



**TRANSIT SERVICES ADVISORY COMMITTEE
AGENDA**

**April 14, 2022
4:00- 5:30 pm
WebEx**

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| I. Call to Order | Chair Krissy Oechslin |
| Approval of March Summary | |
| II. Public Comment | |
| III. Information Items: | |
| A. LYNX Silverline Rail Trail Study | Jason Lawrence |
| B. June 2022 Service Change | Pamela White |
| C. Central Avenue Pilot Bus Stop Sign Project | Krystel Green |
| IV. Chair Report | Krissy Oechslin |
| Service Issues | All |
| Operation Planning Report | Pamela White |

NEXT MONTH'S TSAC MEETING IS MAY 12, 2022

TRANSIT SERVICES ADVISORY COMMITTEE

Meeting Summary

Thursday, March 10, 2022

TSAC Members Present: Krissy Oechslin, Charlotte
Jack Zovistoski, Huntersville
Sam Grundman, Charlotte
Terry Lansdell, Charlotte
Antonette Love, Charlotte
Leroy Fields, Charlotte
Walt Horstman, Matthews
Sherri Thompson, Charlotte

CATS/City of Charlotte Staff: Jason Lawrence, Pamela White, Catherine Kummer, Bruce Jones, Rachel Gragg, Krystel Green, Kimera Coburn, Zachary Szczepaniak, Edwin Johnson, Natalie Bouchard, Lashima Tate, Logan Lover, Jayla Gittens, Deltrin Harris

Meeting Time 4:00-5:30 PM

I. **Call to Order**

Chair Krissy Oechslin called the meeting to order at 4:02 p.m.

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Approval of February 2022 Meeting Summary

Chair Krissy asked for a motion to approve the meeting summary from February 2022. Jack motion to approve the summary. Terry seconded the motion. The February 2022 meeting summary was approved unanimously.

II. **Public Comment on Agenda Items:**

No public comment.

III. **Information Items:**

A. Electric Vehicles

Catherine Kummer started by introducing herself. Catherine is the first Sustainability, Resiliency and Government Affairs Officer for CATS. Catherine was brought on board in October of last year after having served previously as a Climate Advisor as part of the America Cities Climate Challenge. Catherine

worked for NRDC supporting the City of Charlotte specifically on transportation related issues. It was a very organic transition, and she is very grateful and humble to be working with this team and TSAC members.

Catherine gave an overview Battery Electric Bus (BEBs) share out where CATS is with this program to date. CATS is embarking upon first ever battery electric bus pilot program with a total of 18 battery electric buses. CATS has accompanying charging infrastructure as well as work force development that is being implemented to be piloted across region beginning on corridors of opportunity where the poorest air quality exists. Through the pilot, CATS is excited to learn how this technology will work in the community with topography and with the temperatures. Hoping to better understand range and energy use. Partner with eTrans Energy which is the subsidiary of Duke Energy to bring the 12–18-month pilot to life and by doing so supporting and making sure aligning with the City of Charlotte Strategic Energy Action Plan (SEAP).

Something that does make the program unique for CATS is CATS is piloting multiple bus manufacturers, multiple charging station manufacturers as well as multiple charge management systems in alignment with partner eTrans to make sure that CATS is setting up for a further zero emission transition. With the best equipment that is best suited for region and communities. As of last week, CATS has first 10 BEBs on site and looking at an end revenue service estimate of CATS first two BEBs in service on Sunday. Buses were always going to come in a staggered capacity and CATS is starting to get deliveries.

Catherine went over the timeline. CATS started in 2019 which was the first year of the SEAP and CATS formally kicked off the exploration exercise around the new emerging technology started to see specifically in North Carolina. CATS worked with various partners and applying for the competitive 2020 FTA low or no emission grant that comes to CATS annually. Awarded enough funding plus local match to purchase 6 buses, charging infrastructure and workforce development training. Received an unsolicited proposal from eTransEnergy to transition additional buses that kicked off formal FRP process which after receiving multiple submissions eTransEnergy was ultimately awarded which brought CATS to 2021 with the execution of the agreement with eTransEnergy for the 12–18-month pilot program. Enabling CATS to test multiple products, multiple stations, and multiple locations. 18 buses total to be set up by fall of this year.

Catherine recapped the key basics. 12-18 months, 18 buses, 20 charging dispensers, have multiple manufactures, multiple facilities for charging, and will be testing on multiple routes. Presently, CATS have charging infrastructure at South Tryon and North Davidson facilities. The routes that are being kicked off on are South Tryon Route and Wilkinson Blvd Sprinter Route. CATS will kick off first two buses which are Gillig buses on Sunday. Once CATS has all the products in use, the kickoff will officially begin.

In closing, short view right now first two BEB's in revenue service. Next month new

Flyer BEB's enter revenue service which means pilot will formally start and by fall CATS anticipates having all 18 BEB's in revenue service. CATS is planning a ceremony and unveiling in April. Long view CATS is working in alignment with SEAP which puts CATS on a path to full zero emission transition so the continued development of that transition plan and what it looks like is really important. Look forward to learning from the pilot to capture data.

Walt asked if CATS already have the stats figured out how to make it run, what does air condition do, what happens in wintertime because in the wintertime you have to keep diesel buses running overnight? Are the sprinter buses configured differently with the suitcases or configured all the same? Electric cars are a lot quieter will somebody that can't see at a stop be able to know the bus is coming?

Catherine responded that estimates on range. CATS is lucky to be able to follow in the footsteps of many agencies that are doing this transition across the country but the reason that CATS is doing the test because of the unknown of putting the BEB's in Charlotte's community. Get one shot with electrification and making sure that the service remains the same as good as expected to be. CATS doesn't want electrification to be the reason that something is not as good as it was originally. Looking forward to learning all the things that are unknown.

Terry commented that he is very glad to see movements happening. Which of the maintenance facilities are these going to be headquartered out initially? Is it going to be South Tryon or the Graham Street or somewhere else?

Catherine responded that they are going to be at South Tryon and charging at the structure South Tryon and North Davidson.

Terry disagrees personally with this notion to need to go with a wide variety of pilot bus technology, but he understands there is a will for that. What did the airport buy and is CATS buying the same technology as the airport in the pilot project?

Catherine responded that the airport has original purchase are Proterra buses. Catherine would have to confirm with the airport what phase 2 purchase will be and is unclear on the OEM. CATS purchase is New Flyer and Gillig.

Terry commented that he sees different numbers from staff on cost for that. Some of the pieces in technology around Gillig and New Flyer buses cost around a \$1 million a piece with what the policy statement says, and New Flyer is around \$800,000 and both of them get around 230 miles as the estimated range for the region. Are those numbers fair and representative of the cost associated with bus procurement?

Catherine responded that she will need to confirm with Finance and get back to Terry.

Jason commented that part of the pilot is to test range and understand what that

will do in specific environment with grades and temperatures.

Terry commented that previously CATS tracks idle hours or operational hours associated with idling and staging. Can you dive deeper into more information about the requirements for preparation for customer service and how these buses will dramatically alter the emission profile for service startup in all season weather?

Jason wanted to confirm with Terry that he was asking about the electric vehicles not idling as much and when the buses are idling not admitting emission at that time. That is a question for Allen and take back to operation group.

Terry clarified the question received reports about the idling hours for diesel bus and Terry would like to understand how long it takes at 32 degrees for an electric bus to be prepared for customer service versus a diesel bus at 32 degrees to be prepared for customer service. Terry would like to understand at 95 degrees how long it would take for a diesel bus to be prepared for customer service versus an electric bus and to understand modeling better. It would be more beneficial in the evaluation process for any or all of the pilot to have that information readily available for Council and staff to review.

Jason responded that there is a certain amount of preparation CATS vehicle take today to go out on the street and what will the electric vehicles be in comparison to that. Jason thinks that is part of the pilot but can confirm that and bring that in detail back. There are a lot of variables and metrics.

Krissy assumes that the buses are marked that it is an electric vehicle. If this is an opportunity since buses are clearly marked to leverage that to get customer feedback on experience using electric bus.

Catherine responded that it is part of the marketing and communications plan.

Krystal commented that there will be a survey before everything gets started just to understand what people know about battery electric. Another part of the marketing and communications plan will be surveying around the middle of the pilot program to understand what people like about the service and what people know now about battery electric and then again at the end of the pilot to see how much the knowledge has grown.

Krissy asked how Krystal is finding the people to survey. Will it be a QR code on the bus or some other way?

Krystal responded that probably will doing something around survey monkey where a QR code can be used and also put it out on social media just asking folks if they have ridden and then going into the yes/no questions. If someone answer yes, then that person gets a different set of questions then someone that answers no. Krystal thinks the benchmark survey is going to inform CATS on what CATS should be asking for the next survey in doing a deeper dive about how people feel about

battery electric.

B. Bus Amenities Standard

Bruce Jones gave a larger overview on the Bus Priority Study more so focused on the recommendations that CATS is currently presenting for public input. CATS is currently seeking public input on the recommendations developed for the Bus Priority Study. When thinking of Envision My Ride and Bus Priority Study these two efforts combined are working to build a better bus network for the Charlotte region. Initially started with Envision My Ride and helped develop the plan for the initiative. Identified three key things so that includes more frequent bus service and also more connections so creating more crosstown connections more connections between different modes and then also more direct service to and from destinations primarily on major corridors.

Moving on to the Bus Priority Study, CATS is working on capital improvements to help build upon some of the recommendations from Envision My Ride. That ties into the speed and reliability improvements. In addition to that CATS is looking at how to continue to build those connections so not only looking at how to have bus to rail connections or bus to bus connections but how to improve connectivity to other modes through mobility hubs. Mobility hubs ties into the last piece initiative focusing on how to improve passenger experience at the bus stop level.

All recommendations into three main categories think of it as improving time, increasing access to destinations, and enhancing customer experience. With improving time that is where there are things related to the priority bus treatments that CATS is recommending throughout the network but also on focused corridors. Also shifting to a more consistent schedule and making sure to have frequency levels that are consistent throughout the day. Previously CATS typically had peak hour frequency levels and then there was a different frequency period to midday but now looking to have a consistent schedule, so a person knows that a bus on a specific route is coming every 15 minutes or every 30 minutes or so. In addition to that seeing how to increase access. Building that high frequency network with the goal of increasing the number of routes that operate every 15 minutes or better but then also rolling out frequency improvements throughout the entire network so that all of CATS buses come at a minimum of 30 minutes or less. Looking at new crosstown connections to destinations and looking at how to improve first and last mile connections through a program known as Microtransit which provides on demand solutions to connect individuals to frequent transit routes. Enhancing the experience by offering the bus stop improvements and amenity improvements. That is where the mobility hub comes into play.

Starting with improving time and the recommendations. Systemwide CATS is looking at rolling out signal priority at intersections that are managed by CDOT. Signal priority will help communicate with traffic signals so if running behind schedule a green light can be extended or advanced to clear through congested intersections and get to destination. Rolling out those consistent frequency-based

schedules on all routes so that someone knows buses are supposed to come every 15 minutes and every 10 minutes and so on. Identified specific treatments called Focus Corridors. Looked at additional locations for signal priority. Looking at where to roll out queue jumps. When a bus gets to an intersection the bus will pull up to dedicated space which could either be a right turn lane or its own dedicated lane when all other traffic has red lights the bus will get a green light and essentially jumps ahead of traffic. In addition to that, CATS is looking at how to make bus stop adjustments in the form of consolidation relocation and improvements to amenities as well.

