Metropolitan Transit Commission

CATS

October 27, 2021

METROPOLITAN TRANSIT COMMISSION
Wednesday, October 27, 2021
5:30pm
Charlotte-Mecklenburg Government Center
WebEx
AGENDA

I. Call to Order ..... Mayor Vi Lyles
- Attendance (Roll Call)

II. Approval of the September 23, 2021 Summary (**p.5-15**) ..... Mayor Vi Lyles

III. Report from the Chair of the Transit Service Advisory Committee (TSAC) .... Krissy Oechslin

IV. Report from the Chair of the Citizens Transit Advisory Group (CTAG) ..... Adam Pasiak

V. Public Comments

VI. Informational Items
- Federal Bipartisan Infrastructure Plan (**p.17-23**) ..... Dana Fenton
- LYNX Blue Line Economic Development (**p.25-36**) ..... John Howard
- MetroRapid North BRT Planning Study Update (**p.37-49**) ..... Brian Nadolny
- Envision My Ride: Bus Priority Study Update (**p.51-60**) ..... Bruce Jones

VII. Action Items
- Fare Equity Analysis City LYNX Gold Line (**p.62-84**) ..... Arlanda Rouse
- CONNECT Beyond Regional Work Plan (**p.86-97**) ..... Jason Lawrence
- CATS Agency Safety Plan (ASP) Revision 1 (**p.99-248**) ..... David Moskowitz
- Remaining 2021 Meeting Schedule (**p.250**) ..... John Lewis, Jr.

VIII. MTC Commissioners' Business ..... Mayor Vi Lyles

IX. Chief Executive Officer's Report (**p.252-255**) ..... John Lewis, Jr

X. Adjourn

METROPOLITAN TRANSIT COMMISSION
MEETING SUMMARY
September 22, 2021
(Approved on October 27, 2021)

Presiding: Mayor Vi Lyles, City of Charlotte

Present:

Commissioner Leigh Altman (MCBOCC)
Taiwo Jaiyeoba (Assistant City Manager, Charlotte)
Mayor Woody Washam (Town of Cornelius)
Andrew Grant (Town Manager, Cornelius)
Mayor Rusty Knox (Town of Davidson)
Jamie Justice (Town Manager, Davidson)
Anthony Roberts (Town Manager, Huntersville)
Mayor John Higdon (Town of Matthews)
Brian Welch (Town Manager, Mint Hill)
Mayor Jack Edwards (Town of Pineville)
Bill Thunberg (Representative, Mooresville)
Mayor Walker Reid III (City of Gastonia)
Randi Gates, (GCLMPO, Gastonia)
L. J. Weslowski (City of Concord)

CATS Chief Executive Officer: John Lewis, Jr

I. Call to Order

A Special meeting of the Metropolitan Transit Commission was called to order via WebEx conferencing at 5.30p.m. by MTC Chairman Mayor Vi Lyles, City of Charlotte.

II. Review of Meeting Summary

The meeting summary of August 11, 2021 was approved.

III. Transit Services Advisory Committee (TSAC) Chairman's Report

Krissy Oechslin (**Chairwoman**) reported the following recap: TSAC did not meet in July. The following are updates from our August and September meetings. First let me just congratulate CATS on the new streetcar extension. I think we're all happy to see the trains finally running and look forward to people getting to know and use this new mobility option. I'd also like to thank CATS for launching the new CATS-Pass mobile ticketing app, which I have used, and think is great, and then also helping beta test the real-time tracking technology that will be incorporated into the ticketing app as well as in its own standalone app, and what I've seen so far is promising and I can't wait for that to launch.

In our August TSAC meeting we received an overview of the proposed November and future service changes, most of which involve restoring service to local and express bus routes. And then in our September meeting we voted on that service change. Unfortunately, because CATS was experiencing some of the same staffing challenges as many businesses are facing right now, they're limited in how much they can restore bus and Light Rail service, so the November service change that TSAC approved was much more limited in scope than we had hoped. We hope CATS can successfully recruit more operators so that the next service change in February can really start to restore service, especially along the routes with long headways. And there has been a lot of negative chatter on social media and also shared directly with and experienced by various TSAC members about the long headways on the Light Rail, as well as on the new streetcar, ranging from 20 to 40 minutes. Wwe hope to see improvements as the labor shortage eases.

We also discussed safety in both of August and September meetings. In August the new head of CATS security, David Moskowitz, gave us an overview of his department's

responsibilities, but we had two public speakers who provided comment about safety concerns. One speaker shared that she recently felt unsafe waiting for the bus at CTC and had experienced harassment and aggressive panhandling, and that there weren't any security officers around to help her. And another speaker shared an experience calling 911 from the Rail Trail in SouthEnd, and the 911 operator was unable to determine his location.

David Moskowitz-CATS Transit Security - returned to our September meeting to follow up on the 911 issue, stating that he had confirmed that the CATS system locations are in fact encoded in the 911 dispatch system. However, several people followed up with me after that meeting to tell me that this didn't really address their concerns. The public speaker who had raised the 911 issue let me know that recently his wife had called 911 when a car drove onto the tracks near the East-West station and 911 couldn't determine where she was. She eventually just called the local fire station because she knew where it was, and they were able to come help. And the reason that the speaker has brought that to our attention is because he lives in SouthEnd and he was involved in a project that started about five years ago that was a joint project between CATS, CMPD, the Mayor's office, MEDIC, and Center City Partners to implement a geolocation system. On the light poles and other physical infrastructure. Along the Light Rail and the Rail Trail there are small, numbered signs that are supposed to be in the 911 dispatch system, so a caller can tell the dispatcher the number on the nearest sign and then 911 can send the appropriate first responder to that location, but it's not clear that that's actually working as it's supposed to.

One possibility is that it's a 911 training issue, so for that reason I'm asking CATS to work with 911 to ensure not just that those of June location numbers are in the 911 system as they're supposed to be but that whatever auditing or quality control testing the 911 does should include a simulated real-world testing to see whether dispatchers can actually locate people who are calling from the Light Rail or the Rail Trail, that's using like, quote/unquote, real people to test the system, maybe somebody who's never been to Charlotte before or has never used CATS and doesn't know how to describe where they are.

It would also be helpful to see an analysis of 911 calls that originate from CATS system locations, both the Rail Trail and the Light Rail, to help determine that extent of this problem. We're concerned that if this doesn't get addressed it's only going to grow as an issue as CATS expands its footprint with the new Gold Line extension, the new Silver Line, and the Silver Line Rail Trail into the surrounding towns. That's the sum of my remarks. Thanks for your time.

Discussion:

MAYOR LYLES (**City of Charlotte**): Krissy, that's an excellent report. I'm sure Mr. Lewis will follow up and really, the idea of feeling safety is very important but actual safety is even more important and so we need to do some of that work. Any questions for Krissy?

COMMISSIONER ALTMAN (**MCBOCC**): Thank you, Mayor Lyles, and thanks so much for your update. You said as labor shortages ease. Do you have any projections or reasons to think that we're going to see an imminent easing of labor shortages?

CATS CEO LEWIS: I believe Ms. Oechslin was referring to in her committee. I'll report to the committee about some of our service challenges relating to manpower shortages associated with the pandemic. This has been an ongoing challenge, and of course, the pandemic has impacted our employees just as it has the rest of society throughout the pandemic, but the last month or two has particularly been a challenge as we, let me say, focus on large events, and as

the community is starting to come back at higher levels of participation publicly, we are still having challenges with manpower in terms of our service. I'll give you an example.

We had two particular weekends, the Labor Day weekend where we had three major sports events, as an example. We had tens of thousands of people in Uptown attending those events and we had a shortage of rail manpower in particular. Normally we put extra trains in service for large events like that, and because we had a number of last minute callouts we weren't able to do that. We had quite a challenge in getting people away from the games. It is not as difficult getting people to events because people trickle in over hours before, but at the end of an event thousands of people come out and want to get home as quickly as they can, and we just did not have the manpower available to move that large number of people as efficiently as we normally do.

Now, I will say that this problem has been exacerbated over weekends and during large events, because during the week we don't typically have this issue. I think it's a combination of Covid fatigue and other issues surrounding the pandemic that is cropping up. We will continue to work through this issue, but this is something that is ongoing.

COMMISSIONER ALTMAN (**MCBOCC**): For sure we are seeing labor shortages everywhere, and I was just hoping that you were seeing more of a return, but it sounds like you're still wading through labor shortages also, kind of status quo for you, is that right?

CATS CEO LEWIS: Yes, it is. And during the typical commute it's not an issue. It really is exacerbated by these large events.

MAYOR LYLES (**City of Charlotte**): And I think that I would add that as offices said they would be back in September we've seen that push out, so even the day-to-day has less pressure, but at some point, I think we'll see more of it when offices open which I dare not even try to predict. I think people are coming back to work slowly, but when you're a service provider liking CATS is for both the trains and the buses, trying to get that idea of fully staffing is really important. Keep working on it.

Krissy, I want you to know how effective your work is with us and how much we appreciate it. Please keep pushing and keeping us aware. Thank you very much.

IV. **Citizens Transit Advisory Group (CTAG) Chairman's Report** – No Report

V. **Public Comments**

COLIN STIFLER provide comment on City LYNX Gold Line Fare Proposal - I was able to read the Fare Equity Analysis and it looks very thorough so kudos to the individuals who saw that through. I will actually be resuming in-person work Uptown starting next week and am planning to take the Gold Line there. And just a consideration with regard to fares that came to mind as I approached planning my trips -- I know that there isn't a fixed schedule that's published. I'm not sure if there are plans to publish a fixed schedule for that route, however, it strikes me that taking the Gold Line could be even less, I guess; it could be harder to plan trips in a manner that makes it enticing to take if you don't know when you're showing up at the stop, if you're going to be waiting for 5 minutes or 20 minutes depending on when it's going to come by that stop. It doesn't strike me necessarily it's fair that the fare itself should be the same as a bus which operates on a fixed schedule.

I worry about that both for myself and then other individuals who are transit users of choice who I think understandably this Commission and other public transit agencies around the

country are trying to aspire to ditch their cars in favor of the public transit options to get them where they need to go, and so I just wanted to clear that. If there are no plans to publish a fixed schedule that might allow for a more seamless trip planning experience, I worry that over time my interest in taking the streetcar at the full posted fare may wane and it may also make it an unattractive proposition to other riders.

Discussion:

MAYOR LYLES (**City of Charlotte**): That's an excellent question. Mr. Lewis, I know we are not charging a fare until a certain date, and what is the plan for a fixed schedule for the Gold Line?

CATS CEO LEWIS: You are correct, Madam Chair, that it is our plan to as we continue to build up ridership interest in this new service that we will go fare-free until early January, the first week of January. In regard to schedules, because this service operates within the course of normal traffic, we have moved towards a headway management system rather than an exact schedule, similar to what we have for our Blue Line. On the Gold Line, trains will run every 20 minutes each hour, and as we will hear a little later on about our moving towards our automated CATS track app where people can use their mobile phones to get real-time updates on both our bus and soon to be our trains. I would say, Mr. Stifler, stay tuned as we roll that out, but right now generally the Gold Line will run every 20 minutes.

MAYOR LYLES (**City of Charlotte**): Mr. Stifler, does that work for you? Do you have any further questions or inquiry?

MR. STIFLER: I look forward to trying it. I'm optimistic that it will meet my needs and not throw any sort of wrenches in my ability to get places on time. I'm just worried that if it doesn't prove to be as efficient of a user experience as I hope it will, once the fares kick in in January I wonder if it might cause me to reassess whether or not I would like to take it. And I also plan to share my experiences with colleagues that I work with who might also be able to take it, members of my neighborhood, if you live in Elizabeth, and so I very much want to be a champion of this, but I know that in many instances, especially for users of choice, it's a hard sell to get them to ditch their cars in favor of taking transit. I'm just hoping that it will be as smooth as it hopefully could be, given all of the work that's gone into it.

MAYOR LYLES (**City of Charlotte**): We appreciate that, and we want you to cheerlead for us, and thank you for expressing what many people are thinking so that we can be aware and look forward to getting it on the schedule and, as they say, getting the app available and easy for you, so thank you very much for your public comment.

VI. Informational Item

a. CityLYNX Gold Line Fare Equity **Arlanda Rouse**

Arlanda Rouse – **CATS Civil Rights Officer** – made a presentation on the CityLYNX Gold Line Fare Equity, based on pages 8-28 in the MTC Agenda packet for September 22nd, 2021 meeting.

Discussion:

COMMISSIONER ALTMAN (**MCBOCC**): It sounds like the population along this line is a wealthier demographic, is that right?

MR. ROUSE: I wouldn't necessarily say it's a wealthier demographic, but we don't have a lot of housing along the line, its most business corridor, and the students are temporary residents. They did not actually show up in the census count.

COMMSIONNER ALTMAN (**MCBOCC**): Because this is a new form of analysis for me so forgive me as I'm learning, but you know, the fare would have a disparate impact on those low-income individuals living in proximity in the sense that it's going to take more of their take-home pay proportionate than higher income people, but that's not the question you're asking. The question you're asking is are the mass of people on it -- like I want to tease that out and make sure I'm understanding; is that right?

MR. ROUSE: Yes, with this analysis, and this analysis is focused on only the Gold Line corridor. I think the question you were asking is individuals that may come from other routes may be disproportionately affected. If we performed a systemwide analysis we probably would have found a disproportionate burden systemwide, if a systemwide analysis would have been performed, but because we're only changing the fares on this single corridor to the fares that are already systemwide we did not find a disparate impact or disproportionate burden just based on populations.

COMMSSIONER ALTMAN (**MCBOCC**): Are there reduced fares for people who are economically burdened?

MR. ROUSE: There are a number of nonprofit groups that actually help needy individuals, so I guess the short answer to your question is there are programs available for needy individuals but as far as low-income fares, no, ma'am, we don't necessarily have a low-income fare.

COMMSSIONER ALTMAN (**MCBOCC**): Okay, but the student fare you're considering, and I love the idea, I mean whatever we can do to promote the use of mass transit is fantastic, and especially to remove barriers for people like students who probably don't have a lot of discretionary funds is wonderful. How is it funded and is it based upon student status or how does that program work?

CATS CEO LEWIS: We have established, and this began with the Blue Line Extension, our "All Access Pass", and UNC Charlotte was the first institution to come online with that. Throughout our system students have always had a 50% reduction in their service, but that has been on their daily individual ride. By expanding the "All Access Pass" to institutions, what we can do is expand that to entire institutions. Using the UNC Charlotte model, that is funded by an annual student transportation fee that every student at the university, student, and faculty at the university, pays annually whether they ride or not, and as a result, all of the students and faculty have unlimited access to our service. We are in conversations, as Arlanda mentioned, with the institutions along the Gold Line to gauge their interest in joining that program.

MAYOR LYLES (**City of Charlotte**): I think this is probably one of the best programs we offer to our students because the all access pass, I see it both -- and I said this to Mayor Knox and a number of mayors -- that I think that it's also safer than having kids driving, and I think that it's just a really excellent way to, as you noted, to level-set the cost so that everybody pays

the same but that allows us to not have variables that could exist as a result of just charging individually. That's one of our best programs.

MS. OECHSLIN: I noted in the materials that were distributed before the meeting that one of the ways to mitigate the impact of the fares was to promote monthly or weekly passes more heavily since there's no marginal cost for one more ride if you have a weekly or monthly pass. I just wanted to sort of touch on this. This is something that TSAC has talked about for a long time. I think we've probably all heard the same, that it's expensive to be poor, and I think a lot of the folks who would most benefit from a weekly or monthly pass cannot afford the upfront cost. It's $88 for a monthly pass, and I think there's a lot of people who can't afford to pay that upfront even though they might financially benefit from having a monthly pass.

One of the things that I was encouraged to hear was the new CATS pass mobile ticketing app, is that it has the capability to have a fare capping system in it. Fare capping, for those who don't know, is like a payment plan for a monthly pass. Many cities across the U.S. have it: San Jose, St. Louis, Dallas. Basically, you pay for each ticket. You know, you get on the bus, you pay for one ticket; you get on the bus later in the day, you pay for a ticket. Once you've paid $88 you don't pay any more for the rest of the month, and so it's a payment plan. It just allows people to pay for that monthly pass that could save them money over time. I would just encourage CATS to really accelerate thinking about fare capping, especially now that we have a mobile ticketing app that, my understanding, can accommodate that sort of ticketing plan.

b. Huntersville Bus Stop Amenities **Jason Lawrence**

Jason Lawrence – **CATS Senior Transit Planner** – made a presentation on the Huntersville Bus Stop Amenities, based on pages 30-35 in the MTC Agenda packet for September 22nd, 2021 meeting.

Discussion:

MAYOR LYLES (**City of Charlotte**): I understand that what we're doing with Huntersville would be a model for the other five towns, and once you work this out everybody can address the needs that they have in the way that they choose. And I think that was about a year ago that we started talking about this, so thanks for the work. And sometimes it moves slowly, but when it does, hopefully we can move more quickly towards implementation.

TOWN MANAGER ROBERTS (**Huntersville**): I know if Mayor Aneralla was on this call he would say thanks to Jason and staff for continuing to move this along. We appreciate what you have done to work with my staff. Again, thanks.

MAYOR LYLES (**City of Charlotte**): It always helps to have a good partner so thank you both for being that.

MAYOR EDWARDS (**Town of Pineville**): We have been trying for several months, and it was interesting that you're saying that you're talking to people in Pineville. I don't know who, because I had a meeting with the town manager today, who has requested from John Lewis that we're putting sidewalks down for everyone, and he's not heard from anybody. I have sent two emails to John and have heard nothing. Our planning director has sent multiple emails to try to find out what can be done since we are putting sidewalks in the town costs, about putting some seats and foundations in but no one gets back to us, so there is no conversation with Pineville as far as I know as of this morning.

MR. LAWRENCE: Mayor Edwards, I'll apologize for that. Maybe there were some missed crosses there. Travis and I and your planning director, we had some initial conversations back in August. There was a little bit of back and forth there, and then this week we have been coordinating more directly with the actual contractor that's conducting the work and then with I believe your public works director, so I apologize that message hasn't been received to you, but we have been working through that.

I think that it may be, for this one particular case, it may be easier if we do the work in that location and coordinate with the Town. We did learn today that you will be bidding this out, and that might be an opportunity for us to get in at this early stage and make sure that the right clauses are in place in that contract so that we can reimburse you for the work. And as I understand it, the sidewalk is scheduled to be complete by the end of this fiscal year. I think we're certainly early enough in the time period to effectively collaborate and make sure that the project comes to fruition.

MAYOR EDWARDS (**Town of Pineville**): Yeah, we've already gone across the bridge on 51. We are on the other side right now and we're getting bids out for those, but I guess my point is that communication has not been really stellar, and that's what is concerning the town manager also. We need a little bit more back-and-forth with particularly the town manager or myself, if we can do that.

CATS CEO LEWIS: I think what is happening is there has been a drop of the ball of communication. We will set up perhaps a conference call to make sure that everybody is on the same page for this, because I think staff are having conversations that are perhaps not bubbling up to other levels, and we'll make sure we'll do this in the next day or so.

c. Regional Express Services **Jason Lawrence**

Jason Lawrence – **CATS Senior Transit Planner** – made a presentation on the Regional Express Services, based on pages 37-44 in the MTC Agenda packet for September 22nd, 2021 meeting.

Discussion:

MAYOR LYLES (**City of Charlotte**): If I recall, the majority of the voting members did think that we should begin to increase the cost based upon actual, and have you addressed all of the questions or were there questions, Jason, that you had in the prior discussion that you felt like needed additional information, or how is everybody feeling about that?

MAYOR HIGDON (**Town of Matthews**): Is there a plan, as the Mayor said, to incrementally charge even more to our partners?

MR. LAWRENCE: I think at this point we're recommending that single step up to include the additional maintenance cost. I think going forward that would be an ongoing conversation with our partners and would deal all about stepping up those costs, but at this point we're recommending just that single step up. There's a lot of regional conversations underway right now. There might be other opportunities and partnerships with the other transit providers. For us there's six fixed route providers within our CONNECT Beyond service planning area, and there might be some opportunities to coordinate more directly with them. I think at this point the one-step up we feel was a good move as where we are, but additional conversations should certainly occur.

MAYOR LYLES (**City of Charlotte**): I'm going to say this about it, Mayor, to the voting members, I think it is a good step for the next fiscal year to go to not the operations and the maintenance cost. I think that gives everybody a year to look around at those providers and make some decisions on how they would best like to connect with CATS as we do the service. This is a preview, the informational item, before we take any action, but that would be the staff's recommendation: The current fiscal year would be the same and then the next fiscal year -- am I stating that correctly, Jason, that the next fiscal year would be direct cost and maintenance?

MR. LAWRENCE: Yes, and at this point we're just presenting this for information. We are not planning to bring this back for action at this point, at least it's within the policy that we currently have adopted for you all. We're just putting in as information of our path forward for cost per hour.

CATS CEO LEWIS: This does not technically need an action by the MTC. Hearing the consensus of the board, this would be the guidelines by which we develop our FY23 budget, and we did not want to take action prior to the budget conversation, but we will bring this back to you during the budget development if that is the path that the board would like to take. The only other thing I would like to offer is that sometimes we look at this through our own lenses of our own operating budget, but we also partner with our other regional providers.

Under the current model, as an example, Jason, I believe it is Concord that provides our service to the Blue Line Extension, and we actually are reimbursing Concord for that service. It works both ways for this discussion.

MAYOR LYLES (**City of Charlotte**): What I want to make sure is that of the voting members that as you proceed to even prepare for the budget, that everybody has an understanding that this is the direction that you're recommending that we take and if there is any question about it that we raise that now.

CATS CEO LEWIS: That's correct.

MAYOR LYLES (**City of Charlotte**): Okay. I really just want to make sure that that's clear that you're going to work in that direction based upon the recommendation made tonight.

d. CONNECT Beyond Draft Recommendations Michelle Nance / Jason Lawrence
Michelle Nance – **Director, Centralina Regional Council** and **Jason Lawrence** – **CATS Senior Transit Planner** – made a presentation on the CONNECT Beyond Draft Recommendations, based on pages 46-67 in the MTC Agenda packet for September 22nd, 2021 meeting.

Discussion:

MAYOR KNOX (**Town of Davidson**): Maybe you're talking with one of my planners and I don't have knowledge of it, but at some point, can you give me some touch points on where we are with dialogue with Norfolk Southern and where we are with the potential for autonomous shuttles as well?

MR. LAWRENCE: Sure, I can certainly touch more on this. The second topic, we are starting to talk with NCDOT. It is evaluating their third pilot for the autonomous vehicle that

they have. They did one at N.C. State's campus and they did one at the Wright Brothers Memorial. They are looking at three locations throughout the state and we're one of those potential pilot locations, so we've been meeting with your staff to go over potential routes, and we're meeting next week to meet in person actually in the field with the autonomous provider and also with NCDOT. We think they could be an excellent partner to test the pilot. It's not a guarantee because they are looking at two other locations, but that's another way that we feel we can get something on the ground working with a significant partner like NCDOT. And I don't have an update on the Norfolk Southern conversation. Perhaps we can get that back at another meeting, but that is always in our long-term plan to deliver that service to the towns.

MAYOR LYLES (**City of Charlotte**): What's the next step for the MTC in this fabulous plan that I wish we could wave a wand and get on the map right away?

MR. LAWRENCE: We'll be bringing back to you in October with an action item. We're not going to be bringing an action item that would detail the adoption of corridors in other counties, it's the big plan. It will be focused on the MTC and pass-work plan. It will be centered around regional fare and coordination. We'll be bringing back to you an action item right around specific topics that are related to the MTC.

MAYOR LYLES (**City of Charlotte**): Are you doing this presentation before all of the parties? Tell us a bit about the outreach to the various boards, commissions, interest groups, how are you managing that engagement?

MR. LAWRENCE: We're doing many of those currently. We're meeting with all the MPOs, we've done the staff level presentation, and then we're also doing the policy board. We'll be at Gaston MPO tomorrow night; we were at CRTPO last week; we were at the World Planning Organization last week as well. We're making the rounds throughout. We've had some special requests for presentations at the county level. We had a conversation with Gaston County to their mayors and managers, and we've been invited back for additional dialogue to present this plan. We've been going around town to town. The Centralina has been going county by county as well to talk with their delegates that are on their board, so we're presenting this at numerous stakeholder opportunities.

MAYOR LYLES (**City of Charlotte**): I'm going to advise all of our mayors and the commissioner to talk with your COG there and get up to date and merge that thinking and see if there's any feedback that's necessary. Is that a good idea to do that? Centralina Council of Governments has had this before their members for a while.

MS. NANCE: That is correct. And as Jason noted, our executive director has been meeting with all county delegates, because counties play such a critical role in terms of future funding. We've been meeting with them and have provided updates just like we're doing tonight to the MTC, we've provided updates to our Centralina board really over the last 18 months. Actually, the Cabarrus-Rowan MPO is getting a presentation by two other staff members also, as we are before the MTC on this evening.

MAYOR LYLES (**City of Charlotte**): If you want to know more, certainly I tell you, Michelle has been a trooper on this. Jason is right there with her, and then your COG

representative would be I think a good way to also get some feedback beyond what we're doing now so.

VII. Action Items

LYNX Silver Line Corridor Property Acquisition **Kelly Goforth**

Kelly Goforth – **CATS Interim Director of Development** – presented an action item for the LYNX Silver Line Corridor Property Acquisition, based on page 69-74 in the MTC Agenda packet for September 22nd, 2021 meeting.

Resolution: A motion to accept the LYNX Silver Line Corridor Property Acquisition was made by **Commissioner Leigh Altman** (**Mecklenburg County Board of County Commissioners**); seconded by **Mayor Vi Lyles** (**City of Charlotte**). Motion carried by a vote of 6 **In Favor** – 1 **Against** (**Huntersville**).

VIII. MTC Commissioners' Business - None

IX. Chief Executive Officer's Report

CATS New Mobile Payment App.

CATS CEO Lewis: I did want to take an opportunity to have staff show you, as was mentioned in previous discussion, the interest in not only our pass mobile app that allows our customers to pay for their fares using their mobile phone.

Just a heads up, that application went live on August 23, 2021. At that time during the month of July in our previous app we had 4,630 daily users. Through the month of September as of today we have 7,710 active users, so just over that short period of time we've had significant interest and use of our new mobile payment app. Just as important, as I mentioned earlier, was the ability to get real-time information on where our buses and trains are, and the next phase of this project was to implement our real-time app in coordination with our payment. We have actually gone through our first phase of testing on that, and I feel confident enough in the testing that I'd like to give the MTC members a brief showing of what that app will look like once it goes live. **Rachel Gragg** – **CATS IT Director** conducted a live demonstration of the app.

MS GRAGG. (After the demonstration); Some of our next phases coming up, we're going to able to get the rail and streetcar feeds in there so everybody will know where their train is as well. Short and sweet that's what we're doing right now, real-time location feeds, so everybody will know where's their bus.

CATS CEO LEWIS: Rachel and her team have worked very hard to bring both the payment app and the real-time app ready for prime time. We're excited about this, members of the MTC, and this will be going live (keeping our fingers crossed). Barring any technical difficulties, we will hope to go live very soon with this.

COMMISSONER ALTMAN (**MCBOCC**): Well, that's super cool. I really like it, and I think it shows tremendous promise to increase ridership.

X. Other Business – None

XI. Adjourn

The meeting was adjourned at 7:14 p.m. by Mayor Vi Lyles – MTC Chairwoman (City of Charlotte).

NEXT MTC MEETING: WEDNESDAY, OCTOBER 27TH, 2021, STARTS AT 5:30 P.M.

METROPOLITAN TRANSIT COMMISSION
INFORMATION ITEM
STAFF SUMMARY

SUBJECT: Federal Bipartisan Infrastructure Plan **DATE: October 27, 2021**

1.0 **PURPOSE/SCOPE**: The purpose of this information item is to update the MTC on the legislative progress of and proposed federal funding opportunities that the Bipartisan Infrastructure Plan offers to transit agencies.

