

CITY OF CHARLOTTE

Mobility Plan

STATE ROUTE 47/48/49



JULY 2019

HISTORIC DICKSON COUNTY COURTHOUSE

TABLE OF CONTENTS

I	Introduction.....	1
	Project Purpose.....	1
	Project Location, History and Context.....	2
	Grant Application Background.....	3
II	Existing Conditions Assessment	4
	Roadway Features	4
	Crash History	6
	AADT.....	7
	Growth Rate Projections.....	8
	Turning Movement Counts	9
	Traffic Operations	10

TABLE OF CONTENTS

III	Future Conditions Assessment	12
	Future Traffic Projections.....	12
	Future Intersection Traffic Operations	13
IV	Recommendations.....	14
	Proposed Project Locations	15
	Pedestrian Improvements	16
	Intersection Improvements	27
	Access Management.....	34
	Funding Opportunities.....	36

CITY OF CHARLOTTE

Bill Davis
Mayor

Sherri Thiel
Vice Mayor

Jennifer Carlew
City Recorder

STEERING COMMITTEE

Melanie Murphy
TDOT

Jonathan Russell
TDOT

Karyssa Helton
Mid-Cumberland Regional Planning Organization

CONSULTANT TEAM





I INTRODUCTION

VISION

Create a safer environment for pedestrian and vehicular traffic on key routes.

PROJECT PURPOSE

The City of Charlotte has identified the need to develop a plan to create a safer environment for pedestrian and vehicular traffic on its key routes, including any improvements to help mitigate the expected traffic impact of the new Criminal Justice Center. As the county seat of Dickson County, the City of Charlotte is home to two schools, the county court system, and multiple other public offices and facilities. The City is also located at the convergence of three state highways: State Routes 47, 48 and 49. These highways are critical connections between the city and surrounding rural areas, providing routes for trucks moving goods and agriculture products, but also function as a Main Street environment for the city.

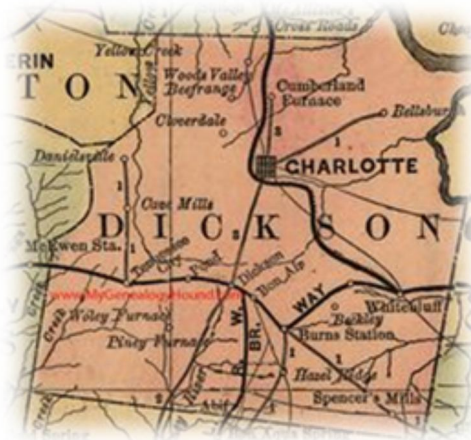
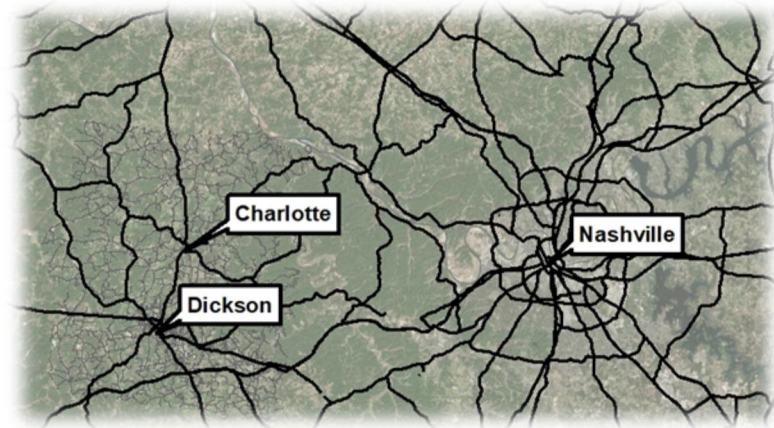
The mix of traffic and pedestrians creates operational and safety concerns, particularly at the points where these three major routes intersect within the City. In addition, construction will soon begin on a new Criminal Justice Center which will take up two blocks along Water Street in the heart of downtown.

To support these planning efforts, the City of Charlotte has been awarded a TDOT Community Transportation Planning Grant to evaluate and develop recommendations to improve pedestrian connections among schools, shopping, services and neighborhoods in the core areas of Charlotte. Key issues identified by the City for examination include:

- Connections between downtown and the commercial area located just to the south along SR 48;
- Pedestrian connections within the downtown area;
- Review intersections of concern identified by the City and develop recommendations to improve transportation at these locations; and
- Recommended policies for future development along State Route 48 (SR 48) to meet traveler needs and to improve safety for walking and cycling.

LOCATION

The City of Charlotte is located in Dickson County and is the county seat. Charlotte is a rural community with a population of 1,480 and is located approximately 40 miles west of Nashville and 8 miles north of Dickson. It is centered around the junction of State Route 49, which connects Charlotte with Ashland City and Kentucky to the northeast and upper West Tennessee to the northwest, and State Route 48, which connects the town to Dickson and U.S. State Route 70 to the southwest and Clarksville to the north. These road intersections are just west of the court square.



HISTORY

Charlotte was established in 1808 as the county seat for Dickson County, which had been created in 1803. The town was named for Charlotte Reeves Robertson, the wife of General James Robertson, who played prominent roles in the settlement of Middle Tennessee. Charlotte was officially incorporated in 1837.

On May 30, 1830, a tornado devastated the town, destroying most of the businesses and homes, as well as the jail and courthouse, along with many county records. A new brick courthouse was completed in 1832, and still stands as the oldest functioning courthouse in the state of Tennessee.

CONTEXT

As the county seat of Dickson County, Charlotte is home to the Dickson County Courthouse, the Sheriff's Department, the Dickson County jail and the Dickson County Mayor's office. The City is also located at the convergence of three state highways: State Routes 47, 48 and 49. These highways are critical connections between the city and surrounding rural areas, providing routes for trucks moving goods and agricultural products.



GRANT APPLICATION

The purpose of the Tennessee Community Transportation Planning Grant (CTPG) is to provide resources to assist Tennessee's small and rural communities in developing transportation plans for preparation of future transportation systems, land use, and growth management issues.

Specifically, the goals of the program are to:

- Assist rural municipalities with planning efforts that define the transportation cohesiveness between multimodal transportation systems and local land use objectives that achieve the statewide transportation goals.
- Aid rural municipalities with the creation of planning documents that support improvements in traffic flow, safety, and overall efficiency of the transportation system.
- Provide rural city governments with planning resources to achieve visions as related to transportation and land use needs that promote future economic growth.

Individuals representing the City of Charlotte, TDOT, and the Mid-Cumberland Rural Planning Organization comprised the study team. A consultant team of WSP assisted in the process.

II EXISTING CONDITIONS

The purpose of the existing conditions analysis is to understand and identify issues, deficiencies, and opportunities to be addressed. The existing conditions analysis also establishes a baseline to which anticipated future conditions can be measured and various recommendations can be compared. To get a full understanding of the study area, data was collected for a wide range of variables including roadway features, crash history, historic traffic volumes, and intersection turning movements counts.

Roadway Features

State Routes (SR) 47, 48, and 49 are each functionally classified by TDOT as rural minor arterial roadways. This section provides a general description of the path each roadway traverses within the study area. The table on the following page details the physical roadway features that characterize each segment.



- SR-47 is a Tennessee State Highway located entirely within Dickson County. It begins slightly southeast of downtown Charlotte, as a secondary highway at the intersection of SR-48. Within the project corridor SR-47 is a 2-lane roadway with 11-foot lanes in each direction and 3-foot shoulders on each side.
- SR-48 is a long north-south state highway in Middle Tennessee that enters the City of Charlotte from the south. The roadway intersects with SR-47 and has a short concurrency with SR-49 just north of the intersection. SR-48 also intersects SR-49 East (Spring Street) and SR-49 West (Van Leer Highway). Within the project corridor SR-48 is a 2-lane roadway with 12-foot lanes in each direction and 3-foot shoulders on each side.
- SR-49 is a Tennessee State Highway that enters the City of Charlotte from the west and has an intersection and short concurrency with SR-48, just north of its intersection with SR-47. The route then goes through downtown and intersects Old State Highway 47, an old alignment of SR-47, before leaving Charlotte. Within the project corridor SR-49 is a 2-lane roadway with 11-foot lanes in each direction and 3-foot shoulders on each side.