CATS initially evaluated 22 routes that CATS identified through Envision My Ride for future high frequency service. Narrowed the list down to 6 focus corridors for this study where CATS can begin to identify additional priority treatments to improve travel time on those routes. Use different metrics to get down to the 6 including current bus delays. Measured bus delays from September to December of 2019 to identify locations that were getting held up due to congestion from a bus standpoint. Looked at population and employment density and also equity and goals that were established through other efforts such as the Charlotte 2040 Comp Plan. With that identified 6 routes, Route 9: Central Avenue, Route 7: Beatties Ford Road, Route 16: South Tryon, Route 27: Monroe, Route 34: Freedom Drive and Route 2: Ashley/Scaleybark. Initially focusing on 6 corridors but the goal is to develop a capital program that CATS can begin to use to roll out on additional corridors. Recommendation for these corridors will be used to help inform additional treatment that CATS can rollout on additional corridors like West Boulevard, Providence Road, and also other corridors throughout the network.

Different thresholds measured depending on bus running speed and also vehicle speed. Looked at specific intersections and locations where bus speed dropped at or below 12 miles per hour. Looked at data from September 1st through December 13th, 2019. Helped CATS identify locations and intersections where signal priority could be implemented and also queue jump recommendations. To help supplement the data, CATS looked at vehicle speed. Looked at areas where cars average speed dropped below 15 miles per hour and used October data to help inform that decision. For the initial recommendations on the corridors identified several TSP&Q queue jump intersections. Currently the queue jump situation are using existing right lane turns for those recommendations. In the future CATS does have the ability to build future infrastructure as needed.

Bus stop adjustments along the focus corridors. The main thing is being able to take advantage of some of the signal priority recommendations. Want to make sure able to avoid the dwell time delay of being held up at the intersection by picking up passengers. Recommending far side stop locations. The stop that is placed after the intersection. Have additional enhancements to help facilitate that transfer experience mainly being pedestrian enhancement such as crossings, signal, and crosswalk improvements. Looking at making adjustments to bus stops along the corridor. The goal is to roughly have stops spaced about a quarter mile apart on each corridor. Use industry best practices to help CATS determine that

spacing requirement. There are exceptions that apply so if it is at a major destination or trip generator want to provide bus stops so the individual can access both destinations.

Shifting to increasing access and Bruce had mentioned systemwide improvements looking to rollout and enhance frequency network. Bruce showed the “Future High Frequency Network” map, and the blue lines represent all of the routes that will have 15 minute or better service as proposed in Envision My Ride initiative includes routes like South Tryon, West Boulevard, Sprinter Wilkinson, and Freedom Drive. All the remaining routes in the network want to make sure to have service that is 30 minutes or better to help improve rate time so that individuals are not waiting for 45 minutes to an hour for a route to come. Also implementing new crosstown connections throughout the network as identified in Envision My Ride which includes new connections such as WT Harris between JW Clay and Northlake, Albemarle Road to I-485 area, Sugar Creek Road to Derita and Waverly to Ballantyne. Focus on zones that have microtransit and on-demand service.

Microtransit is essentially Uber/Lyft but in the form of transit. Smaller vehicles traditional bus so similar to what CATS operates in paratransit service with STS. Smaller vehicle able to travel in areas specifically neighborhoods where there may be operational challenges with a traditional 40-foot bus. Provides the important first/last mile connection and acts as a feeder service to help connect riders to some high frequency routes identified. Microtransit typically operates within a designated boundary or zone. Provides service within that zone but then connects to a frequent transit route if need to access locations outside the zone.

There are different use cases that CATS has identified for Microtransit. Think of it as a service that helps provide some of the key neighborhood circulation services. Think of areas such as Hidden Valley/Pine Valley where there is a need for transit services but this can help supplement that providing those key neighborhoods connections so individuals can be connected to some of those key destinations. For focus on Hidden Valley for instance maybe connecting individuals to Sugar Creek or the Blue Line or other opportunities within the neighborhood. Those first/last mile connections in areas where it is not feasible, or CATS does not currently have service that extends providing service to connect individuals to those frequent transit lines mainly at the end of the line locations. Use it to replace underperforming routes or to offer a better scenario. Think of a route that has 60-minute service microtransit will be a more feasible and a more attractive option that can be implemented in that area because it is more frequent for the passenger and provides with the ability to have on demand service to connect to/from the key destinations.

With Bus Priority, CATS has identified initial zones that CATS is currently getting public feedback. Bruce presented a map with the initial boundaries of zones that CATS identified. To identify the zones CATS did a suitability analysis. Looked at high population need for transit. Looked at lower potential for fixed-route transit so particularly within neighborhoods where it is difficult to navigate a 40-foot bus and

also looking at key origin and destination points within areas. Population and employment density within the area. Currently seeking public input and the zones will be refined based on that input. Key areas include the northern towns Huntersville, Cornelius and Davidson and also key areas including Hidden Valley, the Derita area, Davis Lake area and in Waverly/Ballantyne.

Enhancing the experience and it is important for CATS to provide a comfortable waiting experience for passengers to board buses. At minimum have ADA accessibility improvements to CATS bus stops. At minimum a boarding pad so that individuals traveling by wheelchair can safely navigate to/from the buses. Looking to rollout additional amenities including enhanced shelters. Rolling out a new solar model throughout the network. Roll out mobility hub which are the ability to connect individuals to not only transit but other forms of mobility including bikeshare programs, rideshare program on-demand transit. 3 different tiers that CATS has identified for mobility hubs that includes the enhanced stops, mobility plazas which are at the intersection level and the mobility center similar to what CATS has at the end of the line.

CATS is identifying different amenities. Bruce shared a proposed amenities chart that CATS will be rolling out for each standard stop. At minimum want to make sure that CATS has ADA boarding pad at all of the bus stops. Moving up from the standard stop to the mobility hubs the different levels of amenities begin to increase. Rolling out a new amenity rollout process. This will be implemented into CATS service guidelines. The purpose of this is to rollout amenities at a greater level. Currently CATS process is mainly ridership based. Typically, if there are 25 or more boardings that is what qualifies for a shelter. By shifting to this process CATS is looking at it more holistically. May not have ridership but there are other things that come into play. Longer wait time or serving a major activity center such as a library or public school, recreation center or a major employment opportunity. The system is set up as the scores begin to increase the level of amenities that can be provided increase. Help to roll out shelters at a greater level and have the justification for doing so.

Bruce then went over the timeline and next steps. Currently presenting this information to the public. Had first meeting last Thursday at the Transit Center which was in person. Are having an upcoming virtual meeting which will be on YouTube this upcoming Tuesday at 5:30. Do have some pop-up events at park and rides throughout the area. Encourage everyone to go to ridetransit.org/envisionmyride to be able to link to project page and have access to the online survey. Refining the recommendations within the next month or so based on public and stakeholder input. The goal is to present this to MTC for final adoption in April/May of this year and finally finishing with final report in May of this year.

Sam commented that buses 7 and 19 currently run a 10–15-minute headways but only on a portion of routes because they both split off in branches and then go 20-

or 30-minute frequency but the map was just showing one branch in full. Are you increasing frequency along the branch the 15 minutes and what about the service on the other branch?

Bruce responded that in the plan CATS has identified splitting those routes and are still working through that so the 19 will primarily serve Park Road to and from Carolina Place in uptown and then route 6 is proposed to be another high frequency route that will provide that service to South Park and also similar on Beatties Ford Road mainly streamlining that route to have that connection between Northlake and uptown with 15 minute or better service. The portion on Statesville will be replaced by another route CATS proposed.

Terry told Bruce great job and wanted to thank Bruce for his work. It would be nice to rollout bus stop amenities and features without a plan and to fully deploy the present assets in an appropriate manner as the transitions are made. Terry wanted staff to talk about two particular items associated with this project. Signalization priority specifically. Route 16 down South Tryon for example. It is a state road, but the city manages the signalized intersections. In 2012 \$1.3 million was spent on a signalization project that was a pilot project for Central Avenue that never took traction. How is the technology different, what technology is it and is it incorporated into the city budget for cost?

Jason responded that will have to get Terry an answer. What signal priority is in the context of Bus Priority Study and that comes from CATS buses being able to communicate in a more real time manner to the signals that CDOT manages throughout the city of Charlotte. Jason believes that the majority of the signals within the city does not know about the stops South Tryon. The biggest challenge over the years is making sure to reduce the delay between the buses and signals. CATS has some upcoming meetings with CDOT to make the final steps. For this effort, it is CATS goal for buses to communicate faster and more real time to the signals, so the schedule is known.

Terry responded in the 2012 project it was a physical/manual switch for the bus driver. Terry would love to know more about the technology interface whether it is going to a manual indicator or an automated indicator communicating with the smart signals.

Jason responded that he will confirm that it is a communication between two systems.

Krissy commented that one thing she was missing was bus dedicated lanes. Is that no longer a possible priority treatment?

Bruce responded that CATS did look at it as a feasible treatment. The threshold that other cities implemented for bus lanes was roughly 20 buses per hour which means a bus will come every 2 ½ minutes. Looked at all of the routes to identify if CATS had specific segments on the routes that met that threshold. Outside of

uptown the answer is currently no. It does not mean that it completely shuts down the conversations of bus only lanes. Will continue to have that conversation if maybe need to adjust that threshold and look at additional corridors. Will continue to have those dialogues.

Krissy asked about the quarter mile bus stop spacing. Krissy was wondering generally speaking is that more spaced out or less spaced out then the average on CATS routes right now?

Bruce responded that it depends on the route, and it will not be a huge change. It will be something similar to what CATS has on the Sprinter with the Wilkinson line. Spaced a little farther apart. It depends on the route itself. Typically ran into .2-to-.3-mile range. Not terribly far off from that threshold.

Krissy is excited to see actual bus routes identified and excited to see it keep going. Krissy would love for TSAC to be able to put out a statement supporting this when closer to one of the finish lines. Everyone wants bus service to be as good as it can be, and this is a great project.

Walt commented that it is all about execution. Walt wanted to know when he can actually see something happen.

Jason responded that there is the 2030 plan and the long range. Really big capital projects like Silver Line, Red Line and North Corridor BRT. Really see these projects in the 0–10-year range of implementation. Some of the stuff that is coming out of this will be a near term implementation plan for bus stops. There are some immediate bus stop improvements. ADA improvements, bus shelter replacements existing stock and the expansion of shelter improvements through matrix that Bruce laid out. Put out in front of MTC is a near term bus stop of existing services. Those are things that CATS feel can start advancing on a fiscal year basis. There are also opportunities through the Small Starts Program. New starts built Blue Line and will build Silver Line. Small Starts does streetcar and bus rapid transit projects. In the Small Starts world there is corridor base bus BRT and dedicated right of way BRT which means 50% or greater of the project is in its own dedicated right of way. Corridor base BRT is looking at a corridor, buying the vehicles and doing the stops all the other kind of multimodal improvements but not having dedicated right of way. Feel a lot of those bus priority corridors could be eligible for Small Starts Projects. That is a 50% share from federal and 50% local. Over 80% of small starts is BRT. There is a lot of money out there for BRT. Having the right strategy in place will be key. Start introducing that to the region. Raleigh has 2 or 3 projects in place. Austin has 2 or 3 on the ground in project development. Upfront it is stops and taking full advantage of facilities that exist. CATS put forth an agreement with NCDOT to make improvements or repairs to the bus lane on Independence Boulevard to get buses back in there. 77 express lanes, 485 express lanes that are coming soon. Those are near term things that CATS can do. Anything that requires vehicle purchases like extra frequency will certainly require a more robust funding source. In the more immediate is those service improvements

using those facilities that NCDOT has but doing the near improvements at the bus stop.