2.0 **BACKGROUND/JUSTIFICATION**: Under the policy guidance of the MTC, the Charlotte Area Transit System provides public transportation services within Mecklenburg County and to specified points outside of the County. The System utilizes federal funding for both capital and operating programs. The federal Bipartisan Infrastructure Plan, which has passed the US Senate, would provide new capital funding of $39 billion for public transportation services nationwide. The Plan is before the US House of Representatives for approval.

3.0 **PROCUREMENT BACKGROUND**: N/A

4.0 **POLICY IMPACT**: N/A

5.0 **ECONOMIC IMPACT**: N/A

6.0 **ALTERNATIVES**: N/A

7.0 **RECOMMENDATION**: N/A

8.0 **ATTACHMENT(S)**: N/A

SUBMITTED AND RECOMMENDED BY:

John M. Lewis, Jr.
Chief Executive Officer, Charlotte Area Transit System
Director of Public Transit, City of Charlotte

Federal Legislative Update & Bipartisan Infrastructure Plan

Metropolitan Transit Commission

October 27, 2021

1

FEDERAL OVERVIEW

- US Congress will have a very busy Autumn
  - **Government Funding**: Continuing resolution keeping federal government open expires December 3
  - **Debt Limit**: Increased debt limit recently passed is only a temporary measure to get us through early December
  - **Surface Transportation Reauthorization**: Program expires October 31 and will have to be extended
  - **Budget Reconciliation**: "Human" infrastructure plan that is being negotiated by the Congress
  - **Bipartisan Infrastructure Plan**: "Classic" infrastructure plan that passed the Senate in August and is being used by the House as leverage for the Budget Reconciliation package

2

BIPARTISAN INFRASTRUCTURE PLAN

- Infrastructure Investment & Jobs Act (HR 3684 – DeFazio)
- 20 Senators of both parties negotiated plan with President and Senate Leadership
- Passed Senate with strong bipartisan vote (69 to 30)
- Currently in the House of Representatives
- $1.2 trillion over five years of which **$550 billion** is new funding
  - ➢ Opportunities available over next 5 fiscal years

3

TOPLINE SUMMARY OF NEW FUNDING

Programmatic Area	New Funding
Highways, Roads & Bridges	**$ 110 billion**
Passenger & Freight Rail	$ 66 billion
Broadband	$ 65 billion
Power & Grid	$ 65 billion
Sustainability & Resiliency	**$ 62 billion**
Clean Water	$ 55 billion
Transit	**$ 39 billion**
Aviation	$ 25 billion
Environmental Remediation	$ 21 billion
Ports & Waterways	$ 17 billion
Safety	**$ 11 billion**
Western Water Infrastructure	$ 8 billion
Reconnecting Communities	$ 500 million

4

MULTIMODAL PROGRAMS

- Local & Regional Project Assistance
  - $7.5 billion in competitive grants for projects of local and regional significance
  - Increase of $2.5 billion over five years
  - Highways, passenger & freight rail, transit
  - Formerly known as TIGER / BUILD / RAISE
- *New:* National Infrastructure Project Assistance
  - $10 billion in competitive grants for projects of national or regional economic, mobility or safety significance
  - Highways, passenger & freight rail, transit

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RAIL

- Capital Investment Grants (5309 Program)
  - Program that provides funding for fixed guideway investments such as new and expanded rapid rail, commuter rail, light rail, streetcars, bus rapid transit and ferries
  - $23 billion over five years (increase of $8 billion)
  - Maintains current federal – local cost shares
- *New:* Rail Vehicle Replacement (5337 (f) Program)
  - Enhancement to the State of Good Repair program
  - $1.5 billion in competitive grants for rail vehicle replacement and assists local governments in financing replacement projects

6

BUSES

- Bus and Bus Facilities (5339 (b) Program)
  - Program assists in financing of buses and bus facilities capital projects, including replacing, rehabilitating, purchasing, or leasing buses or related equipment; and rehabilitating, purchasing, constructing, or leasing bus-related facilities
  - $2 billion in competitive grants
  - Increase of $725 million over five years

- Low or No Emissions Grants (5339 (c) Program)
  - Program assists in acquiring, leasing, constructing facilities, and rehabilitating or improving facilities for low or no emissions vehicles
  - $5.6 billion in competitive grants
  - Increase of $5.3 billion over five years

SAFETY

- *New*: Strengthening Mobility and Revolutionizing Transportation (SMART) Grant Program
  - $500 million in competitive grants for demonstration projects that incorporate innovative transportation technologies or uses of data to improve transportation efficiency and safety

- *New*: Safe Streets and Roads for All
  - $5 billion in competitive grants to fund state and local "vision zero" plans and other improvements to reduce crashes and fatalities, especially for cyclists and pedestrians

TECHNOLOGY

- *New:* Grants for Charging and Fueling Infrastructure
  - ➢ $2.5 billion in competitive grants to deploy publicly accessible alternative fuel vehicle charging infrastructure along designated alternative fuel corridors
- *New:* National Electric Vehicle Formula Program
  - ➢ $5 billion in competitive grants to States to deploy electric vehicle charging infrastructure

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EXPANDED ELIGIBILITIES

- Transportation Infrastructure Finance & Innovation Act and Railroad Rehabilitation & Improvement Financing adds eligibilities for:
  - ➢ Economic development, including commercial and residential development, and related infrastructure and activities
  - ➢ Public infrastructure located near transportation facilities to promote transit-oriented development

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WORKFORCE DEVELOPMENT

- Proviso requires that 5% of grants related to zero emissions vehicle shall be used by recipients to fund workforce development training
- Proviso added to the Workforce Development, Training and Education program to allow States greater flexibility to address surface transportation workforce development, training and education needs, including activities that address current workforce gaps, such as work on construction projects

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TAKEAWAYS

- Federal government will have substantial new funds to award in form of competitive grants to address "classic" infrastructure needs
- State governments will receive new formula funding to address "classic" infrastructure needs in their States
- Local sources of revenue needed to match grants
- Bipartisan Infrastructure Plan is not law yet!

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METROPOLITAN TRANSIT COMMISSION
INFORMATION ITEM
STAFF SUMMARY

SUBJECT: LYNX Blue Line Economic Development **DATE: October 27, 2021**

1.0 **PURPOSE/SCOPE**: To present an update of economic development activity along the Blue Line and Blue Line Extension to date.

2.0 **BACKGROUND/JUSTIFICATION**: The City of Charlotte's Planning Department and CATS have been tracking development projects along the Blue Line and Blue Line Extension from the beginning of service to date. This information is also reported to the FTA at quarterly meetings. The data being collected has been expanded to included affordable housing and major rehabilitation/preservation projects to provide a more comprehensive assessment of land uses within ½ mile of light rail stations.

3.0 **PROCUREMENT BACKGROUND**: N/A

4.0 **POLICY IMPACT**: N/A

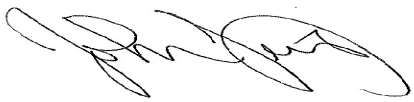
5.0 **ECONOMIC IMPACT**: N/A

6.0 **ALTERNATIVES**: N/A

7.0 **RECOMMENDATION**: N/A

8.0 **ATTACHMENT(S)**: N/A

SUBMITTED AND RECOMMENDED BY:



John M. Lewis, Jr.
Chief Executive Officer, Charlotte Area Transit System
Director of Public Transit, City of Charlotte

METROPOLITAN TRANSIT COMMISSION

Rail Corridor Transit Oriented Development (TOD)

October 27, 2021

1

WHY TOD?

Success of transit is more than just designing for the train….

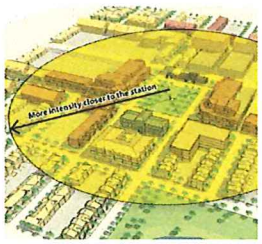
A transit vision and a land use vision must go hand-in-hand

2

TOD PRINCIPLES

Enhance Connectivity

Enhance the existing transportation network to promote good walking, bicycling, and driving connections to transit



Encourage Transit Supportive Development

Focus a mix of complementary, well integrated land uses within walking distance of the transit station

Enhance Community Identity

Use design to enhance community identity around station areas and to make it an attractive, safe, and walkable place

Expand Opportunities

Optimize access to transit to enhance economic mobility and access to jobs; increase affordable housing and neighborhood amenities

3

TOD ADVANTAGES & TRENDS

- Access to reliable travel options
- Compact, dense, walkable/bikeable
- Efficient use of public investments and infrastructure
- Employers value vibrant, walkable neighborhoods
  - Live and work
  - Transportation choices
  - Convenient access to the city and region
  - Architectural variety
- Environmental and public health benefits

50-65%

living in urban areas commute by transit, walking, biking, or carpooling, compared to 22 percent in the suburbs

- ULI (2018)

500

companies relocating to and investing in walkable, transit-served urban areas between 2010-2015

- Smart Growth America (2015)

4

LAND USE + TRANSPORTATION PLANNING POLICY

2025 Transit/Land Use Plan (1998)
- Proposes rapid transit to support land use vision
- Concentrate major office centers at stations
- Focus multi-family at stations and Center City
- Expand local and express bus service for towns

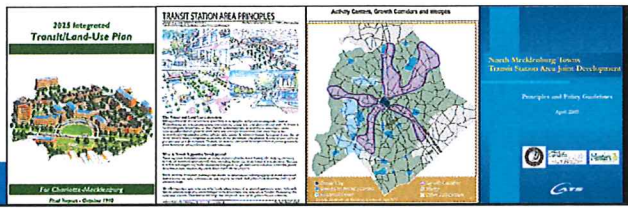
Transit Station Area Principles (2001)
- Land Use and Development
- Mobility
- Community Design

Join Development Principles and Policy (2005)
- Framework for local governments
- Encourage public facilities near transit stations
- Provide basic public infrastructure around stations
- Support a variety of housing types

Centers, Corridors and Wedges (2010)
- Vision for growth and development
- Focus on five Growth Corridors
- Activity Centers, Growth Corridors and Wedges

2030 Transit Corridor System Plan (2006, 2019)
- Multiple transit modes in five corridors
- Series of improvements in Center City
- Bus service and facility improvements

Charlotte Future 2040 Comprehensive Plan (2021)
- Community Area Plans
- Equitable Growth Framework
- Place Types



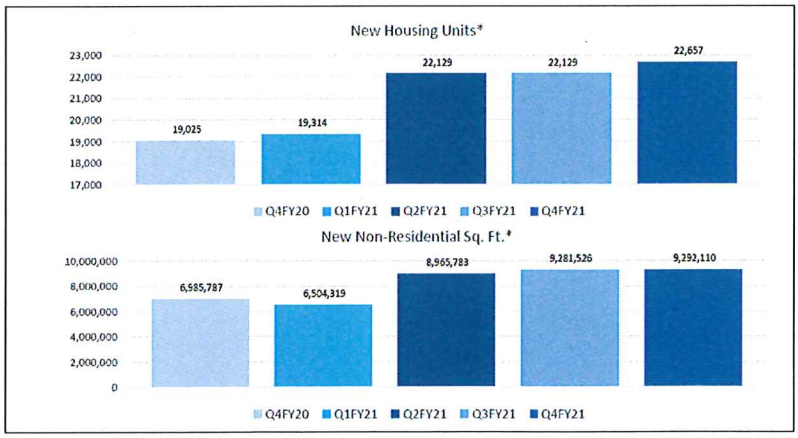
CHARLOTTE FUTURE | 2040 COMPREHENSIVE PLAN

5

DEVELOPMENT AND ECONOMIC IMPACT

We track development along rail corridors as part of FTA policy to leverage transit investments to support land use goals. We also use the data in our CATS TRAX performance metrics to track our community impact goals.

CATS TRAX



** Cumulative metrics. Data Includes Blue Line, BLE, Gold Line and Silver Line*

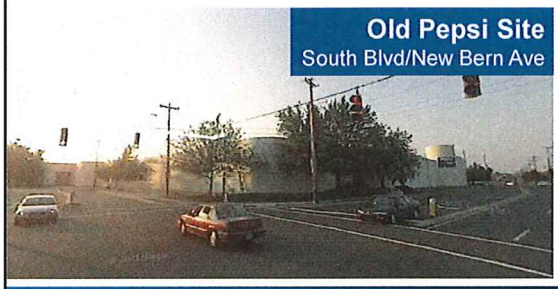
CITY OF CHARLOTTE www.RIDETRANSIT.org

6

2005

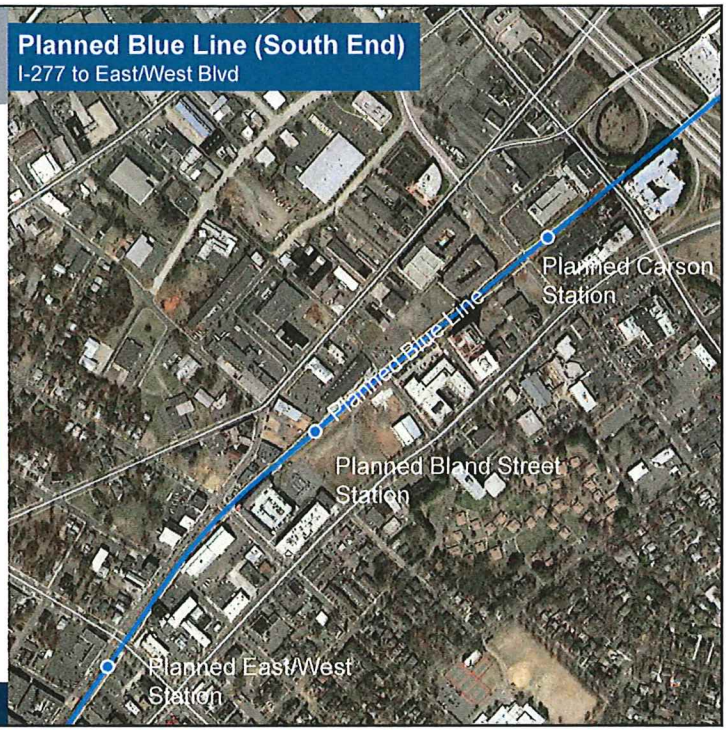
Land Use Context

- Industrial/Commercial
- Underutilized and vacant acreage
- Manufacturing, storage, distribution
- Strip commercial
- Auto-oriented corridor
- Adjacent single family



Old Pepsi Site
South Blvd/New Bern Ave

CITY OF CHARLOTTE



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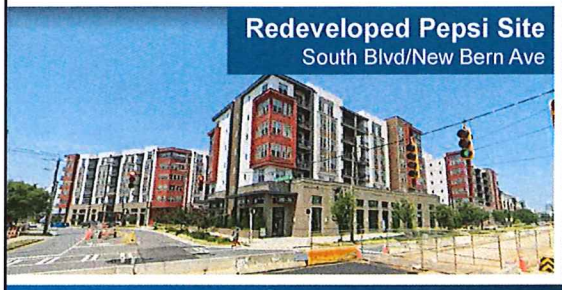
2021

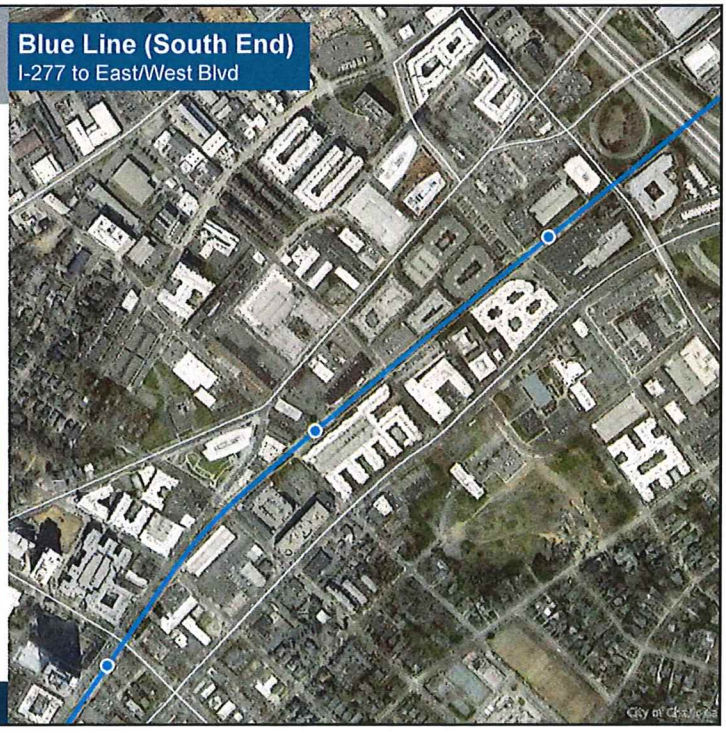
Land Use Context

- Mid-rise to high-rise mixed use, office and residential
- Neighborhood and regional scale commercial
- Pedestrian and bicycle infrastructure
- Adjacent single family preserved



Redeveloped Pepsi Site
South Blvd/New Bern Ave

CITY OF CHARLOTTE



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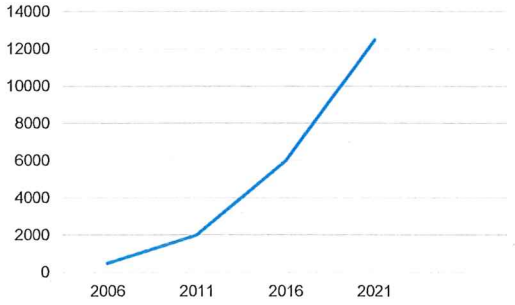
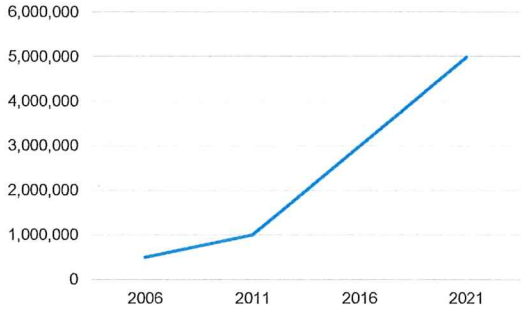
BLUE LINE SOUTH CORRIDOR

Development Activity
- Started tracking in 2006
- Blue Line opened in 2007
- Significant investment in station areas

Residential Units



Commercial Sq. Ft.



9

BLUE LINE SOUTH CORRIDOR

Fast Facts

5M+
Non-residential sq. ft.

473
Hotel rooms

12k+
Residential Units

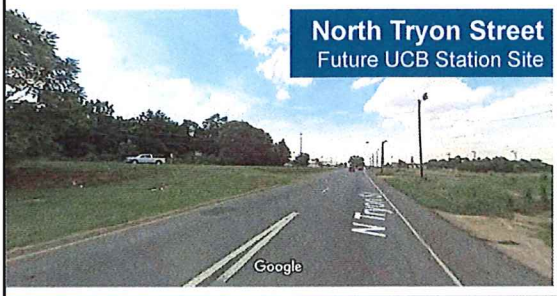
$3.4B
Total Economic Development

10

2007

BLE Land Use

- Industrial/Commercial to Sugar Creek
- Suburban commercial from Sugar Creek to UNCC
- Underutilized and vacant acreage
- Few sidewalks, limited connectivity



CITY OF CHARLOTTE

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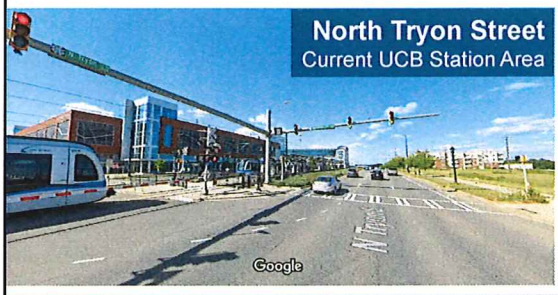
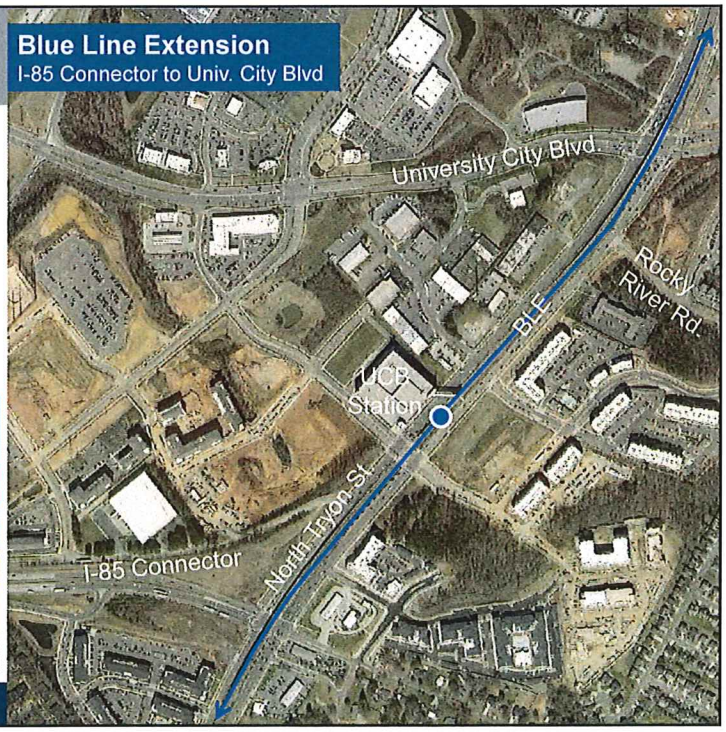
2021

UCB Station Area Context

- Added connectivity
  - roads, sidewalks, bike lanes
- Multifamily and commercial development (Top Golf)





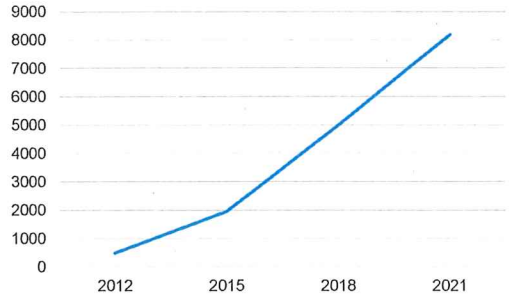
CITY OF CHARLOTTE

12

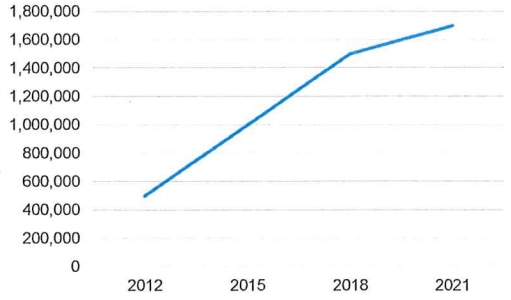
BLUE LINE EXTENSION

Development Activity
- Started tracking in 2012
- Blue Line Extension opened in 2018
- Significant investment in station areas

Residential Units



Commercial Sq. Ft.



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BLUE LINE EXTENSION CORRIDOR

Fast Facts

3.5M
Non-residential sq. ft.

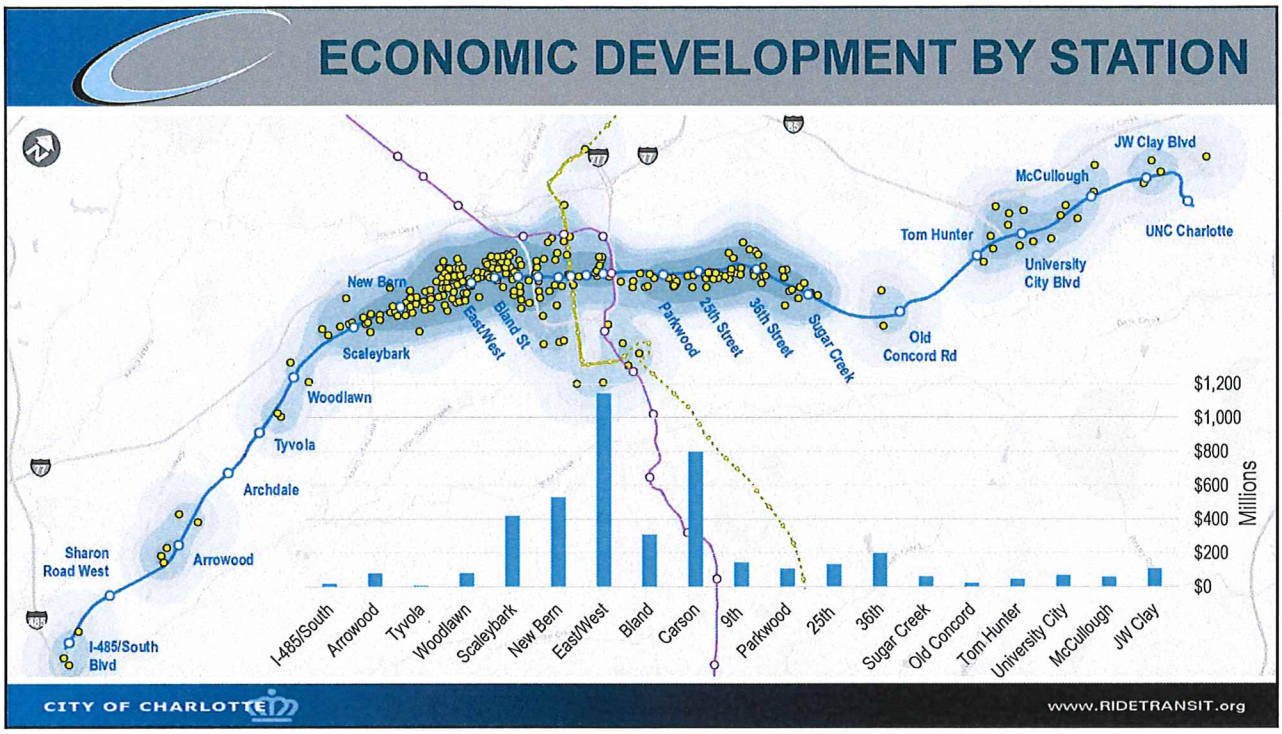
335
Hotel rooms

8k+
Residential Units

225
Affordable Units

$1.1B
Total Economic Development

14


ECONOMIC DEVELOPMENT BY STATION
I-485/South Blvd
Sharon Road West
Arrowood
Archdale
Tyvola
Woodlawn
Scaleybark
New Bern
East/West
Bland St
Parkwood
25th Street
36th Street
Sugar Creek
Old Concord Rd
Tom Hunter
University City Blvd
McCullough
JW Clay Blvd
UNC Charlotte
$1,200
$1,000
$800
$600
$400
$200
$0
Millions
I-485/South
Arrowood
Tyvola
Woodlawn
Scaleybark
New Bern
East/West
Bland
Carson
9th
Parkwood
25th
36th
Sugar Creek
Old Concord
Tom Hunter
University City
McCullough
JW Clay
CITY OF CHARLOTTE
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VARYING SCALE OF TOD
East/West
Bland Street
JW Clay
Woodlawn
Carson
East/West
McCullough
Arrowood
CITY OF CHARLOTTE
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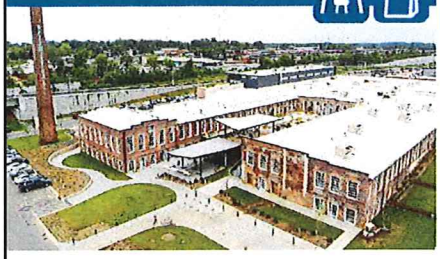
ADAPTIVE REUSE TOD

Parkwood



Sugar Creek

Scaleybark

25th Street

25th Street

Scaleybark

17

PUBLIC + PRIVATE PARTNERSHIPS

LoSo Village at Scaleybark Station

- Previous use was the Scaleybark Station Park and Ride lot
- 350 apartments, 530K SF commercial
- Development includes 315 Park and Ride spaces

The Platform

- Adjacent to the South Blvd. VMF
- 38,000 SF retail development
- Developer will construct 110 space parking lot at VMF
- CATS retains parking for staff and customers

18

PUBLIC + PRIVATE PARTNERSHIPS

110 East Office Tower – East / West Station

- 23 story office building with ground floor retail
- Developer partnered with CATS to design a building mounted OCS
- Direct access to Rail Trail and station platform

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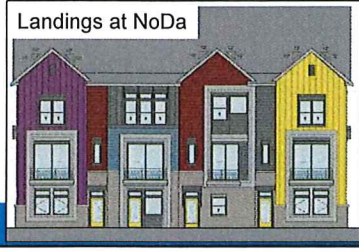
AFFORDABLE HOUSING

Platform Lofts

Parkwood Square

Landings at NoDa



Completed / Under Construction

198 units - Platform Lofts, Old Concord Rd. Station
6* / 59 units - Parkwood Square, Parkwood Station
6* / 55 units - Landings at NoDa, 36th St. Station
15* / 235 units - Johnston Mill, 36th St. Station

Planned Projects

- 80 units - Scaleybark Station
- 2 parcels at Arrowood station ~ 20 acres
- 1 parcel at University City Blvd Station ~ 1.75 acres
- 132 units - Old Concord Station
- 200 units - McCullough Station

**Designated as House Charlotte eligible*

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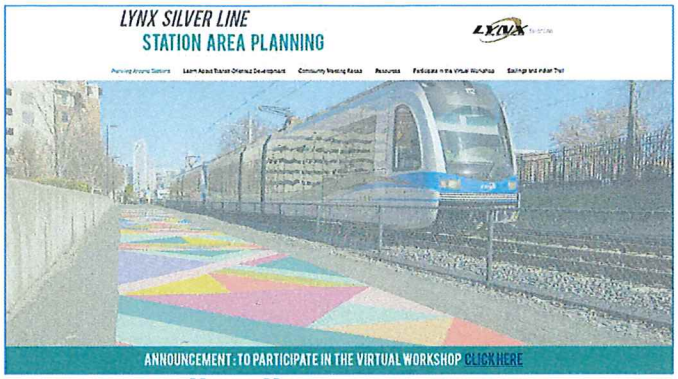
FUTURE UPDATES

CTC Redevelopment



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CITY OF CHARLOTTE

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Thank you!

