridor would link Washington, DC to Atlanta with high-speed rail service. Although the primary route did not include Winston-Salem, the PART study seeks ways of diverting service to Winston-Salem through either a direct route or through connecting spur service to nearby cities. It is likely that any service to Winston-Salem would use the Norfolk Southern east-west line described above for commuter service and possibly the Winston-Salem Southbound line running parallel to US 52 in the study area between Business 40 and I-40 bypass. The station would likely be located close to the US 52 Corridor. Any improvements to interchanges and to local streets should take into consideration likely service lines and station locations.

8.5.3 Bicycle Facilities

Because of the nature of freeways and interstates, there are no bicycle facilities on US 52 today and none are proposed in the future. However, bicycle facilities on parallel and crossing routes are important to improve connectivity and to minimize the demand for automobile travel. There are several ways that bicycle travel can be promoted as part of the US 52 improvement plan.

First, there are two greenway crossings under US 52 that can be planned to incorporate bicycle and pedestrian use. The Salem Creek Greenway near the Diggs Boulevard/Vargrave Street interchange currently has a trail for bicyclists and pedestrians that could be enhanced with a better crossing under US 52. The crossing of Mill Creek under US 52 near University Parkway could also include a bikeway and pedestrian trail as part of its improvements. A new third greenway is proposed over US 52 between 3rd Street and 4th Street downtown. This plan calls for a "cap" over US 52 that would include a park with extensive

pedestrian and bicycle facilities as part of the plan. Finally, all of the bridges replaced along the Corridor should include accommodations for bicycle lanes and sidewalks to improve connectivity across the Corridor. The addition of bicycle lanes and sidewalks can help minimize the isolation felt across the US 52 Corridor today.

Second, parallel streets should incorporate bicycle lanes to provide alternative means of travel other than the automobile for shorter trips. Candidate parallel routes include Martin Luther King, Jr. Drive, Patterson Avenue and Liberty Street.

8.5.4 Pedestrian Facilities

Because of the nature of freeways and interstates, there are no sidewalks along US 52 today and no sidewalks are recommended in the future. However, the presence of sidewalks on parallel and crossing routes is very important in providing connectivity across and through the Corridor.

It is recommended that all parallel streets without sidewalks have sidewalks in the future. For the US 52 Corridor, two major parallel streets currently lack sidewalks for part of their route: Patterson Avenue between Indiana Avenue and University Parkway and Liberty Street between Glen Avenue and Akron Drive. This study recommends sidewalks for Patterson Avenue in the urban boulevard cross-section through the proposed business park in the northern portion of the roadway without sidewalks today. The extension of sidewalks along Liberty Street would complete the urban streetscape already in place along much of this Corridor today.

On cross streets, all bridges should include sidewalks and bike lanes when they are replaced. This would include the addition of sidewalks at the following locations without them today: 16th Street, Akron Drive, Patterson Avenue, Motor Road, Germanton Road, Oak Summit Road, University Parkway and Hanes Mill Road. The US 52 bridges over Glenn Avenue were recently replaced with bridges that can accommodate sidewalks on Glenn Avenue.

¹ AASHTO Guide 2001, P. 811.