

Label	Name	Barriers/Constraints
1	Knightsdale Blvd. is hard to cross	
2	Barriers reduce connectivity	
3	Emerald Pointe neighborhood lacks connectivity	
4	Barriers along Knightsdale Blvd and Mason Road	
5	Barriers along Knightsdale Blvd and Mason Road	
6	Barriers along Knightsdale Blvd and Mason Road	
7	Development is spread out	
8	Knightsdale Blvd & Smithfield Road Intersection	
9	Barriers in road along Smithfield Road, north of US Ave.	

Label	Name	Destinations/Opportunities
1	Smithfield Road - connect schools and neighborhoods	
2	New Pedestrian Crossing	
3	Shopping Centers	
4	Schools	
5	Existing or proposed Greenways	
6	Residential Areas	
7	Knightsdale Blvd between W. Waters and Smithfield Rd	
8	Standalone Electric	

STEERING COMMITTEE - MAP OF DESTINATIONS AND OPPORTUNITIES, BARRIERS AND CONSTRAINTS, KNIGHTDALE PEDESTRIAN PLAN
 WITHERS & RAVENEL
 CONSULTING ENGINEERS & ARCHITECTS

May 8, 2012
3rd Steering Committee Meeting

**Knightsdale
Comprehensive Pedestrian Plan
Sign In Sheet**



Name	Email	Affiliation
Sharon S. Ransom	sharon.ransom@us.shneider-electric.com	Chamber BOB
Nancy Redman	pottery1010@gmail.com	
Doug Taylor	bd-taylor@ndot.gov	electdoug@ndot.gov LURB
Jacqui Cooley	jeacoley@gmail.com	PED COMMITTEE
Chris Hills	chris.hills@knightsdale.nc.gov	Staff
Kenneth Withrow	Kenneth.withrow@campo-nc.us	Capital Area MPO
GEORGE HESS		ETS CITIZEN
Mark Swan		LURB
JEFF TRIEZENBERG		KNIGHTDALE
Melen Chanen	linchanen@headit.com	NCOT
Jennifer Bryan	jennifer.bryan@knightsdalechamber.org	Knightsdale Chamber
Chuck Piratzki	cpiratzki@nc.rr.com	LURB
WITHERS & RAVENEL		TOK P+ Rec
Tina Cheek		TOWN COUNCIL
TERRY GLEASON		

Steering Committee #4

07.24.12



Knightdale Comprehensive Pedestrian Plan 4th Steering Committee Meeting

July 24, 2012
4:30-5:30

Meeting Agenda

Sign Guest Book and Distribute Handouts

- 1. Welcome and Introductions.....5 minutes**
- 2. Progress from last meeting.....10 minutes**
 - Review previous meeting minutes
 - Design Charrette held - June 2
 - Survey Questionnaires Collected - Closed on July 1 (424 completed English survey; 11 completed Spanish survey)
 - 50% Draft Pedestrian Plan Document submitted for review
- 3. 50% Draft Pedestrian Plan Document Discussion.....30 minutes**
 - Comments/Edits/Additions
 - Additional Priorities?
- 4. Upcoming Milestones.....10 minutes**
 - Next Public Open House - show priorities and proposed pedestrian system map:
August (discuss venue and date)
 - Review final draft report: *October*
- 5. Closing Comments.....5 minutes**

Town of Knightdale Pedestrian Plan

Steering Committee Meeting #4

July 24, 2012

Attendees:

Fred Boone – Town Engineer/Public Works Director

Tina Cheek – Town Parks and Recreation Director

Terry Gleason – Town Council

Chris Hills – Town Planning Director

Nancy Redman – Citizen

Mark Swan – Chair of Land Use Review Board

Doug Taylor – LURB member / NCDOT Assistant State Roadway Design Engineer

Jeff Triezenberg – Town Project Coordinator

Jennifer Wagner - Withers & Ravenel

I. Summary of Project to Date

- A. Jennifer Wagner reviewed the minutes from the last (May 8) Steering Committee meeting.
- B. Ms. Wagner summarized the Design Charrette held on June 2 at the Town Chamber of Commerce. The Charrette had 13 people in attendance, including four steering committee members. Although the participation was low, the quality of the participation was good, resulting in good input into the three Design Focus Areas. The Charrette also included a walking tour of one of the Design Focus Areas, leading to greater understanding of the issues and a better design solution.
 - a. The three Design Focus Areas, as determined by the Steering Committee at the last meeting were: 1. the portion of Smithfield Road along Harper Park and the intersection with 1st Avenue (walking tour); 2. a pedestrian crossing on Knightdale Boulevard at the intersection with 540; 3. a pedestrian crossing over the railroad tracks on Hodge Road near Princeton Manor.
 - b. Mr. Hills and Mr. Boone discussed the fact that the Charrette produced a possible design solution for the Hodge Road location that included a possible greenway trailhead near the VFW. The Town has already been planning to place a trailhead in the Princeton Manor neighborhood under a power easement. This trailhead will include approximately 10-12 parking spaces and direct greenway trail access.
 - c. Mr. Swan inquired as to why the multi-use trail would extend south of the railroad. The group discussed the fact that a wider, multi-use trail might be placed along Hodge Road near the railroad, instead of a narrower sidewalk on both sides. This would allow greenway trail access for bicyclists and pedestrians and would continue the wider sidewalk currently installed on Hodge Road in front of Princeton Manor.
 - d. Mr. Swan inquired about the possibility of adding a project priority area to include railroad crossings for the neighborhoods abutting the railroad that are across the railroad tracks from the greenway. These are important

- connections and pedestrians are currently crossing unsafely in these locations to access the neighborhoods and shopping on the north side. Once the greenway is completed in this area, the number of pedestrian crossings will likely increase as people try to access the greenway trail from their neighborhoods. The group discussed the difficulty of attaining a railroad crossing at-grade and the expense of constructing a pedestrian bridge with the necessary height and ADA ramp requirements. The group agreed the issue was noteworthy enough to place the projects in the report, but perhaps list differently (as “Wish List items”) or place as long-term projects that are understood to be difficult to complete, but are worthy enough to include.
- e. Similarly, the group understood the necessity of the two alternatives for the Smithfield Road/1st Avenue connection along Maple or Main Streets, but wanted to include reference to a long-term goal of adding a sidewalk on Smithfield Road if the road is ever widened or if right-of-way can be acquired.
- C. Ms. Wagner summarized the results of the survey questionnaires. The survey was closed on July 1 with a total of 424 surveys completed in English and 11 completed in Spanish.
- a. Ms. Wagner highlighted the answers to the survey, noting any differences between the Spanish and English results.
 - b. Mr. Triezenberg suggested that because the number of Spanish surveys was so low and that having surveys in Spanish was just a tool to reach more people, the results should not be broken out in the final report. The results did not show that the two groups necessarily supported different things.
- D. Ms. Wagner stated that the Pedestrian Plan document was submitted to the Town and Steering Committee at the end of June for review and that at this time the group should discuss any edits or comments, particularly as related to the Project Priorities.
- a. The Project Priority List was based upon public and steering committee input, as well as site observations and Charrette discussion.
 - b. The Proposed System map will be added to the report after the Project Priorities are finalized.

II. 50% Draft Pedestrian Plan Document Discussion

- A. Mr. Taylor inquired as to how the public will be able to view the final document, stating that the current format of the report was somewhat difficult to read in pdf format because of the need to scroll between columns. The group discussed the format of the report and whether it is user-friendly. It was decided the layout was working well for most. Mr. Swan will look into how to format the final report to make it easiest for the visually impaired to read.
- B. Ms. Wagner reviewed the Project Priorities in Section 4.
- a. Mr. Swan questioned the necessity of a push button signal and enhanced pedestrian crossing at the intersection of Smithfield Road and Main Street. He discussed how it is fairly easy to cross at this location, he does not

- advocate a vehicular signal at this location, and if the sidewalk on Smithfield Road is on the east side, the sidewalk will just continue around the corner to Main Street. The group discussed saying that for a short-term project, the crossing could just be a painted crossing and long-term be listed as a signalized crossing if the pedestrian and vehicular volume warrants the need.
- b. Mr. Triezenberg requested that Ms. Wagner compile the projects into a more concise chart, along with their proposed ranking, to help the Steering Committee review the Project Priorities more easily.
- C. Ms. Wagner discussed how the Projects were ranked in Section 7 by utilizing a Criteria Matrix.
- a. The group approved the criteria included in the matrix.
 - b. Mr. Hills questioned whether it was required by NCDOT to group the Short-Term Projects into Phase 1 and Phase 2. His concern was that the Town might have difficulty implementing the projects in Phase 2 if they were not ranked as high. Ms. Wagner stated that NCDOT requires some sort of ranking, but that it can vary depending upon the Town's needs. She stated that she would follow up with Ms. Chaney with NCDOT to clarify exactly how the projects can be grouped.
 - c. Mr. Swan suggested that the intersection improvements at Smithfield Road and Main Street be changed from a "high" safety issue to a "medium" safety issue based upon the previous discussion.