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METROPOLITAN TRANSIT COMMISSION
INFORMATION ITEM
STAFF SUMMARY

SUBJECT: MetroRapid North BRT Planning Study Update **DATE: October 27, 2021**

1.0 PURPOSE/SCOPE: The purpose of this information Item is to update the MTC on the current status of the MetroRAPID North BRT Planning Study.

2.0 BACKGROUND/JUSTIFICATION:

On February 27, 2019, the MTC approved a new Locally Preferred Alternative (LPA) for the North Corridor. The LPA established a North Corridor public transportation strategy that includes near- term and medium-term Bus Rapid Transit improvements in the I-77 corridor while continuing a long-term vision confirming the Norfolk Southern O-Line as an important regional transportation corridor for future regional rapid transit/local mobility options.

The North Corridor Bus Rapid Transit (BRT) LPA is defined by opportunities to utilize the express lanes for significant transit mobility enhancements that are complementary to longer-term investments. The following improvements would be implemented as part of the proposed LPA:

- All day service including nights and weekends;
- Four new park and rides and two or three new express lane direct connects; and
- Integrated BRT stations into mixed use developments that also incorporate emerging mobility technologies for first/last mile connections.

In 2020, CATS implemented the short-term transit strategy by rolling-out a new Bus Rapid Transit (BRT) service called MetroRAPID. MetroRAPID service provides direct Express bus service from four park and ride locations in North Mecklenburg (Cornelius, Northlake, Huntersville-Gateway, Huntersville-Northcross) to Uptown Charlotte utilizing the I-77 Express Lanes at no additional cost to the rider. There are currently four MetroRAPID routes including: 48X Northcross, 53X Northlake, 63X Huntersville and 77X North Mecklenburg.

In May 2021, CATS held a kick-off meeting for the MetroRapid North BRT Planning Study, embarking on a study to expand MetroRAPID service in the towns of Cornelius, Huntersville, Davidson, Mooresville and the city of Charlotte. The study will utilize the data collected during the LYNX System Update to identify capital projects for North Mecklenburg and MetroRAPID service enhancements aimed at improving travel time, expanding economic opportunity, creating pathways to jobs, and building community partnerships.

The planning study focuses on alternative analysis planning, station location and park and ride evaluation, and implementation strategy. This planning phase will be complete at the end of November 2021.

3.0 **PROCUREMENT BACKGROUND:** CATS selected the firm HDR Engineering, Inc. of the Carolinas to perform the planning and design work. HDR received a Notice to Proceed in April 2021. The Project Kick-off Meeting was held in May 2021.

4.0 **POLICY IMPACT:** N/A

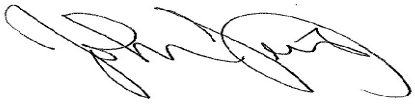
5.0 **ECONOMIC IMPACT:** N/A

6.0 **ALTERNATIVES:** N/A

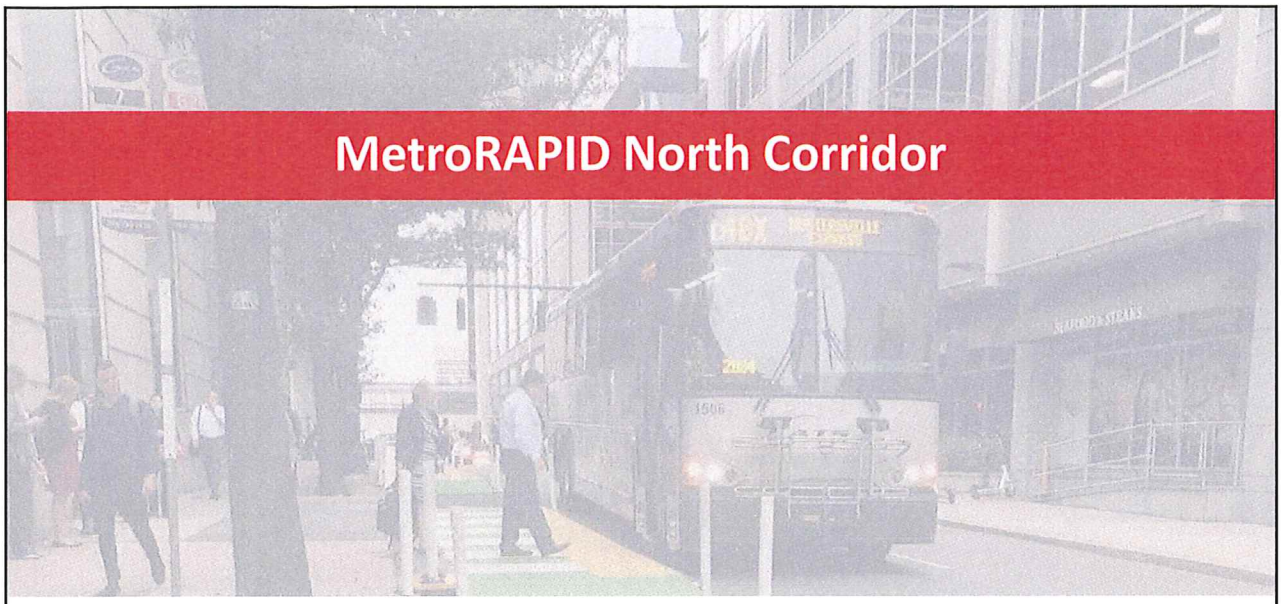
7.0 **RECOMMENDATION:** N/A

8.0 **ATTACHMENT(S):** N/A

SUBMITTED AND RECOMMENDED BY:



John M. Lewis, Jr.
Chief Executive Officer, Charlotte Area Transit System
Director of Public Transit, City of Charlotte



MetroRAPID North Corridor

Metropolitan Transit Committee (MTC) Update

October 27, 2021

1

Project Overview

New or Expanded Park n Rides/Stations:

- Langtree (Mooresville)
- Davidson
- Cornelius
- Huntersville Northcross
- Huntersville Gateway
- Hambright
- Northlake

New Direct Connects / Access Improvements:

- Catawba (bus access to station)
- Huntersville Northcross (bus direct connect)
- Huntersville Gateway (bus direct connect)
- Hucks Rd at Northlake (direct connect)

Use of Existing Direct Connects:

- Hambright
- Lakeview

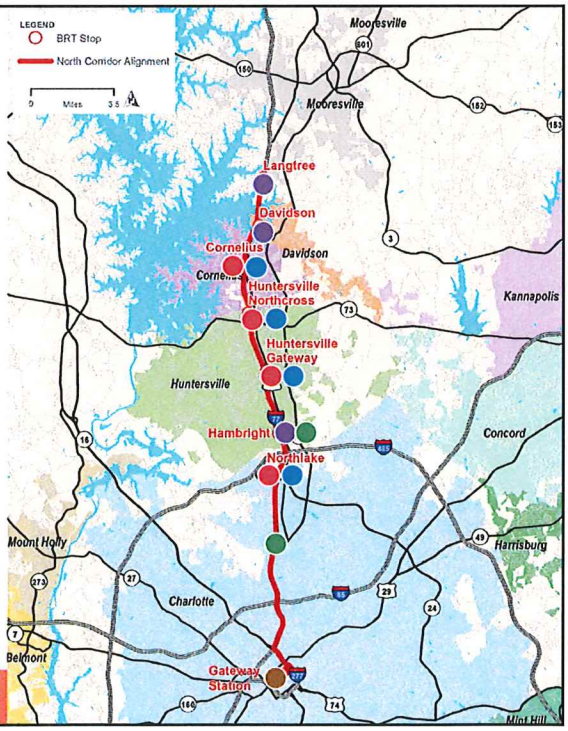
On-Street Transit Prioritization/Amenities:

- Center City Charlotte

First/Last Mile Opportunities:

•On demand service zones

•Autonomous Shuttle Pilot



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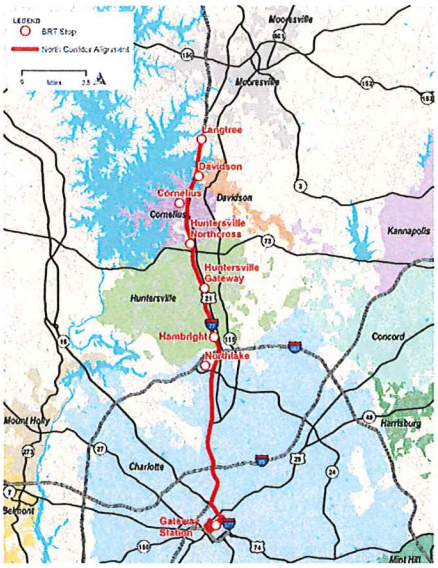
Overview of Progress to Date

- Travel Market Analysis
- Park and Ride Sizing Methodology
- Review Existing and Future Land Use Plans and Roadway Projects
- Develop Site Evaluation Criteria
- Public and Stakeholder Outreach and Engagement
- Technical Advisory Team Meetings:
  - TAT Meeting 1: Identification of Potential Sites
  - TAT Meeting 2: Review High-level Conceptual Designs for each location
  - Future TAT Meeting 3: Review revised design concepts and identify preferred option



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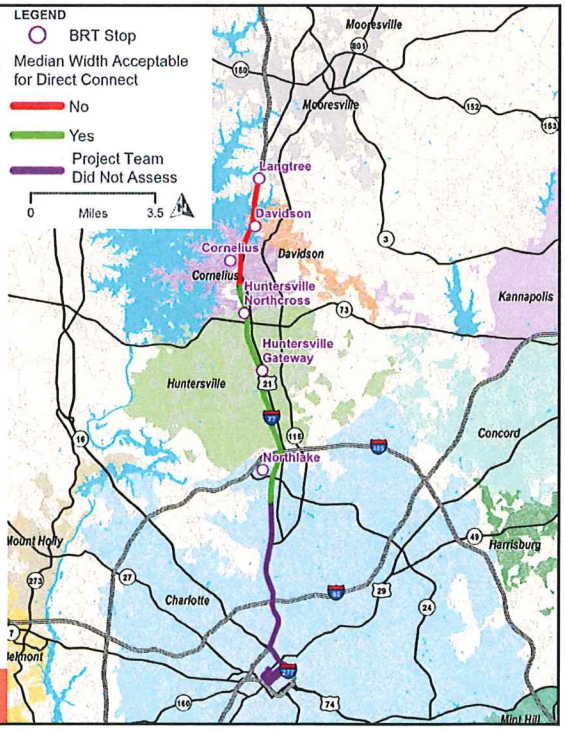
Direct Connect Assessment

Assessment

- Median width north of Westmoreland narrows down
- Existing highway width would allow for direct connects at the Huntersville Northcross and Gateway stations and near the Northlake Mall area.
- Operational improvements being reviewed for other locations



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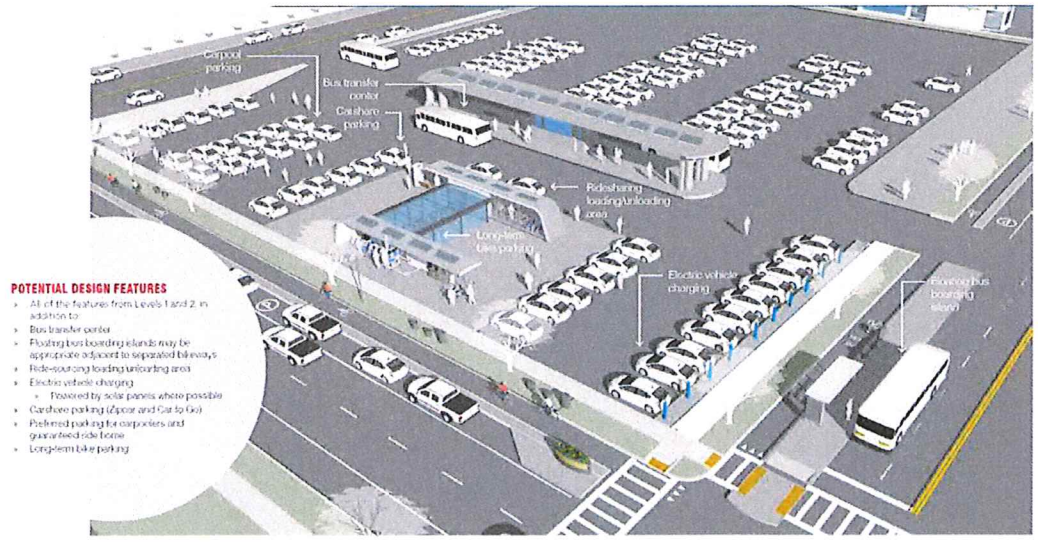
Site Evaluation Criteria

- Consistency with Area Plans
- Candidate Site Acreage
- Estimated Capacity
- Estimated Demand
- Proximity to Highway
- Site Visibility
- Parcel Availability
- Operational Efficiency
- Environmental Constraints
- Site Expansion Capability
- Multimodal Connectivity
- Transit Connectivity
- Future Roadway Projects/Connections
- Planned, Approved, and Active Developments
- Land Use Opportunity Assessment
- Existing Park-and-Ride Evaluation
- Potential for Direct Connection from I-77

5

Mobility Hubs



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Mooresville

Overview

- New park and ride
- Identified and assessed areas for a park and ride at Exits 36, 35, 33, and 31
- Assessed parking needs
  - ➢ 150-200 parking spaces
- Developed draft concepts
- Determined Exit 31 (Langtree) preferred for first Park and Ride in Mooresville

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Davidson

Overview

- Identified and assessed areas for a new park and ride at Exit 30
- Assessed parking needs
  - ➢ 150-200 parking spaces would be ideal but with the ability to expand
- Developed draft concepts
- Sites closer to Exit 30 were more ideal
- Possible Autonomous Vehicle Pilot Program in 2022

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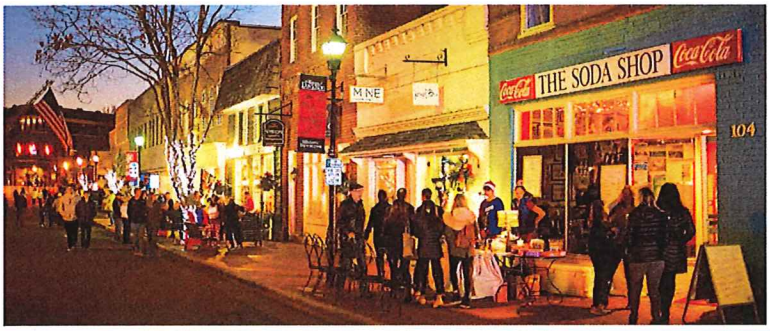
Davidson

Autonomous Vehicle Pilot

- Davidson, CATS, and NCDOT are currently evaluating the feasibility of Autonomous Shuttle Pilot in Davidson
- The proposed route would connect 77x express route with the Circles@30, Downtown Davidson, and Davidson College.
- If deemed feasible the service would start mid 2022 and run for 6 months



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Cornelius

Overview

- Existing park and ride has 355 spaces
- Future parking needs assessed
  - ➢ Future needs indicate possibly up to 440 would be needed
- Median width limits ability to directly connect into the park and ride lot
- Concepts are being developed to more directly and efficiently get to the lot
- Possible future station at Westmoreland, linked to interchange construction

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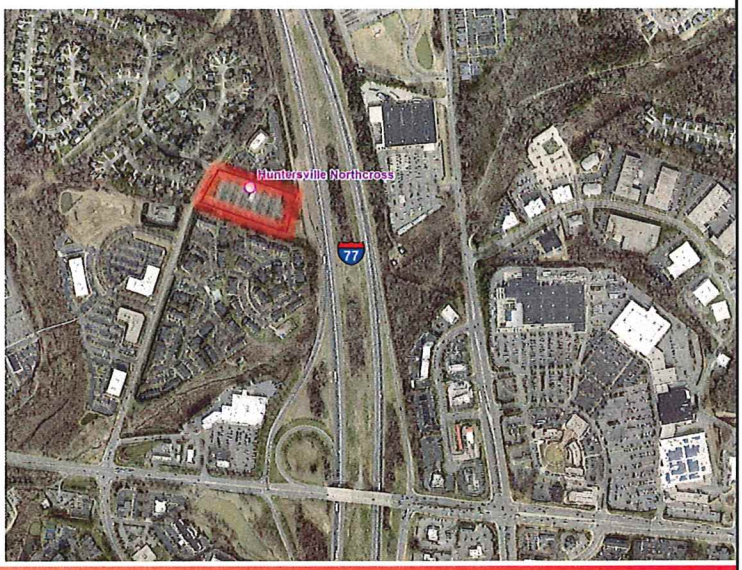
Huntersville Northcross

Overview

- Existing park and ride has 326 spaces
- Future parking needs assessed
  - Future needs indicate possibly up to 430 would be needed
- Concepts are being developed to more directly and efficiently get to the lot – potential direct connect
- Future road network connections required to enhance access to lot - i.e. Northcross Dr Extension



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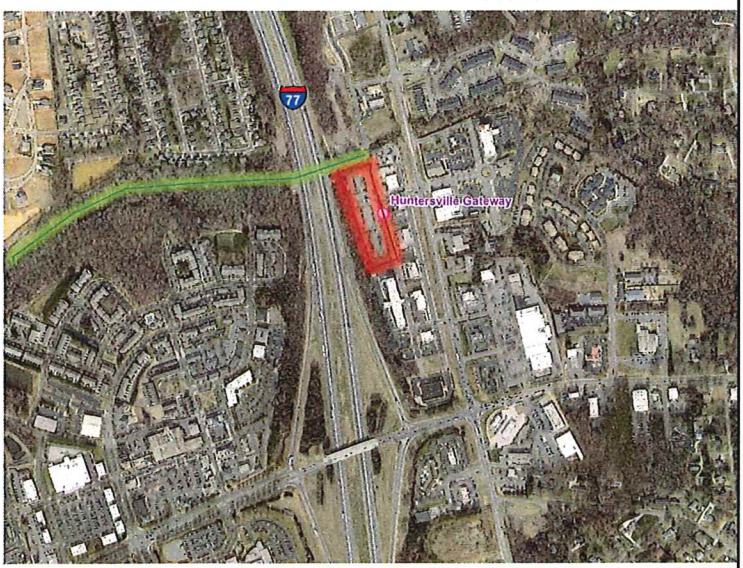
Huntersville Gateway

Overview

- Existing park and ride has 311 spaces
- Future parking needs assessed
  - Future needs indicate possibly up to 640 would be needed
- Concepts are being developed to more directly and efficiently get to the lot – potential direct connect
- Identified possible lot expansion
- Multi-agency collaboration to construct Torrence Creek Greenway project



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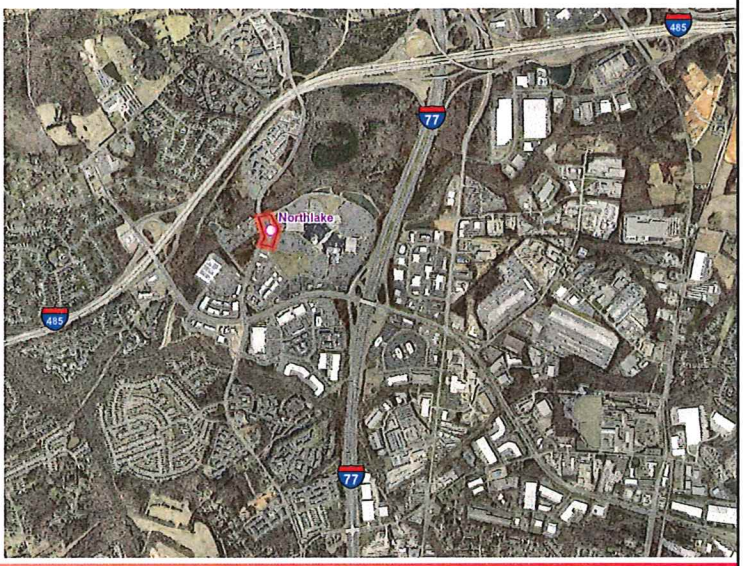
Charlotte

Overview

- Existing park and ride has 200 spaces
- Future parking needs assessed
  - Future needs indicate possibly up to 480 would be needed
- Concepts are being developed to more directly and efficiently get to the lot – potential direct connect
- Site is a great strategic opportunity for the city, and could be a potential Joint Development site depending on land acquisition



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Hambright Park and Ride

- 500+ Parking Spaces
- 6 Bus bays
- Direct Connect access
- Mobility Hub
- Ridesharing, Carpools, Vanpools
- Driver comfort station

- Status: Funded
- Cost: $12.6 Million
- Property Transfer Process and Environmental Review complete
- Survey and Design beginning shortly

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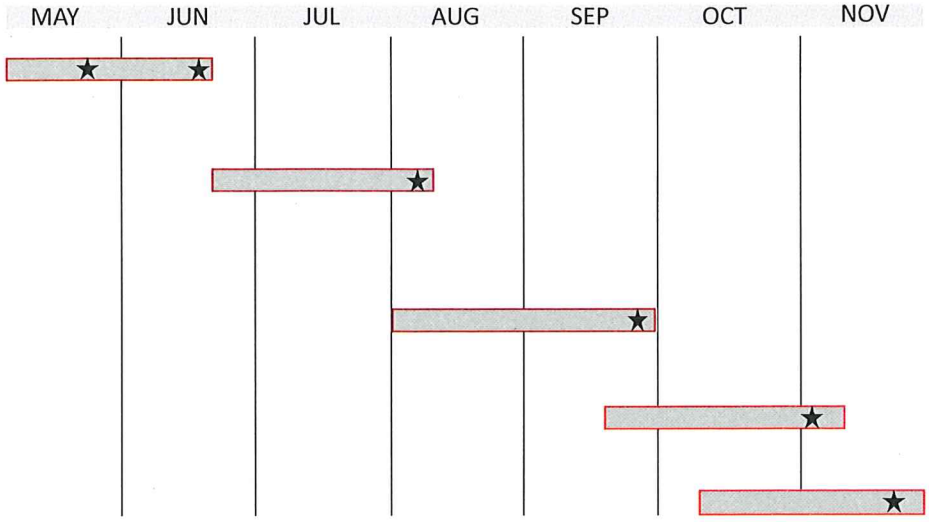
Project Schedule



Kick-Off Meeting

- Project overview
- Issues/Opportunities

Meeting Series #1

- Review results of evaluation and potential sites
- Review results of travel market analysis

Meeting Series #2

- Review high-level conceptual designs for each location

Meeting Series #3

- Review revised design concepts and identify preferred option

Public Information Meeting

- November 18th

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Implementation Strategy

Previous LYNX System Update Study

- Establishment of conceptual program of projects
- Development of initial illustrative station site framework concepts

Current BRT Phase of Study

- Detailed evaluation of locations for stations and direct connects
- Coordination with NCDOT & I-77 Mobility Partners
- Community input on possible site locations
- Site selection for park-and-rides

Future Implementation

- Design and environmental study
- Detailed operations planning for BRT service
- Implementation Strategy -submit program for STI/FTA funding
- Project construction

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MAP-21 Eligible Small Starts Projects

Total project cost is less than $300 million and total Small Starts funding sought is less than $100 million

- New fixed guideway systems (light rail, commuter rail etc.)
- Extension to existing system
- Fixed guideway BRT system
- Corridor-based BRT system

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MAP-21 defines Bus Rapid Transit in two categories:

CORRIDOR-BASED BRT

- Separated right-of-way not required for entirety of corridor
- Makes a substantial investment in a specific corridor
- Defined stations
- Traffic signal priority for buses
- Short headway times
- Bidirectional services for a substantial part of weekdays

FIXED GUIDEWAY BRT

- Majority of project operates in a separated right-of-way dedicated for public transportation use
- Makes a substantial investment in a single route within a defined corridor
- Defined stations
- Traffic signal priority for buses
- Short headway times
- Bidirectional services for a substantial part of weekdays

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MetroRAPID BRT IMPROVEMENT PROGRAM

Next Steps

What's Next?

- November 1-5 – Technical Advisory Team Meetings Series 3
- November 18 – Virtual Public Information Meeting
- December/January – Town Board Presentations
- Spring 2022 MTC Update

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METROPOLITAN TRANSIT COMMISSION
INFORMATION ITEM
INFORMATION SUMMARY

SUBJECT: Envision My Ride: Bus Priority Study Update **DATE: October 27, 2021**

1.0 **PURPOSE/SCOPE**: CATS will provide an update on the ongoing Envision My Ride Bus Priority Study. The presentation will focus on the initial corridor level priority treatment recommendations, potential mobility hub locations, and upcoming public engagement. CATS will also provide information on the upcoming microtransit / on demand and Charlotte Transportation Center/Charlotte Gateway Station bus operational analysis tasks.

BACKGROUND/JUSTIFICATION: As a continuation of the Envision My Ride (EMR) effort, CATS began a Bus Priority study in 2021. This study will develop speed and reliability recommendations for the proposed EMR high frequency network. This analysis will include an evaluation of the following: queue jumpers, signal priority/preemption, dedicated bus lanes and related bus priority treatments. Additional deliverables will include proposed system wide bus stop amenity improvements, mobility hub locations, and recommendations to improve the customer experience.