Roadway Features

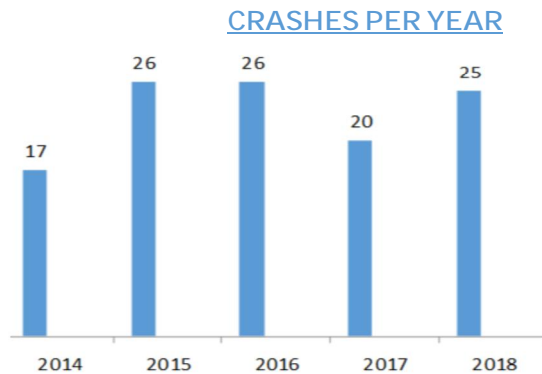
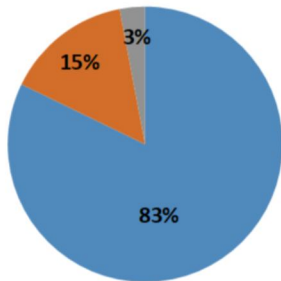
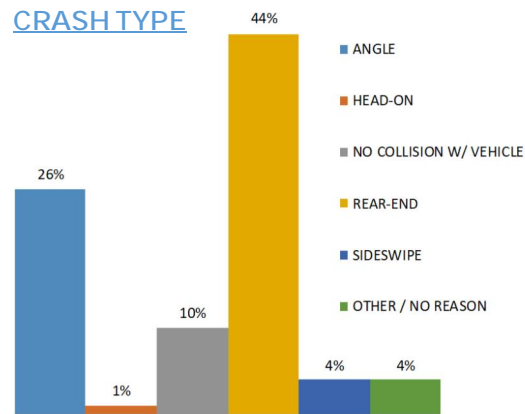
Roadway	Start Point (L.M.)	End Point (L.M.)	Functional Class	Right of Way (ft)	Land Use	Number of Lanes	Speed Limit
SR-47	0.560	0.650	Urban / Minor Arterial	200	Residential / Fringe	2	45
SR-48	0.650	0.820	Urban / Minor Arterial	200	Commercial	2	45
	0.820	2.740	Urban / Minor Arterial	200	Rural	2	55
SR-49	2.740	2.860	Urban / Minor Arterial	200	Rural	3	55

TDOT ETRIMS



Crash History

Crash data used in this analysis was obtained from TDOT via ETRIMS, which contains georeferenced crash data for crashes occurring on all roadways in the state. This data includes crash location, manner of crash, weather and time of day, driver and occupant data and behavior, and vehicle information. This analysis focused on crashes along the SR-48 project corridor and did not review crashes that occurred on intersection side streets. Crash data points were obtained for a five year period, 2014-2018. During this five year period there were 82 crashes. Analysis of this data revealed the following:



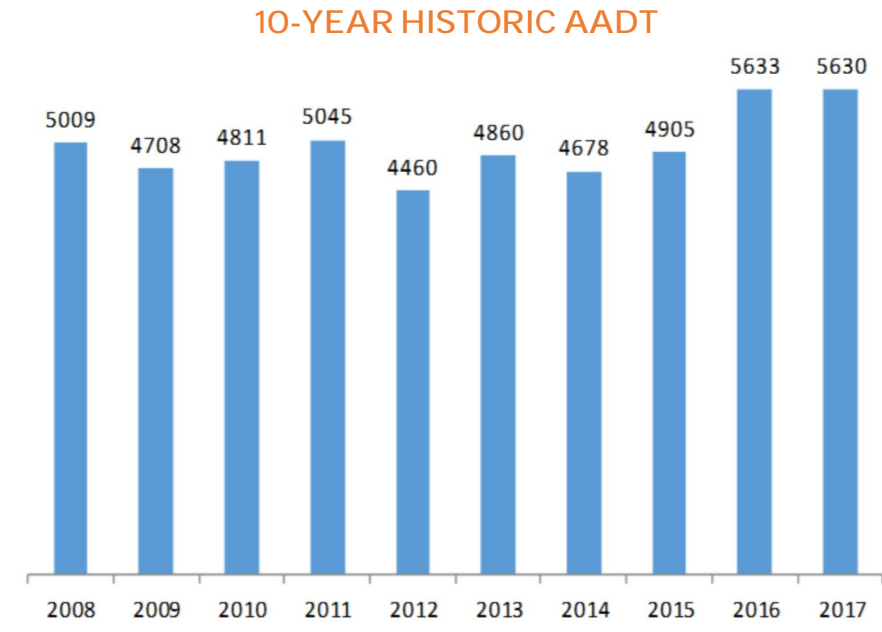
2014-2018 CRASH LOCATIONS

TRAFFIC CONDITIONS

The existing traffic conditions in the study corridor were assessed to identify deficiencies relative to existing traffic capacity and operations and to establish a baseline condition against which the anticipated future conditions and potential impacts of future traffic growth can be evaluated. The study team compiled historic bi-directional Annual Average Daily Traffic (AADT) volumes from TDOT, intersection peak hour traffic volumes, truck traffic, pedestrian counts, and peak hour intersection operations.

AVERAGE ANNUAL DAILY TRAFFIC (AADT)

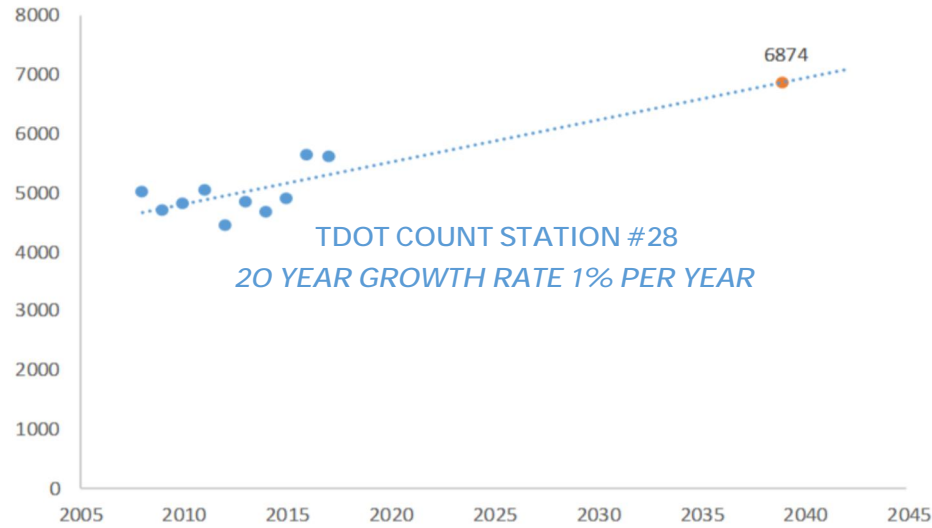
TDOT collects 24-hour bidirectional traffic volume data annually at count station across the state. This data is adjusted using traffic variation factors (TVF) that normalize the data by accounting for weekly and monthly changes in traffic volumes. TDOT then publishes the resulting annual average daily traffic (AADT) for each count station, defined as the total volume of vehicles passing through the count station in a year, divided by 365. The map to the right illustrates the TDOT count station number and location that was used for this analysis. The graph below presents five years, 2013-2017, of historic AADT at the count station.