Krissy asked when Jason says near term improvements is that a way of saying things that don't need a tax increase to fund like you can fund out of the existing budget?

Jason responded that bus stops would be replacement ADA improvements. Already have some funding for ADA within budget. Already get funding for bus stop improvements. If it requires a big local match to a larger federal project will require new local funding. The need for frequency improvements it is going to require a lot more vehicles. If CATS goes 22 routes with high frequency will require more vehicles which will require new local funding. Added a lot to the plan as CATS went along but what CATS really wants MTC to do is adopt the bus system map with these improvements on them just like the long-range system map that CATS has an adopted map that developers as other planning efforts come that someone can refer and to better coordinate CATS services with planning and development as it occurs throughout the region. Never have had that before as an agency so having a more near-term map will be an important strategy going forward.

C. 2022 Service Change

Pamela started off with the 2022 proposed changes for the year as an information item. Every service change there are things that CATS does to help on time performance. The schedule adjustments are to make the service more reliable. All tweaks will help on time performance so the running time will be slightly changed. Gives CATS the opportunity to make service more reliable. Schedule adjustments will include 1 Mt. Holly Rd, 10 West Blvd, 12 South Blvd, 51 Pineville Matthews, 57 Archdale/South Park, 64X Independence, 82 Rockhill Express and a route adjustment to 17 Commonwealth is a change that CATS has worked with the Town of Matthews to make the service safer for passengers.

The adjustment on route 17 is being made currently have stops that are on Independence which is not very safe. Worked with Matthews to address safety concerns that CATS shares with the bus stops being on Independence. With this adjustment CATS is making sure that passengers picking up the bus at the Matthews Park and Ride and passengers that are trying to access Windsor Square still get the opportunity to utilize the service. The service will go behind the Windsor Square area and still maintain the access that passengers are enjoying today passengers will not get it off of Independence.

Pamela discussed some of the service changes that CATS does not have an implementation time for but are changes that CATS wants to make. These changes are proposals that are still being investigated. Some of the changes will be given the opportunity to investigate more to make sure that CATS is matching supply with demand. Two proposed major service changes are 41X Steele Creek

Express and 65X Independence Express. 41X Steele Creek, 61X Arboretum Express are two routes that have an underlying local service and CATS would like express routes to be exactly that. Currently the underlying service and express routes have the same stop. CATS wants to make express service just that. Passengers pay a premium fee for the service to be faster. Looking at modifying the service and discontinuing or consolidating some of the bus stops so that express routes are truly express. CATS is also looking at route restoration on 41X Steele Creek Express, 61X Arboretum Express and 88X Mountain Island Express. During the pandemic suspended some of the routes that had underlying service.

Other proposed changes CATS is looking to implement throughout the 2022 year are route 10 West Blvd looking at servicing the Harper Campus, 34 Freedom Drive looking at extended down Freedom Drive, looking at changes on the 60 Tyvola Road, 211 Hidden Valley and 221 E. Harris Blvd – Idlewild Road looking at extending to Aldi.

Some frequency improvements that CATS would like to make is every 15 minutes on 64X Independence Express, every 30 minutes (previously 45-minute service) on 12 South Boulevard, 18 Paw Creek, 24 Woodlawn, 26 Oaklawn and 39 Eastway. 40 minutes (previously 60-minute service) 20 Queens Road and 57 Archdale. Some of the services that are 45 minutes and making those services 30 minutes really looking at adding frequency. Some of those things will be dependent on staffing and being able to put that service on the street where it is reliable and continuing to look at the landscape of the service and demand out there today.

Goal is to make express services faster. Within CATS last service change extended the route 64 to downtown Matthews. Currently the 27 services the location between Village Lake and downtown where the current 64 is not operating. Looking at consolidating those two routes that will allow services to operate faster.

One of the proposals that CATS has for the 41X is to allow it to operate over the highway more. This is a route that has underlying service that operates along Tryon which is route 16 so passengers will still enjoy the services that enjoy today on the route 16 but the express bus service will allow passengers that utilize express bus to access the park and rides a lot faster than the passengers do today.

Walt commented on the 65 with 64 coming through downtown Matthews before heading back over to Independence Boulevard. Since the 65 shut down, folks that were further north than highway 51 specifically there was a large stop for the 65 and those folks always had 27 access. It has been 2 years since 65 to ride. If those folks that got on at that stop which was the major stop that would go up to Village Lake and then cut over Independence and instead ride the 27 all the way in downtown. The time difference between the old 65 by going to Village Lake and going up Independence and getting the advantage of the limited access. If those folks start coming back, has it impacted the 27 where they are riding the 27 or quit commuting. They are not going to be able to get the bonus of the 65 and so the commute time is going to be increased. Those are the folks that Walt thinks are

going to be negatively impacted by these changes that obviously can't really test because 65 has not run for the last two years.

Pamela commented that one of the things that CATS will make sure to do is the outreach to get information from passengers on what the passengers are currently doing and what schedules are. Still using the 27. Outreach will be significant realizing what passengers need for this service.

Terry regarding the University Research Park Terry didn't see any changes to the routes there. Is it not significant enough to be reviewed as a service change? A possible neighborhood connector or shuttle service to light rail.

Jason responded that he has had a couple of conversations with the businesses and office sites in that area. Jason would love some more information there to find out what is really going on there. There is a lot of employment there and it is close to the Blue Line and there is an old park and ride there that is not utilized as it used to be. Open to ideas there particularly around the research park. Talked about a shuttle in the past. Have Centene building a major campus there. Have had some conversations with TIAA-CREF and the renovation that they are doing there and about their phase return to work.

Sam voiced his concern with the 29 bus going to the VA North Center going near University East Drive apparently it is only stopping on inbound trip, outbound trip to it but to do that it would take 2 hour trip out and back. Consider for next service change.

Pam responded that she would take a look at that. It does go in there one and there was a safety issue with that.

Krissy had a question on the 41 getting moved onto the highway. Is that going to cut off any stops from the previous route or because it was express there were not any stops in the middle?

Pamela responded that it is one of those areas where the local express routes have what is called a pickup zone and non-pick-up zones. A lot of the times the pickup zones are the exact bus stops that the local services are. There is an area that was on that particular map that would no longer be on the route 41X. However, it still would be maintained with route 16. Stays on South Tryon. There are several stops. Pamela believes that making that service faster and getting it out of the traffic that is on South Tryon will really help that route.

Krissy asked what does mainstream mean?

Pam responded that a lot of times CATS routes take a lot of turns and go into areas like shopping centers. In the case of route 16 it was the White Hall Shopping Center. Mainstream is just on the main road and is able to provide a faster service.

The June service changes that are the on-time performance and the minor adjustment with the route 17 those are ones that CATS believe will happen in June. Pamela will bring those back next month.

IV. Chair Report:

John Lewis did talk about the steps that CATS is taking to try to fill the bus operator shortage like with bonuses and different ways of scheduling. Talked about the need for increase funding to make a nice robust bus system that Bruce and others have been talking about.

Krissy brought up that MTC meetings are still virtual. Krissy didn't know if those meetings are being moved into in-person. She is fine with virtual for now and wanted to make sure ahead of the game if that is being discussed.

Pamela responded that she did reach out to Kirk and right now still remaining virtual and will give information in the future when to come back whether it would be completely in-person or hybrid.

Service Issues

Walt commented that the CDC just announced that masking is going to remain until April 18th at least. If they remove mask mandate will CATS follow soon after that and does that include just customers no longer and operators not wearing masks or does that include taking down plexi glass. Is there an effort involved in that?

Pam will have to follow up with Allen.

Krissy mentioned that someone she knows that takes the number 5 in the evening late 10:00, 11:00pm and takes it to CTC to get on a different bus but sometimes when that 5 is coming into the city it takes a different route and she never knows what route the bus is going to take. If she misses it, she has to walk to CTC and misses transfer and was wondering if it is something Pamela can look into. If the bus is in service, then it should run whatever the written route is.

Pamela responded that she can present that to BOD and bring it back.

Krissy has had numerous coworkers tell her that the Blue Line is uncomfortably crowded. David emailed before the meeting and said that at one of the express bus stops in uptown the sign on the bus stop post that has the times and the times were wrong and is not the current schedule. Does CATS conduct an audit of all bus stops?

Pamela will respond to David to get an exact location. Normally when there is a service change and the schedule itself changes the eye level displays change for those routes.

Operation Planning Report

Pamela will send out Bruce's presentation as well as the meeting dates for the virtual meetings.

Action Items:

Person Responsible	Action Item
Catherine	Gilling Bus – confirm cost with Finance
Allen/Operations	Idling – how long it takes for diesel buses vs electric buses to be prepared for customer service in extreme cold or extreme heat. There is certain amount of preparation CATS vehicle take today to go out on the street and what will electric vehicles be in comparison to that?
Jason Lawrence	Signal Prioritization – How is the technology different from the pilot in 2012 on Central Avenue, what technology is it and is it incorporated into the city budget for cost?
Pamela	Mask Mandates – Work with Allen to find out what procedures will be taken when mask mandates are lifted (will operator's still be required to wear masks, will plexi glass be removed, etc.)
Pamela	Bus Number 5 – Check with BOD regarding bus number 5 taking different routes then what is on route
Pamela	Eye level displays – Respond to David's emails to find out exact location of displayed bus stop times that are incorrect

The meeting was concluded and adjourned at 5:30 p.m.