2.0 **PROCUREMENT BACKGROUND**: N/A

3.0 **POLICY IMPACT**: N/A

4.0 **ECONOMIC IMPACT**: N/A

5.0 **ALTERNATIVES**: N/A

6.0 **RECOMMENDATION**: N/A

7.0 **ATTACHMENT(S)**: N/A

SUBMITTED AND RECOMMENDED BY:

John M. Lewis, Jr.
Chief Executive Officer, Charlotte Area Transit System
Director of Public Transit, City of Charlotte

Metropolitan Transit Commission (MTC)
Bus Priority Study Update

October 27, 2021

CITY OF CHARLOTTE

www.RIDETRANSIT.org

1

ENVISION MY RIDE: BUS PRIORITY STUDY

Building a Better Bus Network

Envision My Ride established the foundation

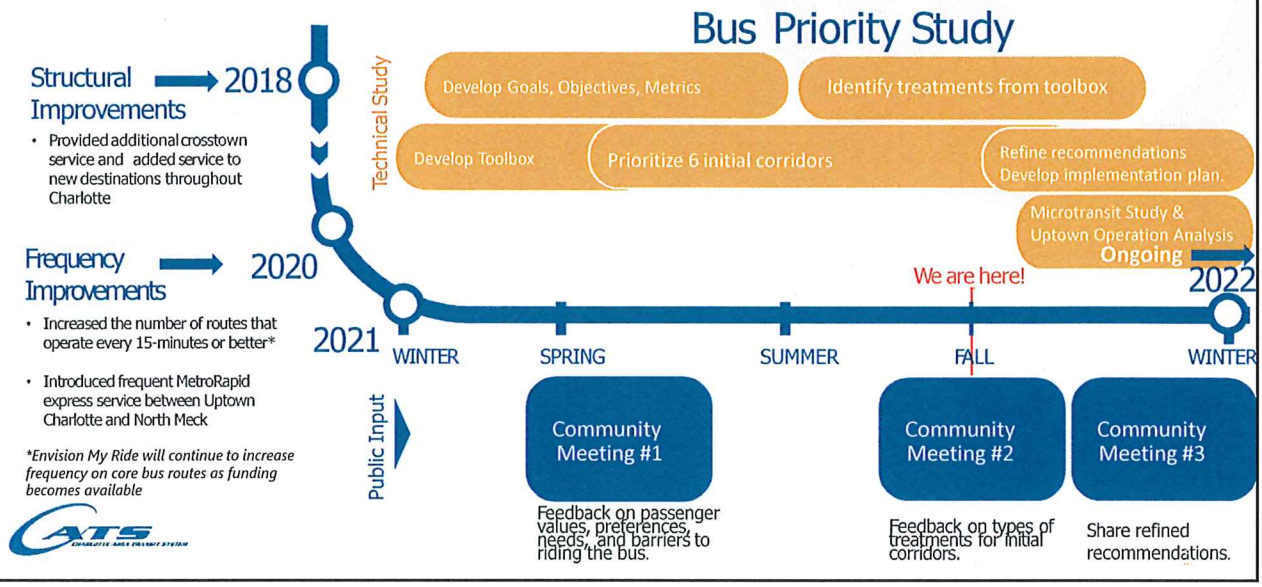
- Create more frequent bus service
- Create more direct bus service
- Develop more crosstown connections
- Greater connectivity between different routes

The Bus Priority Study will recommend capital improvements that

- Makes bus trips faster, more reliable, and more enjoyable.
- Improves connections to other transit lines, bikeshare, park & rides, and other mobility options
- Improves the bus stop system-wide. Includes mobility hubs and greater amenity types

2

PROJECT SCHEDULE



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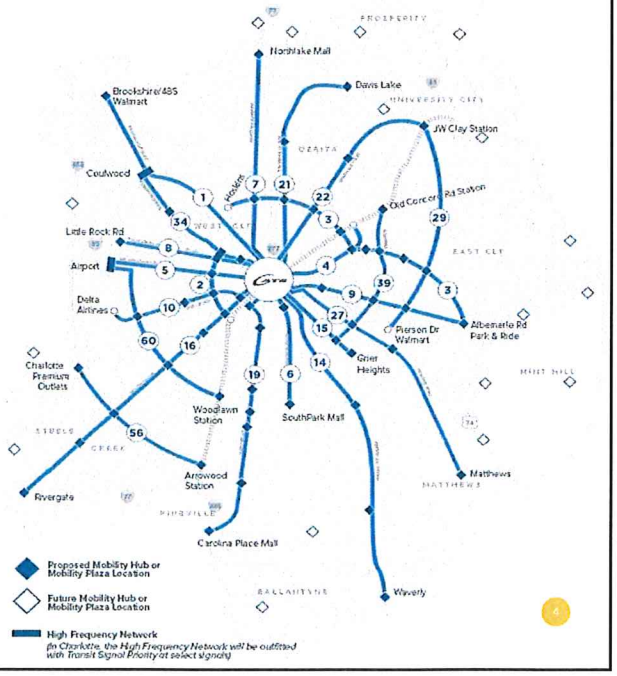
TASKS UNDERWAY

- Systemwide Improvements that include:
  - Bus stop improvements
  - Enhanced bus frequency
  - Transit signal priority at all intersections managed by CDOT
- Priority treatment recommendations along focused corridors
- Improving hub to hub connectivity
  - Crosstown routes
  - On-demand and micro-transit zones
- Uptown operational strategy



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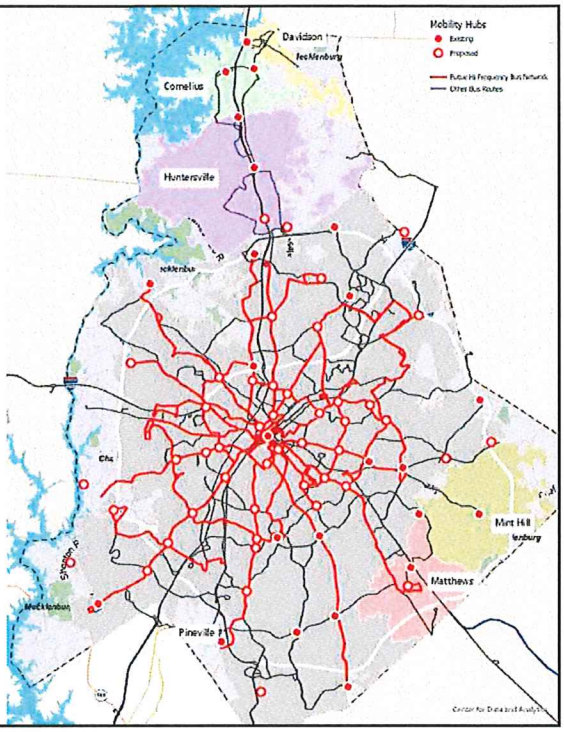
MOBILITY HUB SELECTION CRITERIA

- Team performed initial work to select locations for hub types
  - 71 locations identified
  - Will refine this list and determine hub types as the project advances
- Proposed scoring system developed to determine amenity type for all stops systemwide



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IMPROVEMENT MATRIX

Stop Amenity	Standard Stop Type A	Standard Stop Type B	Standard Stop Type C	Enhanced Stop (Level 1)	Mobility Plaza (Level 2)	Mobility Center (Level 3)
5'x10' or 5'x15' Shelter			●	●	●	●
Bench		●	●	●	●	●
Simme seats		●	●			
Trash Receptor	●	●	●	●	●	●
Bicycle Rack			●	●	●	●
Scooter & E-Bike Storage					●	●
Bus Stop Marker: Signpost with Sign	●	●	●			
Bus Stop Marker: Pylon				●	●	●
Sidewalk Wayfinding				●	●	
Boarding & Alighting Area	●	●	●	●	●	●
Crosswalk Improvements			●	●	●	●[1]
Operator Restroom						●
Bus & Sidewalk Bulb				●	●	
Bus Bay						●
Offboard Fare Payment						●
Public Wifi[2]				●	●	●

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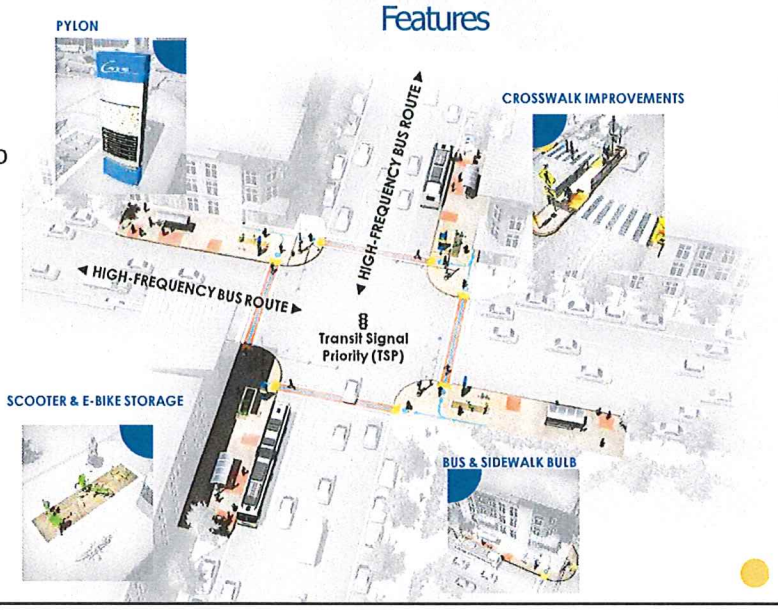
MOBILITY PLAZAS

Mobility Plazas are where two key routes intersect:

- Includes enhanced shelters
- Far side stops recommended to fully take advantage of signal priority



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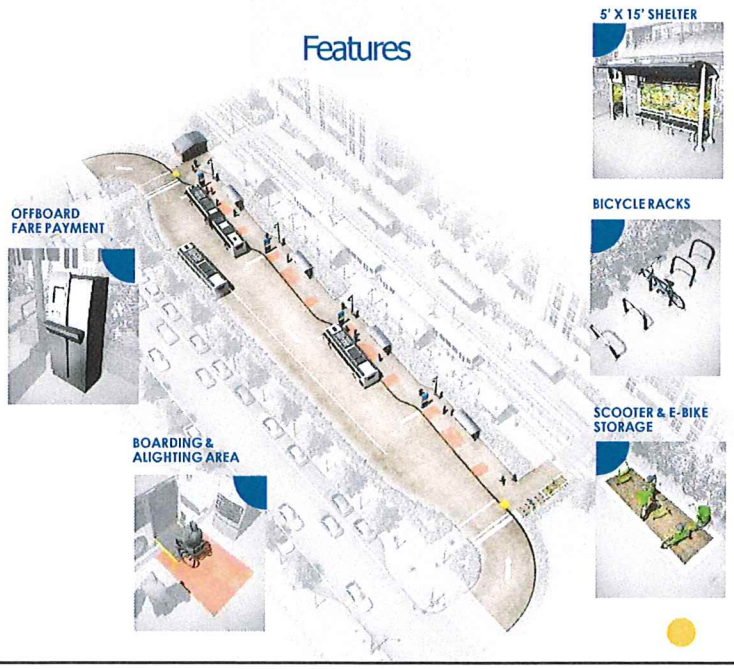
MOBILITY CENTER

Mobility Centers improve transfer connections between buses and other modes of travel:

- Linking shared mobility options
  - Transit
  - Rideshare
  - Bike / Scooter
  - Pedestrian
  - On-demand / microtransit
- Helps support first / last mile connectivity



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CURRENT AMENITY SCORING SYSTEM

- Existing MTC standards for amenities are mainly ridership based
  - 25 or more boardings for shelter
  - Currently have just over 100 stops with >25 boardings but no amenity
- Other factors include:
  - Wait time
  - Transfers
  - High number of seniors of individuals with disabilities

Amenities: Placement of amenities should be based upon factors that consider equity in distribution throughout the service area, and factors that consider the benefit to the user and site-related constraints. Greater consideration should be given to stops on key bus routes due to a generally higher level of demand. Stop locations that have boardings greater than 25 people per day will be given priority.

Other factors that should be considered in determining the priority for amenities at stops are:

- Lengthy wait times between buses (beyond 30 minutes),
- High percentage of transfer passengers (more than 25 percent), and
- High percentage of seniors or individuals with disabilities using the stop (more than 25 percent).

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PROPOSED AMENITY SCORING SYSTEM

Evaluation Category	Evaluation Criteria	Scoring
Ridership	Boardings	1 point per average weekday daily boarding
	Bus Priority Corridor	50 points if on a Bus Priority Corridor
Wait Time	Transfers	5 points if stop is a transfer location between two Bus Priority Corridors or LYNX Light Rail
	Frequencies	5 points if stop is outside the Bus Priority Corridor network (longer wait times could indicate a higher need for shelter or seating)
Rider Profile	Equity Populations	10 points if stop is in predominantly minority and/or low-income area (as defined by CATS)
	Reliant Populations	10 points if stop is in area with higher than average elderly or persons with disability
Activity Generator	Human Service Facility	15 points if one or more of the following existing or planned facilities, are within 1,320 feet of the stop: Medical facility, hospital, dialysis clinic, social security office, or County service center
	Activity Destinations	5 points if one or more of the following existing or planned facilities, are within 1,320 feet of the stop: Public library, public school, recreation center, senior center, or supermarket/pharmacy
	Major Employer	5 points if within 1,320 feet of the stop: is an existing or planned job center with more than 50 jobs
	Operator Relief	10 points if the stop is assigned as an official relief/layover point

Minimum Score by Typology

Standard Stop
- Type A: ---
- Type B: 10
- Type C: 25

Enhanced Stop Pair
- 50

Mobility Plaza
- 55

Mobility Center
- 65

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ONGOING BUS STOP IMPROVEMENT INITIATIVES

- Corridors of Opportunity
  - West Blvd and Remount Rd Mobility Plaza
- Areas of Persistent Poverty Grant
  - Application submitted for mobility hub improvements at:
    - Ashley and Freedom
    - West and Clanton

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CORRIDORS FOR FOCUSED TREATMENTS

Team evaluated 22 future hi-frequency bus routes for focused treatments

Looked at:

1. Enhancing access to opportunities
2. Connecting the priority bus network to all other modes
3. Providing equitable transit access for under served and vulnerable populations modes
4. Offering resilient travel options

Goals	Objective	Phase I	Phase II
1. *Enhance Access to Opportunities*	*Provide access to existing employment, education/childcare, fresh foods, healthcare/pharmacies, and recreational/community facilities*	✓	✓
	Provide access to future growth areas		✓
2. *Connect the Priority Bus Network with all Modes*	Provide connections to trails and all-ages-and-abilities bike facilities		✓
	Provide convenient bus-to-bus connections	✓	✓
	Provide convenient bus-to-rail connections	✓	✓
3. *Deliver Convenient, Frequent, and Reliable Service*	*Provide reliable and frequent transit service*	✓	✓
	Offer convenient, efficient, and direct transit trips		✓
4. *Provide Equitable Transit Access for Underserved and Vulnerable Populations*	*Provide transit service to areas with affordable housing options*		✓
	Provide transit service to populations with low jobs to skills match		✓
	Provide better transit service to populations that may rely on transit as their primary means of transportation		✓
	Provide better transit service to minority populations	✓	✓
5. *Offer Resilient Travel Options**	*Offer transit service that is flexible and can transform to new and emerging technologies*		

*Note: *Goal 5 will be used in subsequent phases of the BPS to assess the criteria specific to bus priority treatments.*

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HIGH RANKING ROUTES

- Routes were given a composite score based on how they fared in each category
- Initial corridors selected for focused treatments:
  - **Route 9: Central Avenue**
  - **Route 7: Beatties Ford**
  - **Route 2: Ashley/Scaleybark**
- Remaining three routes will be finalized in Fall 2021 before being advanced to the next stage
- Recommendations will be used to inform treatment types that can be applied along other corridors

Radial Routes	Rank
9 Central Ave	1
7 Beatties Ford Rd	2
16 S. Tryon	3
34 Freedom Dr	4
27 Monroe Rd	5
8 Tuckaseegee Rd	6
21 Statesville Rd	7
5 Sprinter	8
10 West Blvd	9
1 Mt. Holly	10

Crosstown Routes	Rank
2 Ashley Rd	1
3 The Plaza	2
29 UNCC/JW Clay	3
39 Eastway Dr	4

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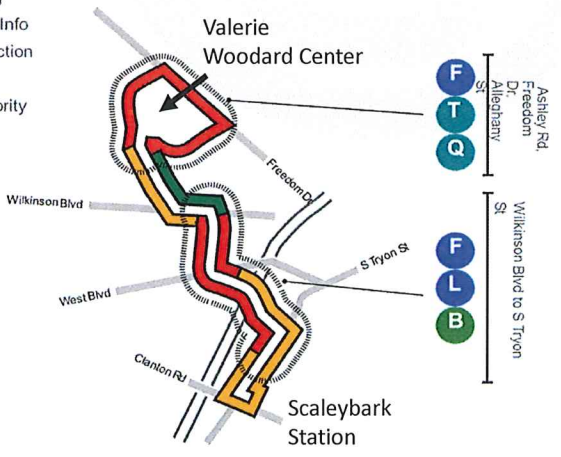
EXAMPLE OF PRIORITY TREATMENT

Treatment Toolbox

- **Q** **Queue jumps** allow buses to bypass traffic at congested intersections.
- **T** **Transit signal priority** allows buses to get a green light at traffic signals
- **D** **Dedicated bus lanes** reduce re-entry delay by removing need for bus to merge back into traffic
- **B** **Bus bulb-outs** reduce re-entry delay be removing the need for bus to merge back into traffic
- **L** **Level boarding** makes the bus door line up with the curb for faster and easier boarding
- **F** **Faster fare collection** reduces dwell delay by collecting fares off-board or at all doors

Route 2 —Ashley / Scaleybark Crosstown

- All-Door Boarding
- Real-Time Arrival Info
- Faster Fare Collection
- Level boarding
- Transit Signal Priority
- Bus bulb-outs
- Queue Jumps



- Looked at dwell and signal delay along corridor
- **Red** indicates segments with higher delay
- Presenting findings to the public for comment before refinements are made

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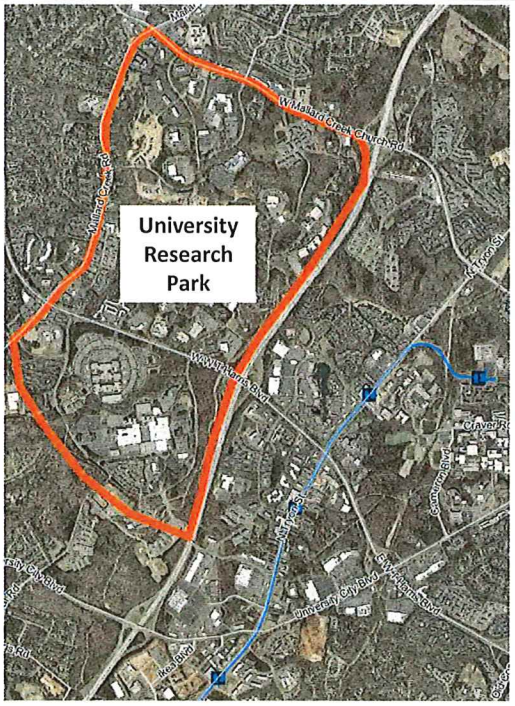
MICROTRANSIT FEASIBILITY TASK

- Develop first / last mile solution between mobility hubs and key destinations
- Analysis of current operations to determine where microtransit can support existing service
- Identify candidate service areas
  - Includes focus on **University Research Park** opportunities
- Anticipated to begin in January 2022



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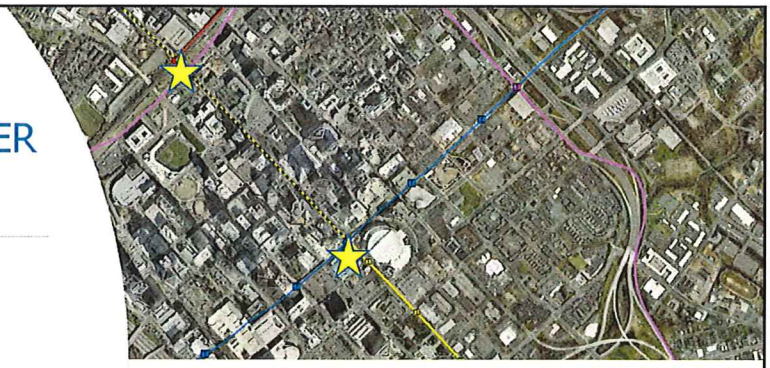
UPTOWN TRANSIT CENTER OPERATIONAL ANALYSIS

Focus on service recommendations at the Charlotte Transportation Center (CTC) and future Gateway Station



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FALL OUTREACH

- Virtual Meetings:
  - Thursday 10/28 @ 12:00pm
  - Future evening meeting: TBD
- In person Open House @ The Charlotte Transportation Center:
  - Tuesday 11/2 from 11:00am-1:00pm
  - Thursday 11/4 from 4:00pm-6:00pm
- Partner Meetings
  - Corridors of Opportunity
- Neighborhood Groups

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METROPOLITAN TRANSIT COMMISSION
ACTION ITEM
STAFF SUMMARY

SUBJECT: Fare Equity Analysis City LYNX Gold Line **DATE: October 27, 2021**

1.0 **PURPOSE/SCOPE**: Presentation on the process, observations, comments and conclusions of the fare equity analysis for the CityLYNX Gold Line.

BACKGROUND: As a recipient of federal funding CATS/City of Charlotte must conduct a fare equity analysis whenever a change in fares is due to occur. The CityLYNX Gold Line Connector previously operated within the streetcar corridor as a free service, and the current proposal is to begin a fare service in January 2022. The purpose of the analysis is to find and address any negative impacts that disproportionately affect minority and low-income residents and riders, as a result of the change to fares on the streetcar.

Public Outreach: The following notifications and outreach were performed.

- CATS website: Ridetransit.org (English and Spanish) July 14,2021
- Electronic Rider Alert (Notify Me): July 14, Sept 13, 16, & 21, 2021
- Charlotte Observer & Rock Hill Herald: July 16 & Aug 16, 2021
- Charlotte Post: July 15 & August 19, 2021
- LaNoticia: July 14 & 21, 2021
- Gaston Gazette July 15 & Aug 19, 2021

2.0 **POLICY IMPACT**: Per CATS Policy CivR01 “Major Service Adjustments Title VI Compliance” an equity analysis was conducted due to the beginning of fare service on the streetcar line.

3.0 **ECONOMIC IMPACT**: The analysis found that the economic burden of the fare increase on passengers along the corridor does not affect minorities or low-income passengers in a manner disproportionate to other populations.

4.0 **RECOMMENDATIONS**: The MTC should approve the City LYNX Gold Line Fare Equity Analysis as the project expands services and amenities mainly operating to the benefit of all riders.

5.0 **ATTACHMENT**: City Lynx Gold Line Title VI Fare Equity Analysis

SUBMITTED AND RECOMMENDED BY:

John M. Lewis, Jr.
Chief Executive Officer, Charlotte Area Transit System
Director of Public Transit, City of Charlotte

Charlotte Area Transit System

Fare Equity Analysis

October 27, 2021

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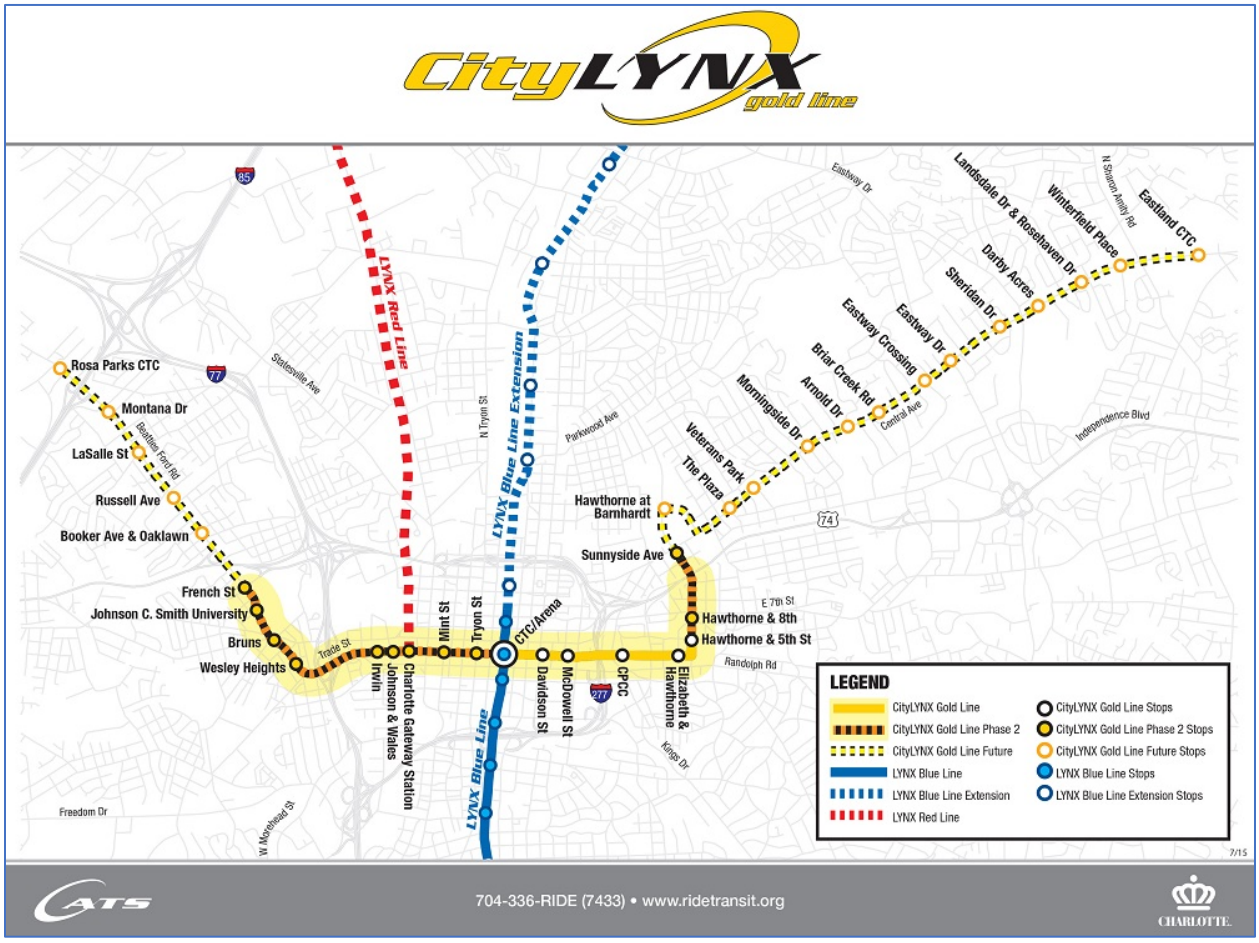
1.0 Introduction

The purpose of this document is to analyze the fare structure of the C.A.T.S. CityLYNX Gold Line Streetcar service. The CityLYNX Gold Line Connector, a supplemental bus service that previously operated within the completed Phase 1 of the streetcar corridor before the expansion, was a free service. The current proposal is to begin a regular fare service on the CityLYNX Gold Line after revenue service begins. The fare service is estimated to begin in the month of October 2021.

2.0 Service Area/ Hours/ Frequency

The CityLYNX Gold Line is a 4.0-mile streetcar system traveling through Center City Charlotte (see **Map 1** below), serving 17 stops that connect the Elizabeth area in east Charlotte to the Historic West End. The service will operate with a vehicle frequency of 20 minutes and connect students and employees from Central Piedmont Community College (CPCC), Novant Presbyterian Medical Center, Johnson C. Smith University, and Johnson & Wales University along its corridor. The hours of operation will be 5:00 a.m. to 2:00 a.m. Monday through Sunday.

Map 1: Map of CityLYNX Gold Line Service Area



3.0 Definitions

The following are the definitions used within the analysis to define groups and incomes. C.A.T.S. conducted a systemwide customer survey in 2016 which identified demographic groups using the system.

Poverty Level: Poverty rate by block group as defined by the U.S Census American Community Survey (ACS) 5-year estimates, as defined by the U.S. Department of Health and Human Services Poverty Guidelines.

Low-income: C.A.T.S. used household income of $11,770 and below to represent low-income households. C.A.T.S. used the demographics percentage for household of $11.770 or less obtained from C.A.T.S. Fall 2016 Customer Survey conducted across the entire C.A.T.S. system. Ridership amounts represented in the analysis is derived from this demographic percentage applied to C.A.T.S. unlinked passengers.

Minority: C.A.T.S. used all non-white categories as minorities. C.A.T.S. used the demographics percentage for race obtained from C.A.T.S. Fall 2016 On-Board Customer Survey conducted across the entire C.A.T.S. system. Ridership amounts represented in the analysis is derived from the demographic percentage applied to C.A.T.S. unlinked passengers.

System wide: C.A.T.S. used the statistics obtained from the C.A.T.S. Fall 2016 On-Board Customer Survey conducted across the entire C.A.T.S. system. Ridership amounts represented in the analysis is derived from the statistics applied to C.A.T.S. unlinked passenger trips.

Service Area: The areas along C.A.T.S. bus and rail routes including a ¾ mile buffer

C.A.T.S. Customer Satisfaction Survey: C.A.T.S. periodically conducts an annual on-board survey of customers obtaining their perceptions and attitudes toward public transit and management of the system along with ratings on 40 customer service elements. Also obtained, is demographic and usage information including fare media. The results from the most current survey were used in developing this analysis. The survey conducted in the Fall 2016 was representative of C.A.T.S. ridership across all service types, and day and week parts with information accurate at the 95% confidence interval with a sampling error of plus or minus 3.9%.