TDOT AADT COUNT STATIONS

GROWTH RATE PROJECTIONS

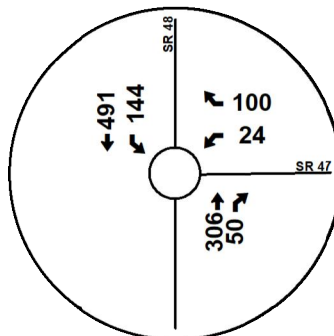
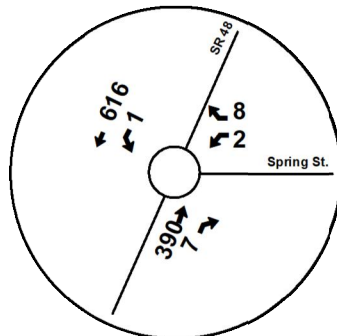
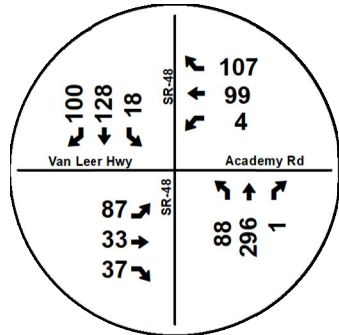
The 10-year historic AADT data was then used to determine the growth rate of traffic during the past ten years along the corridor and to project the growth rate of traffic over the next 20 years for future analysis. As shown in the figure below, TDOT count station #28 has a 20-year growth rate of 1.0% per year.



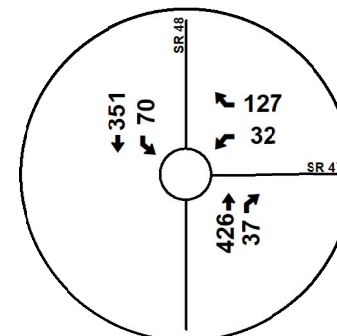
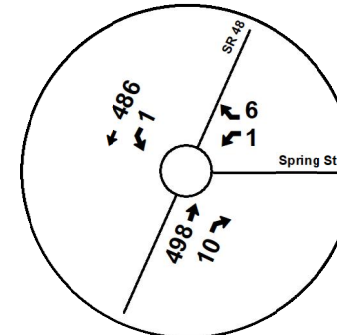
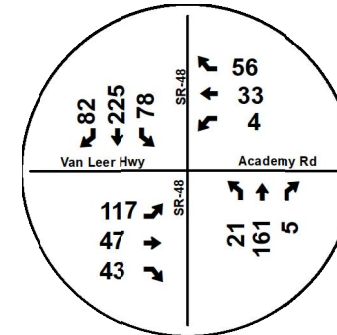
TURNING MOVEMENT COUNTS

To establish existing traffic volumes within the study area, twelve-hour intersection turning movement counts were collected on February 11, 2019 at three intersections: SR-48 and SR-47, SR-48 and Spring Street, and SR-48 and Van Leer Highway / Academy Road. The counts were conducted from 6:00 am to 6:00pm using video cameras on site and processed manually. From the turning movement counts, AM and PM peak hours were identified and are shown in the maps below.

2019 AM PEAK HOUR INTERSECTION VOLUMES



2019 PM PEAK HOUR INTERSECTION VOLUMES



TRAFFIC OPERATIONS

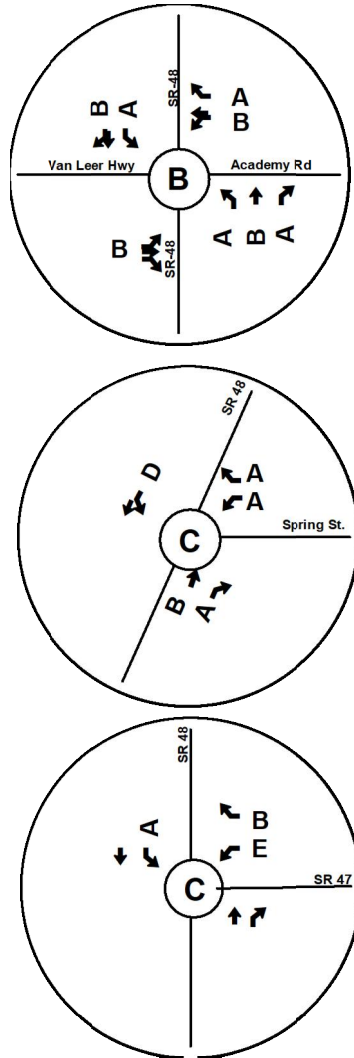
To evaluate the existing traffic operations at the study intersections, AM and PM peak hour capacity analyses were performed per the calculations outlined in the Highway Capacity Manual (HCM). The HCM provides operational analysis methodology for several types of transportation facilities, including unsignalized and signalized intersections, both of which are used in this analysis. The HCM prescribes the use of levels of service (LOS) to characterize operational conditions within the study area. LOS is a qualitative measure, defined by the HCM, which describes the operational conditions of a transportation facility in terms of general service measures, such as speed, travel time, freedom to maneuver, interruptions, and user comfort and convenience. Six levels are defined for all transportation facilities with operational analysis methodology in the HCM; the levels are designated using letters from "A" to "F", with "A" representing the best operational conditions and "F" the worst. The table below lists each LOS and its definition for vehicular operations. Using existing turning movement counts a level of service analysis was performed at each intersection. Currently, both intersections are operating at an acceptable LOS. The existing LOS for each movement and the overall LOS for each intersection is illustrated in the map on the following page.

LOS	VEHICULAR OPERATIONS DEFINITION
A	Free flow operations. Vehicles are almost completely unimpeded in their ability to maneuver with the traffic stream. The general level of physical and psychological comfort provided to the driver is high.
B	Reasonable free flow operations. The ability to maneuver within the traffic stream is only slightly restricted and the general level of physical and psychological comfort provided to the driver is still high.
C	Flow with speeds at or near free flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted and lane changes require more vigilance on the part of the driver. The driver notices an increase in tension.
D	Speeds decline with increasing traffic. Freedom to maneuver within the traffic stream is more noticeably limited. The driver experiences reduced physical and psychological comfort levels.
E	At lower boundary; the facility is at capacity. Operations are volatile because there are virtually no gaps in the traffic stream. There is little room to maneuver. The driver experiences poor levels of physical and psychological comfort.
F	Breakdowns in traffic flow. The number of vehicles entering the highway section exceeds the ability of the highway to accommodate that number of vehicles. There is no room to maneuver. The driver experiences poor levels of physical and psychological comfort.

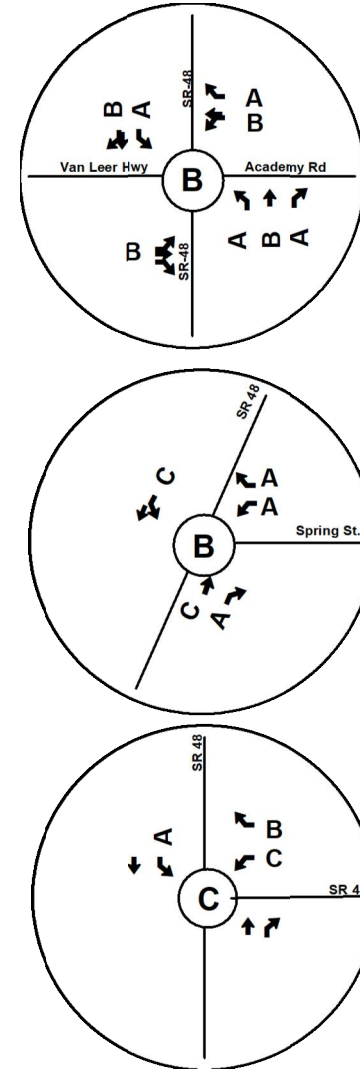
EXISTING 2019 INTERSECTION TRAFFIC OPERATIONS