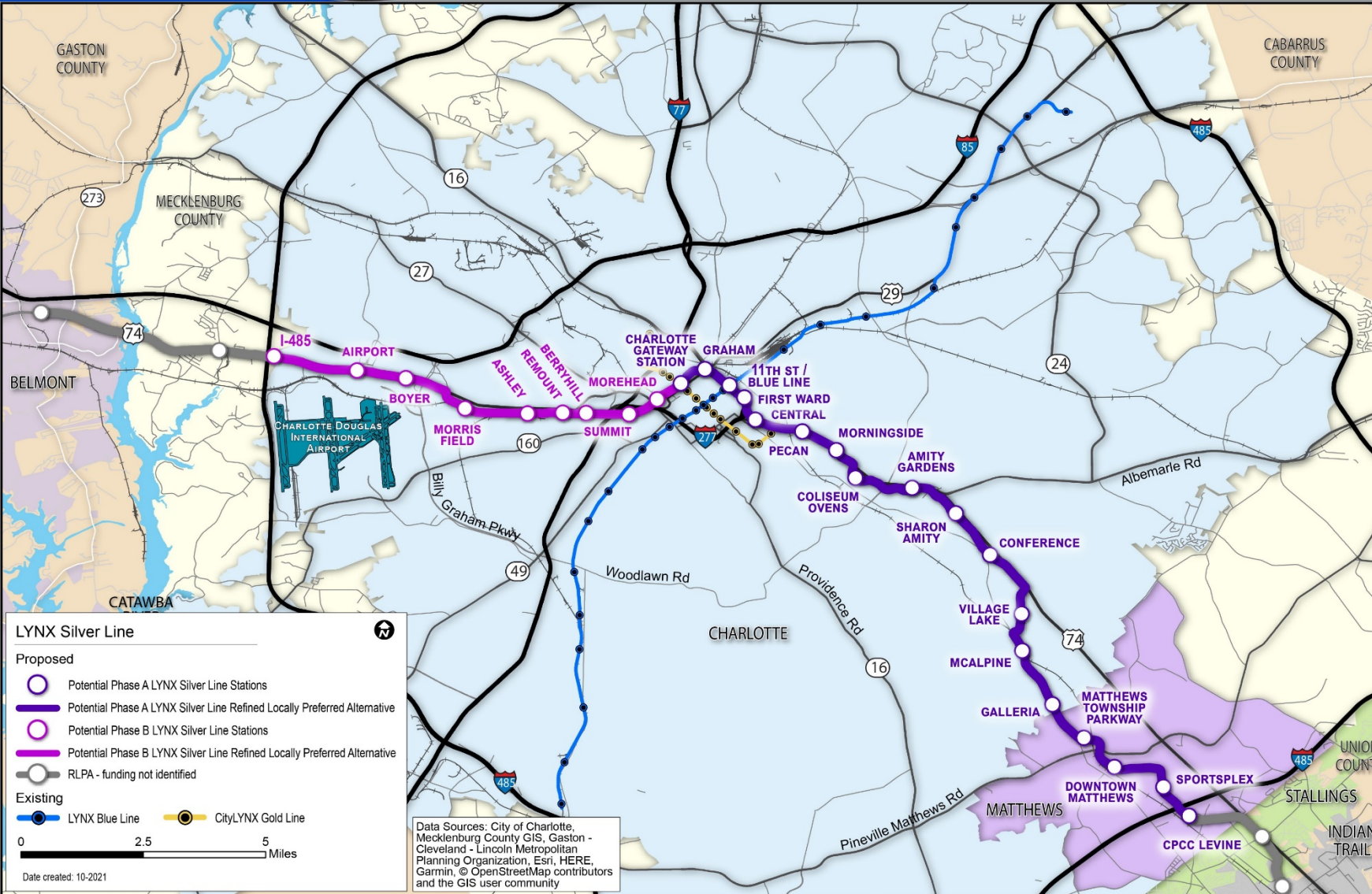
NEXT MEETING: THURSDAY APRIL 14, 2022



**Transit Services
Advisory Committee
Rail Trail Study Update
April 14, 2022**



LYNX Silver Line



Design & Environmental Services

Transit Oriented Development Planning

Rail Trail Study





RECENT
CONSTRUCTION

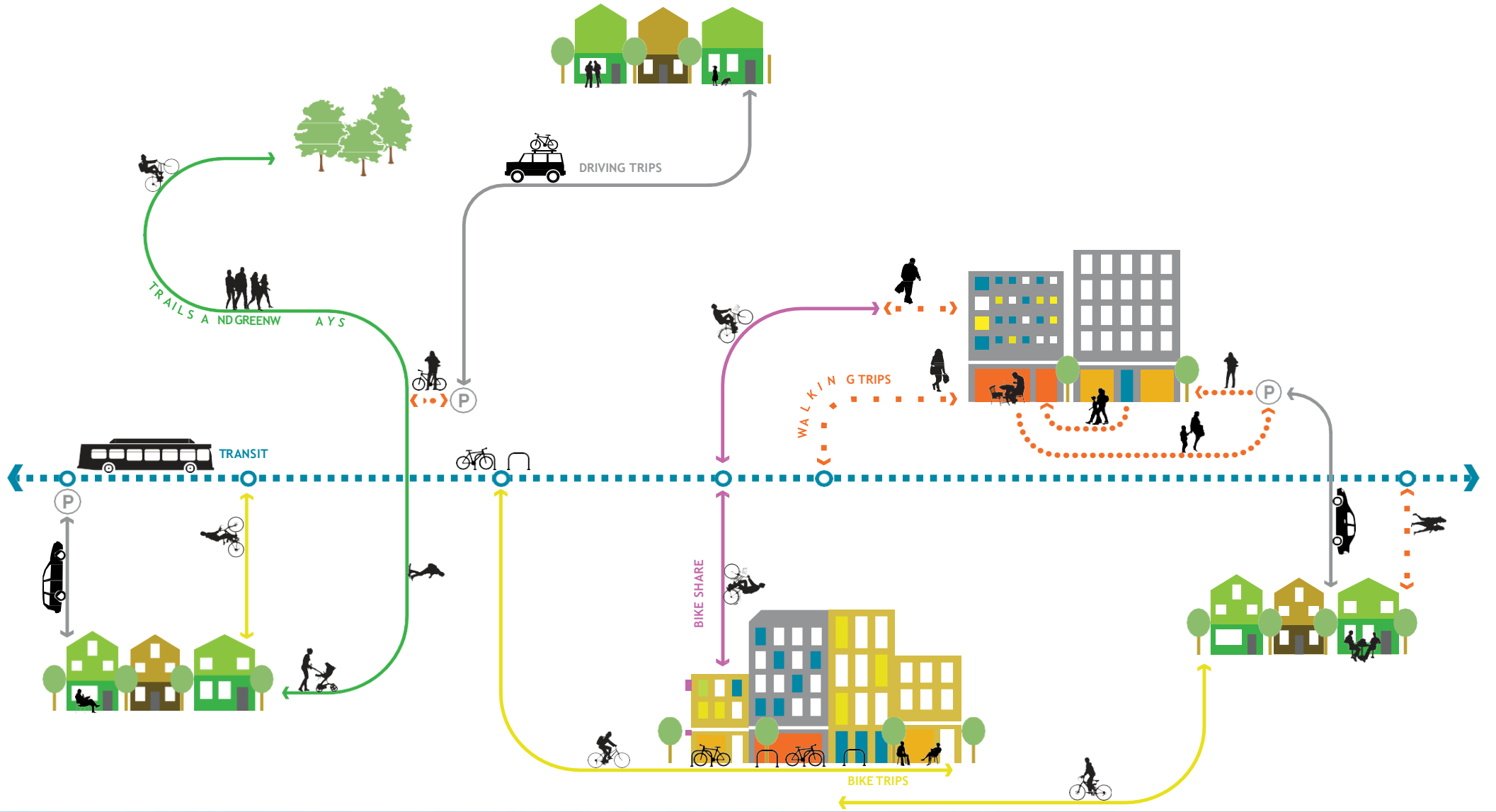
CARSON

TRACK 2

SPARKS

Old,
meet
new.
New,
meet
old.

A Complete Network



CHARLOTTE REGIONAL Bikeways Map

Summer 2020

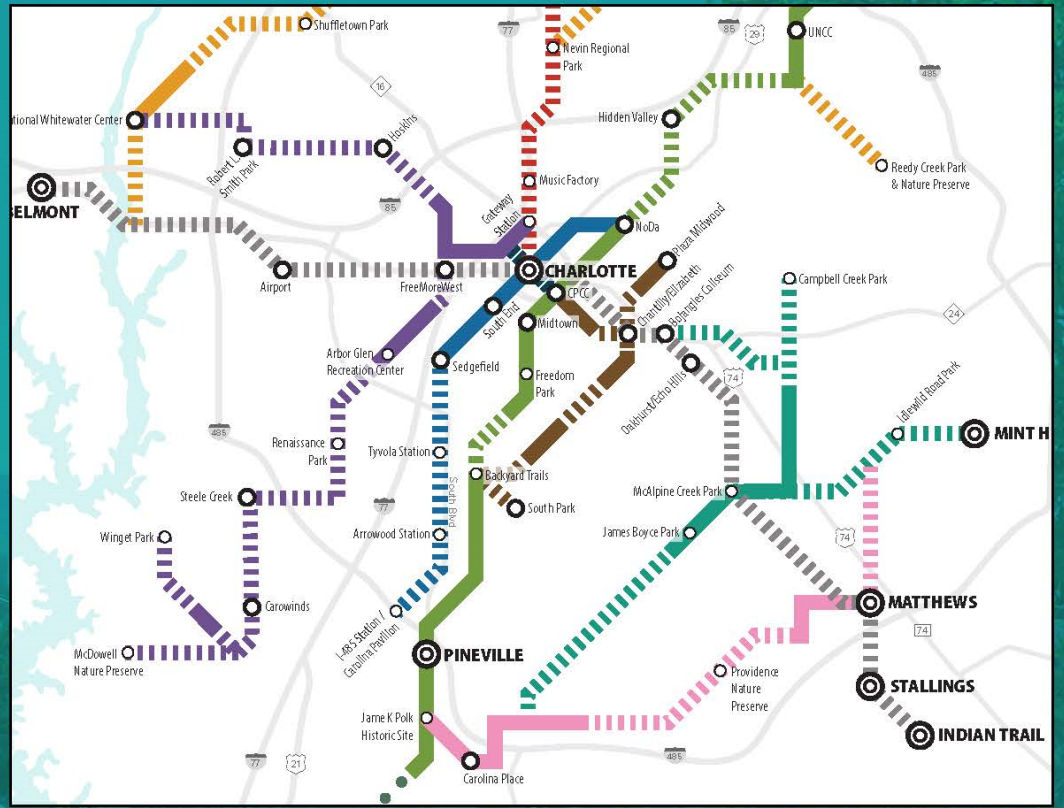
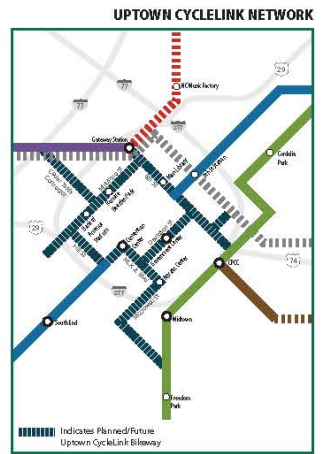
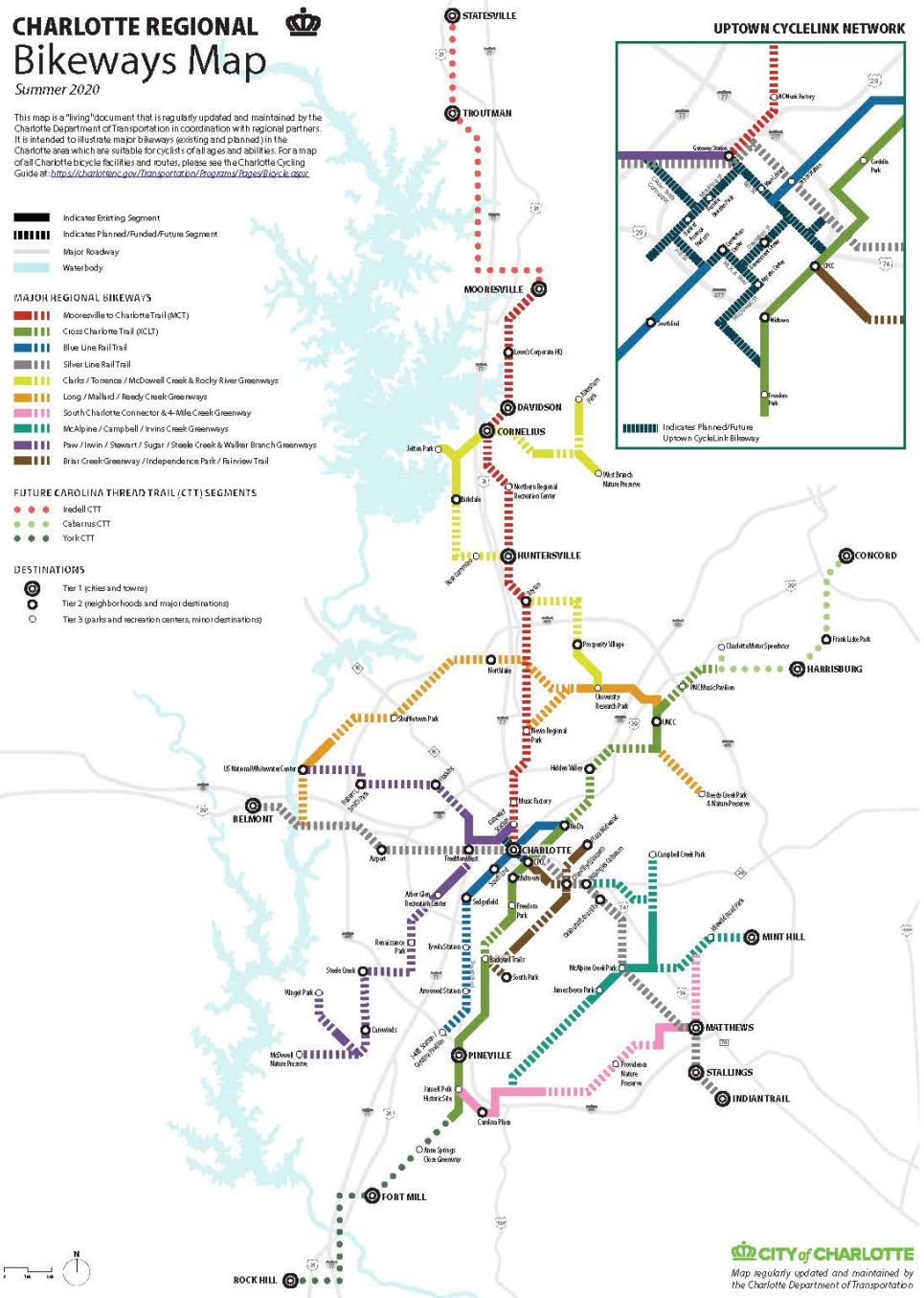
This map is a "living" document that is regularly updated and maintained by the Charlotte Department of Transportation in coordination with its regional partners. It is intended to illustrate major bikeways (existing and planned) in the Charlotte area which are suitable for cyclists of all ages and abilities. For a map of all Charlotte bicycle facilities and routes, please see the Charlotte Cycling Guide at: <https://charlotte.gov/Transportation/Programs/Departments/cycling.aspx>