III – Upcoming Milestones

- A. 2nd Public Open House
 - a. Show the public the project priorities and proposed pedestrian system map and get additional input
 - b. Two dates were suggested: September 7th Movie Night at Forestville Recreation Center or September 15 "Community Day" at Harper Park

July 24, 2012
4th Steering Committee Meeting

Knightsdale

**Comprehensive Pedestrian Plan
Sign In Sheet**



Name	Email	Affiliation
Nancy Ledman	pottery1010@gmail	citizen
FRED BOONE	Fred.boone@knightsdale.nc.gov	STAFF
Chris Hills	Chris.hills@knightsdale.nc.gov	Staff

WITHERS & RAVENEL

July 24, 2012
4th Steering Committee Meeting

Knightsdale Comprehensive Pedestrian Plan Sign In Sheet



Name	Email	Affiliation
Dany Taylor	btaylor@ncdot.gov	LURB Member
TERRY GLEASON	TJG@10-AEP.COM	TOWN COUNCIL
Mark Swan	DMarkSwan@msn.com	LURB
Tina Cheek	TOK	TOK
JEFF TREZENBERG	TOK	TOK
Jennifer Dwyer	Withers? Ravenel	

WITHERS & RAVENEL

US Census Data



State & County QuickFacts

Knightsdale (town), North Carolina

People QuickFacts	Knightsdale	North Carolina
Population, 2011 estimate	NA	9,656,401
Population, 2010	11,401	9,535,483
Population, percent change, 2000 to 2010	91.4%	18.5%
Population, 2000	5,958	8,049,313
Persons under 5 years, percent, 2010	7.8%	6.6%
Persons under 18 years, percent, 2010	29.4%	23.9%
Persons 65 years and over, percent, 2010	6.4%	12.9%
Female persons, percent, 2010	53.4%	51.3%
White persons, percent, 2010 (a)	50.0%	68.5%
Black persons, percent, 2010 (a)	38.3%	21.5%
American Indian and Alaska Native persons, percent, 2010 (a)	0.6%	1.3%
Asian persons, percent, 2010 (a)	1.7%	2.2%
Native Hawaiian and Other Pacific Islander, percent, 2010 (a)	0.1%	0.1%
Persons reporting two or more races, percent, 2010	3.5%	2.2%
Persons of Hispanic or Latino origin, percent, 2010 (b)	11.4%	8.4%
White persons not Hispanic, percent, 2010	45.9%	65.3%
Living in same house 1 year & over, 2006-2010	78.0%	83.4%
Foreign born persons, percent, 2006-2010	13.4%	7.4%
Language other than English spoken at home, pct age 5+, 2006-2010	18.0%	10.4%
High school graduates, percent of persons age 25+, 2006-2010	92.6%	83.6%
Bachelor's degree or higher, pct of persons age 25+, 2006-2010	43.7%	26.1%
Mean travel time to work (minutes), workers age 16+, 2006-2010	24.0	23.4
Housing units, 2010	4,723	4,327,528
Homeownership rate, 2006-2010	71.3%	68.1%
Housing units in multi-unit structures, percent, 2006-2010	19.5%	16.9%
Median value of owner-occupied housing units, 2006-2010	\$171,600	\$149,100
Households, 2006-2010	3,643	3,626,179
Persons per household, 2006-2010	2.88	2.49
Per capita money income in past 12 months (2010 dollars) 2006-2010	\$26,546	\$24,745
Median household income 2006-2010	\$71,922	\$45,570
Persons below poverty level, percent, 2006-2010	5.1%	15.5%
Business QuickFacts	Knightsdale	North Carolina
Total number of firms, 2007	1,181	798,791
Black-owned firms, percent, 2007	S	10.5%
American Indian- and Alaska Native-owned firms, percent, 2007	F	1.0%
Asian-owned firms, percent, 2007	F	2.5%
Native Hawaiian and Other Pacific Islander-owned firms, percent, 2007	F	0.1%
Hispanic-owned firms, percent, 2007	S	2.7%
Women-owned firms, percent, 2007	24.2%	28.2%
Manufacturers shipments, 2007 (\$1000)	NA	205,867,299
Merchant wholesaler sales, 2007 (\$1000)	D	88,795,885
Retail sales, 2007 (\$1000)	200,933	114,578,173

<http://quickfacts.census.gov/qfd/states/37/3736080.html>

2/21/2012

Retail sales per capita, 2007	\$26,845	\$12,641
Accommodation and food services sales, 2007 (\$1000)	27,144	16,126,939
Geography QuickFacts	Knightdale	North Carolina
Land area in square miles, 2010	6.21	48,617.91
Persons per square mile, 2010	1,837.1	196.1
FIPS Code	36080	37
Counties		

Population estimates for counties will be available in April, 2012 and for cities in June, 2012.

- (a) Includes persons reporting only one race.
- (b) Hispanics may be of any race, so also are included in applicable race categories.

D: Suppressed to avoid disclosure of confidential information
 F: Fewer than 100 firms
 FN: Footnote on this item for this area in place of data
 NA: Not available
 S: Suppressed: does not meet publication standards
 X: Not applicable
 Z: Value greater than zero but less than half unit of measure shown

Source U.S. Census Bureau: State and County QuickFacts. Data derived from Population Estimates, American Community Survey, Census of Population and Housing, County Business Patterns, Economic Census, Survey of Business Owners, Building Permits, Consolidated Federal Funds Report, Census of Governments
 Last Revised: Tuesday, 31-Jan-2012 17:22:08 EST

NCDOT Crash Data

PBCAT

City of Knightdale Pedestrian Crash Data -
 Crash Severity by Pedestrian Age
 For Years
 1997,1998,1999,2000,2001,2002,2003,2004,
 2005,2006,2007,2008,2009

Crash Severity by Pedestrian Age	10-Jun	15-Nov	16-20	21-25	31-40	41-50	51-60	71+	Total
K: Killed	0	0	0	1	1	1	1	0	4
A: Disabling Injury	0	1	1	0	0	0	0	0	2
B: Evident Injury	1	0	0	1	0	0	0	1	3
C: Possible Injury	0	1	1	1	3	0	2	2	10
O: No Injury	0	0	1	0	0	0	0	0	1
Unknown Injury	0	0	0	0	0	0	1	0	1
Total	1	2	3	3	4	1	4	3	21

PBCAT

City of Knightdale Pedestrian Crash Data -
 Crash Severity by Pedestrian Age
 For Years
 2000,2001,2002,2003,2004,2005,2006,2007,
 2008,2009

Crash Severity by Pedestrian Age	10-Jun	15-Nov	16-20	21-25	31-40	41-50	51-60	71+	Total
K: Killed	0	0	0	0	1	1	1	0	3
A: Disabling Injury	0	0	1	0	0	0	0	0	1
B: Evident Injury	1	0	0	1	0	0	0	1	3
C: Possible Injury	0	1	1	0	3	0	2	2	9
O: No Injury	0	0	1	0	0	0	0	0	1
Unknown Injury	0	0	0	0	0	0	1	0	1
Total	1	1	3	1	4	1	4	3	18

PBCAT

City of Knightdale Pedestrian Crash Data -
 Pedestrian Position by Crash Severity
 For Years
 2000,2001,2002,2003,2004,2005,2006,2007,
 2008,2009

Pedestrian Position by Crash Severity	K: Killed	A: Disabling Injury	B: Evident Injury	C: Possible Injury	O: No Injury	Unknown Injury	Total
Non-Roadway - Parking Lot / Other	0	0	2	1	0	0	3
Not Coded	1	1	1	8	1	1	13
Travel Lane	2	0	0	0	0	0	2
Total	3	1	3	9	1	1	18

PBCAT

City of Knightdale Pedestrian Crash Data -
 Pedestrian Age by Crash Location
 For Years
 2000,2001,2002,2003,2004,2005,2006,2007,
 2008,2009

Pedestrian Age by Crash Location	Intersection	Non-Intersection	Non-Roadway	Total
8	0	0	1	1
14	0	1	0	1
16	0	1	1	2
17	0	0	1	1
24	0	0	1	1
33	0	1	0	1
36	0	0	1	1
38	0	1	0	1
40	0	0	1	1
46	0	1	0	1
51	0	1	0	1
56	0	0	1	1
58	1	0	1	2
70+	0	0	3	3
Total	1	6	11	18