For the existing conditions analysis, 2019 traffic volumes were entered into Synchro (traffic modeling software), leaving all other conditions the same. As shown in the figures below, the study intersections currently operate at an overall acceptable level of service during both the AM and PM peak hours. During the AM peak hour, the westbound left movement at the intersection of SR-48 and SR-47 is the only movement to operate an unacceptable LOS,

2019 AM PEAK HOUR INTERSECTION LOS



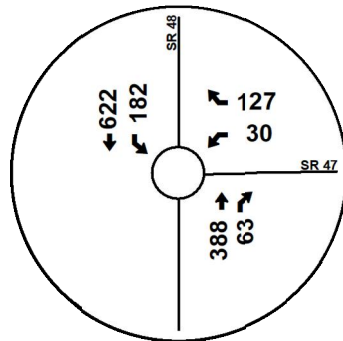
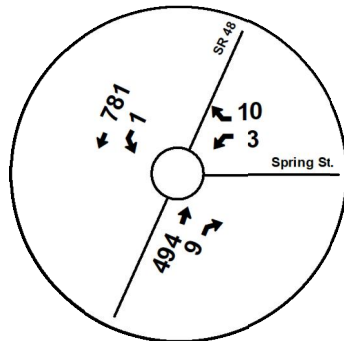
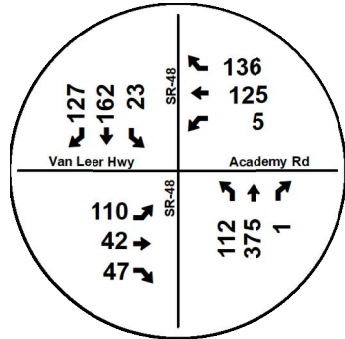
2019 PM PEAK HOUR INTERSECTION LOS



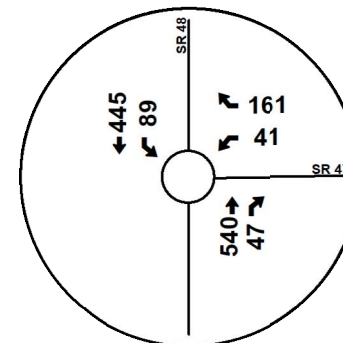
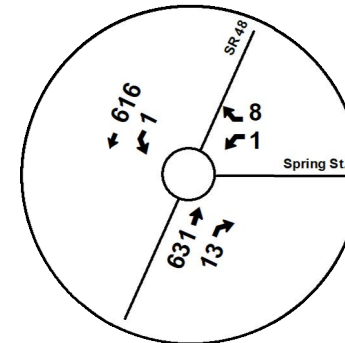
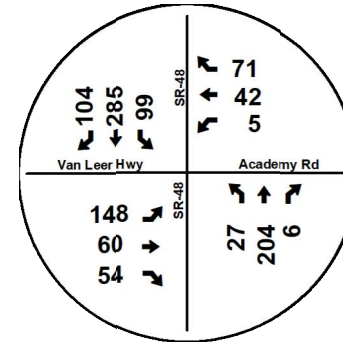
II FUTURE CONDITIONS

The purpose of the future conditions analysis is to understand and identify issues and deficiencies that may need to be addressed in the future. Existing traffic volumes were forecasted 20 years into the future to determine 2039 conditions. The growth rates, as discussed in the existing conditions section, were applied to the 2019 AM and PM peak hour volumes to create 2039 volumes. The figures below illustrate the future 2039 projected traffic volumes.

2039 AM PEAK HOUR INTERSECTION LOS



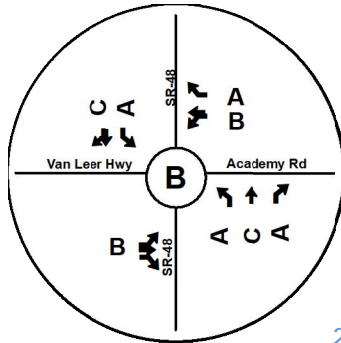
2039 PM PEAK HOUR INTERSECTION LOS



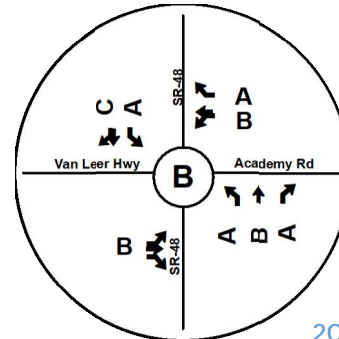
FUTURE 2039 INTERSECTION TRAFFIC OPERATIONS

For the future year analysis, projected 2039 traffic volumes were entered into Synchro, leaving all other conditions the same. As shown in the figures below all of the study intersections operate at an overall acceptable LOS during both peak hours, with the exception of SR-48 and Spring Street. This intersection is projected to operate at an overall unacceptable level of service during both the AM and PM peak hours. Specifically, the intersection will operate at a LOS F in the AM peak hour and a LOS E in the PM peak hour. As shown in the figure below, a roundabout is recommended for this intersection and would increase the overall intersection operation to a LOS B during both the AM and PM peak hours. This improvement is further discussed in the Recommendations section of this study.

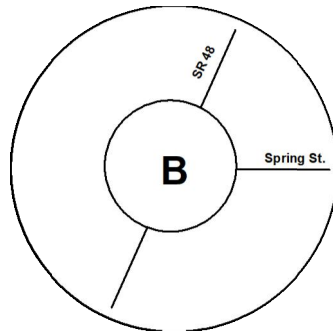
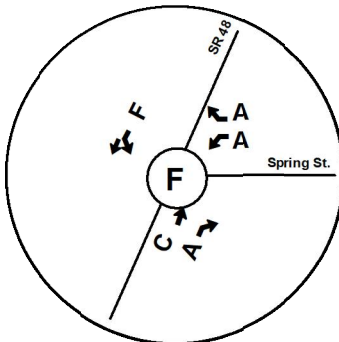
2039 AM PEAK HOUR INTERSECTION LOS



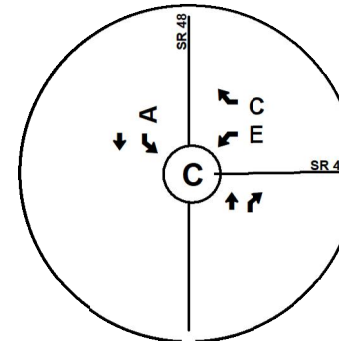
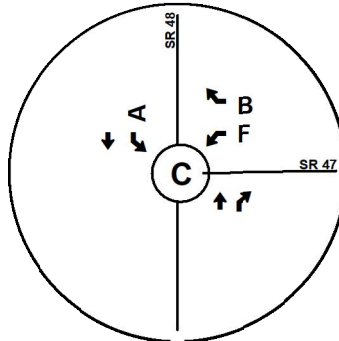
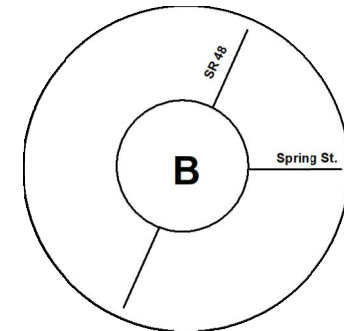
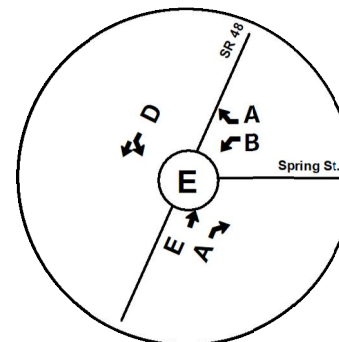
2039 PM PEAK HOUR INTERSECTION LOS