- Indicates Existing Segment
- - - - - Indicates Planned/Funded/Future Segment
- ▬ Major Roadway
- ▬ Water body

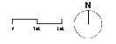
- MAJOR REGIONAL BIKEWAYS**
- ▬ Mooresville to Charlotte Trail (MCT)
 - ▬ Cross Charlotte Trail (XCLT)
 - ▬ Blue Line Rail Trail
 - ▬ Silver Line Rail Trail
 - ▬ Clarks / Torrence / McDowell Creek & Rocky River Greenways
 - ▬ Long / Mallard / Reedy Creek Greenways
 - ▬ South Charlotte Connector & 4-Mile Creek Greenway
 - ▬ McAlpine / Campbell / Irwins Creek Greenways
 - ▬ Paw / Irwin / Stewart / Sugar / Steele Creek & Walker Branch Greenways
 - ▬ Briar Creek Greenway / Independence Park / Fairview Trail

- FUTURE CAROLINA THREAD TRAIL (CTT) SEGMENTS**
- Iredell CTT
 - Cabarrus CTT
 - York CTT

- DESTINATIONS**
- ⊙ Tier 1 (cities and towns)
 - ⊙ Tier 2 (neighborhoods and major destinations)
 - Tier 3 (parks and recreation centers, minor destinations)

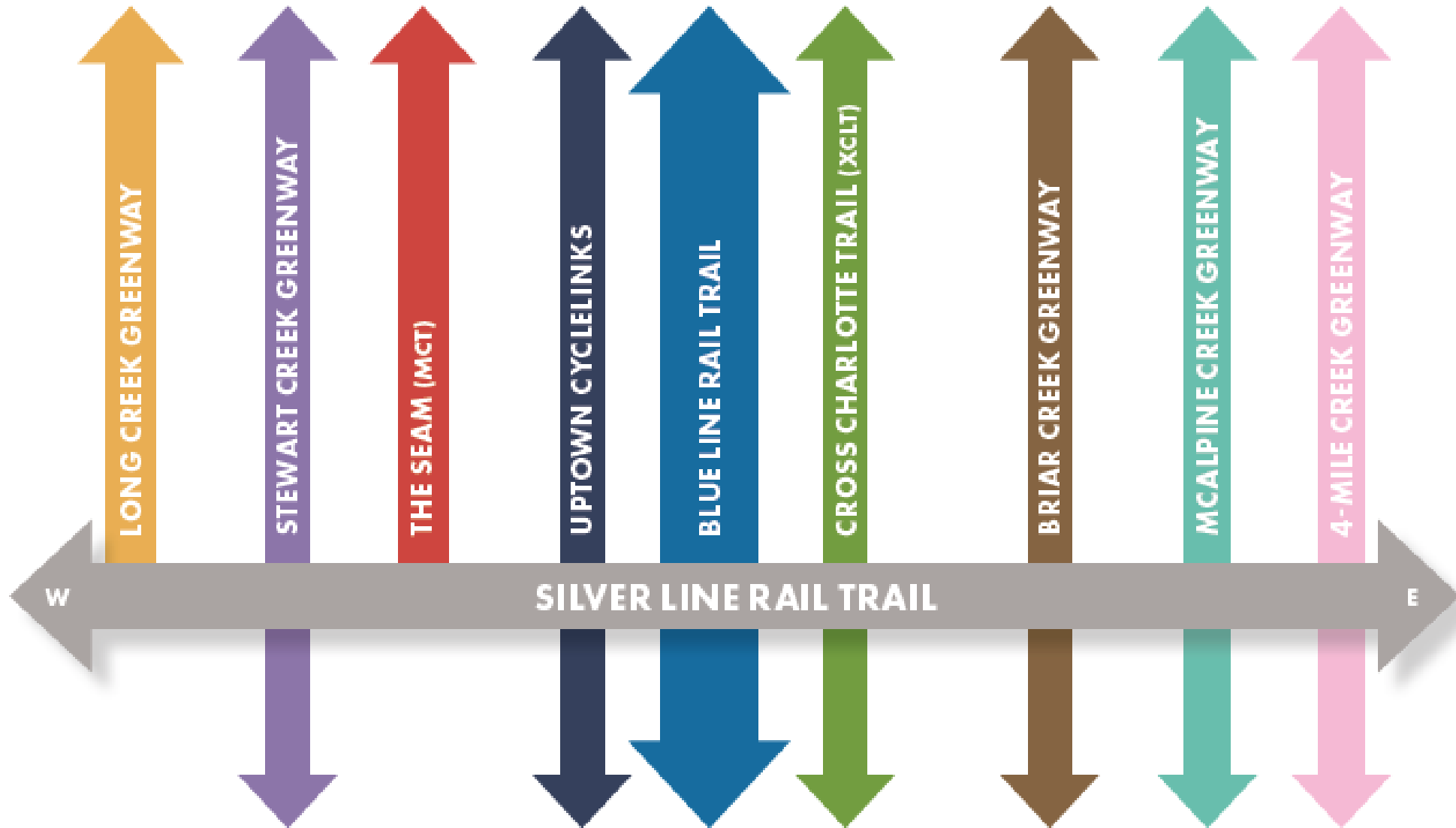


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Critical East to West Connection





Parallel to Rail





Along a Thoroughfare





Town Center & Independent Path



Matthews-Mint Hill Road (existing conditions)





Pedestrian Structures



Goals and Objectives



Goal 1: Define a continuous, premier rail trail that maximizes opportunities for active transportation and integrates with local land use development and the LYNX Silver Line alignment.



Goal 2: Promote awareness and support for the Silver Line Rail Trail.



Goal 3: Ensure the rail trail is a functional transportation facility.



Goal 4: Create a unique public space for the neighborhoods along the trail and regional residents, workers, and visitors.





Stakeholder Engagement

A 'spine' of the multi-modal network

- Prioritize routes that connect to AAA facilities
- Comfortable bridge and road crossings
- Connect to existing greenways

A 'Premier' trail - not just functional!

- 'Seamless' trail more important than following the LRT
- Integrate with County, CTT, and other wayfinding + branding
- Safe + comfortable, especially for kids
- Create a special place

Trail-Oriented Development (TrOD) potential

- Connect to neighborhoods; 're-stitch' neighborhoods
- Attract new residents along the corridor
- Connect to major destinations, and beyond

Ready for Implementation

- Implementable; phased approach
- Adoption by jurisdictions to be eligible for Complete Streets funding
- Land development strategies and ROW preservation



6 KEY RECOMMENDATIONS FROM THIS STUDY

01 The Silver Line Rail Trail will be a 29-mile trail parallel to the Silver Line Light Rail.

02 The majority of the trail alignment should be built with the Silver Line Light Rail (LRT) project as part of station access for bicyclists and pedestrians. Segments that are constrained by structural interventions (bridges + tunnels) may require the trail to be built separately.


















03 The trail will create many different connection points to other regional trails and massively expand the bike and pedestrian network. The intersection of Silver Line Rail Trail and Blue Line Rail Trail will be a critical junction that should continue to be evaluated in future phases of design.

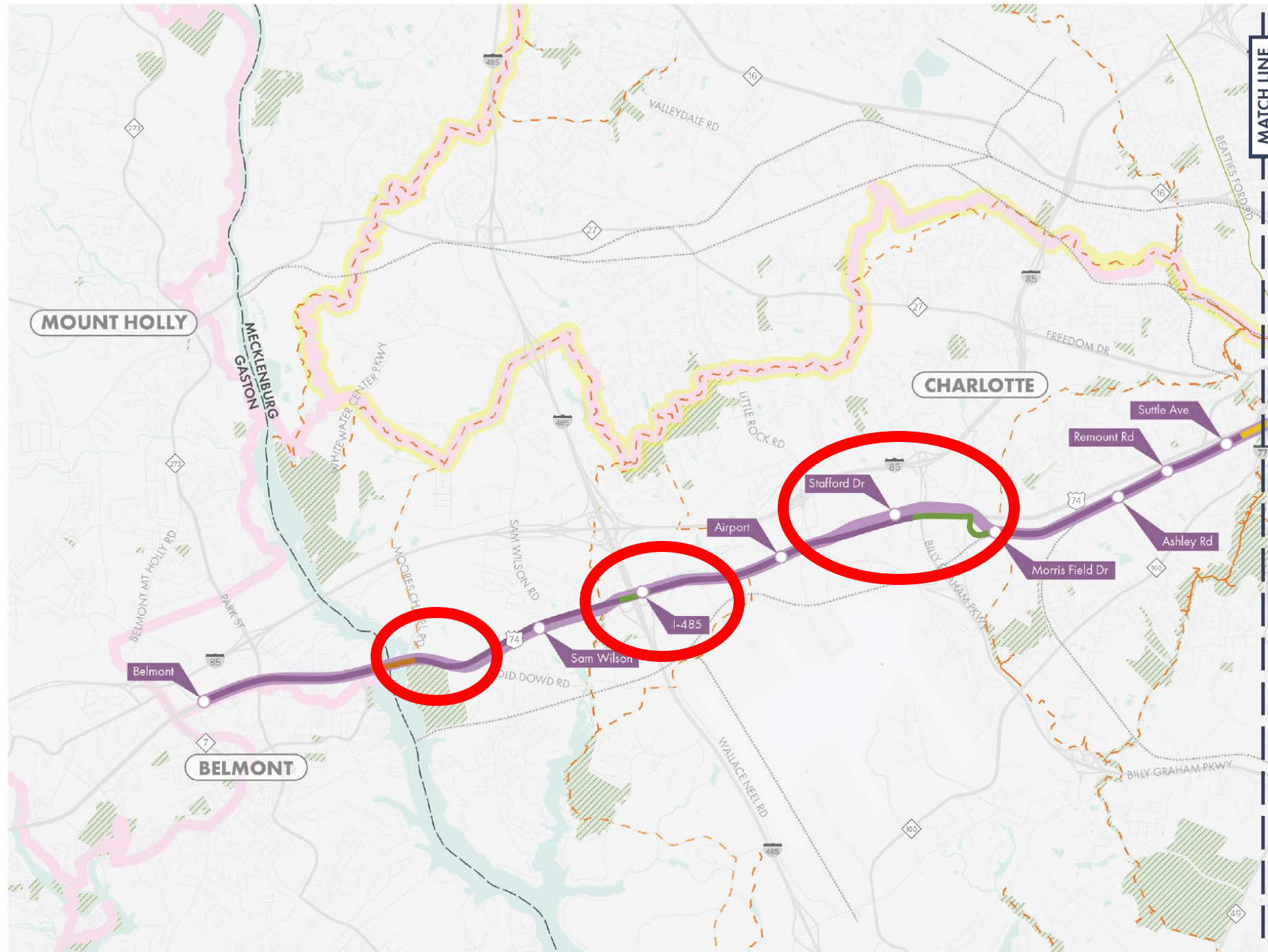
04 The Silver Line Rail Trail will provide a premier trail experience.