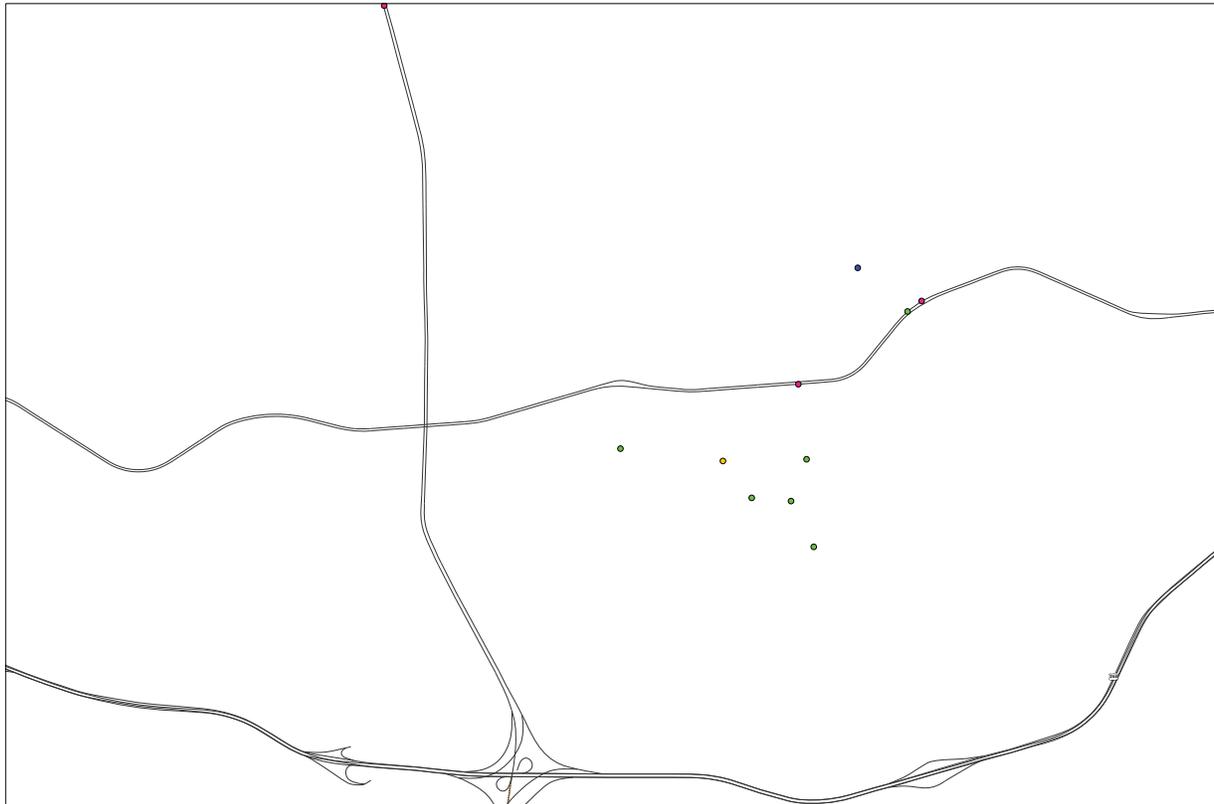
PBCAT

City of Knightdale Pedestrian Crash Data - Pedestrian Age by Crash Severity
 For Years 2000,2001,2002,2003,2004,2005,2006,2007,2008,2009

Pedestrian Age by Crash Severity	K: Killed	A: Disabling Injury	B: Evident Injury	C: Possible Injury	O: No Injury	Unknown Injury	Total
8	0	0	1	0	0	0	1
14	0	0	0	1	0	0	1
16	0	0	0	1	1	0	2
17	0	1	0	0	0	0	1
24	0	0	1	0	0	0	1
33	0	0	0	1	0	0	1
36	0	0	0	1	0	0	1
38	1	0	0	0	0	0	1
40	0	0	0	1	0	0	1
46	1	0	0	0	0	0	1
51	1	0	0	0	0	0	1
56	0	0	0	1	0	0	1
58	0	0	0	1	0	1	2
70+	0	0	1	2	0	0	3
Total	3	1	3	9	1	1	18

**Reported Pedestrian Crashes in Knightdale, Wake County, North Carolina
For the Reporting Period of April 1, 2002 to March 31, 2012**

Municipality	On Road	Miles	Dir	From Road	Toward Road	Date of the Crash	Time of the Crash	Crash Type	Crash Type	Color Code
KNIGHTDALE	FIRST AVE	0.003	N	MAIN ST	ROBERTSON ST	12/4/2003	5:52 PM	PEDESTRIAN	C-INJURY (POSSIBLE)	green
KNIGHTDALE	SMITHFIELD RD	0		CARRINGTON DR	MCKNIGHT DR	9/2/2004	11:33 AM	PEDESTRIAN	B-INJURY (EVIDENT)	blue
KNIGHTDALE	SMITHFIELD RD	0.013	S	FOURTH AVE	MARIE DR	4/8/2005	5:40 PM	PEDESTRIAN	C-INJURY (POSSIBLE)	green
KNIGHTDALE	BRYAN CHALK LN	0		UNKNOWN		11/29/2005	3:56 PM	PEDESTRIAN	PDO	gold
KNIGHTDALE	KNIGHTDALE BLVD	0.225	E	MCKNIGHT DR	FIRST AVE	3/17/2006	11:56 PM	PEDESTRIAN	FATAL-KILLED	red
KNIGHTDALE	N FIRST AVE	0.2	N	ROBERTSON STREET	POPLAR STREET	12/30/2006	7:20 PM	PEDESTRIAN	C-INJURY (POSSIBLE)	green
KNIGHTDALE	KNIGHTDALE BLVD	0.028	W	ACRES OF SPACE DR	OLD KNIGHT RD	6/28/2008	11:21 PM	PEDESTRIAN	FATAL-KILLED	red
KNIGHTDALE	1540	1.25	E	BUFFALO RD	KNIGHTDALE BLVD	8/22/2008	10:30 PM	PEDESTRIAN	FATAL-KILLED	red
KNIGHTDALE	FLOWERS ST	0.009	E	SALLINGER ST	KELLY MEADOWS	10/18/2010	8:00 PM	PEDESTRIAN	C-INJURY (POSSIBLE)	green
KNIGHTDALE	MINGOCREST DR	0.001	W	PARKSIDE COMMONS DR	BRASWELL CT	11/7/2010	9:38 AM	PEDESTRIAN	C-INJURY (POSSIBLE)	green
KNIGHTDALE	US 64	0.1	W	ACRES OF SPACE	SR 2232	2/4/2012	8:16 PM	PEDESTRIAN	C-INJURY (POSSIBLE)	green



**PEDESTRIAN CRASHES WITHIN THE LIMITS OF KNIGHTDALE - WAKE COUNTY
JANUARY 1, 2009 TO DECEMBER 31, 2011**

CRASHID	TYPE	COUNTY	DATE	TIME	SEVERITY	CITY	ON ROAD	MILEPOST	FROM RD	DISTANCE	TOWARDS RD
102993847	PEDESTRIAN	WAKE	10/18/2010	8:00 PM	C-INJURY (POSSIBLE)	KNIGHTDALE	FLOWERS ST	999.999	SALLINGER ST	0.009	KELLY MEADOWS
103006017	PEDESTRIAN	WAKE	11/7/2010	9:38 AM	C-INJURY (POSSIBLE)	KNIGHTDALE	MINGOCREST DR	999.999	PARKSIDE COMMONS DR	0.001	BRASWELL CT