2039 PM PEAK HOUR ROUNDABOUT LOS



2039 PM PEAK HOUR ROUNDABOUT LOS





IV RECOMMENDATIONS

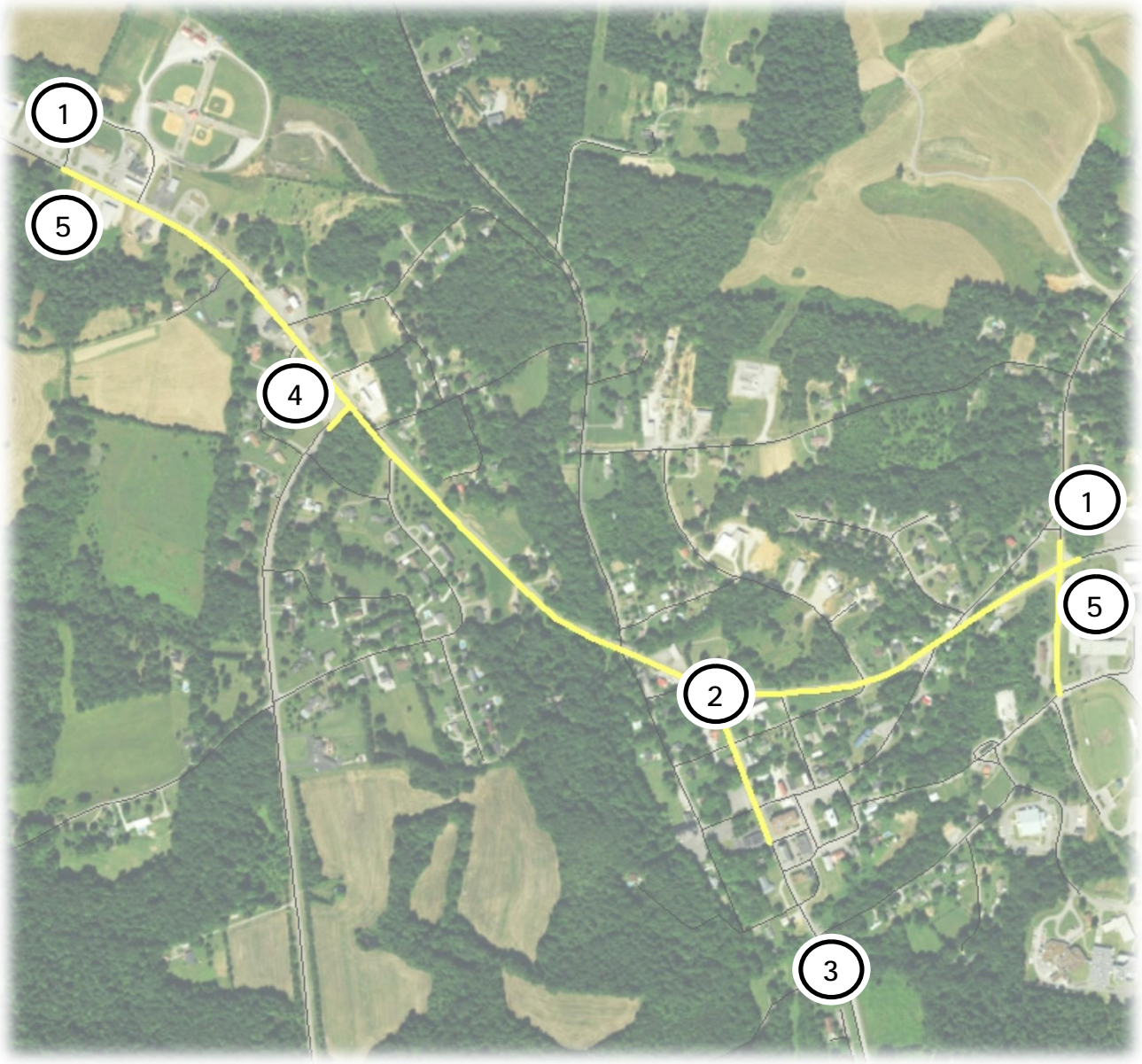
OVERVIEW

The purpose of this study was to develop a plan that would create a safer environment for pedestrian and vehicle traffic and to provide connectivity between schools, residential neighborhoods, retail and the downtown. The improvements recommended for the project corridor include:

- à Installation of sidewalks;
- à Roundabout at the intersection of SR-48 and Spring Street;
- à Realignment of the intersection at SR-49E and Old Highway 47;
- à Defined parking at the intersection of SR-48 and SR-47; and
- à Incorporate Access Management guidelines into future development and redevelopment.

The following pages include a map that illustrates the location of recommended projects and a detailed description of each recommendation.

PROPOSED PROJECT LOCATIONS



- 1 — Proposed sidewalks throughout the SR-48 corridor
- 2 Roundabout at the intersection of SR-48 and Spring Street
- 3 Intersection realignment at SR-49E and Old Hwy. 47
- 4 Defined parking
- 5 — Implementation of Access Management guidelines

PEDESTRIAN IMPROVEMENTS

SR-48 PROJECT CORRIDOR



Pedestrian mobility throughout the study corridor has been identified by the City of Charlotte as a priority of this plan. Connections between surrounding neighborhoods, commercial areas and the downtown is essential to creating a vibrant and inviting community. Today, there is little that binds these areas together. Sidewalks are nonexistent and pedestrians are forced to walk on narrow shoulders or in areas adjacent to the roadways. The construction of sidewalks would provide dedicated space intended for use by pedestrians that is safe, comfortable, and ADA compliant (including intersection ramps). The following pages illustrate the location of proposed sidewalks in the study area. The illustrations are not to scale and reflect conceptual design concepts.

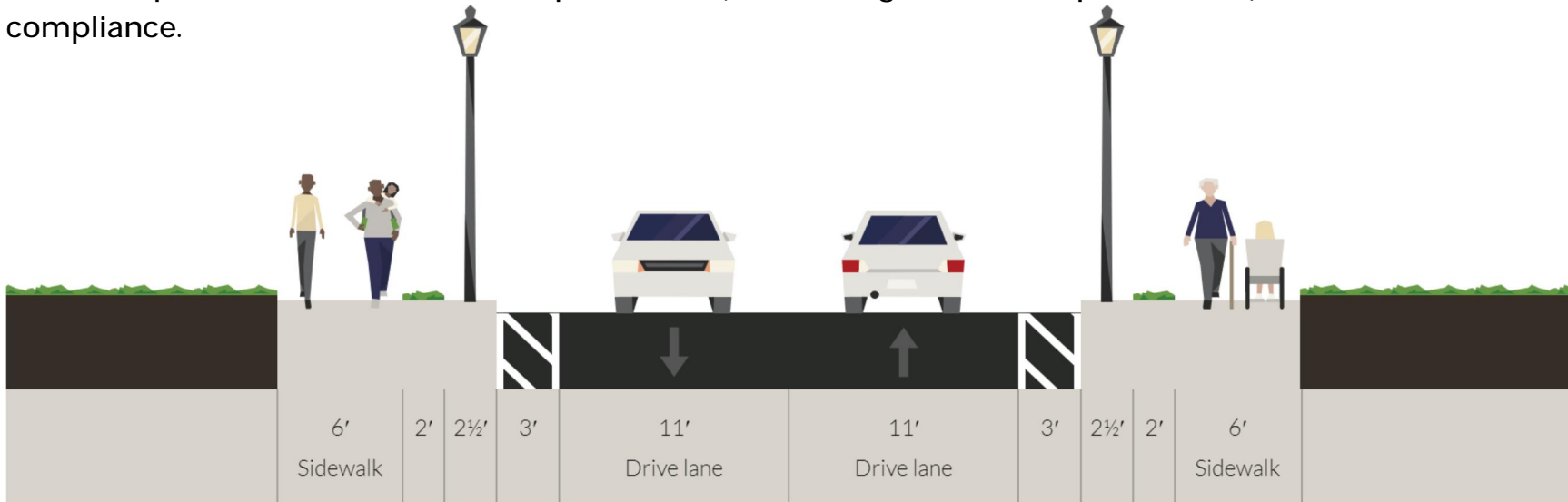


SR-48 SOUTHBOUND NORTH OF SR-47

PEDESTRIAN IMPROVEMENTS

The separation of pedestrians from motorized traffic is an essential design feature of a safe and functional roadway. Creating safe walking options for residents will create a more livable, accessible community for people of all ages, abilities and income levels. Therefore, the construction of sidewalks is recommended for the study corridor to increase connectivity between the historic downtown, schools, the new criminal justice center, commercial areas, and residential neighborhoods.