4.0 Mecklenburg County Demographics

Mecklenburg County has the largest population of any county in the State of North Carolina. **Table 1** below shows that Mecklenburg is home to over 1,110,000 residents. Non-white minorities make up over 54% of the residents in Mecklenburg County. This is a higher percentage of minority residents than in the State of North Carolina, in which non-white minorities make up approximately 37% of the population.

Table 1: US Census Mecklenburg County Demographics

	Mecklenburg County, NC	North Carolina
Population estimates, July 1, 2019, (V2019)	**1,110,356**	**10,488,084**
PEOPLE		
Race and Hispanic Origin		
White alone	57.30%	70.60%
Black or African American alone	33.00%	22.20%
American Indian and Alaska Native alone	0.80%	1.60%
Asian alone	6.30%	3.20%
Native Hawaiian and Other Pacific Islander alone	0.10%	0.10%
Two or More Races	2.50%	2.30%
Hispanic or Latino	13.80%	9.80%
White alone, not Hispanic or Latino	46.10%	62.60%

US Census 2019

The median income levels of Mecklenburg County are approximately $12k per year higher than the median incomes within the State of North Carolina. As a result, the percentage of persons defined at or below the poverty level in Mecklenburg County is approximately 3% lower than the poverty level found within the State of North Carolina as shown in **Table 2** below.

Table 2: US Census Mecklenburg County Income

	Mecklenburg County, NC	North Carolina
PEOPLE		
Income & Poverty		
Median household income (in 2019 dollars), 2015-2019	$66,641	$54,602
Per capita income in past 12 months (in 2019 dollars), 2015-2019	$38,819	$30,783
Persons in poverty, percent	10.30%	13.60%

US Census 2019

5.0 Charlotte Area Transit System Demographics

The non-white minority resident population living within the C.A.T.S. service area is shown below in **Table 3**, and they comprise 49% of the population within the service area. However, when the CityLYNX Gold Line corridor was analyzed, it was discovered that 30.5% of the households along the corridor were minority households, which is 18.5% lower than the overall C.A.T.S. service area minority household representation.

The number of low-income households within the C.A.T.S. service area is 15.93%, which is a higher percentage than the number of households living in poverty in both the State of North Carolina and Mecklenburg County. The number of low-income households within the CityLYNX Gold Line Streetcar corridor is 12.1%, which is higher than the number of households living in poverty in Mecklenburg County. But, it is 3.83% lower than the low-income household percentage for the overall C.A.T.S. service area.

Table 3: C.A.T.S. Service Area Demographics

	Minority Population	Low-income Population
C.A.T.S. Service Area	49.02%	15.93%
CityLYNX Gold Line Streetcar	30.5%	12.1%

US Census 2019 Note: The service area minority and low-income population percentages were approved by the Federal Transit Administration (FTA) as part of C.A.T.S.' 2021-2023 Title VI program. Those percentage thresholds are set for all equity analyses until the 2024 program update.

The CityLYNX Gold Line Streetcar travels through Center City Charlotte and the corridor is largely a business district. However, the people who may be attracted to the service would come from businesses and schools adjacent to the corridor. There are three (3) colleges and universities along the streetcar corridor and the demographics of the student populations are shown below in **Table 4**. The majority of the student populations at all of the schools are minority students. The minority students' makeup is as high as 98%, as seen at Johnson C Smith, to 66% for CPCC Central campus.

Table 4: Colleges and Universities Demographics CityLYNX Gold Line

	Minority	Non-Minority
Johnson C. Smith	98.20%	1.80%
Johnson & Wales	68.73%	31.27%
CPCC (Central Campus)	66.20%	33.80%

6.0 C.A.T.S. Fare Structure

C.A.T.S. intends to implement regular passenger fares on the CityLYNX Gold Line beginning in October 2021. The fares below in **Table 5**, show that the regular Adult One-Way passenger fare is $2.20, a Weekly Pass is $30.80, and a Monthly Pass is $88.00. Further, transfers between C.A.T.S. Local services, which are the majority of services offered by C.A.T.S., are FREE except when transferring between Local and Express services, which will require passengers to pay a transfer fare due to the higher cost of the service. The cost of transfers is shown below in **Table 6**.

Table 5: C.A.T.S. Regular Passenger Fare

	Adult	Senior/Medicare	ADA-Disabled	K-12
Local Bus & LYNX				
One-Way	$2.20	$1.10	$1.10	$1.10
Weekly Unlimited Rides	$30.80	$30.80	$30.80	$30.80
Monthly Unlimited Rides	$88.00	$44.00	$44.00	
10-Ride	$22.00	$9.35	$9.35	

Table 6: C.A.T.S. Transfer Fare

Service Transfer	Transfer Price
Local/LYNX to Express	$0.80
Local/LYNX to Express Plus	$2.20
Express to Express Plus	$1.40
From Community Shuttle to Local/LYNX	$1.30
From Community Shuttle to Express	$2.15
From Community Shuttle to Express Plus	$3.50
From Community Shuttle to Community Shuttle	FREE

7.0 Public Involvement

As prescribed by C.A.T.S.' fare policy **C.A.T.S. MC01** (see **Attachment 1**), the public is notified of a proposed fare increase and given the opportunity to provide input in several forms including a public hearing before C.A.T.S.' policy board, the Metropolitan Transit Commission (MTC). The public is required to receive notification at least 30 days prior to the public hearing of the proposed fare increase and at least 90 days before any proposed fare increases are to take effect. Excerpt from the policy:

> *Proposed fare increases will be published for public review and comment no less than 90 days before the proposed changes are to take place. A public hearing/meeting will be held to hear and consider comments no less than 30 days after the published notice. The public hearing for fare increases shall follow the MTC Rules of Procedures section 7(b) "Procedures for Public Hearings."*

A summary of the comments and effects of changes in regard to energy conservation, economy, environmental and social impacts will be provided to the Transit Services Advisory Committee and the Metropolitan Transit Commission. Notice of the final changes will be posted on C.A.T.S. revenue operated vehicles, through other communication avenues, at the Charlotte Transportation Center, and at other C.A.T.S. transit centers and stations.

On July 14, 2021, C.A.T.S. initiated communications to riders and the public regarding the proposed fare increase scheduled to occur, along with the opportunity to speak at a public hearing before the MTC on August 25, 2021.

C.A.T.S. used several communications methods to inform the customers and public including:

1. Rider Alerts:
    a. Display printed material on revenue vehicles in English and Spanish with options for other translations upon request
    b. Electronic notification using Notify Me e-subscriptions on ridetransit.org with the option for on-line translation of information via Google Translate
2. Press Releases
3. Newspaper Ads
4. C.A.T.S. Website – ridetransit.org
5. Social Media

In addition to these communications, C.A.T.S. presented the proposed fare increase to TSAC at their regularly scheduled meeting on August 12, 2021. TSAC is scheduled to vote on the proposed fare increase at the September 9, 2021, meeting.

8.0 Customer and Financial Analysis

Households living along the CityLYNX Gold Line, were determined to be 12.3% low-income as shown in **Table 3.** Students attending colleges and universities along the corridor are assumed to be low-income as well, due to many attending the colleges and universities full-time. Minorities make up 30.5% of the households living along the corridor and make up the majority of students traveling along the corridor. As shown in **Table 7**, the passenger groups which pay for C.A.T.S. services using a full cash fare the highest percentage of time, are African American, Hispanic, Native American, and Multiracial passengers. The full cash customers do not receive the benefit of discounts offered through multiride passes such as Monthly passes.

Table 7: Fare Usage by Racial Demographics

	Full Cash	Monthly (All types)
African American	46%	14%
White	26%	21%
Hispanic/Latino	42%	4%
Asian	29%	14%
Native American	65%	24%
Multiracial	46%	12%
Other	31%	38%

Estimates of anticipated ridership for the first year of full revenue service have been difficult to estimate due to the COVID-19 pandemic. *The models used are based upon the last full calendar year of service in 2019 before COVID-19 under normal operating conditions*. Elasticity, which is a passenger's sensitivity to change, is adjusted to -0.5 which is up from the range used in previous models -0.19 to -0.34, anticipating that riders will be more sensitive to price adjustments in the wake of COVID-19. To reflect ridership impacts of COVID-19, the model was recalibrated with the ridership and revenue reallocated across modes Community, Local Bus, Rail, Express, and Express Plus based on average ridership change between April 2020 and January 2021. Ridership for Rail services decreased 71.7%, as shown in **Table 8**.

Table 8: COVID-19 Ridership Changes Across Modes

Mode of Service	COVID-19 Ridership Change
Community Bus	-53.30%
Local Bus	-51.60%
Rail	**-71.70%**
Express	-95.90%
Regional Express	-90.10%

When attempting to determine the financial impact of the new service, anticipated revenue for the service is analyzed, along with the anticipated expenses. Ridership under normal operating conditions was expected to generate $465,000 at a fare of $2.20 for 1,291,500 passengers. If COVID-19 conditions continue, we can expect a continued 71% decrease in Rail ridership.

Table 9: Full Year of Gold Line Service at Local Fare of $2.20

Annual Impacts	**Normal Operating Conditions** (Full Service & Ridership)	COVID-19 Conditions
Ridership Change	1,291,500 trips	365,495 trips
Revenue Change	$465,000	$131,995

The majority of passengers traveling by Rail, tend to travel using multi-ride fare products. Monthly passes and transfers are the most frequently used forms of payment for Rail travel. As shown in **Table 10**, these forms of payment make up 60% of the payment types for Rail travel.

Table 10: Allocation of Fare Products

Fare Product	% of Riders
Rail One-Ride	15.38%
Rail Reduced Fare One-Ride	3.64%
Rail Transfer	12.76%
Rail Reduced Fare Transfer	3.02%
Day Pass	3.02%
Weekly Pass	6.96%
Monthly Pass	45.14%
Monthly Pass Reduced Fare	9.52%

9.0 New Service

The CityLYNX Gold Line will expand the previous CityLYNX Connector service from 1.5 miles to 4.0 miles. The service will expand the number of stops, hours, frequency, vehicle capacity, and amenities, while connecting to over 70 C.A.T.S. routes. The CityLYNX Gold Line service will have an expense of $4.4 million which is included in the C.A.T.S. budget of $186 million.

10.0 Modification Recommendation

C.A.T.S. has analyzed the proposed fare change and determined that, when compared to the residents of the entire system, U.S Census data shows 49% minority representation C.A.T.S. systemwide, and 30.5% within the CityLYNX Gold Line corridor. Further analysis determined that low-income representation throughout the C.A.T.S. system of 15.9%, with the low-income population along the CityLYNX Gold Line corridor making up 12.1% of households, which is below the number of low-income percentage systemwide. Therefore, C.A.T.S. determined that the economic burden on passengers along the corridor when compared to passengers systemwide does not affect minorities or low-income in a manner disproportionate to other populations. Furthermore, 60% of rail passengers were shown utilizing a multi-ride form of payment, which reduced the economic burden of travel.

When reviewing businesses and schools along the proposed corridor, C.A.T.S. determined that there were three colleges and universities along the corridor. These schools have minority populations

ranging from 66% to 98%. C.A.T.S. bus service was provided to all of these schools previously, which would have allowed to students and employees to utilize all C.A.T.S. services with the payment of fare. Because the previous CityLYNX Connector traveled only to the Charlotte Transportation Center for transfers to other C.A.T.S. services, the assumption can be made that the same transfer process will occur while utilizing the CityLYNX Gold Line Streetcar which travels more frequently.

Possible recommendations would be to explore the use of student passes to reduce the burden on minority student populations at the colleges and universities along the corridor using the streetcar during their school day to travel – lunch, bill payments, government services, library, and shopping – Uptown and along the rest of the service area of the CityLYNX Gold Line Streetcar service.

11.0 Impact of No Service

An elimination of services along the CityLYNX Gold Line corridor would have a negative impact on all riders within the C.A.T.S. system. The CityLYNX Gold Line Streetcar service will connect all C.A.T.S. passengers with a service that connects to a major healthcare center and three colleges and universities. Minority students make up the largest population at these schools, and low-income customers, which many students would consider themselves, would experience a significant negative impact due to reduction in frequency, or the elimination of some service areas and/or connection to routes.

All CityLYNX Gold Line Streetcar vehicles will be level boarding, which provides significant advantages to mobility-challenged passengers with ADA mobility needs. Elimination of CityLYNX Gold Line Streetcar services would negatively impact these passengers, which would include a portion of minority and/or low-income patrons with disabilities, and require them to utilize other modes of transportation such Special Transportation Service.

Overall, the elimination of the CityLYNX service will negatively impact students, and the C.A.T.S. system as a whole, by eliminating a vital artery within transit network.

12.0 C.A.T.S. Existing Assistance to Minority and Low-Income Patrons

The analysis indicates at the media-type level – passes, cash fares, etc. – that the proposed fare change has been applied equitably across all fare types and services. But, from a global perspective, with 49.02% of C.A.T.S. systemwide residents being minority and 15.9% being low-income, there is an inherent burden with any fare increase on those patrons, though not disproportionately burdened. When surveyed, greater proportions of these groups ride on, and show transit-dependency, for C.A.T.S. services than reside* in the service area.

To mitigate the negative impacts at a global level, C.A.T.S. already provides several avenues to mitigate the effect with discounted fare media or through inherent features within the pass media to provide usage discounts. These include:

- Weekly, Monthly and One-Day passes have the unlimited ride feature allowing for lower price per ride based on customer usage

- One-Way Discount Pass rates
    - Seniors 50% (1/2 price) passes
    - K-12 50% (1/2 price) passes
    - ADA-fixed route 50% (1/2 price) passes
    - Children 5 or younger ride free
- Volume discounts
    - 10% off for businesses participating in the Employee Transportation Coordinator (ETC) program.
    - 25% for non-profits where 80% of their clients are at or below the poverty level

To further mitigate negative impacts on minority and/or low income patrons, C.A.T.S. will continue to track the usage of passes and will execute marketing campaigns to educate customers/organizations about the benefits of the Weekly and other unlimited-use passes and the ETC and Non-profit program participating organizations. These campaigns will target specific low-income and minority customer markets. Bi-lingual Ads – English and Spanish – will be placed in the following areas:

1. Hanging riders alert on all buses and trains
2. Interior ad cards inside all buses and trains (rider report)
3. Shelters in the transit center and uptown shelters where 80% of customers transfer
4. Exterior ads on the front of buses
5. C.A.T.S. webpage
6. Transportation fairs
7. Poster ads adjacent to C.A.T.S. main pass sales outlet at the transit center

*U.S Census

Public Comments

Colin Stifler provided comment on CITY LYNX Gold Line Fare Proposal during September 2021 MTC meeting.

- Comments will be updated after minutes are approved by MTC at October 2021 meeting.

MTC Meeting Minutes

CATS 2021 Title VI
Fare Change Equity Analysis
City LYNX Gold Line

Presented to:
Metropolitan Transit Commission

Arlanda Rouse
CATS Civil Rights Officer

October 27, 2021

1

Expansion of Services

The CityLYNX Gold Line will expand the previous CityLYNX Connector service from 1.5 miles to 4.0 miles. The service will expand the number of stops, hours, frequency, vehicle capacity, and amenities, while connecting to over 70 CATS routes

2

Title VI Statute

No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance

Definitions

Disparate Impact / Disproportionate Burden

When minorities or low-income individuals are disproportionally represented within an area proposed for a major service or fare change

Low income

CATS used household income of $11,770 and below to represent low-income households. CATS used the demographics percentage for household of $11.770 or less obtained from CATS Fall 2016 Customer Survey conducted across the entire CATS system. Ridership amounts represented in the analysis is derived from this demographic percentage applied to CATS unlinked passengers

Minority

Non-White population by race census tract defined by US Census

Service Area Demographics

	Minority Population	Low-income Population
CATS Service Area	49.02%	15.93%
City LYNX Gold Line	**30.5%**	**12.1%**
US Census 2019		

5

Fare Table

Regular Passenger Fares

	Adult	Senior/Medicare	ADA-Disabled	K-12
Local Bus & LYNX				
One-Way	$2.20	$1.10	$1.10	$1.10
Weekly Unlimited Rides	$30.80	$30.80	$30.80	$30.80
Monthly Unlimited Rides	$88.00	$44.00	$44.00	
10-Ride	$22.00	$9.35	$9.35	

Transfer Fares

Service Transfer	Transfer Price
Local/LYNX to Express	$0.80
Local/LYNX to Express Plus	$2.20
Express to Express Plus	$1.40
From Community Shuttle to Local/LYNX	$1.30
From Community Shuttle to Express	$2.15
From Community Shuttle to Express Plus	$3.50
From Community Shuttle to Community Shuttle	FREE

6

System Fare Usage

	Full Cash	Monthly (All types)
African American	46%	14%
White	26%	21%
Hispanic/Latino	42%	4%
Asian	29%	14%
Native American	65%	24%
Multiracial	46%	12%
Other	31%	38%

CITY OF CHARLOTTE www.RIDETRANSIT.org

7

Fare Usage Type

Fare Product	% of Riders
Rail One-Ride	15.38%
Rail Reduced Fare One-Ride	3.64%
Rail Transfer	12.76%
Rail Reduced Fare Transfer	3.02%
Day Pass	3.02%
Weekly Pass	6.96%
Monthly Pass	**45.14%**
Monthly Pass Reduced Fare	9.52%

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8

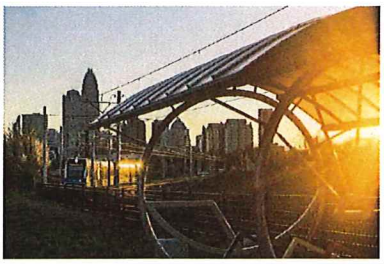
Disproportion Burden

- No disproportionate economic burden when compared to CATS systemwide totals
- 60% of rail passengers pay using multi ride form of payment
- CityLYNX corridor the number of low-income households was 12.1% compared to low-income systemwide at 15.9%

9

Disparate Impact

- No disparate impact was found when compared to CATS systemwide totals
- CityLYNX corridor minority population is 30.5% compared to 49% minorities systemwide



10

Disparate Impact

- ✓Conduct an analysis
- ✓Gather public input
- ✓Present to governing body
- ✓Propose mitigation efforts
- ✓Staff recommendation
- Evaluate the effectiveness of the efforts

11

Recommendation

	Minority	Non-Minority
Johnson C. Smith	98.20%	1.80%
Johnson & Wales	68.73%	31.27%
CPCC (Central Campus)	66.20%	33.80%

- Three colleges and universities are located along the corridor have minority populations of between 66% to 98%
- Explore the use of student passes to reduce the burden on minority student populations which may travel during the school day

12

Next steps

- Final version of the document updated to include the MTC minutes from October 27, 2021 meeting.

13

Conclusion

14

METROPOLITAN TRANSIT COMMISSION
ACTION ITEM
STAFF SUMMARY

SUBJECT: CONNECT Beyond Regional Work Plan **DATE: October 27, 2021**

1.0 **PURPOSE/SCOPE**: CATS will present to the MTC a regional work plan developed from the CONNECT Beyond Regional Transit Study Recommendations. Additionally, detail will be provided on the study background, public/stakeholder engagement, and opportunities to maintain the momentum of this regional mobility initiative.

2.0 **BACKGROUND/JUSTIFICATION**: CONNECT Beyond is a two-state, 12 county regional mobility initiative conducted by the Centralina Regional Council and the Metropolitan Transportation Commission. With the collaboration of municipal and county governments, regional planning organizations, and various transit agencies, the aim is to create a long-term strategic regional transit plan that will include a transit vision along with implementation strategies that project partners can use to guide their individual planning efforts and capital investment projects.

Project Goals

- Define a single, coordinated transit vision for the project study area that includes multiple transit modes.
- Identify high-capacity transit corridors that build upon and complement the Charlotte Area Transit System 2030 Plan and other regional and local transportation plans.
- Strategize on key topics and methods for regional coordination that cross modes of transit as well as organizational and geographic boundaries.
- Develop action-oriented implementation strategies that support:
    - Improved mobility and access.
    - Effective, regionally coordinated transit investments.
    - Coordinated and resilient transit operations to meet the needs of a growing and changing region.
    - Environmentally sustainable investments and policies.
    - Advancement of equitable and community-driven improvements

3.0 **PROCUREMENT BACKGROUND**: N/A

4.0 **POLICY IMPACT**: N/A

5.0 **ECONOMIC IMPACT**: N/A

6.0 **ALTERNATIVES**: N/A

7.0 **RECOMMENDATION**: Staff recommends the following MTC actions:

(A) Endorse the recommendations of the Connect Beyond Regional Transit Plan to develop an integrated regional mobility system that allows residents and visitors to travel seamlessly throughout the region using high-quality public transportation services.

(B) Appoint a MTC representative to participate in the Connect Beyond Funding and Partnership Working Group to explore potential regional partnership structures and coordinate a cross-county funding strategy.

(C) Direct staff to support the regional work plan through the following activities:

1. Provide technical support to neighboring counties and municipalities in the development of high-capacity transit corridors that will connect or serve CATS existing and future facilities, services, and assets.
2. Participate in a Regional Fare Study and Regional TDM Study
3. Partner with North Carolina Department of Transportation as well as neighboring counties and municipalities in the development of future passenger rail to the Charlotte Gateway Station.
4. Continue the partnership with the Centralina Regional Council to advance the CONNECT Beyond Study Recommendations of the Five Mobility Moves.

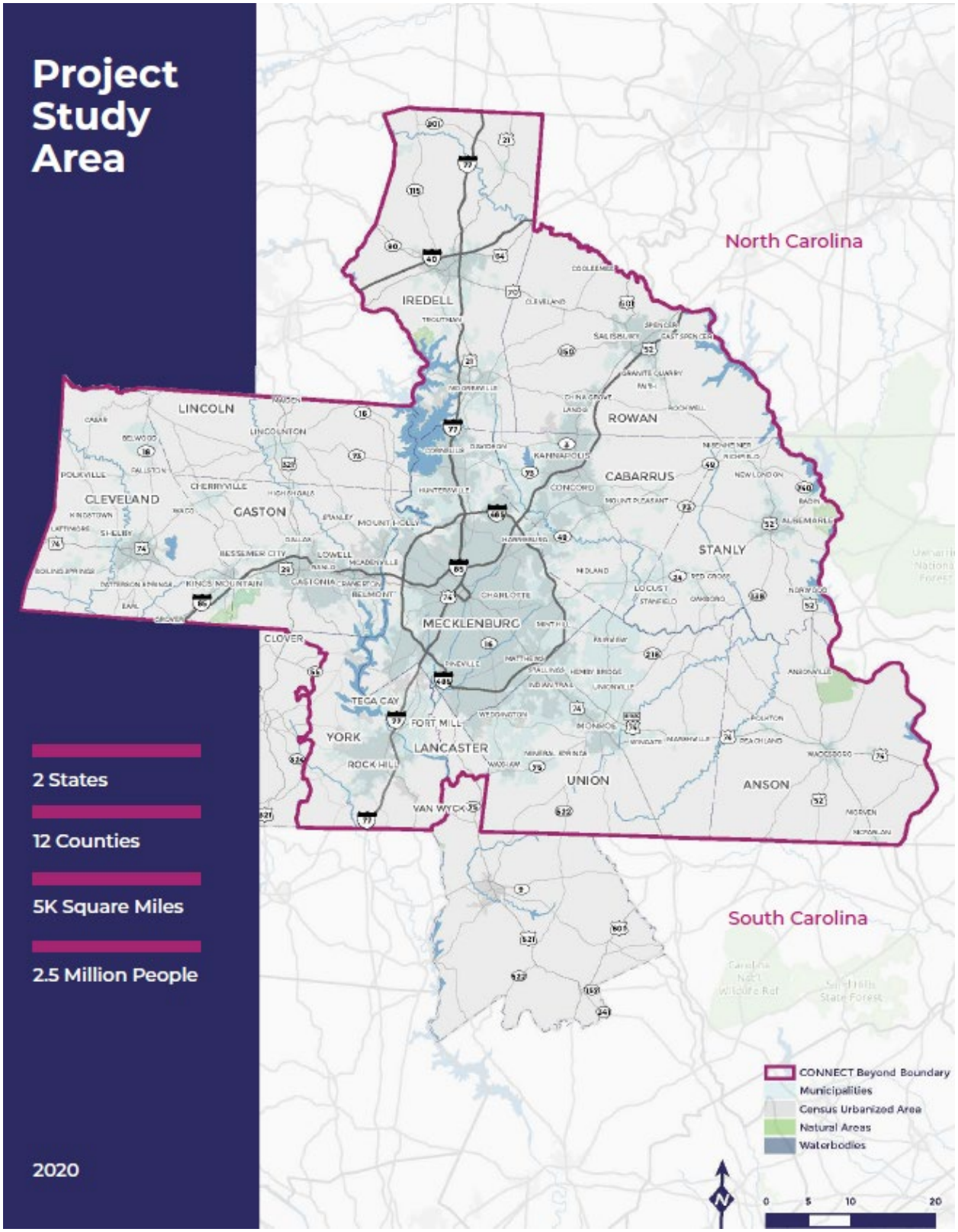
8.0 **ATTACHMENT(S)**:

(A) RESOLUTION No. 2021-03

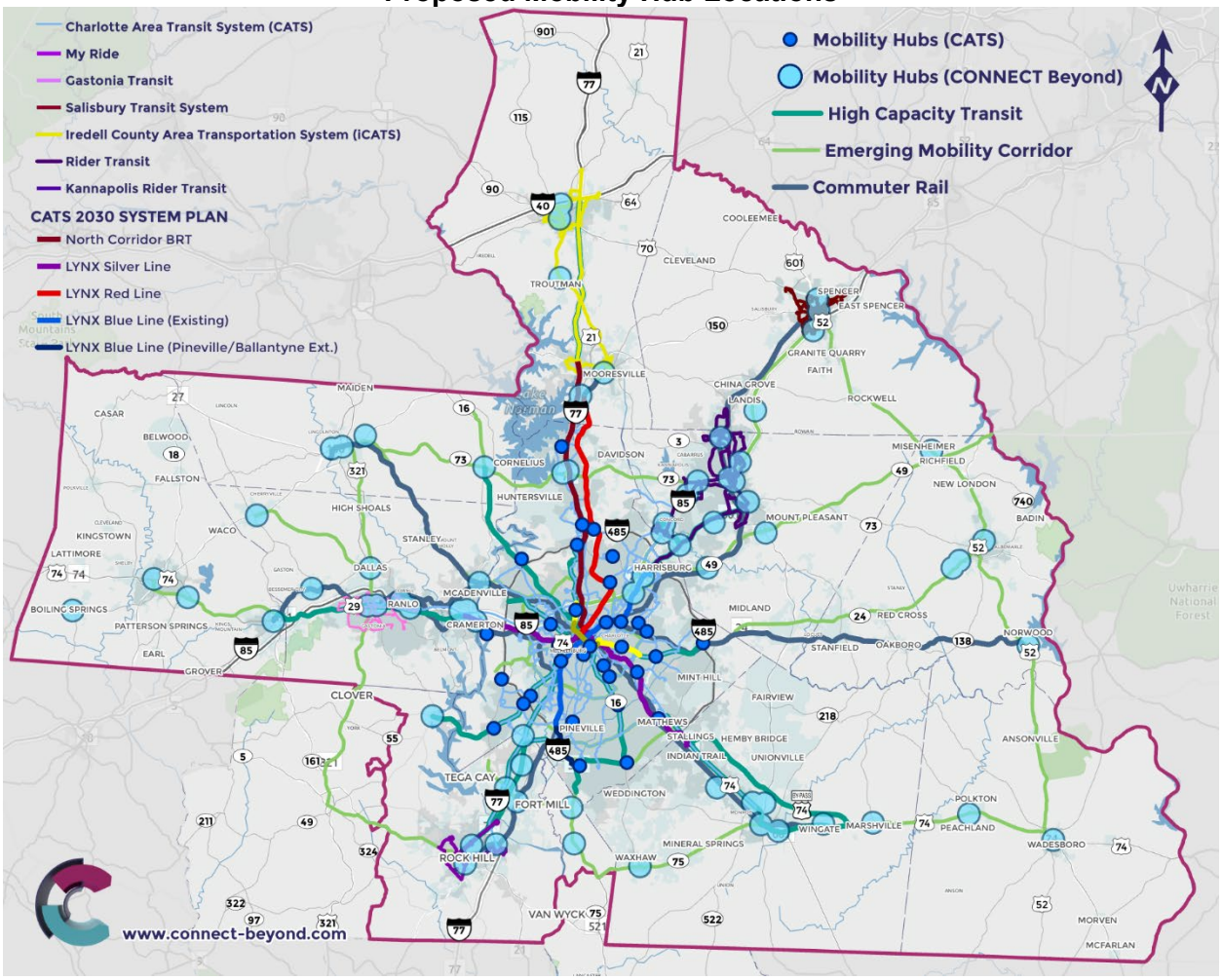
SUBMITTED AND RECOMMENDED BY:

John M. Lewis, Jr.
Chief Executive Officer, Charlotte Area Transit System
Director of Public Transit, City of Charlotte

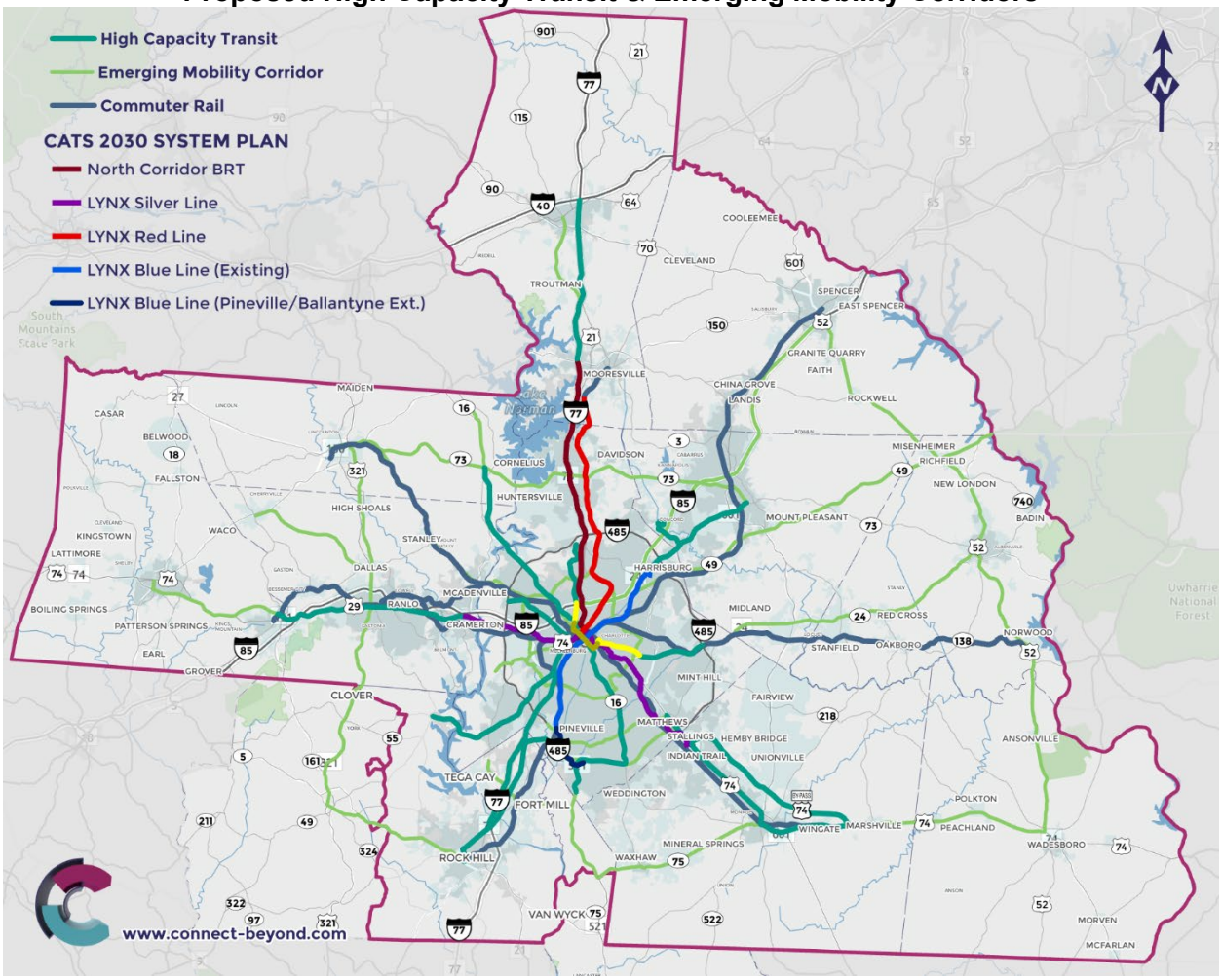
Attachment A
CONNECT Beyond Study Area Map



Attachment B
Proposed Mobility Hub Locations



Attachment C
Proposed High Capacity Transit & Emerging Mobility Corridors



RESOLUTION
No. 2021-03

ADOPTION OF CONNECT BEYOND RECOMENDATIONS

A motion was made by **Commissioner Leigh Altman** (**Mecklenburg County Board of County Commissioners**) and seconded by **Mayor Woody Washam** (**Town of Cornelius**) for the adoption of the following resolution and upon being put to a vote was duly adopted.

WHEREAS the Metropolitan Transit Commission was formed by Mecklenburg County and its municipalities located herein to review and recommend long-range public transportation plans as well as to guide the planning, financing and implementation of an accountable regional transit system, and

WHEREAS the Metropolitan Transit Commission adopted its 2030 Transit Corridor System Plan in 2002, which was amended in 2006, 2016, 2019, and 2021 to develop primary transportation corridors, linking our area's key centers of economic activity, and

WHEREAS in 2017 CATS staff entered into a partnership with Centralina Regional Council to conduct a Regional Transit Engagement Series to better understand the scale, scope, and potential for a regional transit study from stakeholders in the North Carolina Counties of Cleveland, Gaston, Lincoln, Iredell, Cabarrus, Rowan, Stanly, Anson, Union, and Mecklenburg as well as the South Carolina Counties of York and Lancaster, and

WHEREAS in 2018 CATS and Centralina Regional Council held a Regional Transit Summit where a broad consensus emerged that our region should begin the development of a coordinated regional transit plan, and

WHEREAS in 2019 the MTC, through the LYNX System Update Staff Recommendations, directed CATS staff to continue the development of a regional transit plan, and

WHEREAS in 2020 CATS, Centralina Regional Council, Charlotte Regional Transportation Planning Organization, Cabarrus Rowan Metropolitan Planning Organization, Gaston Cleveland Lincoln Metropolitan Planning Organization, Rocky River Rural Planning Organization, Rock Hill-Fort Mill Area Transportation Study, North Carolina Department of Transportation, and South Carolina Department of Transportation agreed to jointly fund and manage a regional mobility initiative called CONNECT Beyond, and

WHEREAS over 18 months beginning in March 2020 the CONNECT Beyond project team collaborated with municipal and county governments, regional planning organizations as well as transit agencies, and residents in the 12-county study area to develop recommendations in an open, fair, comprehensive, and impartial manner, and

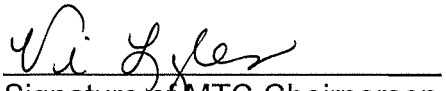
WHEREAS in July 2021 the CONNECT Beyond project team presented to the public the study recommendations to be advanced as Five Mobility Moves; Create Mobility Friendly Places, Expand Mobility Choices, Strengthen Rural to Urban Connections, Build a Better Bus Network, and Invest in Strategic Mobility Corridors, and

WHEREAS CATS staff presented the CONNECT Beyond study results and recommendations at the September 22, 2021 Metropolitan Transit Commission meeting and

NOW, THEREFORE, be it resolved that:

1. The Metropolitan Transit Commission endorses the recommendations of the Connect Beyond Regional Transit Plan to develop an integrated regional mobility system that allows residents and visitors to travel seamlessly throughout the region using high-quality public transportation services.
2. The MTC will appoint a MTC representative to participate in the Connect Beyond Funding and Partnership Working Group to explore potential regional partnership structures and coordinate a cross-county funding strategy.
3. CATS staff is directed to support the regional work plan through the following activities:
   - 3.1. Provide technical support to neighboring counties and municipalities in the development of high-capacity transit corridors that will connect or serve CATS existing and future facilities, services, and assets.
   - 3.2. Participate in a Regional Fare Study and Regional TDM Study
   - 3.3. Partner with North Carolina Department of Transportation as well as neighboring counties and municipalities in the development of future passenger rail to the Charlotte Gateway Station.
   - 3.4. Continue the partnership with the Centralina Regional Council to advance the CONNECT Beyond Study Recommendations of the Five Mobility Moves.

I, **Mayor Vi Lyles** (**MTC Chairwoman**) do hereby certify that the above is a true and correct copy of an excerpt from the minutes of a meeting of the Metropolitan Transit Commission, duly held on October 27, 2021.



Signature of MTC Chairperson

CONNECT Beyond
A Regional Mobility Initiative

October 27, 2021
Metropolitan Transit Commission

Recommended Regional Work Plan

1

Bobby Compton
Commissioner At Large, Town of Mooresville
Chair, Centralina Regional Council

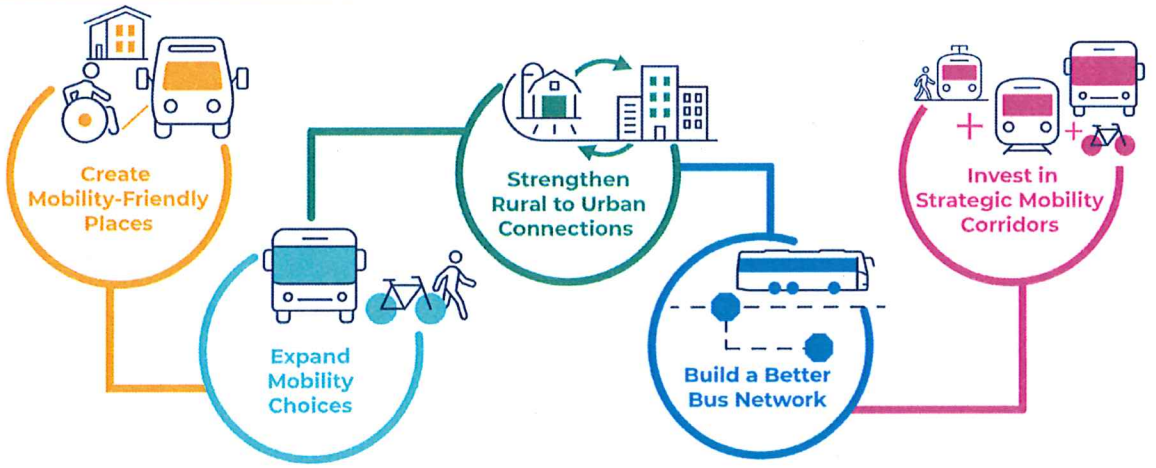
Michelle Nance
Regional Planning Director
Centralina Regional Council

2

3

Mobility Moves

Create | Expand | Strengthen | Build | Invest



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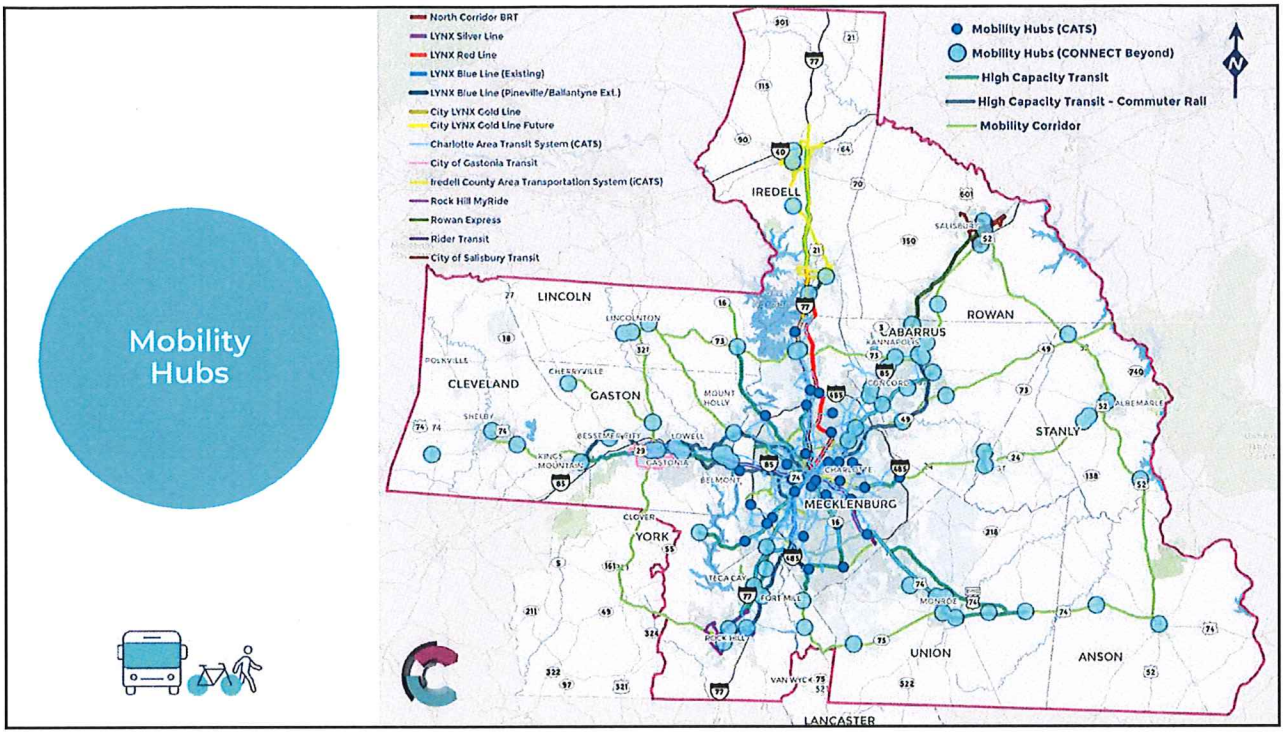
Mobility Hubs
North Corridor BRT
LYNX Silver Line
LYNX Red Line
LYNX Blue Line (Existing)
LYNX Blue Line (Pineville/Ballantyne Ext.)
City LYNX Gold Line
City LYNX Gold Line Future
Charlotte Area Transit System (CATS)
City of Gastonia Transit
Iredell County Area Transportation System (iCATS)
Rock Hill MyRide
Rowan Express
Rider Transit
City of Salisbury Transit
Mobility Hubs (CATS)
Mobility Hubs (CONNECT Beyond)
High Capacity Transit
High Capacity Transit - Commuter Rail
Mobility Corridor
IREDELL
LINCOLN
CLEVELAND
GASTON
CABARRUS
ROWAN
STANLY
MECKLENBURG
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UNION
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LANCASTER

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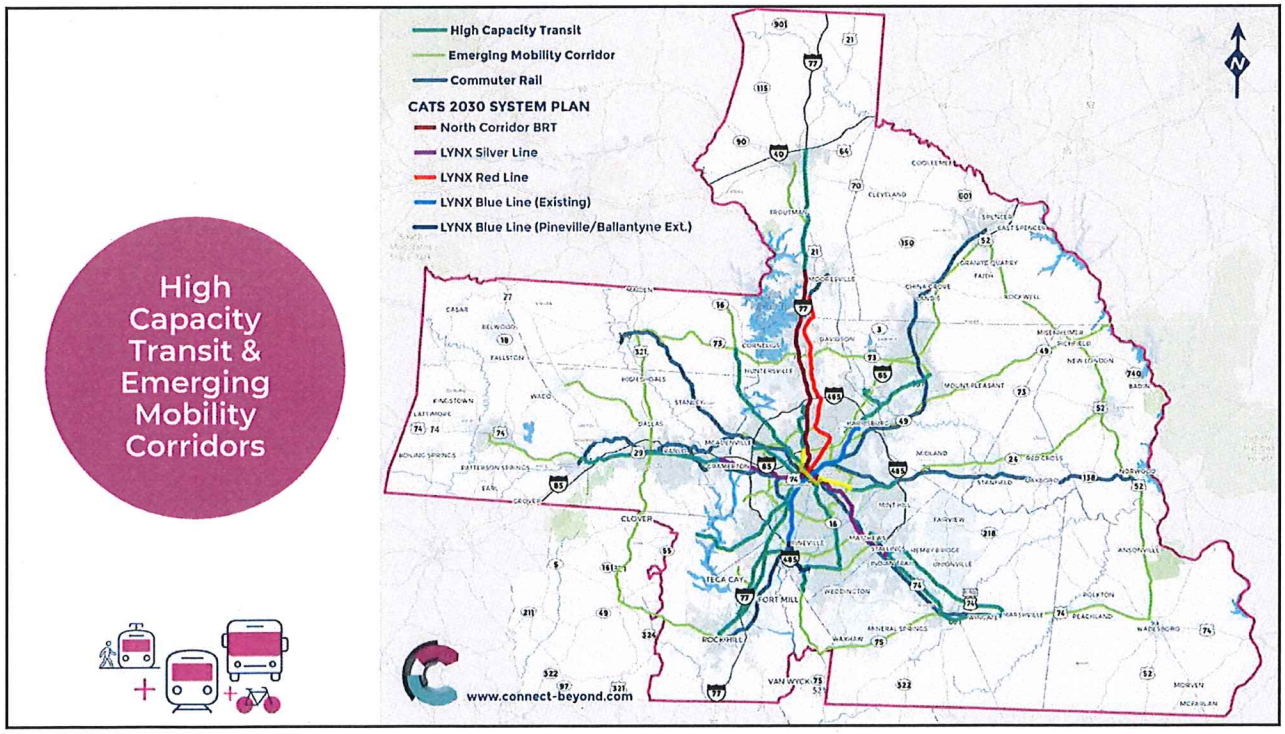
High Capacity Transit & Emerging Mobility Corridors
High Capacity Transit
Emerging Mobility Corridor
Commuter Rail
CATS 2030 SYSTEM PLAN
North Corridor BRT
LYNX Silver Line
LYNX Red Line
LYNX Blue Line (Existing)
LYNX Blue Line (Pineville/Ballantyne Ext.)
www.connect-beyond.com

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Plan Endorsement

- **Centralina Board of Delegates Endorsement**
  (October 13, 2021)
- **Metropolitan Transit Commission Action Item**
  (October 27, 2021)
- **Region's MPOs/RPO Acceptance**
  (November – December 2021)

Contact Us

contact@connect-beyond.com

7

CONNECT Beyond Regional Work Plan Action

NOW, THEREFORE, be it resolved that:

1. The Metropolitan Transit Commission endorses the recommendations of the Connect Beyond Regional Transit Plan to develop an integrated regional mobility system that allows residents and visitors to travel seamlessly throughout the region using high-quality public transportation services.
2. The MTC will appoint a MTC representative to participate in the Connect Beyond Funding and Partnership Working Group to explore potential regional partnership structures and coordinate a cross-county funding strategy.
3. CATS staff is directed to support the regional work plan through the following activities:
   - 3.1 Provide technical support to neighboring counties and municipalities in the development of high capacity transit corridors that will connect or serve CATS existing and future facilities, services, and assets.
   - 3.2 Participate in a Regional Fare Study and Regional TDM Study
   - 3.3 Partner with North Carolina Department of Transportation as well as neighboring counties and municipalities in the development of future passenger rail to the Charlotte Gateway Station.
   - 3.4 Continue the partnership with the Centralina Regional Council to advance the CONNECT Beyond Study Recommendations of the Five Mobility Moves.

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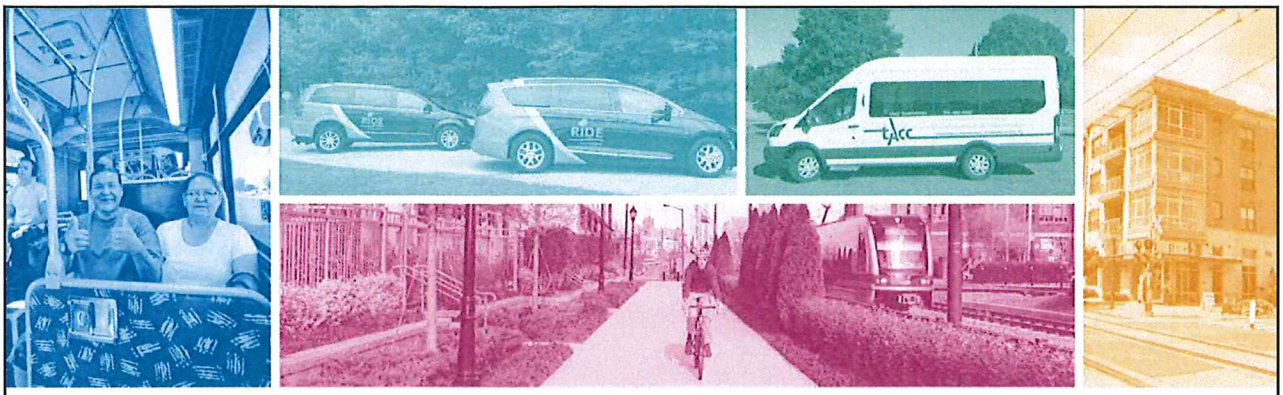


CONNECT Beyond

A Regional Mobility Initiative

Thank you

9

METROPOLITAN TRANSIT COMMISSION
ACTION ITEM
STAFF SUMMARY

SUBJECT: MTC Approval of ASP Revision 1 **DATE: October 27, 2021**

1.0 **PURPOSE/SCOPE**: Provide the MTC a revised CATS Agency Safety Plan (ASP) and request approval of Revision 1.

2.0 **BACKGROUND**:

- On June 3, 2020, NCDOT provided final approval of the CATS Agency Safety Plan (ASP) as required by Federal Regulation 49 CFR Part 673.
- Section 4.2 of the ASP requires MTC review and approval of all significant revisions
  - Revisions are in red text for ease of review

3.0 **PROCUREMENT BACKGROUND**: N/A

4.0 **POLICY IMPACT**: CATS policies to be updated to meet agency SMS/ASP requirements and NCDOT State Safety Oversight Program Standards (SSOPS)

5.0 **ECONOMIC IMPACT**: N/A

6.0 **ALTERNATIVES**: N/A

7.0 **RECOMMENDATIONS**: Review and Approve ASP Revision 1.

8.0 **ATTACHMENT**: ASP Revision 1.

SUBMITTED AND RECOMMENDED BY:

John M. Lewis, Jr.
Chief Executive Officer, Charlotte Area Transit System
Director of Public Transit, City of Charlotte

CHARLOTTE.

October 20, 2021

Timothy P. Abbott
Safety Enforcement and Oversight Manager
SSO Program Manager
Rail Division
North Carolina Department of Transportation
1553 Mail Service Center
Raleigh, NC 27699-1566

Dear Mr. Abbott,

As the Chief Executive Officer of the Charlotte Area Transit System (CATS), please find attached the CATS Final Draft Agency Safety Plan (ASP), Rev. 1. As the Accountable Executive, I certify the revised ASP is in compliance per 49 CFR 673 and the NCDOT State Safety Oversight Program Standard (SSOPS).

Per NCDOT's SSOPS, Section 4.3.4: RTA Annual Review and Update of ASP, CATS is requesting NCDOT's review and "conditional approval" of our revised ASP, with the exception of CATS' oversight Board (MTC) review and approval.

Thank you for your assistance with the development of our revised ASP and we look forward to continuing to work with NCDOT as we implement our ASP, Rev. 1 and Safety Management System (SMS) principles.

Sincerely,

John Lewis

John M. Lewis, Jr.
Chief Executive Officer, Charlotte Area Transit System
Director of Public Transit, City of Charlotte

cc: Jahmal Pullen, Engineering Coordination and Safety Manager
David Moskowitz, CATS General Manager of Safety and Security
Chad Hagans, CATS Interim Rail Safety Manager
Ed Gamo, CATS Quality Assurance Manager
Jason Sergent, NCDOT Contractor
Donald Pike, NCDOT Contractor

Attachments:

CATS SMS Implementation Timeline – Phase 1

Agency Safety Plan

October 2021
Revision 1

CHARLOTTE AREA TRANSIT SYSTEM
Charlotte-Mecklenburg Government Center (CMGC)
600 East Fourth Street
Charlotte, NC 28202

Document Revision Policy

This is a controlled document. It is intended for use by the position to which it was issued. Should the holder of this plan leave their current position, the plan must be returned to the General Manager of Safety and Security or CATS Quality Assurance. Should the plan be lost or stolen, it must be immediately reported to the General Manager of Safety and Security.

This plan is complemented by, and dependent on, other supporting documents by CATS and other third parties. The CATS General Manager of Safety and Security determines the initial distribution for this document. The Quality Assurance Section maintains the distribution list and assigns control numbers for the controlled distribution. Anyone referring to a copy of this document that doesn't have a control number must verify they are using the latest revision. Document holders are required to keep their plans up-to-date by discarding obsolete documents, in accordance with CATS and City policies, and replacing them with updated documents as explained in the instructions that accompany all updates to the plan.

For additional copies, please contact CATS Quality Assurance Section at (704) 336-2961.

Document Revision Record

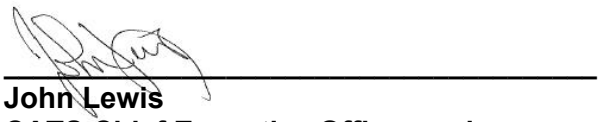
Revision	Effective Date
Revision 0	April 1, 2020
Revision 1	October 20, 2021

10/20/2021
Date

David Moskowitz
CATS General Manager of Safety and Security and Chief Safety Officer

10/20/2021
Date

Allen C. Smith, III
CATS Deputy Director of Transit - Chief Operating Officer



10/20/2021
Date

John Lewis
CATS Chief Executive Officer and Director of Public Transit

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Summary of Changes
Revision 1
October 2021

Location	Change
Entire Document	Minor wording changes to improve clarity.
Document Revision Policy	Safety & Security signatory updated from Ken Chapman to David Moskowitz. Added signatory: Deputy Director of Transit - Chief Operating Officer.
Definitions	Added to definition for Derailment: "A derailment occurs when the LRV or on-track equipment leaves the rail for a reason other than a collision, explosion, highway-rail grade crossing impact, etc." Added definitions: Collision; Point of Derailment; Cause of Derailment; Emergency Conditions; Qualification Level (QL); and SPEAR.
1.2.2	Deleted from "Fatalities" Performance Measure definition: "and rate per total vehicle revenue miles by mode." Added "preventable" to "Safety Events" Performance Measure definition. Added "a. Rail" and "b. Bus" subsections to all four Performance Measure sections.
1.3.1	In first paragraph, added "seven days a week" to second sentence, and added fourth sentence: "Rail operating hours are approximately from 5:30 a.m. to 2:00 a.m., 6 days a week and until 1:30 a.m. on Sundays." Deleted second paragraph: "LYNX operates seven days a week. Weekday service operates from 5:26 am to 1:26 am and service is available every 7.5 minutes during weekday rush hour and every 15 minutes during non-peak hours. Weekend service operates every 20 minutes during the day and every 30 minutes during late night hours." Rewrote CityLYNX Gold Line section to reflect current status of operations.
1.3.2	In second paragraph, added "seven days a week to first sentence. In third paragraph, changed number of buses from 308 to 304.
1.5	In third row, removed "Deputy" from "Planning & Development Division Director" and added second bullet: "Safety and Security Certification for Major Projects." In sixth row, changed "Manager – Special Transportation Service (STS)" to "Sr. Manager – Bus Operations/Special Transportation Service (STS)." In seventh row, changed "Chief Operations Planning Officer" to "Service Implementation & Scheduling Manager." In eighth row, added third bullet point: "Safety and Security Certification," and in the fifth bullet point, added: "and Security." In fourteenth row, changed "Chief Technology Officer" to "Information & Technology Director."