KEY	Rank	Type of Project	Location	Description	Issue/Justification	Designation	Possible Funding Opps.
A	Tier 1	Sidewalk Construction/Improvement	Northside of Knightdale Boulevard - multiple locations where there are gaps in the sidewalk system: between Bozeman Drive and the Food Lion Shopping Center; from Sherwin Williams to Bojangles, just west of Old Knight Road (completes the connection from Forest Drive to Old Knight Road)	Construct 5' wide concrete sidewalks to complete the gaps in the existing sidewalk system.	Completing the gaps in the sidewalk system along Knightdale Blvd. will improve connectivity and safety between businesses, retail and residences. These sidewalks connect businesses in the major retail/business corridor in Knightdale.	Spot Improvements/ Short-Term	STP-DA, CMAQ, Transportation Enhancement Program, NCDOT Division Small Projects, Powell Bill Program, Community Development Block Grants, local funding options,
B	Tier 1	Sidewalk Construction/Improvement	Southside of Knightdale Boulevard - multiple locations where there are gaps in the sidewalk system: small gap in the sidewalk in front of the bank to the west of Wide Waters Pkwy; small section west of McKnight Drive; west of Smithfield Road, in front of Big Lots; curve sidewalk around existing manhole in front of Smithfield's Chicken N Bar BQ east of Smithfield Rd.	Construct 5' wide concrete sidewalks to complete the gaps in the existing sidewalk system.	Completing the gaps in the sidewalk system along Knightdale Blvd. will improve connectivity and safety between businesses, retail and residences. These sidewalks connect businesses in the major retail/business corridor in Knightdale.	Spot Improvements/ Short-Term	STP-DA, CMAQ, Transportation Enhancement Program, NCDOT Division Small Projects, Powell Bill Program, Community Development Block Grants, local funding options,
C	Tier 1	Sidewalk Construction/Improvement	1st Avenue - connection in front of new park to Knightdale Boulevard.	Construct 5' wide concrete sidewalk to complete the gap in the existing sidewalk system.	Completing this gap between the new streetscape improvements on 1st Avenue to Knightdale Boulevard will provide a connection to the new Town park and will provide a connection to the intersection at Knightdale Blvd and 1st Avenue.	Spot Improvements/ Short-Term	STP-DA, Transportation Enhancement Program, NCDOT Division Small Projects, Powell Bill Program, Community Development Block Grants, local funding options,
D	Tier 1	Streetscape/Corridor Enhancements	Smithfield Road - from Knightdale High School to 1st Avenue	Add sidewalks where missing along the entire stretch of road from Knightdale High School to Knightdale Elementary School. Improve pedestrian lighting and add landscape improvements in the right-of-way.	Smithfield Road is a major north/south connector in Town, providing links to Town facilities, schools and businesses. Safe pedestrian connections to these amenities is critical. The section of road from Harper Park to 1st Avenue is narrow with steep embankments on both sides, making an addition of a sidewalk difficult in this area. But, due to safety concerns and the high pedestrian use of this area, it should still be considered a top priority for the Town.	Corridor Improvement/ Short-Term	STP-DA, Transportation Enhancement Program, Safe Routes to School Program, NCDOT Division Small Projects, Powell Bill Program, Community Development Block Grants, local funding options,
E	Tier 1	Sidewalk Construction/Improvement	Hodge Road - from Princeton Manor to Lynwood Road; continue east to the existing sidewalk on Lynwood Road.	Construct 5' wide concrete sidewalk to complete the gap in the existing sidewalk system.	Completing this gap in the sidewalk system will provide residents southwest of Lynwood Road with a connection to the remaining sidewalk system that leads to the commercial areas on Knightdale Blvd.	Spot Improvements/ Short-Term	STP-DA, Transportation Enhancement Program, NCDOT Division Small Projects, Powell Bill Program, local funding options,
F	Tier 1	Multi-use Trail Construction/Improvement	Hodge Road, over railroad tracks.	Construct 10' wide multi-use trail to connect neighborhoods and a school to the greenway system. Construct a safe crossing at the railroad by using fencing and a "Z" type crossing that encourages pedestrians and cyclists to slow down.	This pedestrian crossing will provide a need connection across the railroad and will provide a link for residents south of the railroad to utilize the greenway system. The railroad crossing will also provide a safe crossing for children to walk from Princeton Manor neighborhood to the elementary school south of the railroad.	Spot Improvements/ Short-Term	STP-DA, Safe Routes to School, NC PARTF, CWMTF, LWCF, NCDENR Ecosystem Enhancement Program, Water Resources Development Grant Program, local funding options, partnerships, sponsorships, TPL,

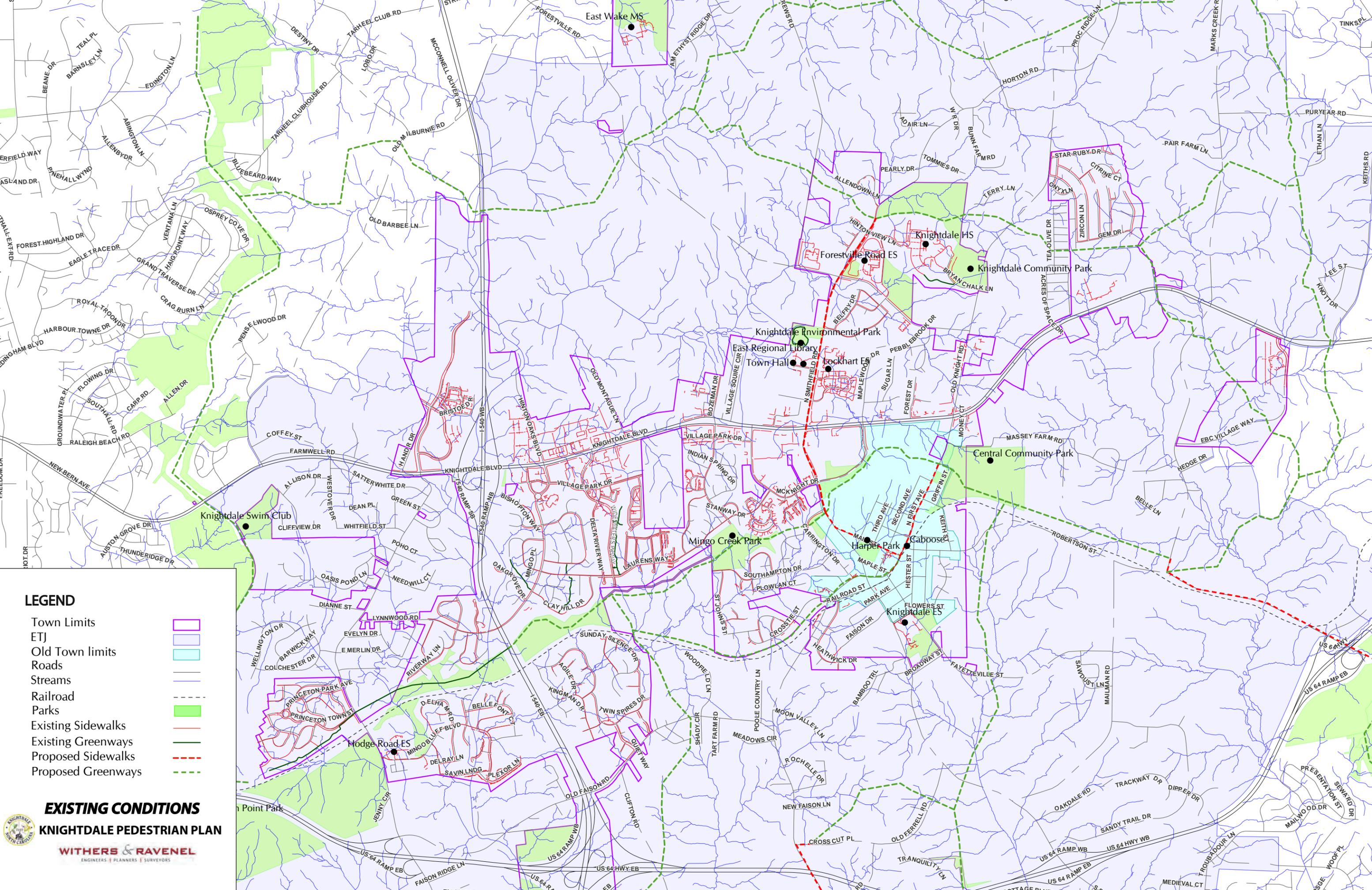
KEY	Rank	Type of Project	Location	Description	Issue/Justification	Designation	Possible Funding Opps.
G	Tier 1	Intersection Improvement	Hinton Oaks Blvd. and Knightdale Blvd.	Add marked crosswalks and pedestrian push button signals; also include a pedestrian refuge island for those crossing Knightdale Blvd.	There are currently sidewalks and handicap ramps on all four corners at this intersection and this intersection connects residences to the south with businesses on the north side of Knightdale Boulevard.	Spot Improvements/ Short-Term	STP-DA, Transportation Enhancement Program, NCDOT Division Small Projects, Powell Bill Program, Community Development Block Grants, local funding options,
H	Tier 1	Intersection Improvement	Smithfield Road and Knightdale Blvd. (*partly funded)	Add marked crosswalks and pedestrian push button signals; also include a pedestrian refuge island for those crossing Knightdale Blvd.	There are currently sidewalks and handicap ramps on three of the four corners at this intersection. With the addition of a sidewalk connection and handicap ramp on the southwest corner, safe pedestrian crossings should be implemented.	Spot Improvements/ Short-Term	STP-DA, Transportation Enhancement Program, NCDOT Division Small Projects, Powell Bill Program, Community Development Block Grants, local funding options,
I	Tier 1	Intersection Improvement	Hodge Road and Lynnwood Road	Add marked crosswalks and pedestrian signage. This is not a lighted vehicular intersection, but pedestrian improvements should be incorporated for safety and visibility.	After installing sidewalks along Hodge Road and Lynnwood Road, intersection improvements will be needed for safety.	Spot Improvements/ Short-Term	STP-DA, Transportation Enhancement Program, NCDOT Division Small Projects, Powell Bill Program, Community Development Block Grants, local funding options,
J	Tier 1	Intersection Improvement	Smithfield Road and 1st Avenue	Add marked crosswalks and pedestrian push button signals.	This intersection was cited as a dangerous intersection with many pedestrians. With the implementation of sidewalks in this location, intersection improvements should be implemented.	Spot Improvements/ Short-Term	STP-DA, Transportation Enhancement Program, NCDOT Division Small Projects, Powell Bill Program, Community Development Block Grants, local funding options,
K	Tier 1	Streetscape/Corridor Enhancements	Knightdale Boulevard - from I-540 to Old Knight Road	Improve pedestrian lighting, incorporate additional landscape treatments, incorporate traffic calming methods such as "bulb-outs" or curb extensions at critical intersections: Hinton Oaks Blvd; Widewaters Parkway; Parkside Commons Dr/Bozeman Dr; Smithfield Road; Old Knight Road/1st Avenue.	Improving Knightdale Boulevard will increase pedestrian safety and enhance this highly visible corridor through Town. This corridor is a "gateway" through Town.	Corridor Improvement/ Short-Term	STP-DA, Transportation Enhancement Program, NCDOT Division Small Projects, Powell Bill Program, Community Development Block Grants, local funding options,
L	Tier 1	Streetscape/Corridor Enhancements	Hodge Road - from Lynnwood Road to Hodge Road Elementary School	Improve pedestrian lighting, add sidewalks where missing and add landscape improvements in the right-of-way.	Hodge Road connects to numerous neighborhoods and provides a connection to the greenway in Princeton Manor. The stretch of corridor between Lynnwood Road and the elementary school connects neighborhoods to the shopping district on Knightdale Boulevard via Lynnwood Road.	Corridor Improvement/ Short-Term	STP-DA, Transportation Enhancement Program, NCDOT Division Small Projects, Powell Bill Program, Community Development Block Grants, local funding options,