05 The Silver Line Rail Trail crosses 5 jurisdictions – the City of Charlotte, the Town of Matthews, and the Cities of Belmont, Indian Trail, and Stallings, NC. Governance, operations, and maintenance of the trail still needs to be decided upon and should continue to be discussed among the many agencies and jurisdictions as design moves forward.

Recommend Rail Trail Alignment

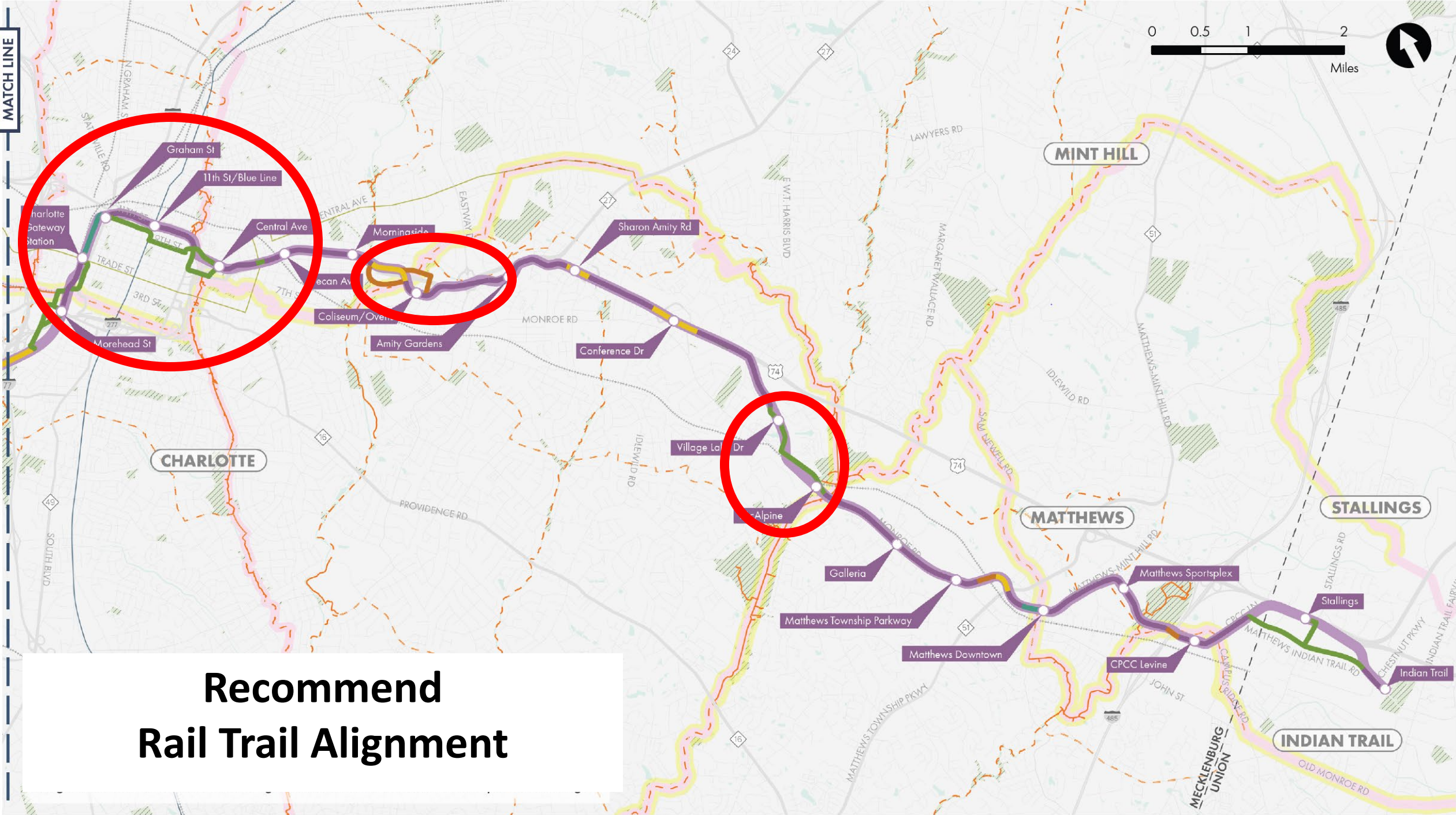
LEGEND

-  Rail Trail with parallel light rail
-  Rail Trail without parallel light rail
-  Woonerf/shared roadway
-  Structure co-located with light rail
-  Structure without light rail (roadway or independent)
-  LYNX Silver Line Proposed Stations
-  LYNX Silver Line Alignment
-  LYNX Blue Line
-  LYNX Gold Line Track
-  Railroad
-  Regional Greenway Network: Existing
-  Regional Greenway Network: Planned
-  XCLT2 Alignment
-  Carolina Thread Trail
-  Park
-  Water
-  County Boundary