Location	Change
	In fifteenth row, changed “Manager – Facilities Management” to “Manager – Facilities Maintenance.” Added to end of section, after table: “As part of the implementation plan, the Office of Safety and Security will hire full-time CATS staff to implement various programs/activities, such as hazard management processes, data collection, analysis and reporting.
1.6	In third, fourth, and fifth rows, changed “Hazard Management” to “Hazard Assessments and Recommend Mitigations.” In fifth row, added “Bus” to Chair’s title: “Bus Safety Training Coordinator.”
1.7	Added to end of second paragraph: “Another means to report safety concern is to send an email to reportsafety@ci.charlotte.nc.us. This email is monitored by all Safety and Security managers. Any reported safety concern to this email address will be reviewed, added to the hazard safety log if applicable, and followed-up with the department manager and employee sending the email.” Added to end of third paragraph: “CATS Safety and Security managers are part of the Employee Hotline process as part of the implementation plan.”
1.11	Added to end of paragraph: “CATS shall provide the CATS ASP implementation plan updates to NCDOT quarterly or as requested.” Deleted key task timeline which included specific dates.
2.2.1	In item 7, added “Operational data” and “ROCC/BOCC & key process indicator reports.”
2.2.2	In second paragraph, deleted outdated content: “As part of the implementation plan, CATS QA05 will be updated to include adding hazard ratings to identified nonconformances and following ASP for tracking hazardous conditions.” Added to final paragraph: “CATS shall notify NCDOT of an Unacceptable Hazardous Condition (UHC) within two hours, via email or phone, regardless of the time of day.”
2.2.4	Added to first paragraph: “Hazard logs and risk registries are living documents and are reviewed and updated at a minimum quarterly. As part of the ASP implementation plan, safety will appoint Safety Coordinators who will be responsible for maintaining, updating and setting up the hazard log to ensure adequacy and appropriateness of the hazard log.”
2.2.5	Added to first sentence: “the Office of Safety and Security along with Quality Assurance will create a Risk Registry that will be distributed to each division to use to track risks.”
2.4.2	Deleted: “Corrective Action Plans that have been developed shall be verified and monitored to ensure that unexpected hazards have not developed as part of the implementation plan.” Added: “If a risk mitigation is not effective or appropriate, the safety risk control should be reviewed through the Safety Risk Management and Hazard Analysis process.”
2.5.4	In first sentence, added: “accident/incident data” and “identify issues of increasing severity and/or probability. In second sentence, added: “mitigations to address potential consequences of the corrective actions for” hazards.

Location	Change
3.2.5	Added to end of first paragraph: “CATS QA100 Quality Audits outlines the process to be followed for ISA.” Added second paragraph: “The ISA team will identify the components of the annual safety performance assessment based on SMS and conduct a safety assessment annually to verify compliance to audit schedule.”
3.2.6	Added to end of section: “The lead auditors will be certified to conduct audits by accredited bodies such as the Transportation Safety Institute ASQ (American Society for Quality).”
3.2.9	In first sentence, deleted: “Safety & Security Audit Report.” Added bullet points two through seven.
3.2.11	Added third sentence: “Corrective action plans are reviewed monthly by the SMS manager or designee to provide oversight and direction for corrective action activities in order to resolve hazardous conditions and deficiencies.”
3.3.1	Added final paragraph.
3.3.6	In first paragraph, added second and third sentences. In second paragraph, added to first sentence: “and tracked through inspection logs.” Added second sentence.
3.4.8.3	In final paragraph, rewrote first sentence.
3.5.1.1	In third sentence, updated Section number from 2.1.1 to 2.2.1.
3.5.1.2	Added second paragraph and related bullet points.
4.5.1	Added to first sentence: “working on or near CATS Right-of-Way.”
4.5.2.2	In fourth paragraph, added: “MOW conducts a minimum of three evaluations per quarter using the CATS Light Rail System Evaluation Form (RODF600). Rail Car Maintenance (RCM) conducts and documents monthly assessments of RCM employees.”
4.5.2.5	Deleted: “The results of the proficiency checks performed by operations and maintenance supervisors are documented on the appropriate form and are available to the Office of Safety and Security. As part of the implementation plan, identified hazardous conditions will be assigned hazard ratings and tracked in the Division’s Hazard Management Log.” Added: “Safety and Security periodically audits the proficiency check forms for completeness and identification of hazards. Identified hazards will be tracked in the Hazard Tracking Log.”
4.6.3	Added first and second paragraphs. Added to end of Bus sub-section: “As part of the implementation plan, SMS training will be incorporated in the RWP training provided to contractors.” Rewrote Rail sub-section. Rewrote ROCC Controller Training sub-section. Added ROCC Requalification Training sub-section and ROCC Refresher Training sub-section.

Location	Change
	In the 49 CFR 672 Safety Training sub-section, added to first sentence: "Office of Safety and Security General Manager, Managers and Coordinators for rail and, bus."
4.6.4.2	Rewrote and reorganized section.
4.6.4.3	Added section.
4.6.5	Added to end of section: "Timekeeping records managed through their time-record software programs will be maintained for a minimum of three years."
4.7	Added to first paragraph of Safety Messages subsection: "Operations employees are informed of hazards in their workspace through tool talks, bulletins and informal shop meetings on an as needed basis." Added fourth and fifth paragraphs to Safety Messages subsection.
4.7.2	Added third paragraph.

Definitions

Accident: An event that involves any of the following: a loss of life; a serious injury to a person; a collision involving a rail transit vehicle; a runaway train; an evacuation for life safety reasons; or any derailment of a rail transit vehicle, at any location, at any time, whatever the cause. An accident must be reported in accordance with the thresholds for notification and reporting set forth in the State Safety Oversight Program Standard (SSOPS).

Accountable Executive: A single, identifiable individual who has ultimate responsibility for: carrying out the Public Transportation Safety Plan of a public transportation agency; carrying out the agency's Transit Asset Management Plan; and controlling or directing the human and capital resources needed to develop and maintain both the agency's Public Transportation Agency Safety Plan, in accordance with 49 U.S.C. 5329(d), and its Transit Asset Management Plan, in accordance with 49 U.S.C. 5326. For CATS, the CEO is the Accountable Executive.

Administrator: The Federal Transit Administrator or the Administrator's designee.

Agency Safety Plan (ASP): See Public Transportation Agency Safety Plan (PTASP).

All-Hazards Approach: An ideology and approach used by planners to conduct integrated planning and build capability for safety, security, and emergency management, and to optimize and continuously improve the use of resources and the management of risks from hazards, threats, vulnerabilities, and adverse events or incidents.

APTA Guidelines: The American Public Transit Association's (APTA) *Manual for the Development of Rail Transit System Safety Program Plans*, published on August 20, 1991 (revised June 2001).

Charlotte Regional Transportation Planning Organization (CRTPO): The federally designated Metropolitan Planning Organization (MPO) for the Charlotte Urbanized Area.

Chief Safety Officer: An adequately trained individual who has responsibility for safety and reports directly to a transit agency's chief executive officer, general manager, president, or equivalent officer. A Chief Safety Officer may not serve in other operational or maintenance capacities unless employed by a transit agency that is a small public transportation provider as defined in this part or by a public transportation provider that does not operate a rail fixed guideway public transportation system.

Collision: An impact in which one piece of on-track equipment strikes another piece of on-track equipment, railroad property, object, person or non-rail vehicle.

Contractor: An entity that performs tasks on behalf of the Federal Transit Administration (FTA), a State Safety Oversight Agency (SSOA), or a Rail Transit Agency (RTA), through contract or other agreement. The contractor may not perform tasks for the oversight agency and the RTA at the same time.

Corrective Action Plan (CAP): A plan developed by a Rail Transit Agency (RTA) that describes the actions the RTA will take to minimize, control, correct, or eliminate risks and hazards, and the schedule for taking those actions. Either a State Safety Oversight Agency (SSOA) or the Federal Transit Administration (FTA) may require an RTA to develop and carry out a Corrective Action Plan.

Designated personnel: Can be defined in the following two ways:

1. Employees and contractors identified by the CATS Agency Safety Plan whose job function is directly responsible for safety oversight of CATS Transportation Services; or
2. Employees and contractors of a State Safety Oversight Agency whose job functions require them to conduct safety audits and examinations of the rail fixed guideway public transportation systems subject to the jurisdiction of the agency.

Derailment: A non-collision event that occurs when a train or other rail vehicle unintentionally comes off its rail, causing it to no longer be properly guided on the railway.

A derailment occurs when the LRV or on-track equipment leaves the rail for a reason other than a collision, explosion, highway-rail grade crossing impact, etc.

Point of Derailment: The point on the rail where the normal wheel-rail relationship was disturbed.

Cause of Derailment: A condition or failure, that results in a derailment, collision or other type of accident. A condition is a characteristic of a LRV or track which can be measured or identified during equipment or track inspection, or personnel interview. A failure is a physical failure of a track or car component or a human failure to properly perform a job.

Directly responsible for safety oversight: Public transportation agency personnel whose primary job function includes the development, implementation, review and enforcement of the agency's safety plan, and/or the State Safety Oversight Agency (SSOA) requirements for the rail fixed guideway public transportation system, pursuant to 49 CFR parts 659 or 674.

Equivalent Authority: An entity that carries out duties similar to that of a Board of Directors, for a recipient or subrecipient of FTA funds under 49 U.S.C. Chapter 53, including sufficient authority to review and approve a recipient or subrecipient's Public Transportation Agency Safety Plan. The Metropolitan Transit Commission (MTC) is CATS Equivalent Authority.

Emergency Conditions: Unexpected events or incidents that occur naturally or manmade that impacts the ability of CATS to operate normal service that causes a hazardous condition requiring an immediate response.

Emergency Operations Plan (EOP): Describes the coordination and preparedness activities related to an organization's emergency response policies and procedures, including: the assignment of employee responsibilities during an emergency; specific emergency response annexes, as deemed necessary; and addressing various threats and vulnerabilities specific to internal organizational systems, functions, or work groups.

Emergency Management Program (EMP): A comprehensive framework, including plans, policies, and procedures, established to manage an All-Hazards Approach to emergency preparedness and response activities. This framework addresses the five phases of emergency management: prevention, preparedness, response, recovery, and mitigation. It incorporates, by reference, integration of the Emergency Operations Program (EOP) and its annexes.

Event: An Accident, Incident, or Occurrence.

Examination: A process for gathering or analyzing facts and information related to the safety of a rail fixed guideway public transportation system.

Finding of Noncompliance: A determination of noncompliance made when the facts disclosed during an investigation, compliance review, hazard trend analysis, or other information, indicate a failure to comply with the provisions of the State Safety Oversight Program Standard.

FRA: The Federal Railroad Administration. An agency within the U.S. Department of Transportation.

FTA: The Federal Transit Administration. An agency within the U.S. Department of Transportation.

FTA Reportable Event (Rail Only): A rail event that meets the notification threshold for the Federal Transit Administration (FTA). A Non-FTA Reportable Event does not rise to the threshold for reporting to the FTA but is required to be reported to NCDOT per 49CFR Part 674 and the SSOPS.

Hazard: Any real or potential condition that can cause: injury, illness, or death; damage to or loss of the facilities, equipment, rolling stock, or infrastructure of a Rail Transit Agency (RTA); or damage to the environment.

Hazard Management Log: An information management tool for tracking identified hazards, rating the hazards, any mitigations, and how the hazard is resolved. Unacceptable and Undesirable Hazardous Conditions must be captured in the Risk Register.

Homeland Security Exercise and Evaluation Program (HSEEP): A set of guiding principles for exercise programs related to national security, as well as a common approach to the management, design and development, execution, evaluation, and improvement planning for such programs.

Incident: An event that involves any of the following: a non-serious personal injury; one or more injuries requiring medical transport; damage to facilities, equipment, rolling stock, or infrastructure which disrupts the operations of a rail transit agency.

Investigation: The process of determining the causal and contributing factors of an accident, incident, or hazard, for the purpose of preventing recurrence and mitigating risk.

Individual: Any person on the property of a Rail Transit Agency.

National Public Transportation Safety Plan: The plan to improve the safety of all public transportation systems that receive Federal financial assistance under 49 U.S.C. Chapter 53.

NCDOT: The North Carolina Department of Transportation. The designated State Safety Oversight Agency (SSOA) for the State of North Carolina.

NTSB: The National Transportation Safety Board. An independent Federal agency charged with determining the probable cause of transportation accidents, promoting transportation safety, and assisting victims of transportation accidents and their families.

New Starts Project: One type of transit capital investment project for a Rail Transit Agency funded under FTA's 49 U.S.C.5309 discretionary construction program.

Occurrence: An Event without any personal injury in which damage to facilities, equipment, rolling stock, or infrastructure does not disrupt the operations of a Rail Transit Agency.

Operator of a public transportation system: A provider of public transportation as defined under 49 U.S.C. 5302(14).

Passenger: A person who is on board, boarding, or alighting from a rail transit vehicle for the purpose of travel.

Passenger Operations: The period of time when any aspect of a Rail Transit Agency's operations are initiated with the intent to carry passengers.

Performance measure: A quantifiable indicator of performance or condition that is used to establish targets and to assess progress toward meeting the established targets.

Performance target: A quantifiable level of performance or condition, expressed as a value for the measure, to be achieved within a time period required by the Federal Transit Administration (FTA).

Person: A passenger, employee, contractor, pedestrian, trespasser, or any individual on the property of a rail transit agency.

Preliminary Engineering Phase: The second developmental phase required for New Starts Projects to receive Federal funds. During this phase, project sponsors investigate the merits of all potential configurations and designs in greater detail. The results of this phase provide the basis for subsequent funding and implementation decisions. This phase concludes with the request to enter the final design phase.

Public Transportation Agency Safety Plan (PTASP or ASP): The documented comprehensive agency safety plan for a transit agency that is required by 49 U.S.C. 5329(d) and 49 CFR Part 673.

Public Transportation Safety Certification Training Program (PTSCTP): The certification training program for Federal and State employees, or other designated personnel, who conduct safety audits and examinations of public transportation systems, and employees of public transportation agencies directly responsible for safety oversight, established in 49 CFR Part 672.

Qualification Level (QL): The practical examination for a qualifying Rail/Streetcar Operator is scored based on three levels. A Qualification Level 1 (QL-1) requires no performance or safety deviations and the operator performed all functions with complete accuracy and confidence level was high. A Quaification Level 2 (QL-2) requires the operator has only minor performance deviations, no safety related deviations, the operator performed the majority of the functions with accuracy and their confidence level was high to moderate. A Qualification Level 3 (QL-3) is a failing score with the occurrence of major performance and/or safety deviations and the operator's confidence level was low and uncertain.

Rail Fixed Guideway Public Transportation System (RFGPTS): Any fixed guideway system that uses rail, is operated for public transportation, is within the jurisdiction of a State, and is not subject to the jurisdiction of the Federal Railroad Administration (FRA), or any such system in engineering or construction. RFGPTSs include, but are not limited to, rapid rail, heavy rail, light rail, monorail, trolley, streetcar, inclined plane, funicular, and automated guideway.

Rail Transit Agency (RTA): Any entity that provides services on a rail fixed guideway public transportation system. Both RTAs and Rail Fixed Guideway Public Transportation Systems

(RFGPTS) are referenced in various FTA documents and, as such, indicate the same entity, regardless of which of the two acronyms is referenced.

Rail Transit-Controlled Property: Property that is used by the Rail Transit Agency (RTA) and may be owned, leased, or maintained by the RTA.

Rail Transit Vehicle: The RTA's rolling stock, including, but not limited to, passenger and maintenance vehicles.

Risk: The composite of predicted severity and likelihood of the potential effect of a hazard.

Risk Register: An information management tool used to document Safety Risk Management and Safety Assurance activities. It records the hazards identified by the transit agency, the potential consequences associated with those hazards, initial safety risk ratings, new mitigations implemented to eliminate or minimize the risk associated with the hazard, revised safety risk rating, and mitigation monitoring measures and activities to ensure the implementation and effectiveness of mitigations.

Risk Mitigation: A method or methods used to eliminate or reduce the effects of hazards.

Safety: Freedom from harm resulting from unintentional acts or circumstances.

Safety audit: A review or analysis of system components for compliance with the safety requirements. Audit methods may include interviews, document and record reviews, firsthand observations of operations and maintenance activities, spot checks, inspections, and visual examinations and measurements.

Safety Events (under NTD): Total number of reportable events and rate per total vehicle revenue miles by mode. The safety events measure captures all reported safety events that occur during transit operations and the performance of regular supervisory or maintenance activities. A reduction in safety events will support efforts to reduce fatalities and injuries, as well as damages to transit assets. Measuring the number of safety events by mode over vehicle revenue miles provides a safety event rate from which future performance can be compared.
Reportable events (Accidents) include:

- Train derailments
- Collisions (vehicle-to-vehicle, vehicle-to-person, vehicle-to-object)
- Collisions at grade crossings
- Fires
- Evacuations for safety reasons

Safety Management System (SMS): A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies, and procedures. SMS defines the activities by which safety management is undertaken by an organization in order to achieve acceptable levels of safety. SMS also defines the method of identifying hazards and controlling risks in a work and operational environment and continuously monitors these methods for effectiveness.

Safety Risk Management: A process within a Rail Transit Agency Safety Plan for identifying hazards and analyzing, assessing, and mitigating safety risk.

Security: Freedom from harm resulting from intentional acts or circumstances.

Sensitive Security Information (SSI): Information as described in 49 CFR § 1520, which is obtained or developed while conducting security activities, the disclosure of which would be detrimental to transportation safety. SSI includes: security program plans; security and vulnerability assessments; threat information; incident response plans; security directives and measures; security inspection or investigative information; security screening information or procedures; specifications for devices for detection of weapons or destructive devices or substances; specifications for communications equipment used for transportation security; and critical infrastructure information, including drawings, design plans, cut sheets, or architectural drawings.

Serious Injury: Any injury which:

1. requires hospitalization for more than 48 hours, commencing within 7 days from the date of the injury was received;
2. results in a fracture of any bone (except simple fractures of fingers, toes, or nose);
3. causes severe hemorrhages, nerve, muscle, or tendon damage;
4. involves any internal organ; or
5. involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.

SPEAR: Database management software for tracking incidents and maintenance records pertaining to equipment for rail and bus operations.

State: A state of the United States, the District of Columbia, Commonwealth of Puerto Rico, the Northern Mariana Islands, Guam, American Samoa, and the Virgin Islands.

State Safety Oversight Agency (SSOA): An agency established by a State that meets the requirements and performs the functions specified by 49 U.S.C. 5329(e) and the regulations set forth.

State Safety Oversight Program Standard (SSOPS): A written document developed and adopted by a State Safety Oversight Agency to describe the policies, objectives, responsibilities, and procedures used to provide Rail Transit Agency safety oversight.

Substantial Damage: Damage which adversely affects the structural strength, performance, or operating characteristics of the vehicle, facility, equipment, rolling stock, or infrastructure which requires towing, rescue, onsite maintenance, or immediate removal prior to safe operation.

System Reliability: The mean distance between major mechanical failures by mode. The System Reliability measure expresses the relationship between safety and asset condition. The rate of vehicle failures in service, defined as mean distance between major mechanical failures, is measured as revenue miles operated divided by the number of major mechanical failures. This is a measure of how well a fleet of transit vehicles is maintained and operated. The Federal Transit Administration (FTA) recognizes the diversity of the transit industry and that agencies have varied equipment types with varied rates of performance. This measure allows agencies to develop safety performance targets that are specific to their own fleet type, age, operating characteristics, and mode of operation.

Unacceptable Hazardous Condition: A hazardous condition determined to be an unacceptable risk according to an established evaluation matrix which evaluates the severity and probability of the risk.

Vehicle: Any rolling stock used on a Rail Fixed Guideway Public Transportation System (RFGPTS), including, but not limited to, passenger and maintenance vehicles.

ACRONYMS

AAR	After Action Report
APTA	American Public Transit Association
AREMA	American Railway Engineering and Maintenance of Way Association
ASP	Agency Safety Plan
BLE	Blue Line Extension
CAP	Correction Action Plan
CATS	Charlotte Area Transit System
CRTPO	Charlotte Regional Transportation Planning Organization
CIL	Certifiable Items List
CEO	Chief Executive Officer
CFR	Code of Federal Regulations
CSO	Chief Safety Officer
CWP	Certification Work Plan
DHS	Department of Homeland Security
EOP	Emergency Operations Plan
EMP	Emergency Management Program
EPCP	Emergency Preparedness and Continuity Plan
FNC	Finding of Noncompliance
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
HML	Hazard Management Log
GL2	CityLYNX Gold Line Phase 2
HSEEP	Homeland Security Exercise and Evaluation Program
IIC	Investigator in Charge
I & M	Inspection and Maintenance
MAP-21	Moving Ahead for Progress in the 21st Century
N/A	Not Applicable
NCDOL	North Carolina Department of Labor
NCDOT	North Carolina Department of Transportation
NFPA	National Fire Protection Association
NTD	National Transit Database
NTSB	National Transportation Safety Board
OCS	Overhead Catenary or Contact System

OHA	Operating Hazard Analysis
OSHA	Occupational Safety and Health Administration
OSH	Occupational Safety and Health
PHA	Preliminary Hazard Analysis
PTASP	Public Transportation Agency Safety Plan
PTSCTP	Public Transportation Safety Certification Training Program
RFGPTS	Rail Fixed Guideway Public Transportation System
ROW	Right of Way
RTA	Rail Transit Agency
RWP	Roadway Worker Protection
SMS	Safety Management System
SOP	Standard Operating Procedure
SRM	Safety Risk Management
SSCP	Safety and Security Certification Plan
SSI	Sensitive Security Information
SSO	State Safety Oversight
SSOA	State Safety Oversight Agency
SSOPS	State Safety Oversight Program Standard
SSPP	System Safety Program Plan
TSA	Transportation Security Administration
UHC	Unacceptable Hazardous Condition
USC	United States Code

Purpose and Scope

The purpose of the Agency Safety Plan (ASP) is to set forth the requirements for identifying, evaluating and minimizing safety risks throughout CATS Bus, Rail, and Special Transportation Services (STS). The ASP design and implementation includes the development of a comprehensive Safety Management System (SMS) as described in Federal Transit Administration's 49 CFR, Part 673 and follows the North Carolina State Safety Oversight Program Standards (SSOPS) and the four components of SMS: Safety Management Policy, Safety Risk Management, Safety Assurance, and Safety Promotion. The SMS Manager will ensure that FTA, other Federal Agencies, and the NCDT State Safety Oversight Agency (SSOA) will have access to review all CATS SMS documentation upon request.

The ASP is specifically developed to:

- Establish the System Safety Program for CATS.
- Identify the relationships and responsibilities of CATS with other City of Charlotte departments and other agencies and organizations that impact transit system safety.
- Provide formal documentation of CATS Management commitment to safety.
- Provide a framework for implementing CATS' safety policy.
- Achieving CATS system safety goals and objectives in compliance with the *National Public Transportation Safety Plan, January 2017.*
- Satisfy federal, state, and local laws, codes, ordinances, and regulations.

Section 1 Safety Management Policy

1.1 Chief Executive Officer's Safety Management Policy Statement

The following is the Safety Management Policy Statement issued by the Chief Executive Officer (CEO) of the Charlotte Area Transit System (CATS). (See Appendix B CATS EX03 *Safety Policy.*) This policy statement was reviewed and approved by the Metropolitan Transit Commission (MTC).

The Charlotte Area Transit System (CATS) was organized with the mission to provide safe, secure, reliable and effective rail, bus and paratransit transportation services to our customers. Accordingly, safety is a primary concern that affects all levels of CATS activities including operations, maintenance, and administrative functions of the organization.

All employees and contractors of CATS are expected to conduct their duties safely, aimed at preventing, controlling and minimizing undesired events, such as customer or employee injury, equipment or property damage, or degradation to system safety in any CATS function. Employees and customers are CATS' most important assets, and their safety and security are among CATS' greatest responsibilities.

While the minimizing of unsafe conditions and the prevention of accidents in CATS' transportation system and facilities are the responsibility of each employee, they are first and foremost the responsibility of CATS Management. A safety reporting program will be established as a viable tool for employees to voice their safety concerns. No disciplinary action will be taken against any employee who communicates a safety concern through the CATS safety reporting program unless such disclosure indicates the following: an illegal act, gross misconduct and/or negligence, or a deliberate or willful disregard of CATS rules, policies, and procedures.

CATS Management is committed to developing a Safety Management System (SMS) and will develop programs to promote the safety and security of all employees and customers. We are fully committed to providing a safe work environment and safe vehicles, systems, and facilities. To that end, CATS' General Manager of Safety and Security is empowered and authorized to administer a comprehensive, integrated Agency Safety Plan.

CATS will distribute this Safety Management Policy Statement to each employee and will review it with employees during employee safety meetings and toolbox talks with supervisors. CATS commitment to developing our SMS is supported by the following safety objectives:

- **Support** the implementation of an effective SMS by providing appropriate resources to support an organizational culture that fosters safe operational policies, encourages effective safety reporting and communication, and actively manages safety with the same attention to results as that given to the other management systems of CATS.
- **Integrate** the management of safety as an explicit responsibility of CATS managers and employees.
- **Clearly define** for all managers, employees and contractors their accountabilities and responsibilities for the delivery of safe transit services and the performance of our safety management system.

- **Establish and operate** a safety reporting program as a fundamental tool in support of CATS hazard identification and safety risk evaluation activities to eliminate or mitigate the safety risks of the consequences of hazards resulting from our operations or activities to a point that is as low as reasonably practical.
- **Comply** with and, wherever possible, exceed any applicable legislative and regulatory requirements and standards.
- **Ensure** that sufficiently trained and skilled personnel are available and assigned to implement CATS safety management processes and activities.
- **Ensure** that all staff are formally provided with adequate and appropriate safety management information, are competent in safety management system activities, and are assigned only safety related tasks commensurate with their skills.
- **Establish and measure** our safety performance against realistic safety performance indicators and safety performance targets.
- **Continually improve** our safety performance through management processes that ensure relevant safety action is taken in a timely fashion and is effective when carried out.
- **Ensure** contracted services are ordered and delivered in compliance with our safety performance standards.

1.2 Goals and Objectives

1.2.1 Goals

The system safety goal is to design, construct, test, prepare, and operate a transportation system that attains a practical optimum level of safety during the entire life cycle of the system's five phases – Planning, Design, Construction, Operations, and/or Disposal as applicable. The ASP is directed toward achieving this goal within CATS' strategic goals and constraints.

The following are CATS' Goals in achieving comprehensive system safety:

- Develop a sustainable safety culture focusing on safety through knowledge.
- Promote learning through the development of a comprehensive training curriculum.
- Ensure training enhances individual performance and provide continuous learning for all levels that is managed through a centralized learning management system.
- Continue to cultivate coordination, communication, and collaboration to achieve solutions for shared strategic initiatives.

Properly implemented, the Safety Management Systems processes documented herein will provide for:

- Identification and elimination or control of hazards to employees, customers, or the public.
- A working environment which meets or exceeds all government and industry occupational health and safety standards and practices.
- Investigation of all major accidents/incidents and identification and documentation of accident causes for the purpose of implementing corrective action to prevent recurrence.
- Effective emergency response by CATS and public safety agencies

- Integration of safety and hazard control measures into all CATS department and division activities.

1.2.2 Objectives - Safety Performance Metrics/Targets and Indicators

To accomplish the system safety goal and promote continuous improvement, CATS developed performance metric objectives that are Specific, Measurable, Attainable, Relevant, and Time-bound (SMART).

CATS has identified the following NTD Safety Performance metrics from the *National Public Transportation Safety Plan*, January 2017. These Safety Measures and Targets are reflected in the Charlotte Regional Transportation Planning Organization's (CRTPO) Performance Based Planning & Programming – Transit Safety Plan. See Appendix H for annual performance targets and results. CATS coordinates with the State and CRTPO in the selection of State and MPO safety performance targets, to the maximum extent practicable.