KEY	Rank	Type of Project	Location	Description	Issue/Justification	Designation
M	Tier 2	Intersection Improvement	1st Avenue/Old Knight Road and Knightdale Blvd.	Add marked crosswalks and pedestrian push button signals; also include a pedestrian refuge island for those crossing Knightdale Blvd.	There are currently sidewalks and handicap ramps on three of the four corners at this intersection. With the addition of a sidewalk connection and handicap ramp on the southwest corner, safe pedestrian crossings should be implemented. 1st Avenue is in the process of being upgraded with enhanced sidewalks and streetscape improvements. Old Knight Road from the Emerald Point subdivision to Knightdale Boulevard has been identified as a dangerous stretch of road that needs a complete sidewalk system to accommodate existing pedestrians.	Spot Improvements/ Short-Term
N	Tier 2	Intersection Improvement	Smithfield Road and Main Street	Add marked crosswalks for pedestrians to cross Main Street when walking on the sidewalk on the east side of Smithfield Road.	The Town is proposing a continuation of the sidewalk on the east side of Smithfield Road to Main Street. The sidewalk would then continue east on Main Street to 1st Avenue. A safe pedestrian crossing at Main Street will allow pedestrians to continue south on Smithfield Road if sidewalks are built in the future and will allow pedestrians to cross to the south side of Main Street to access Harper Park and the Chamber of Commerce. If a sidewalk is installed on the west side of Smithfield Road or if traffic volumes increase, additional intersection improvements will be needed, such as push button signals, flashing lights, or a vehicular light to stop traffic. (Possible Tier 2 improvement)	Spot Improvements/ Short-Term
O	Tier 2	Intersection Improvement	Smithfield Road and Maple Street	Add marked crosswalks for pedestrians to cross Maple Street when walking on the sidewalk on the east side of Smithfield Road.	If the sidewalk continues on the east side of Smithfield Road to 1st Avenue, a pedestrian crossing will be necessary at Maple Street to allow for safe crossing. Due to lower traffic volumes at this intersection and the fact that there is no vehicular signal, painting a crosswalk is adequate for phase one. If a sidewalk is installed on the west side of Smithfield Road or if traffic volumes increase, additional intersection improvements will be needed, such as push button signals, flashing lights, or a vehicular light to stop traffic. (Possible Tier 2 improvement)	Spot Improvements/ Short-Term

KEY	Rank	Type of Project	Location	Description	Issue/Justification	Designation
P	Tier 2	Sidewalk Construction/Improvement	Northside of Knightdale Boulevard from the Shopping Center east of I-540, west across the interchange to the existing sidewalk west of the I-540 interchange.	Construct 5' wide concrete sidewalks to complete the gaps in the existing sidewalk system. Include pedestrian safety enhancements such as pedestrian refuge islands to cross ramps, the removal of free-flow on and off ramps for vehicles, pedestrian crossing signs, and painted crosswalks.	This gap in the existing sidewalk system will connect residents in neighborhoods west of I-540 to the shopping district east of I-540 and provide important pedestrian safety features. The design charrette identified this intersection as an important connector in the Town in need of safety enhancements.	Spot Improvements/ Short-Term
Q	Tier 2	Sidewalk Construction/Improvement	North side of Knightdale Boulevard - multiple locations where there are gaps in the sidewalk system that are longer segments or not immediately connecting popular destinations: between the Radio Shack and the shopping center east of the rock quarry; gaps in the sidewalk system between Smithfield Road and Old Knight Road (between Autozone and Maplewood Drive; between Maplewood Drive and Texaco; between Texaco and Forest Drive).	Construct 5' wide concrete sidewalks to complete the gaps in the existing sidewalk system.	Completing the gaps in the sidewalk system along Knightdale Blvd. will improve connectivity and safety between businesses, retail and residences.	Spot Improvements/ Short-Term
R	Tier 2	Sidewalk Construction/Improvement	South side of Knightdale Boulevard - multiple locations where there are gaps in the sidewalk system that are longer gaps or not immediately connecting popular destinations: in front of the agricultural parcel west of Autumn View Drive ("goat path" indicates pedestrian use); between Maplewood Drive and 1st Avenue.	Construct 5' wide concrete sidewalks to complete the gaps in the existing sidewalk system.	Completing the gaps in the sidewalk system along Knightdale Blvd. will improve connectivity and safety between businesses, retail and residences.	Spot Improvements/ Short-Term
S	Tier 2	Streetscape/Corridor Enhancements	Smithfield Road - from 1st Avenue to the Town limits at Broadway Street.	Add sidewalks where missing, add landscape treatments and improve pedestrian lighting.	Smithfield Road is a major north/south corridor through Town, however this segment of road is less travelled and less critical for safety reasons than the portions of road north.	Corridor Improvement/ Short-Term
T	Tier 2	Streetscape/Corridor Enhancements	Hodge Road - from Knightdale Boulevard to Lynnwood Road; from Hodge Road Elementary School to Kemp Drive.	Add sidewalks where missing along these stretches of road, add landscape treatments and improve pedestrian lighting.	Hodge Road is a major north/south connector and connects many neighborhoods south and west of Town. Providing sidewalks and other streetscape enhancements will increase connectivity and safety for these residents.	Corridor Improvement/ Short-Term
U	Tier 2	Streetscape/Corridor Enhancements	1st Avenue/Old Knight Road	Add sidewalks where missing along the entire stretch of road from 1st Avenue and Smithfield Road to the Emerald Point subdivision on Old Knight Road. Improve pedestrian lighting.	Old Knight Road/1st Avenue is a prominent north/south connector in Town that will become more popular with the completion of the Town's Community Park and streetscape improvements on 1st Avenue. In addition, students walk from the Emerald Point subdivision to the high school, making the construction of sidewalks in this area critical for safety.	Corridor Improvement/ Short-Term