Below is a typical cross section of the sidewalks proposed for the SR-48 corridor. It includes a 6-foot sidewalk, a 2-foot grass buffer, a 2 1/2 foot utility strip, and a 3-foot shoulder with curb and gutter. The improvements extend along both sides of SR-48 from the Charlotte Ball Park entrance to the intersection of SR-49 West. Sidewalks are also proposed on both sides of Spring Street from SR-48 to the new criminal justice center and on both sides of Academy Street from SR-48 to Humphries Street (school entrance). The following pages illustrate the location of the proposed sidewalks throughout the corridor and a planning level cost estimate for construction. As the project progresses, more detailed design plans should be developed to address crosswalk placement, business access placement (conforming to entrance permit rules), and ADA compliance.



SR-48 CORRIDOR PROPOSED TYPICAL CROSS SECTION

PROPOSED SIDEWALK



Existing ROW Proposed Sidewalks

SR-48, CHARLOTTE BALL PARK ENTRANCE

PROPOSED SIDEWALK



SR-48, AT SR-47

Existing ROW Proposed Sidewalks

PROPOSED SIDEWALK



Existing ROW Proposed Sidewalks

SR-48, NORTH OF SR-47

PROPOSED SIDEWALK



SR-48 AT SPRING STREET

Existing ROW

Proposed Sidewalks

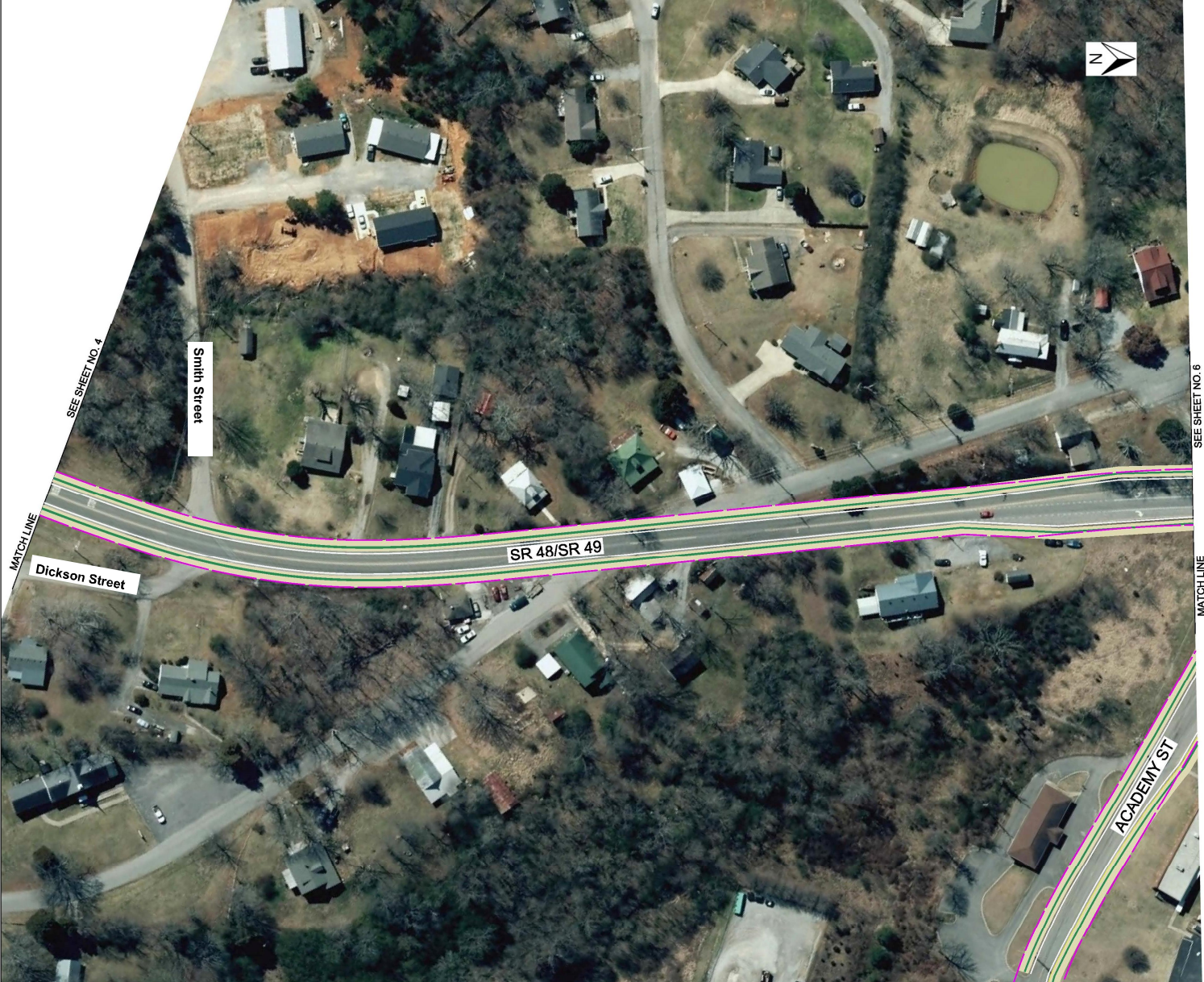
PROPOSED SIDEWALK



Existing ROW Proposed Sidewalks

SPRING STREET, EAST OF SR-48

PROPOSED SIDEWALK



SR-48, BETWEEN SPRING STREET AND SR-49

Existing ROW

Proposed Sidewalks

PROPOSED SIDEWALK



Existing ROW Proposed Sidewalks

SR-48 @ SR-49/ACADEMY STREET.

PROPOSED SIDEWALK



ACADEMY STREET, SR-48 TO HUMPHRIES STREET

Existing ROW Proposed Sidewalks

SIDEWALK COST ESTIMATE SUMMARY

Description	Estimate	Contingency
Construction:	\$3,568,600	30%
Right-of-Way:	\$356,860	
Preliminary Engineering:	\$356,900	
Construction Engineering:	\$356,900	10%
Total Estimated Project Cost:	\$4,639,000	

TDOT COST ESTIMATE TOOL—2018

Cost Estimate

The 2018 TDOT Cost Estimate Tool was used to provide an estimated cost. Detailed design criteria and project scopes will need to be more clearly defined for the preparation of more refined cost estimates. Each location is subject to unique circumstances and situations that will determine costs, such as available right-of-way, right-of-way access costs, pavement condition, and utility locations.

INTERSECTION IMPROVEMENTS

SR-48 AND SPRING STREET

A roundabout is proposed at the intersection of SR-48 and Spring Street. The future level of service analysis discussed in Chapter III indicates that the intersection will operate at a unacceptable future year 2039 LOS F in the AM peak hour and a LOS E in the PM peak hour. Construction of a roundabout would improve future year 2039 intersection operation to a LOS B in both the AM and PM peak hours. The following pages illustrate the proposed roundabout, with sidewalks, and a cost estimate for construction.



SR-48 NORTHBOUND SOUTH OF SR-47



Roundabouts

The proposed roundabout will serve as a gateway into the downtown. Designed to accommodate vehicles of all sizes, including emergency vehicles, buses, and trucks, in comparison to a traditional intersection, roundabouts help to improve traffic capacity and are generally safer than traditional intersections. The proposed roundabout will control the direction of traffic, reduce the speed of vehicles entering into the downtown, and reduce the likelihood of collisions that typically can occur at a traditional intersection.