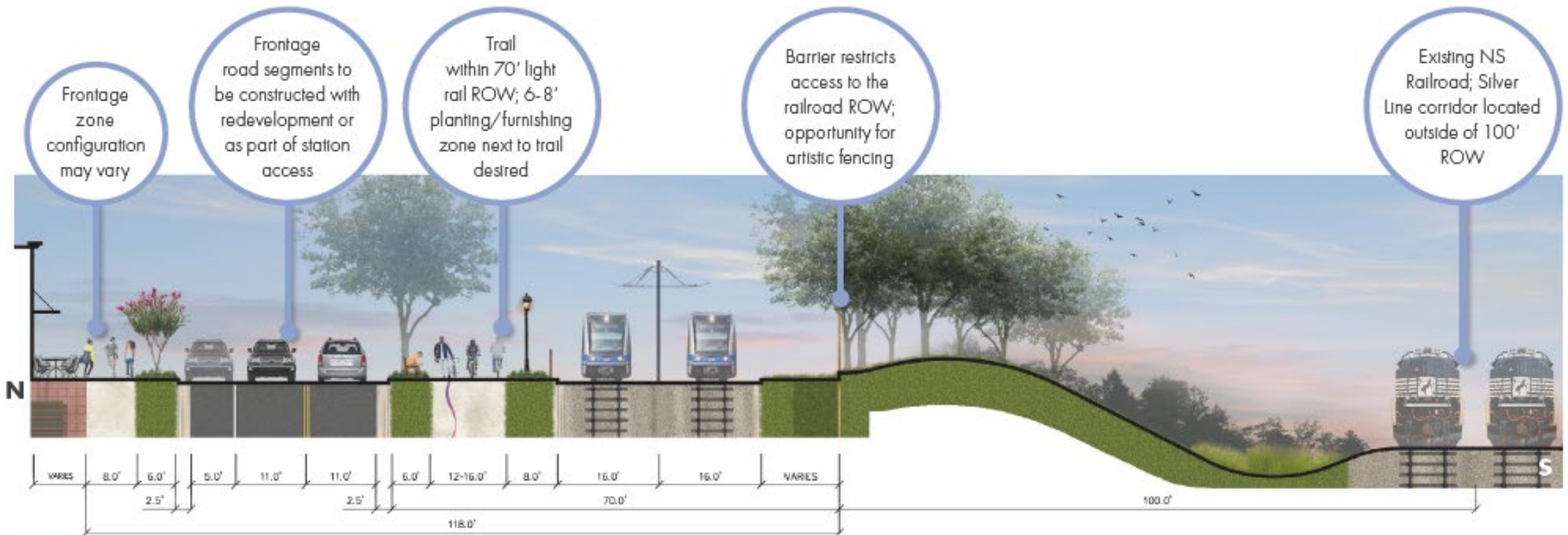




MATCH LINE



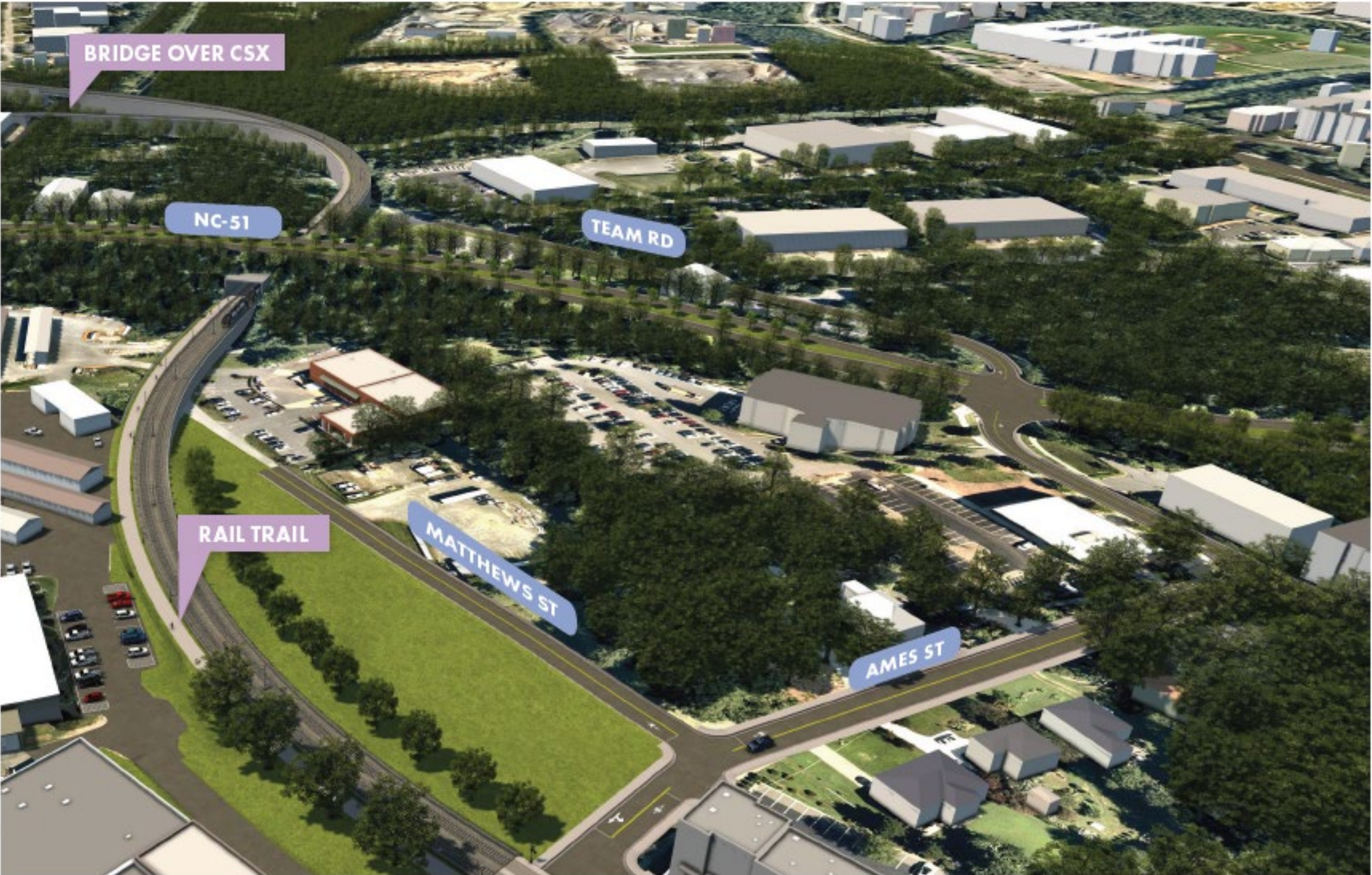
**Recommend
Rail Trail Alignment**



Norfolk Southern Railroad Alignment Typical Section – Not to scale



Independence Blvd/US-74 Typical Section at the front of parcels – *Not to scale*



BRIDGE OVER CSX

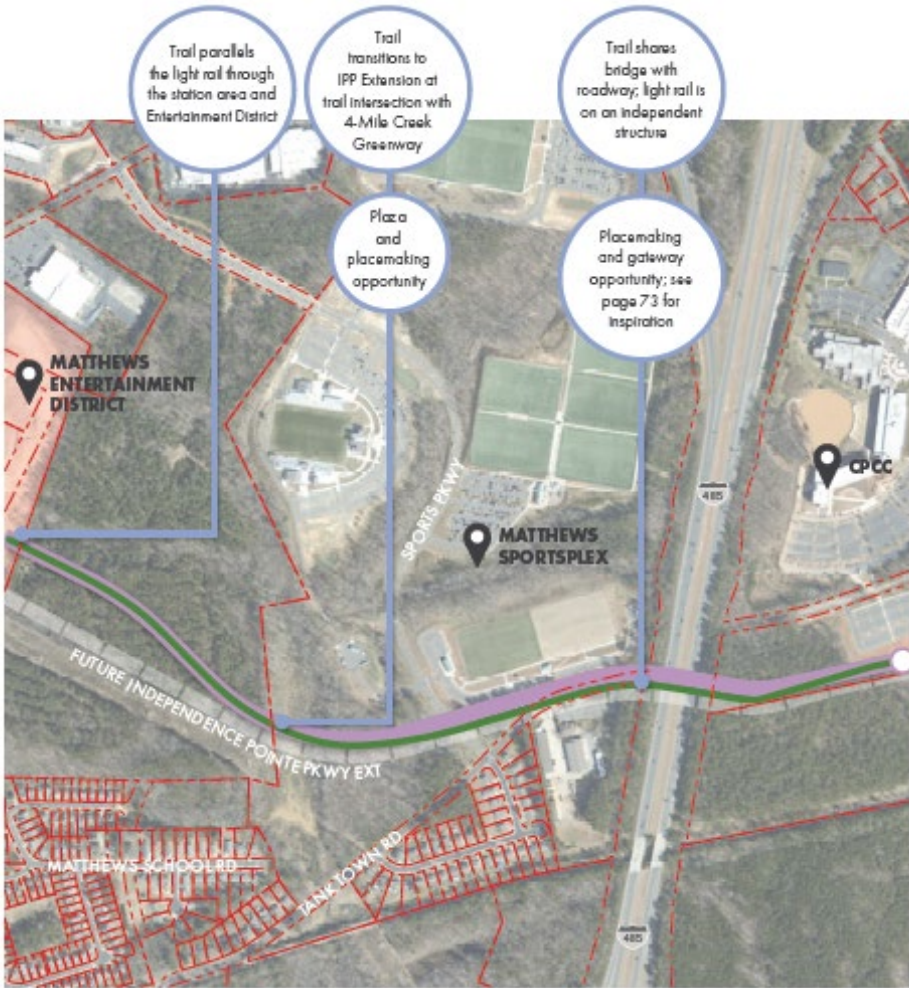
NC-51

TEAM RD

RAIL TRAIL

MATTHEWS ST

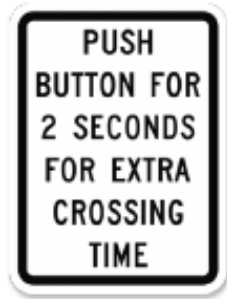
AMES ST



- Collaboration with CDOT and NCDOT road projects required for sections of the Rail Trail alignment.
- Private development coordination important as well

0 250 500 1,000 Feet
LYNX Silver Line - Staff Recommendation
Silver Line Rail Trail Alignment
Development Site

Silver Line alignment through Entertainment District, Sportsplex, and CPCC

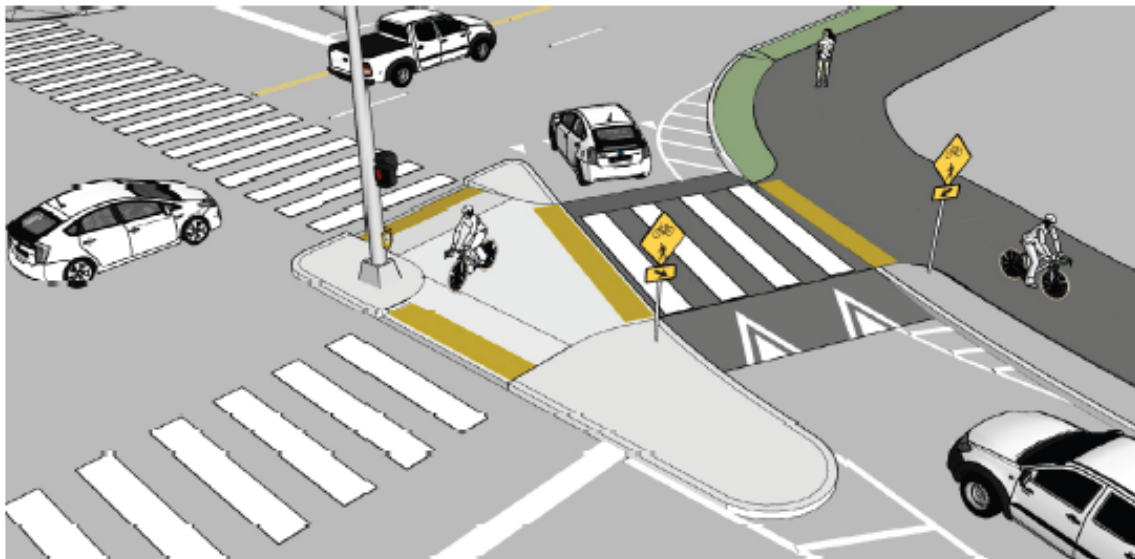


(Above) R10-32P



(Above) Leading pedestrian interval (LPI) installed in New York City, NY. Bicyclists use LPI to cross with pedestrians.

Source: amny.com



(Above) Channelized turn lane at an arterial road with high right-turn volumes.

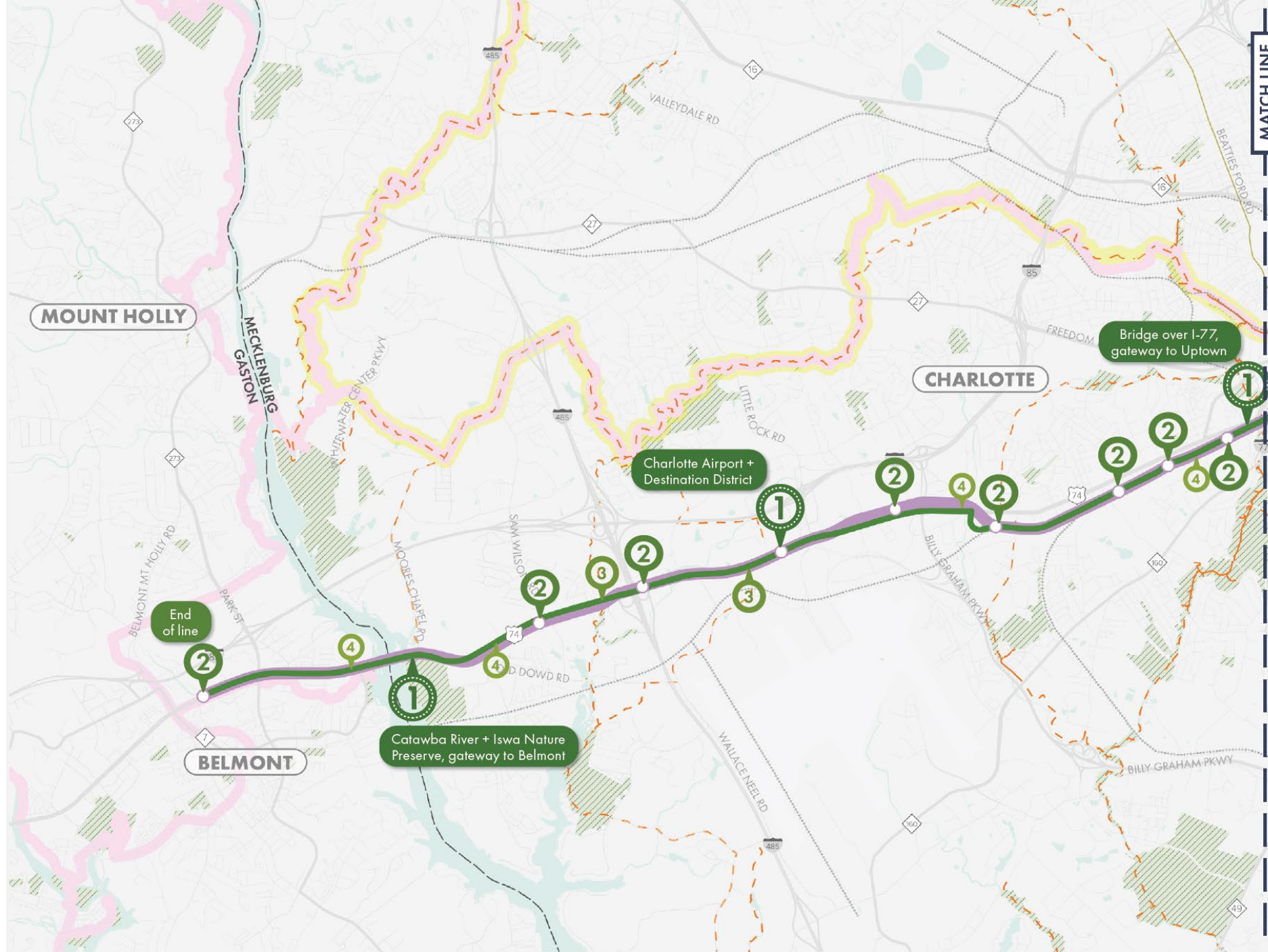
Design Considerations

- Consider median refuge islands, allowing bicyclists and pedestrians to cross a roadway in two stages.
- Define locations for Pedestrian Hybrid Beacons where side street volumes do not support installation of a conventional traffic signal
- At signalized locations where large volumes of pedestrians and bicyclists are anticipated, install leading pedestrian indicators to reduce pedestrian/bicyclist conflicts.
- Evaluate intersections for additional pedestrian crossing time
- Right turns on red should be prohibited wherever practical.
- Explore channelized turn lanes with a raised refuge island