KEY	Rank	Type of Project	Location	Description	Issue/Justification	Designation
V	Tier 2	Streetscape/Corridor Enhancements	Knightdale Boulevard - from I-540 west to the Town limits.	Add sidewalks where missing, add landscape treatments and improve pedestrian lighting.	Knightdale Boulevard is the major gateway corridor through Town. However, this section of Knightdale Boulevard has less usage and less opportunity for connectivity, but there are still numerous residents and businesses west of I-540 that would benefit from increased access and safe walking paths.	Corridor Improvement/ Short-Term
W	Tier 2	Streetscape/Corridor Enhancements	Smithfield Road from Knightdale High School to the Town's proposed greenway system and Town limits.	Add sidewalks where missing, add landscape treatments and improve pedestrian lighting.	Smithfield Road is a major north/south connector in Town, however this small section of roadway is less critical than the rest of Smithfield Road.	Corridor Improvement/ Short-Term
X	Tier 2	Sidewalk Construction/Improvement	North side of Lauren's Way - large gap in the sidewalk system between W Cameo Lane and Stanway Drive.	Construct 5' wide concrete sidewalks to complete the gaps in the existing sidewalk system.	Completing the gaps in the sidewalk system along Lauren's Way will improve connectivity and safety between businesses, retail and residences.	
Y	Tier 2	Sidewalk Construction/Improvement	Knightdale Boulevard - from Old Knight Road east to Schneider Electric.	Construct 5' wide concrete sidewalk to extend the sidewalk system to businesses east.	As development occurs, extend the sidewalk system to include additional businesses and neighborhoods. Extending the sidewalk Schneider Electric will connect this large employer and the Emerald Pointe neighborhood to Knightdale Boulevard, creating a walking loop with Old Knight Road and providing greater access to businesses along Knightdale Boulevard.	Spot Improvements/ Long-Term
Z	Tier 2	Sidewalk Construction/Improvement	Brookfield Drive from Carrington Drive to the Town Limits	Add sidewalks where missing, add landscape treatments and improve pedestrian lighting.	Brookfield Drive will have increased usage by residential area with connection to future Greenway Tail.	Spot Improvements/ Short-Term

KEY	Rank	Type of Project	Location	Description	Issue/Justification	Designation
AA	Tier 3	Greenway trail Construction/Improvement	From Churchill neighborhood to the proposed greenway, over the railroad tracks.	Construct 10' wide multi-use trail to connect neighborhood to the greenway system. Construct a safe crossing at the railroad by using fencing and a "Z" type crossing that encourages pedestrians and cyclists to slow down. Or construct a pedestrian bridge over the railroad right-of-way.	Providing a safe crossing at the railroad tracks will increase safety and connectivity for pedestrians. Providing this safe connection would provide residents from the Churchill neighborhood with access to the greenway system and to businesses and retail north of the railroad tracks.	Spot Improvements/ Long-Term
AB	Tier 3	Greenway trail Construction/Improvement	From Mingo Creek neighborhood to the greenway, over the railroad tracks.	Construct 10' wide multi-use trail to connect neighborhood to the greenway system. Construct a safe crossing at the railroad by using fencing and a "Z" type crossing that encourages pedestrians and cyclists to slow down. Or construct a pedestrian bridge over the railroad right-of-way.	Providing a safe crossing at the railroad tracks will increase safety and connectivity for pedestrians. Providing this safe connection would provide residents from the Mingo Creek neighborhood with access to the greenway system and to businesses and retail north of the railroad tracks..	Spot Improvements/ Long-Term
AC	Tier 3	Streetscape/Corridor Enhancements	Northside of Knightdale Blvd from Old Knight Road to Town Limits.	Add sidewalks where missing, add landscape treatments and improve pedestrian lighting.	Knightdale Boulevard is the major gateway corridor through Town. However, this section of Knightdale Boulevard has less usage and less opportunity for connectivity. However, having a continuous, cohesive streetscape through Town on Knightdale Boulevard should be a goal for the Town.	Corridor Improvement/ Short-Term
AD	Tier 3	Greenway trail Construction/Corridor Enhancements	Mingo Creek Greenway - from Mingo Creek Park to the park on 1st Avenue.	Construct 10' wide asphalt multi-use path from Phase 1 of the Mingo Creek Greenway to the new Community Park.	Extending the multi-use trail will provide residents and visitors with a safe and attractive route connecting neighborhoods and parks in Town.	Corridor Improvement/ Long-Term
AE	Tier 3	Streetscape/Corridor Enhancements	Smithfield Road from Broadway Street to US 64/264	Add sidewalks where missing, add landscape treatments and improve pedestrian lighting.	Extending the streetscape enhancements and pedestrian corridor south to US 264/64 will help connect neighborhoods south of Town and create a unified appearance to this gateway corridor into Town.	Corridor Improvement/ Long-Term
AF	Tier 3	Greenway trail Construction/Improvement	Multi-jurisdictional greenway trail from North 1st Avenue to the Town of Wendell.	Construct 10' wide asphalt multi-use trail to connect greenway to the Town of Wendell.	Extending the multi-use trail will provide residents and visitors with a safe and attractive route connecting Knightdale to the Town of Wendell.	Corridor Improvement/ Long-Term
AG	Tier 3	Greenway trail Construction/Improvement	Greenway trail from Smithfield Road to the west.	Construct 10' wide asphalt multi-use trail from north Smithfield Road, extending westward.	Extending the multi-use trail will provide residents and visitors with a safe and attractive route in the north of Town that will eventually "close the loop" around Town.	Corridor Improvement/ Long-Term



- LEGEND**
- Town Limits
 - ETJ
 - Old Town limits
 - Roads
 - Streams
 - Railroad
 - Parks
 - Existing Sidewalks
 - Existing Greenways
 - Proposed Sidewalks
 - Proposed Greenways

EXISTING CONDITIONS
KNIGHTDALE PEDESTRIAN PLAN

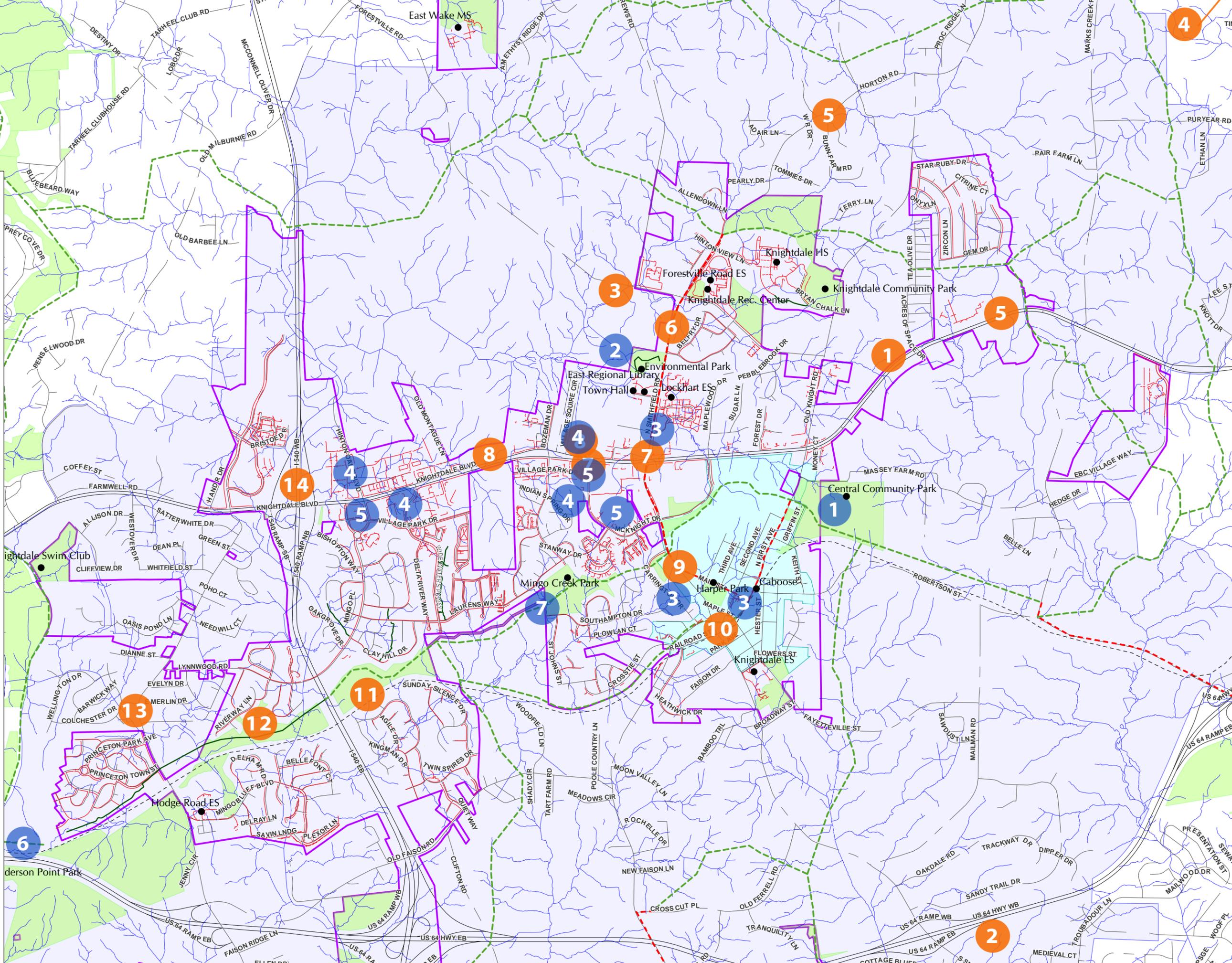


Destinations/ Opportunities	
Label	Name
1	New community park
2	Trails at Environmental Park behind Library/Town Hall
3	Places people currently walk around town
4	Shopping center destinations
5	Bus Stops
6	Connect to regional greenway system
7	Mingo Creek Park and greenway system