SR-48 AND SPRING STREET



PROPOSED ROUNDABOUT AT SR-48 AND SPRING STREET

SR-48 AND SPRING STREET

ROUNDBABOUT COST ESTIMATE SUMMARY

Description	Estimate	Contingency
Construction:	\$575,900	30%
Right-of-Way:	\$57,600	
Interchanges & Roundabouts:	\$1,000,000	
Preliminary Engineering:	\$157,600	
Construction Engineering:	\$157,600	10%
Total Estimated Project Cost:	\$1,949,000	

TDOT COST ESTIMATE TOOL—2018

Cost Estimate

The 2018 TDOT Cost Estimate Tool was used to provide an estimated cost. Detailed design criteria and project scopes will need to be more clearly defined for the preparation of more refined cost estimates. Each location is subject to unique circumstances and situations that will determine costs, such as available right-of-way, right-of-way access costs, pavement condition, and utility locations.

INTERSECTION IMPROVEMENTS

SR-49 EAST AND OLD HIGHWAY 47



OLD HIGHWAY 47 AT SR-49E



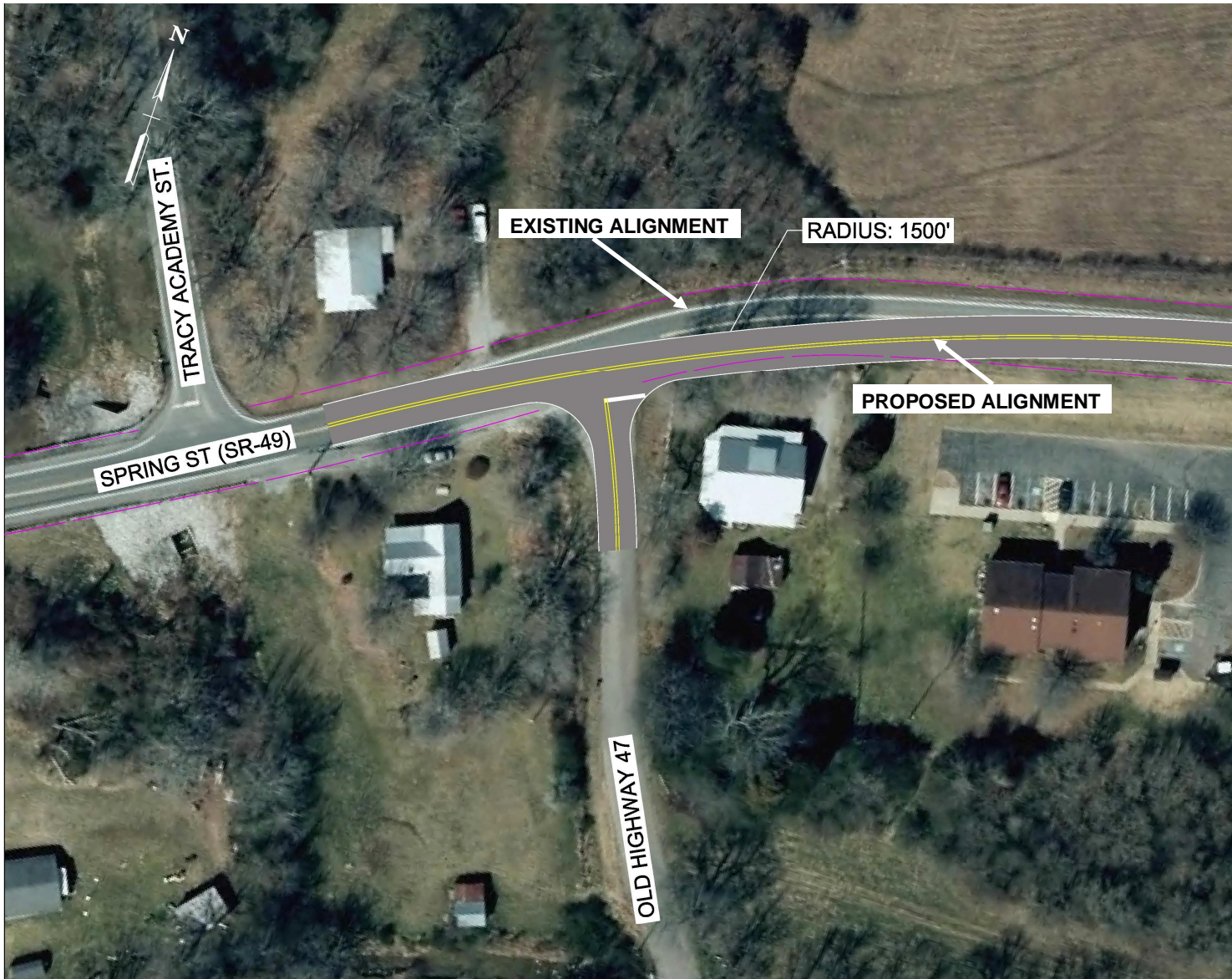
SR-49E, APPROACHING OLD HIGHWAY 47

The City of Charlotte has identified safety concerns due to poor sight distance at the intersection of SR-49E (Spring Street) and Old Highway 47. This intersection is often used as an alternate route to avoid traffic congestion on SR-47 and SR-49, particularly when school is in session. A driver stopped on Old Highway 47 at the intersection with SR-49E has an obstructed view due to the stone wall, trees and rolling terrain. The vertical grade of SR-49E also obstructs the sight distance of drivers.

TDOT defines sight distance as the distance at which a driver can see or be seen by an approaching vehicle. The driver of a vehicle approaching or departing from a stopped position at an intersection should have an unobstructed view of the intersection and sufficient lengths along the intersection roadway to permit the driver to anticipate and avoid potential collisions. The calculated site distance at this location is 149 feet, which is significantly less than the TDOT minimum standard of 305 feet.

To address the insufficient sight distance, it is recommended that this intersection be realigned. The proposed realignment would reduce the vertical elevation of SR-49E to meet the minimum sight distance standard. The following pages illustrate the existing and proposed realignment and a cost estimate for construction.

SR-49 E AND OLD HIGHWAY 47



REALIGNMENT OF SR-49E AND OLD HIGHWAY 47

Existing ROW

INTERSECTION REALIGNMENT COST ESTIMATE SUMMARY

Description	Estimate	Contingency
Construction:	\$477,000	30%
Right-of-Way:	\$1,400	
Preliminary Engineering:	\$47,700	
Construction Engineering:	\$47,700	10%
Total Estimated Project Cost:	\$574,000	

TDOT COST ESTIMATE TOOL—2018

Cost Estimate

The 2018 TDOT Cost Estimate Tool was used to provide an estimated cost. Detailed design criteria and project scopes will need to be more clearly defined for the preparation of more refined cost estimates. Each location is subject to unique circumstances and situations that will determine costs, such as available right-of-way, right-of-way access costs, pavement condition, and utility locations.

INTERSECTION IMPROVEMENTS

SR-48 AND SR-47

The intersection of SR-48 and SR-47 has been identified by the steering committee as an area of concern. As shown in the photos below, parking is not clearly separated from the road shoulder, which allows vehicles to enter and exit at multiple points on SR-48 and SR-47 within a short distance of the intersection. The construction of sidewalks with curb and gutter, as previously recommended in this study, would not only create separation between pedestrians and motorized traffic, but would also define vehicular access points, which would reduce vehicle conflicts.



SR-47 WESTBOUND AT SR-48



SR-48 NORTHBOUND, SOUTH OF SR-47

ACCESS MANAGEMENT

SR-48 CORRIDOR

Access management and a lack of defined parking is an issue in several locations along the SR-48 corridor. The map on the following page illustrates the areas of concern. The TDOT 2015 Manual for Constructing Driveways on State Highways gives specific guidelines for the construction of access points along State Highways. The Access Design portion of the Manual provides specific control dimensions that must be followed to insure the safety of the public. It is recommended that the City of Charlotte incorporate access management guidelines into any future development and redevelopment in the project corridor.