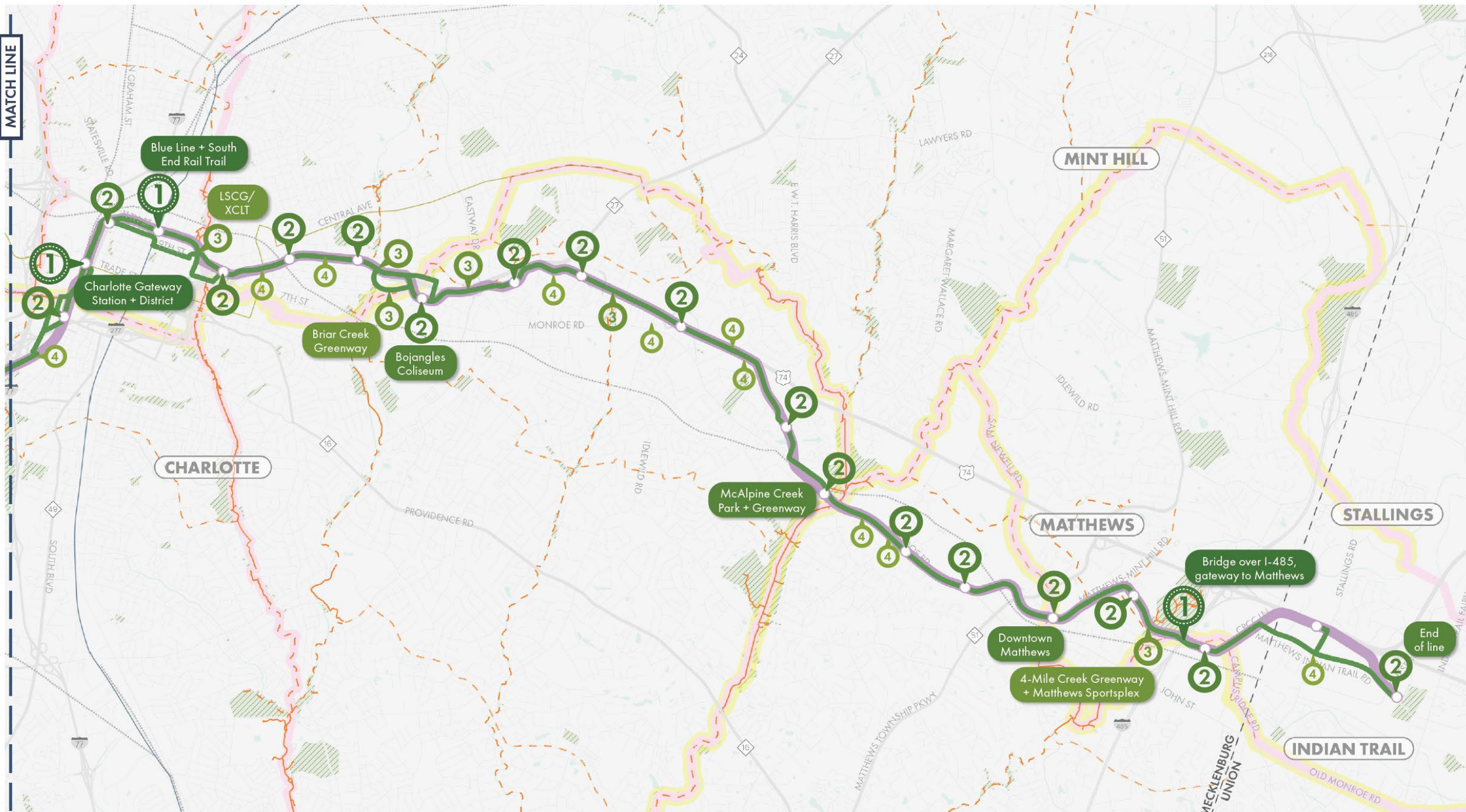
Trail Head Locations

LEGEND

-  Key Moments/Gateways
-  Main Trailheads (station areas)
-  Minor Trailheads (trail junctions)
-  Access Points (neighborhood connections)
-  Proposed Silver Line Rail Trail Alignment
-  LYNX Silver Line Proposed Stations
-  LYNX Silver Line Alignment
-  LYNX Blue Line
-  LYNX Gold Line Track
-  Railroad
-  Regional Greenway Network: Existing
-  Regional Greenway Network: Planned
-  XCLT2 Alignment
-  Carolina Thread Trail
-  Park



MATCH LINE





DESIGN THEMES

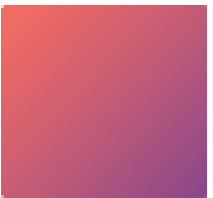
PATTERNS
FORMS
COLORS
TEXTURES
MATERIALS

SILVERLINE
RAIL TRAIL

SILVERLINE
RAIL TRAIL

SILVER
LINE
TRAIL

- Branded Navigational Ground Treatment
- Consistent Signage
- Uniform Surface Material
- Trash & Recycling Receptacles
- Public Plazas
- Bike Racks
- Lighting
- Shade
- Public Area & Placemaking





DESIGN THEMES

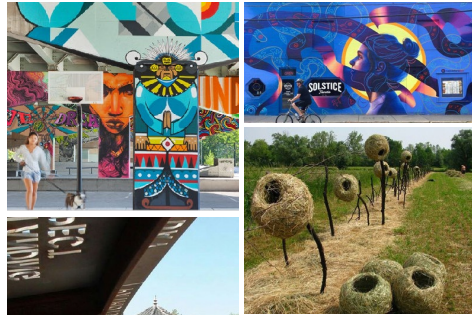
PATTERNS
FORMS
COLORS
TEXTURES
MATERIALS





Placemaking

HIGHLIGHTED EXPERIENCES COMMUNITY CHARACTER



COMFORT AND EASE



A LINEAR COMMONS





- Continue coordination with Design Team
- Develop Scope of Work for Phase 2 Planning
- Conduct focused public outreach in Fall 2022





Thank you



Presented to the
Transit Services Advisory Committee
April 14, 2022



Schedule Adjustments

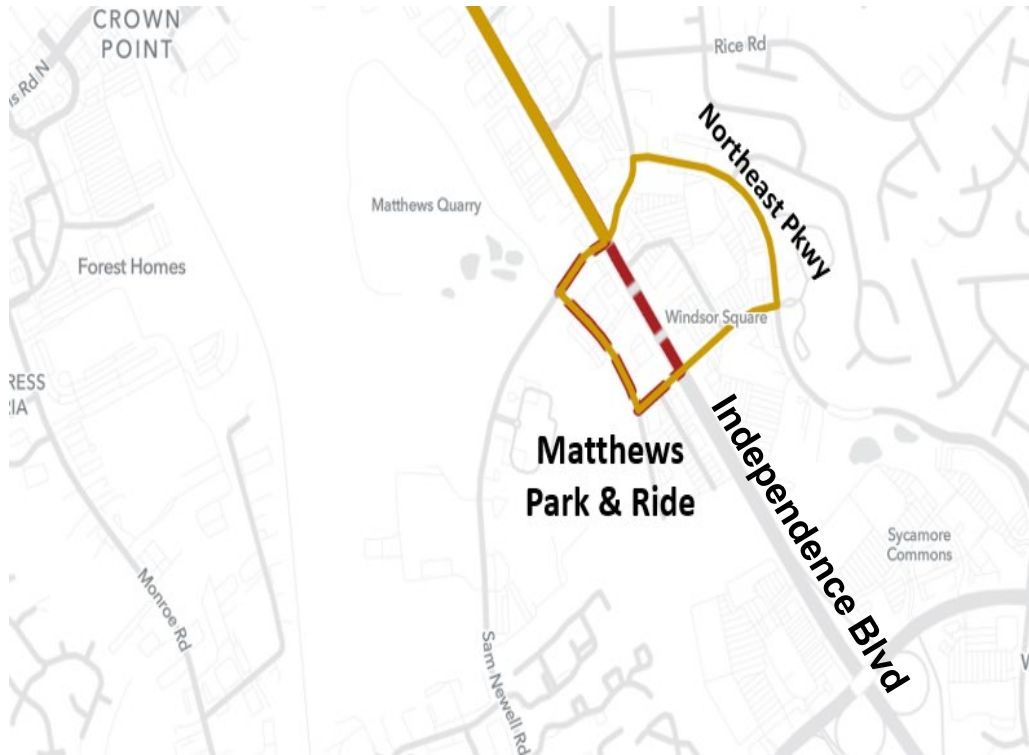
- 1 Mt Holly Rd
- 10 West Blvd
- 64X Independence Blvd
- 82X Rock Hill Express

Route Adjustment

- 17 Commonwealth
- 51 Pineville-Matthews Road



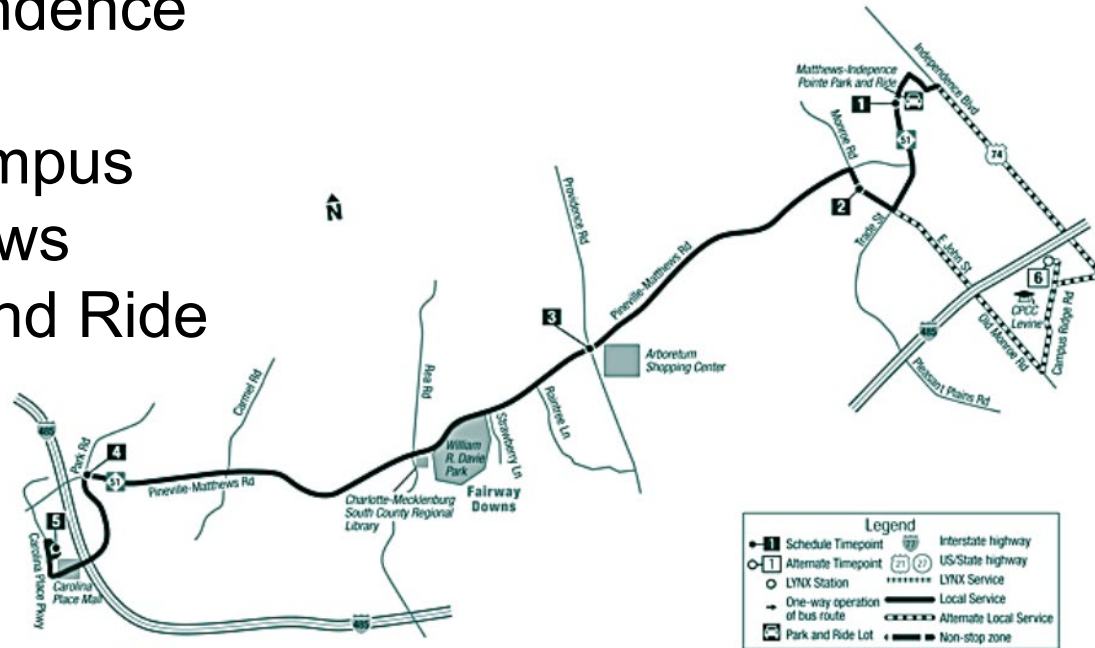
Route 17 Commonwealth



- Safety concern for bus stop currently located along Independence Blvd Safety reasons
- Maintains access to Windsor Square

Route 51

- Serves Matthews Independence Park and Ride
- Serves CPMC Levine Campus
- Serves downtown Matthews
- Serves Arboretum Park and Ride
- Carolina Place Mall



51 Pineville-Matthews Road