Barriers/Constraints	
Label	Name
1	No sidewalks along Knightdale Boulevard east toward Clayton
2	No sidewalks in neighborhoods near US 264
3	No sidewalks on Forestville Road west of Smithfield Road
4	Loose dogs in neighborhood east of Rolesville Road (Damascus Drive area)
5	No sidewalk connection to Wendell
6	No sidewalks along Smithfield Road north to connect schools and amenities
7	No way to get safely across Knightdale Boulevard
8	Gaps in sidewalk along Knightdale Boulevard
9	Unsafe - lots of pedestrians, no sidewalks along Smithfield Road south
10	Dangerous intersection at Railroad Street and Smithfield Road - needs crosswalks
11	Railroad is a barrier to cross for pedestrians
12	No sidewalk on the side of the road children are waiting for schoolbus - Unsafe condition
13	Neighborhoods west of I-540 lack connectivity to the rest of Town
14	No pedestrian connection across I-540/Knightdale Boulevard interchange

LEGEND

- Town Limits 
- ETJ 
- Old Town limits 
- Roads 
- Streams 
- Railroad 
- Parks 
- Existing Sidewalks 
- Existing Greenways 
- Proposed Sidewalks 
- Proposed Greenways 
- Barriers/Constraints 
- Destinations/ Opportunities 



PUBLIC INPUT MAP
DESTINATIONS/OPPORTUNITIES
BARRIERS/CONSTRAINTS
KNIGHTDALE PEDESTRIAN PLAN

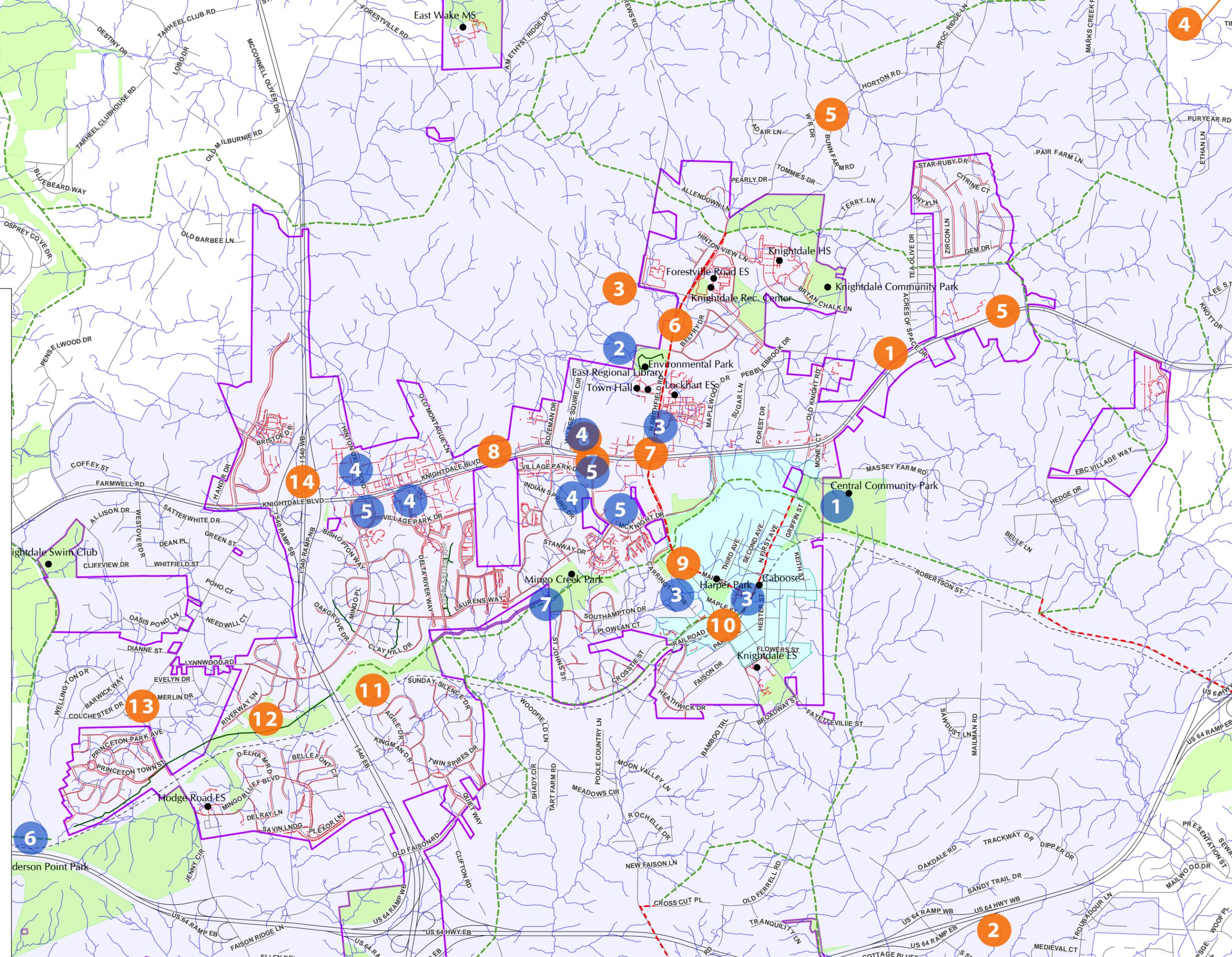


Destinations/ Opportunities	
Label	Name
1	Smithfield Road - connect schools and neighborhoods
2	New Pedestrian Crossing
3	Shopping Centers
4	Parks
5	Schools
6	Existing or proposed Greenways
7	Residential Areas
8	Knightdale Blvd between Widewaters and Smithfield Rd
9	Schneider Electric

Barriers/Constraints	
Label	Name
1	Knightdale Blvd. is hard to cross
2	Railroad reduces connectivity
3	Emerald Pointe neighborhood lacks connectivity
4	Southeast area lacks infrastructure & destinations
5	Intersection of Knightdale Blvd and Hodge Road
6	I-540 and Old Faison/Knightdale Blvd intersection
7	Development is spread out
8	Knightdale Blvd. & Smithfield Road Intersection
9	Bend in road along Smithfield Road, north of 1st Ave.

- LEGEND**
- Town Limits 
 - ETJ 
 - Old Town limits 
 - Roads 
 - Streams 
 - Railroad 
 - Parks 
 - Existing Sidewalks 
 - Existing Greenways 
 - Proposed Sidewalks 
 - Proposed Greenways 
 - Barriers/Constraints 
 - Destinations/Opportunities 

**STEERING COMMITTEE
INPUT MAP
DESTINATIONS/OPPORTUNITIES
BARRIERS/CONSTRAINTS
KNIGHTDALE PEDESTRIAN PLAN**



KEY	Rank	Type of Project	Location
A	Tier 1	Sidewalk Construction/Improvement	Northside of Knightdale Boulevard - multiple locations where there are gaps in the sidewalk system: between Bozeman Drive and the Food Lion Shopping Center; from Sherwin Williams to Bojangles, just west of Old Knight Road (completes the connection from Forest Drive to Old Knight Road)
B	Tier 1	Sidewalk Construction/Improvement	Southside of Knightdale Boulevard - multiple locations where there are gaps in the sidewalk system: small gap in the sidewalk in front of the bank to the west of Wide Waters Pkwy; small section west of McKnight Drive; west of Smithfield Road, in front of Big Lots; curve sidewalk around existing manhole in front of Smithfield's Chicken N Bar BQ east of Smithfield Rd.
C	Tier 1	Sidewalk Construction/Improvement	1st Avenue - connection in front of new park to Knightdale Boulevard.
D	Tier 1	Streetscape/Corridor Enhancements	Smithfield Road - from Knightdale High School to 1st Avenue
E	Tier 1	Sidewalk Construction/Improvement	Hodge Road - from Princeton Manor to Lynwood Road; continue east to the existing sidewalk on Lynwood Road.
F	Tier 1	Multi-use Trail Construction/Improvement	Hodge Road, over railroad tracks.
G	Tier 1	Intersection Improvement	Hinton Oaks Blvd. and Knightdale Blvd.
H	Tier 1	Intersection Improvement	Smithfield Road and Knightdale Blvd. (*partly funded)
I	Tier 1	Intersection Improvement	Hodge Road and Lynnwood Road
J	Tier 1	Intersection Improvement	Smithfield Road and 1st Avenue
K	Tier 1	Streetscape/Corridor Enhancements	Knightdale Boulevard - from I-540 to Old Knight Road
L	Tier 1	Streetscape/Corridor Enhancements	Hodge Road - from Lynnwood Road to Hodge Road Elementary School