The purpose of access management is to preserve the functional integrity of the roadway system and to promote the safe and efficient movement of people and goods while providing reasonable access to adjoining property owners.

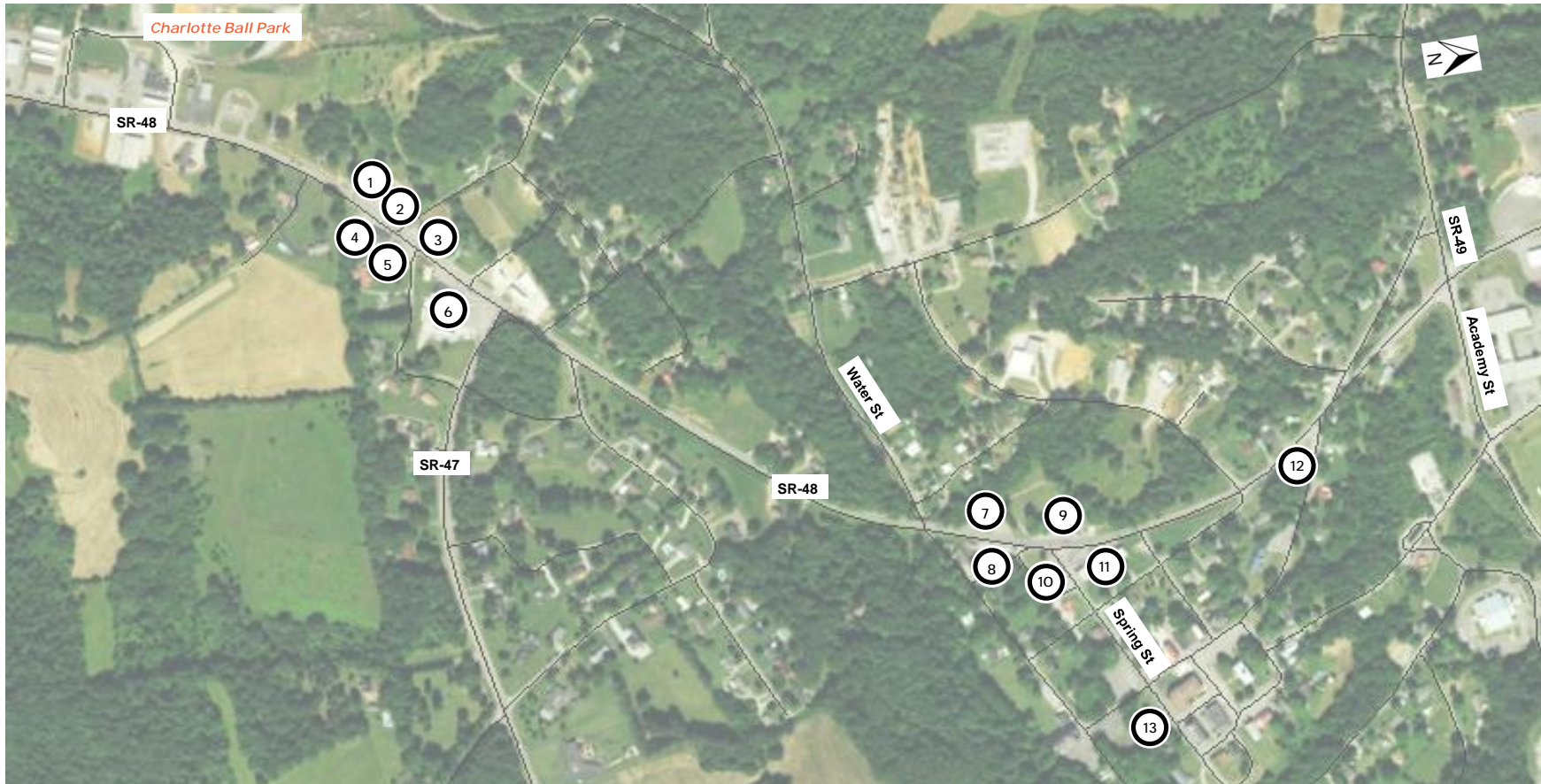
Examples of access management techniques include the following:

- * Turn or movement restrictions
- * Shared driveway access
- * Minimum intersection and driveway spacing
- * Traffic signal spacing



SR-48 SOUTHBOUND, SOUTH OF SR-49E

ACCESS MANAGEMENT LOCATION RECOMMENDATIONS



SR-48, CHARLOTTE BALL PARK ENTRANCE TO SR-49

- | | |
|---------------------------------------|----------------------------------|
| 1 Vacant Commercial Building | 8 Jeff's Auto Service |
| 2 Citgo / Duke's Market | 9 Sweet Charlotte Popcorn Shoppe |
| 3 Corlew's | 10 Lions Club Parking Lot |
| 4 TriStar Bank | 11 Gene's Body Shop |
| 5 Vacant Building | 12 Courtside Café |
| 6 Murphy's CB Foods | 13 Child Advocacy Center |
| 7 Charlotte Volunteer Fire Department | |

FUNDING OPPORTUNITIES

Potential Funding Sources

The recommendations from this study will likely not be implemented through a single source, but a combination of multiple sources of funding including some or all of the funding sources identified in the table to the right. It should be noted that the sources identified require a matching ratio to be provided by the city or county. As such, private dollars may need to be leveraged via a public-private partnerships as projects are constructed. It should be noted, that typically grant funding is reimbursable funds. Therefore, the applicant will pay for the improvements upfront, and will be reimbursed.

Funding Source	Supportive Retail Category / Tenant
<p>Multimodal Access Grant Match: 95% State 5% Local Maximum for Project: \$1M</p>	<p>TDOT's Multimodal Access Grant is a state-funded program created to support the transportation needs of transit users, pedestrians and bicyclists through infrastructure projects that address existing gaps along state routes.</p>
<p>Transportation Alternatives Program (TAP) Match: 80% Federal 20% Local Utility relocations limited to 33%</p>	<p>The Transportation Alternatives Program provides funding that may be used by local governments to build sidewalks, bike and pedestrian trails, and other transportation related structures.</p>
<p>Community Transportation Planning Grant (CTPG) Match: 80% State 20% Local Utility relocations limited to 33%</p>	<p>Assists rural municipalities with planning efforts the define the transportation cohesiveness between multimodal transportation systems and local land use objectives. The Community Transportation Planning Grant provides planning resources to complete planning documents that support traffic flow and safety improvements, and to achieve community visions as related to transportation land use that promote future economic growth.</p>
<p>TDOT Spot Safety Improvement Program Match: 90-100% Federal</p>	<p>The Spot Safety Improvement Program provides funds for projects on state routes or intersections with state routes. Funding may be used to install a traffic signal on a state route, resolve a sight-distance problem on or near a state route, add a turning lane or lanes with or without signals on a state route, install school flashing signals on a state route, or install a flashing beacon on a state route.</p>

POTENTIAL PROJECT FUNDING ASSISTANCE

To provide a clear funding strategy, the table below details how grant dollars can support the recommendation strategies of the Charlotte Mobility Plan. The projects are listed in order of priority.

PRIORITIZED RECOMMENDATIONS

		GRANTS	Multimodal Access Grant	Community Transportation Planning Grant	Transportation Alternatives Program (TAP)	Spot Safety and Highway Spot Improvements
1	Incorporate Access Management guidelines into future development and redevelopment			X		X
2	Realignment of the intersection at SR-49E and Old Highway 47					X
3	Installation of sidewalks throughout the project corridor		X	X	X	X
3(a)	Installation of ADA compliant infrastructure		X	X	X	X
3(b)	Create defined parking at the intersection of SR-48/SR-47			X		X
4	Installation of roundabout at SR-48 / Spring Street			X		X