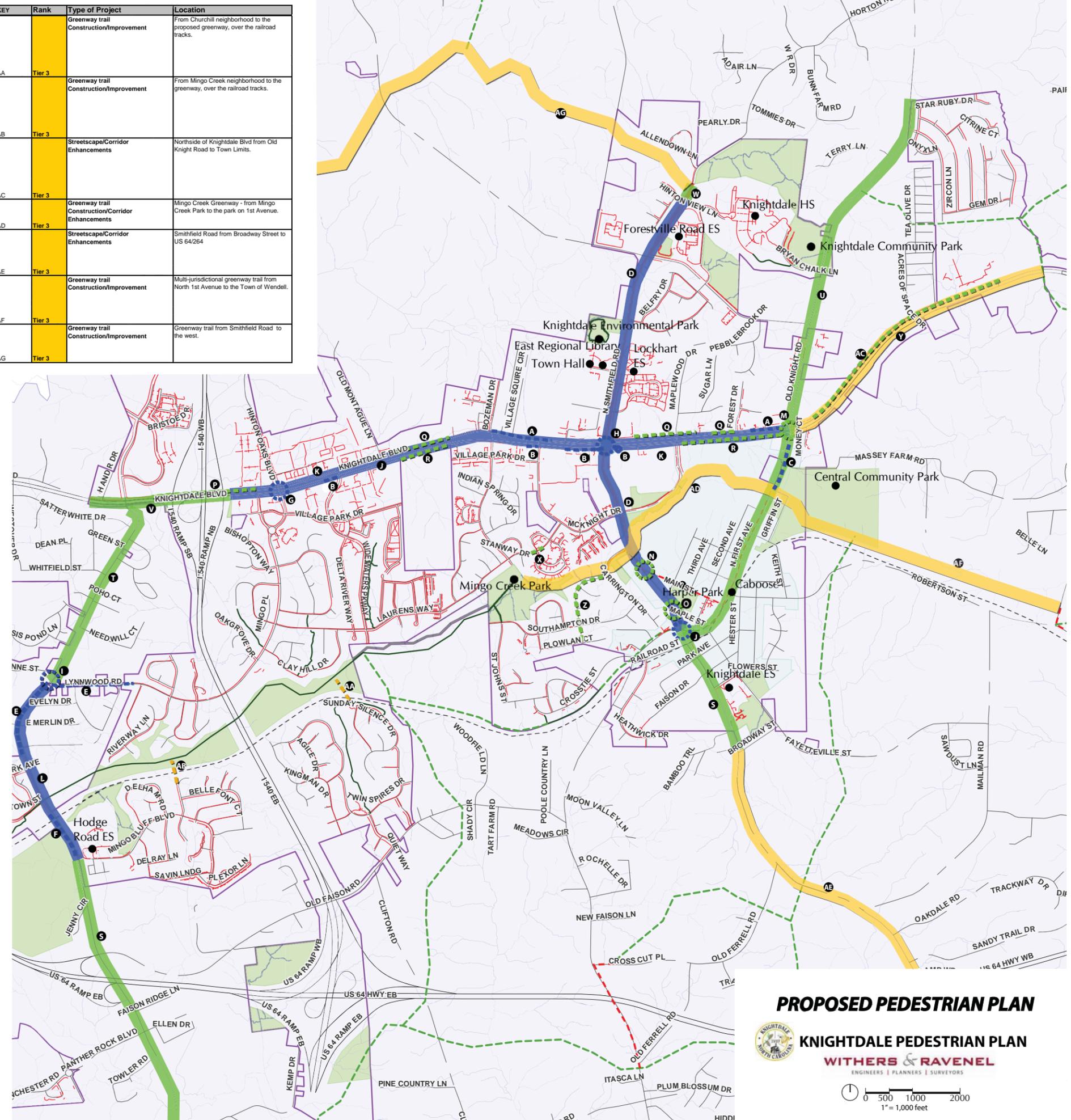
KEY	Rank	Type of Project	Location
M	Tier 2	Intersection Improvement	Smithfield Road and Main Street
N	Tier 2	Intersection Improvement	Smithfield Road and Maple Street
O	Tier 2	Sidewalk Construction/Improvement	Northside of Knightdale Boulevard from the Shopping Center east of I-540, west across the interchange to the existing sidewalk west of the I-540 interchange.
P	Tier 2	Sidewalk Construction/Improvement	North side of Knightdale Boulevard - multiple locations where there are gaps in the sidewalk system that are longer segments or not immediately connecting popular destinations: between the Radio Shack and the shopping center east of the rock quarry; gaps in the sidewalk system between Smithfield Road and Old Knight Road (between Autozone and Maplewood Drive; between Maplewood Drive and Texaco; between Texaco and Forest Drive).
Q	Tier 2	Sidewalk Construction/Improvement	South side of Knightdale Boulevard - multiple locations where there are gaps in the sidewalk system that are longer gaps or not immediately connecting popular destinations: in front of the agricultural parcel west of Autumn View Drive ("goat path" indicates pedestrian use); between Maplewood Drive and 1st Avenue.
R	Tier 2	Streetscape/Corridor Enhancements	Smithfield Road - from 1st Avenue to the Town limits at Broadway Street.
S	Tier 2	Streetscape/Corridor Enhancements	Hodge Road - from Knightdale Boulevard to Lynnwood Road; from Hodge Road Elementary School to Kemp Drive.
T	Tier 2	Streetscape/Corridor Enhancements	1st Avenue/Old Knight Road
U	Tier 2	Streetscape/Corridor Enhancements	Knightdale Boulevard - from I-540 west to the Town limits.
V	Tier 2	Streetscape/Corridor Enhancements	Smithfield Road from Knightdale High School to the Town's proposed greenway system and Town limits.
W	Tier 2	Sidewalk Construction/Improvement	North side of Lauren's Way - large gap in the sidewalk system between W Cameo Lane and Stanway Drive.
X	Tier 2	Sidewalk Construction/Improvement	Knightdale Boulevard - from Old Knight Road east to Schneider Electric.
Y	Tier 2	Sidewalk Construction/Improvement	Brookfield Drive from Carrington Drive to the Town Limits
Z	Tier 2	Sidewalk Construction/Improvement	

KEY	Rank	Type of Project	Location
AA	Tier 3	Greenway trail Construction/Improvement	From Mingo Creek neighborhood to the proposed greenway, over the railroad tracks.
AB	Tier 3	Streetscape/Corridor Enhancements	Northside of Knightdale Blvd from Old Knight Road to Town Limits.
AC	Tier 3	Greenway trail Construction/Corridor Enhancements	Mingo Creek Greenway - from Mingo Creek Park to the park on 1st Avenue.
AD	Tier 3	Streetscape/Corridor Enhancements	Smithfield Road from Broadway Street to US 64/264
AE	Tier 3	Greenway trail Construction/Improvement	Multi-jurisdictional greenway trail from North 1st Avenue to the Town of Wendell.
AF	Tier 3	Greenway trail Construction/Improvement	Greenway trail from Smithfield Road to the west.
AG	Tier 3	Greenway trail Construction/Improvement	

LEGEND

- Town Limits
- ETJ
- Old Town limits
- Roads
- Streams
- Railroad
- Parks
- Existing Sidewalks
- Existing Greenways
- Town Proposed Sidewalks
- Town Proposed Greenways

	SPOT	INTERSECTION	CORRIDOR
TIER 1 PROJECTS			
TIER 2 PROJECTS			
TIER 3 PROJECTS			



PROPOSED PEDESTRIAN PLAN

KNIGHTDALE PEDESTRIAN PLAN
WITHERS & RAVENEL
 ENGINEERS | PLANNERS | SURVEYORS