Performance Measures

1. **Fatalities:** Total number of reportable fatalities.
   a. **Rail:** A fatality confirmed within 30 days of a reportable event to as defined in the current National Transit Database Safety and Security Policy Manual.
   b. **Bus**: A fatality confirmed within 30 days of a reportable event as defined in the current National Transit Database Safety and Security Policy Manual.

2. **Injuries:** Total number of reportable events and rate per total vehicle revenue miles by mode.
   a. **Rail:** A serious reportable injury to FTA and/or NCDOT within two (2) hours as defined in the NCDOT State Safety Oversight Program Standard (SSOPS). Also includes any injury reported based on the current National Transit Database (NTD) Safety and Security Policy Manual and all employee injuries reported to Risk Management.
   b. **Bus**: Any reportable injury as defined in the current National Transit Database Safety and Security Policy Manual.

3. **Safety Events:** Total number of preventable reportable events and rate per total vehicle revenue miles by mode.
   a. **Rail:** A major safety preventable reportable event to FTA and/or NCDOT within two (2) hours as defined in the current National Transit Database (NTD) Safety and Security Policy Manual and NCDOT State Safety Oversight Program Standard (SSOPS).
   b. **Bus**: A safety preventable reportable event as defined in the current National Transit Database Safety and Security Policy Manual.

4. **System Reliability:** Mean Distance Between Major Mechanical Failures by mode.
   a. **Rail:** A failure of some mechanical element of the revenue vehicle that prevents the vehicle from completing a scheduled revenue trip or from starting the next scheduled revenue trip because actual movement is limited or because of safety concerns. Train is off-loaded and out of service.

b. **Bus**: A failure of some mechanical element of the revenue vehicle that prevents the vehicle from completing a scheduled revenue trip or from starting the next scheduled revenue trip because actual movement is limited or because of safety concerns. The vehicle is road called and operator given another bus.

The Office of Safety and Security will review and analyze the data received related to the target goals. A report showing the performance status of the four target goals will be submitted to CATS Leadership, the MTC, NCDOT, and CRTPO on a quarterly basis and updated annually in Appendix H - *Safety Annual Targets and Results*.

Where incidents, audits, or observations indicate that the goals or objectives of this plan are clearly not being met, the Safety and Quality Assurance sections coordinate discussion with involved divisions and develop corrective action plans for follow up and completion.

1.3 System Description

1.3.1 Light Rail Operations

LYNX Blue Line

The LYNX Blue Line is the Charlotte region's first light rail service. It is 18.9 miles long and operates seven days a week from I-485/South Boulevard Station to the UNC Charlotte Main Campus in University City. With 26 stations, including 11 park and ride locations, the LYNX Blue Line provides a congestion free commute with a consistent travel time. Rail operating hours are approximately from 5:30 a.m. to 2:00 a.m., six days a week and until 1:30 a.m. on Sundays.

All CATS light rail passengers board trains at light rail stations. Each light rail station provides protection from inclement weather, lighting, blue light emergency phones, and security camera coverage. Appendix D – System Maps shows the map of the LYNX Blue Line.

The operation of the Blue Line rail system is managed by the Rail Operations Control Center (ROCC) in accordance with CATS Rail Operations Control Center (ROCC) Procedures Manual.

The Siemens Light Rail fleet consists of 42 double-articulated, low floor Light Rail Vehicles (LRVs). The LRVs were procured by CATS from Siemens Transportation Systems and meet the following physical and performance characteristics:

- 70% Low Floor Design
- 100% Low Floor Boarding
- 68 Passenger Seats (Minimum)
- Maximum Speed of 55 mph
- Approximately 93 ft. in length and 9 ft. in width
- Bi-Directional Operation
- Cameras
- Automatic passenger counters

The LRVs and the station platform interface are compliant with the Americans with Disabilities Act (ADA). LRVs are capable of operating as single units or coupled in consists of up to two cars (with three car consist capability at designated stations for future express service). Each LRV is equipped with operating cabs at both ends and feature alternating current (AC) propulsion, cab signaling equipment, automated station announcements, and a climate control system.

CityLYNX Gold Line

The CityLYNX Gold Line is the Charlotte region's streetcar service which returned to revenue service August 2021. It is approximately 4 miles long and has 17 stops/platforms for boarding and alighting, running from the intersection of French Street and Beatties Ford Road to the intersection of Sunnyside Avenue and Hawthorne Lane. The CityLYNX Gold Line is a conventional in-street running fixed-guideway with a mix of center and side platforms. Each stop has a shelter to provide protection from inclement weather. Appendix D shows a map of the CityLYNX Gold Line.

The operation of the Gold Line rail system is managed by the Rail Operations Control Center (ROCC) in accordance with CATS Rail Operations Control Center (ROCC) Procedures Manual.

The Siemens Light Rail Hybrid Streetcar fleet consists of 6 double-articulated, low floor Light Rail Vehicles (LRVs). The LRVs were procured by CATS from Siemens Transportation Systems and have the following physical and performance characteristics:

- 70% Low Floor Design
- 100% Low Floor Boarding
- 54 Passenger Seats (Minimum)
- Maximum Speed of 25 mph
- Approximately 85 ft. in length and 9 ft. in width
- Bi-Directional Operation
- Cameras
- Automatic passenger counters
- On Board Energy Storage System (OESS)

The streetcars and the stop interface are compliant with the Americans with Disabilities Act (ADA). Streetcars operate as single units. Each streetcar is equipped with operating cabs at both ends and feature both alternating current (AC) propulsion or battery operations, cab signaling equipment, automated station announcements, and a climate control system. The hybrid streetcar is designed to operate for specified distances without the overhead catenary system power utilizing the vehicle’s battery pack also known as the On Board Energy Storage System (OESS).

Rail Car Maintenance

Light Rail Vehicles, including streetcars, are maintained by Rail Car Maintenance in accordance with the CATS Light Rail Fleet Management Plan, applicable Light Rail SOPs and manufacturer’s maintenance manuals.

Rail Maintenance of Way

The vehicles are powered by electricity distributed by an Overhead (contact) Catenary System (OCS). A train control system, using cab signaling, provides vehicle spacing and routing throughout the light rail system. The Rail Maintenance of Way (MOW) section is responsible for the maintenance of Train Control and Communication Systems, Traction Power Substations, Overhead Catenary Systems, and track work on the LYNX Blue Line and the CityLYNX Gold Line. The CATS systems and equipment are maintained in accordance with CATS ROD600, *Preventive Maintenance Requirements for Rail MOW* and the referenced ROD600-series SOPs.

The South Boulevard Light Rail Facility

The South Boulevard Light Rail Facility is adjacent to and west of the mainline light rail track between New Bern Street and Clanton Road. Detailed information on the facility is contained in the Light Rail Fleet Management Plan. The Facility includes the ROCC, Bus Operations Control Center (BOCC), maintenance shop, storage yard and administrative offices. Staff are located in the building 24 hours a day, seven days a week, to ensure the safe and efficient operation of the LYNX Blue Line.

The Main Shop building contains the following rail vehicle service inspection and repair facilities:

- A service track for interior and exterior vehicle cleaning
- A running repair track for scheduled car servicing and inspection
- A light repair area for change-out of minor components
- A heavy repair area for vehicle overhauls, major repairs, and modifications
- A wheel truing machine for running rail vehicle and truck wheel truing
- A truck shop for change-out and repair/overhaul of vehicle truck components
- An electronics shop for repairing electronic equipment and components
- Parts storage areas
- Overhead work platforms and maintenance pits
- Shop areas for repair of couplers, pantographs, and brakes
- A machine shop, welding shop, and carpentry shop
- A portable vehicle hoist system
- A 7.5-ton bridge crane, a monorail crane, and various jib cranes

Component repair shops, which support maintenance services for all components of the light rail system, are included in the maintenance facility. A paint booth is provided in a separate building. Interior vehicle cleaning may be done on the LRV service and cleaning track, or it may be accomplished on the storage tracks. Daily LRV washing may occur when vehicles return from service or during off-peak service hours by drawing equipment from the storage tracks.

As a part of the BLE project significant, much-needed vehicle storage and specialty maintenance capability was added to the South Boulevard facility. In its original construction, the SBLRF was originally sized to accommodate a fleet of 40

vehicles. Improvements to the outside yard area at the SBLRF allowed for the accommodation of 16 additional LRVs and three trolleys.

North Brevard Light Rail Facility

The North Brevard Light Rail Facility at 1911 North Brevard Street is a satellite facility utilized to perform daily vehicle cleaning, basic preventive maintenance inspections, and basic running repairs including lowest level component replacement (for failure or repair only).

1.3.2 Bus Operations Division

The CATS Bus Operations Division (BOD) is the entity that provides CATS' fixed-route bus service. CATS operates 72 fixed routes; local buses, express buses, and neighborhood shuttles. Express routes provide service to and from outlying areas of Mecklenburg County as well as neighboring counties.

CATS buses provide transit service seven days a week to LYNX Blue Line stations and on urban streets, suburban streets, limited access highways, and a bus-only busway. Bus operating hours are from 5:00 a.m. to 2:00 a.m., 6 days a week and until 1:30 a.m. on Sundays.

The CATS revenue bus fleet is comprised of approximately 304 buses.

Many bus lines terminate at, or pass through, the Charlotte Transportation Center, a downtown center where a large number of passengers transfer from one line to another. This facility is covered and provides passenger information and other amenities.

In addition to the Charlotte Transportation Center, CATS operates and maintains neighborhood transit centers throughout the service area. The neighborhood transit centers enhance travel within neighborhoods and provide transfer opportunities to the fixed-route service for residents to continue their travel outside of their neighborhoods. CATS continues development of additional neighborhood transit centers.

Bus Park and Ride lots are used largely by commuters who travel from outlying suburban areas to light rail stations and the uptown business district. CATS currently provides bus service to over 50 Park and Ride lots.

The majority of CATS bus passengers board buses at stops located at the curb. Many stops have shelters for protection from inclement weather and there may also be a bench in the shelter. Lighting is generally from nearby streetlights.

Bus shelters are maintained by the CATS Facilities Management Section within the Rail Division. CATS contracts with a management company to manage the Charlotte Transportation Center.

South Tryon Street Bus Facility

This facility opened in March 2005 and is the principal CATS Bus Operations and Maintenance Facility. It is the centralized administrative base for BOD and provides space for warehousing and major repair activities. This facility has capacity for 250 buses.

Davidson Street Bus Facility

This facility was built and opened in 1985 and was originally designed to be a full-service maintenance facility for 200 vehicles. The separate administration building at 901 N. Davidson St. was rehabilitated in 2011 and now houses CATS' Special Transportation Services (STS), Vanpool Services, and CATS Technology. From this location, STS provides the operation and dispatch activities for its ADA-mandated paratransit service.

An enclosed fuel lane and bus wash is located at 929 N. Davidson St. where daily vehicle service occurs. Across the public street, at 900 N. Davidson St., bus maintenance functions are performed including routine preventive maintenance and corrective maintenance.

1.3.3 Special Transportation Service

CATS provides a demand-response paratransit service called Special Transportation Service (STS).

Located at the Davidson Street Bus Facility, STS provides the operation and dispatch activities for its Americans with Disabilities Act (ADA) mandated paratransit service. STS provides service during the same hours as fixed routes: normally 5 a.m. until 2 a.m., 7 days a week.

- Approximately eighty-five lift-equipped buses are maintained by the Bus Operations Division.

1.3.4 Vanpool

Vanpools are a flexible, comfortable, cost-effective way for groups of 5 to 15 commuters to share their ride to work. A Vanpool consists of a group of people who live and work near each other and share similar commuting schedules. The CATS Vanpool program provides vans, gas cards, insurance and maintenance. Vans are available 24 hours a day, 7 days a week.

- Approximately 87 vanpool vans are maintained by the City of Charlotte's Management and Financial Services Department/Fleet Management.

1.3.5 Facilities Management

CATS facilities are maintained by the Facilities Management section in accordance with the Facilities Management Plan. The major goals and objectives of this Facilities Management Plan are to:

- Responsively address ongoing maintenance needs.
- Maintain facilities for all modes of transit in a safe condition and in compliance with applicable codes and regulations.
- Provide for the inspection of buildings and major building components when they reach the end of their expected service life.
- Provide periodic inspections on all passenger amenities.
- Provide appropriate custodial care to clean and sanitize facilities.
- Properly prioritize facility maintenance, renovation, and replacement needs to best utilize available resources.
- Serve as the framework to be used in the management of CATS facilities when this work is contracted outside the department.
- Assign responsibility and provide planning for the maintenance and renewal of parking lots, driveways, walkways, plazas, and outdoor lighting which support CATS facilities.
- Promote the efficient and effective use of existing space.
- Implement energy saving and environmentally friendly improvements.

1.4 Management Responsibilities and Lines of Authority

The SMS Structure, CATS Organizational Chart and the Safety and Security organizational chart in Appendix A capture CATS lines of authority to manage safety issues.

1.4.1 Metropolitan Transit Commission (Equivalent Authority)

The Interlocal Agreement by and among the County of Mecklenburg, the City of Charlotte, and the Towns of Cornelius, Davidson, Huntersville, Matthews, Mint Hill, and Pineville established the Metropolitan Transit Commission and provides transit services through the metropolitan region.

The Interlocal Agreement mandated the creation of a chief transit official position, now titled Chief Executive Officer (CEO). The CEO of the Charlotte Area Transit System is also the Director of the Public Transit Department of the City of Charlotte and has responsibility for making recommendations to the MTC on transit planning and programming; for implementing the approved operating and capital programs; and for implementing the policies and actions approved by the MTC.

As the Equivalent Authority, the MTC will review and approve the ASP and any revisions to the ASP as required by 49 CFR 673. A copy of the MTC Resolution will be provided as evidence that the MTC has reviewed and approved the ASP (Appendix F).

1.4.2 Chief Executive Officer (Accountable Executive)

The Chief Executive Officer is accountable for ensuring that CATS Safety Management System (SMS) through the Agency Safety Plan is effectively

implemented throughout the entire agency. The CEO is accountable for ensuring action is taken, as necessary, to address substandard performance in CATS SMS. The accountable Executive provides leadership and management oversight for the Executive and other divisions of CATS. The Executive Division includes Human Resources, Legal, and Civil Rights.

1.4.3 General Manager of Safety and Security (Chief Safety Officer)

The CEO has designated the General Manager of Safety and Security (GM of S&S) as the Chief Safety Officer (CSO) for CATS. The GM of S&S is adequately trained and is empowered and authorized to administer a comprehensive integrated and coordinated ASP, including the day-to-day implementation and operations of the agency Safety Management System (SMS) program. The CSO maintains CATS Safety program and acts as a liaison with the Charlotte Mecklenburg Police Department as well as security firms at major transit facilities. The Office of Safety and Security also oversees the contract security staff based at CATS facilities. The GM of S&S may not serve in any other operational or maintenance capacities. The GM of S&S reports directly to the CATS CEO and informs the whole Leadership team on the status of the SMS and risks to CATS.

1.4.4 Manager of Safety - Rail (SMS Manager)

The CSO has designated the Manager of Rail Safety as the SMS Manager for CATS. The Manager of Rail Safety is empowered and authorized to lead the organization in day-to-day implementation and operations of the agency Safety Management System (SMS) and for developing and maintaining the ASP in compliance with CFR 49 673. The SMS Manager is adequately trained in safety and SMS and reports directly to the CSO.

1.4.5 CATS Leadership and Executive Management

CATS Leadership Team consists of the CEO's direct reports. The CATS Leadership team is responsible for the communication, implementation, and management of their assigned responsibilities of the ASP.

1.4.6 Key Staff and Groups

The Chief Operating Officer is responsible for overseeing and performing complex professional leadership, direction, and strategic planning and directing of BOD, Rail Operations Division, STS, and Facilities. The COO is responsible for managing CATS day to day operations and reporting them to the CEO.

The General Manager of Bus Operations has responsibility for CATS public transportation services including fixed-route and demand bus service, vanpool, and paratransit services for ADA-eligible riders.

The General Manager of Rail Operations and Facilities has responsibility for Rail Operations and Facilities Management.

The Chief Transit Financial Officer is responsible for Capital Budget and Operating Budget support. The Revenue Section receives, tracks, and distributes cash revenue.

The Director of Marketing/Communications maintains public information and involvement programs.

The Chief Technology Officer works with CATS and City IT to protect CATS Technology and integrate new technology with current technology.

Planning & Development Division Director oversees long-range transit system and transit land use planning and construction project management, as well as short term planning and managing current service operations and Quality Assurance.

CATS Quality Assurance Section is responsible for oversight of the quality management system. CATS Quality Assurance section oversees the Policy and Procedure review process and participates in ASP audits.

City Procurement is a division within the City Department of General Services in the City of Charlotte. City Procurement has staff assigned to CATS procurements.

1.4.7 NCDOT State Safety Oversight

As required by 49 CFR Part 674, the State of North Carolina has designated the North Carolina Department of Transportation (NCDOT) to serve as the State Safety Oversight (SSO) Agency responsible for overseeing CATS' system safety and security programs as implemented and administered for CATS' rail transit system. NCDOT's authority as an SSO Agency is established by North Carolina Statute G.S. 136-18.

NCDOT's State Safety Oversight Program Standard (SSOPS) establishes the minimum requirements for the agency safety program that must be met by rail fixed guideway systems operating in the State of North Carolina. CATS is responsible for meeting the requirements of NCDOT's SSOPS and for complying with the requirements of 49 CFR Part 673.

1.5 Safety Responsibilities Task Matrix

Table 1 - Safety Responsibilities	
Position/Title	**Safety Responsibilities** (Areas refer to departmental/divisional responsibilities unless noted as system-wide)
Chief Executive Officer	• All system-wide/Accountable Executive
Deputy Director/Chief Operating Officer	• Hazard Management • Accident and Incident Investigation • Risk Mitigation and Verification of Effectiveness • Data Acquisition and Analysis • Drug and Alcohol Program • Rules and Procedures • Facilities and Equipment Safety

	• Qualification and Training Qualification • Employee and Contractor Safety • Configuration Management
Planning & Development Division Director	• Hazard Management for design and construction • Safety and Security Certification for Major Projects • System Modification • Risk Mitigation for projects and Verification of effectiveness • Safety and Security Qualification • Employee and Contractor Safety • Configuration Management
General Manager – Rail Operations	• Hazard Management • Accident and Incident Investigation • Risk Mitigation and Verification of Effectiveness • Data Acquisition and Analysis • Drug and Alcohol Program • Rules and Procedures • Facilities and Equipment Safety • Qualification and Training Qualification • Employee and Contractor Safety • Configuration Management
General Manager – Bus Operations	• Hazard Management • Accident and Incident Investigation • Risk Mitigation and Verification of Effectiveness • Data Acquisition and Analysis • Drug and Alcohol Program • Rules and Procedures • Facilities and Equipment Safety • Qualification and Training Qualification • Employee and Contractor Safety • Configuration Management
Sr. Manager – Bus Operations/Special Transportation Service (STS)	• Hazard Management • Accident and Incident Investigation • Risk Mitigation and Verification of Effectiveness • Drug and Alcohol Program • Rules and Procedures • Facilities and Equipment Safety • Qualification and Training Qualification • Employee Safety • Configuration Management
Service Implementation & Scheduling Manager	• System Modification • Route Development and Modification • Rules and Procedures • Configuration Management
General Manager of Safety and Security	• Safety Goals and Objectives • System Safety Program Implementation • Safety and Security Certification • System Modification • Safety and Security Qualification • Safety Data Acquisition and Analysis • Accident and Incident Investigation, Notification and Reporting • Risk Mitigation and Verification of Effectiveness

	• Emergency Management • Rules and Procedures • Facilities and Equipment Safety Inspections • Training Qualification • Employee and Contractor Safety • Hazardous Materials Management • Emergency Drills • Audits in Design and Construction • Audits with NCDOT SSO
Chief Financial Officer	• Hazard Management • Rules and Procedures • Risk Mitigation and Verification of Effectiveness • Data Acquisition and Analysis • Security of Revenue • Training Qualification • Employee Safety
Director Marketing/Communications	• Crisis Communication • Public and Internal Communications • Risk Mitigation and Verification of Effectiveness • Training Qualification • Operation Life Saver
Procurement Services Manager (General Services)	• Procurement • Hazard Management • Safety and Security Qualification • Emergency Management • Configuration Management
Human Resources Manager	• Drug and Alcohol Program • Blood Exposure Control Plan • Configuration Management
Quality Assurance Manager	• Rules and Procedures • System Modification • Configuration Management • Internal Audits
Information & Technology Director	• Hazard Management • Rules and Procedures • Facilities and Equipment Safety • Configuration Management • Emergency Management • Data Acquisition and Analysis • Training Qualification • Employee and Contractor Safety
Manager – Facilities Maintenance	• Hazard Management • Rules and Procedures • Facilities and Equipment Safety • Configuration Management • Training Qualification • Employee and Contractor Safety
Supervisors and Managers	• Comply with CATS Rules, Procedures and Policies • Identify and report hazards through the appropriate chain of command and safety reporting systems

	• Assist, as necessary, in the investigation, mitigation and elimination of hazards and unsafe conditions. • Oversee front-line employees to ensure compliance with safe work practices and adherence to policies and procedures • Support emergency situations • Provide appropriate training and tool talks • Evaluate employees for Reasonable Suspicion
Front-line Employees	• Comply with CATS Rules, Procedures and Policies • Identify and report hazards through the appropriate chain of command and safety reporting systems • Support in the investigation, mitigation and elimination of hazards and unsafe conditions. • Support emergency situations • Attend and participate in appropriate training and tool talks

As part of the implementation plan, the Office of Safety and Security will hire full-time CATS staff to implement various programs/activities, such as hazard management processes, data collection, analysis and reporting.

1.6 Committees' Safety Responsibilities Task Matrix

Table 2 - Committees' Safety Responsibilities	
Name	**Main Purpose**
Project Team meets as specified in Project Management Plans. Members: Led by Development - Coordinate with all divisions Chair(s): Project Manager(s)	• Provide oversight and coordination between all divisions and project committees • Track and oversee all critical tasks are completed on time • Allocate available resources as needed • Coordinate with other City departments and external agencies as required
Safety and Security Review Committee (SSRC) meets monthly, or more frequently as necessary. Members: Rail Operations, Bus Operations, STS, Development, S&S, Technology, Facilities Management, Quality Assurance, CMPD Chair: GM Safety and Security delegated to the Rail Safety Manager	• Review safety and security certification of system components including certifiable items lists and hazard analysis • Hazard Management for Projects
Safety and Security Committee (SSC) meets monthly or more frequently as necessary Members: Rail Operations, Bus Operations, STS, S&S, Technology, Facilities Management, Quality Assurance, CMPD, HR, Marketing and Communications, and Chairs of safety & security committees Chair: GM Safety and Security delegated to the Security Manager	• Review all safety and security efforts • Hazard Assessments and Recommend Mitigations • NCDOT reportable Incident/accident Investigation reviews • Review security breaches • Vehicle Accident Review • Items escalated from Rail, STS, and Bus safety committees
Rail Safety Committee meets monthly Members: S&S, QA, and frontline employees from MOW, RCM, Transportation, Parts & Warranty, Facilities Management Chair selected by committee members Rail Safety Liaison: Rail Safety Coordinator	• Hazard Assessments and Recommend Mitigations • Identify and investigate rail safety issues.
Bus Safety & Security Committee meets monthly Members: S&S, BOD Operations and Maintenance supervisors, BOD Operators, Facilities Management, STS operator, STS supervisor Chair: Bus Safety Training Coordinator	• Hazard Assessments and Recommend Mitigations • Identify and investigate bus safety & security issues

Table 2 - Committees' Safety Responsibilities	
Name	**Main Purpose**
Fire-Life Safety Committee meets bi-monthly, or more frequently as required. Members: S&S, Bus Operations, Rail Operations, Facilities Management, Risk Management, QA, Technology, CMPD, CFD, MEDIC, NCDOT –Rail Division, Project Staff (Design and Construction Chair: GM Safety and Security delegated to Bus Safety Coordinator	• Act as liaison group with emergency response agencies • Review designs, standards, and procedures • Make recommendations • Participate in emergency exercises

1.7 Employee Reporting Program

CATS employees and contractors are held accountable for their safety performance and for compliance with rules and regulations. Employees who intentionally conduct unsafe acts will be disciplined commensurate with the offense per City, CATS, and contractor policies and procedures.

Employees are expected to address safety concerns within their control immediately. Employees are to report unsafe conditions and issues with procedural compliance to their supervisor or manager. If an employee feels that a safety concern is not being addressed in a timely manner, the employee is encouraged to escalate unsafe issues to their safety committee representative, General Manager, or the Office of Safety & Security. CATS Management encourages employees to report safety concerns with no fear of reprisal. CATS Leadership will have no tolerance for any retaliation against employees, contractors or the public who report safety concerns. As part of the implementation process, reported safety concerns will be tracked in the appropriate hazard tracking format per the Hazard Management section of this ASP. For employee reported safety concerns, where contact information is provided, the recipient of the safety concern is responsible to follow-up with the employee. Another means to report safety concern is to send an email to reportsafety@ci.charlotte.nc.us. This email account is monitored by all Safety and Security managers. Any reported safety concern to this email address will be reviewed, added to the hazard safety log if applicable, and followed-up with the department manager and employee sending the email.

The City of Charlotte maintains an Employee Hotline that allows for anonymous 24/7 reporting of Abuse, Fraud, and Safety and Waste violations. The hotline should only be used in instances when employees are not comfortable reporting directly to Human Resources, management or the Office of Safety and Security. CATS Safety and Security managers are part of the Employee Hotline process as part of the implementation plan.

Details on the Employee Hot Line are communicated on the City's CNET and at City offices/facilities throughout the City.

Examples of reportable offenses for safety include:

- Witnessing or experiencing unsafe working conditions or behavior that compromises one's safety or the safety of others.
- Equipment or facility maintenance issues that can lead to unsafe working conditions.

Employee Hotline process:

- An employee can either call in or email a safety concern. Reports are kept anonymous and confidential.
- Once the incident has been reported, the employee will be given a unique report number by the Hotline Operator which will allow them to call in or email at a later time to either provide additional information or to follow up on the report status.
- The report will then be provided to the CATS Office of Safety and Security for an initial screening for review and action.
- The issue will be reviewed and a determination will be made: unfounded; credible with immediate resolution or mitigation; or credible with long term mitigation until final solution can be made. Responses to how the issue was addressed are sent back to the Hotline administrator.
- An anonymous employee can call or email with their assigned unique number to hear the determination, mitigation, or resolution.
- CATS Safety and Security will submit all appropriate documentation and reports to the third-party administrator who manages the Hotline who will confirm in writing the information was made available to the anonymous employee.

1.8 Safety Plan and Policy Dissemination

As part of the implementation plan, all CATS employees will receive training on the ASP and CATS Safety Policy. CATS EX03 Safety Policy is communicated by all divisions during New Hire Safety training and is available on CATS CNET site with CATS Policies and Procedures. CATS Policies and Procedures (including CATS Safety Policy) are available on CATS CNET site and at key locations throughout CATS. ASP training for current employees will include training on the ASP and CATS Safety Policy including the employee's roles and responsibilities. The ASP is a controlled document that CATS QA manages through CATS QA02 Control and Distribution of Plans, Manuals, Policies, and Procedures to ensure only the most current revision of the document is available to employees.

1.9 Emergency Preparedness and Continuity Plan (EPCP)

CATS EPCP incorporates the FTA requirements for an Emergency Preparedness and Response Plan. The EPCP provides planning and program guidance to ensure that CATS is capable of conducting its Mission Essential Functions under all threats and conditions. The EPCP also includes CATS Continuity of Operations Plan (COOP) which describes how CATS will continue to operate under conditions where various resources are impacted.

The CATS EPCP is maintained by CATS Quality Assurance and is a stand-alone document that can be reviewed on site by both internal and external authorized personnel as requested.

1.10 Integration of Safety Function

The ASP serves as a blueprint for the organizational integration of the safety function and its effective implementation ensures a safe functioning system. The safety function is integrated throughout all operations and activities of CATS through the delegation of safety

functions and safety responsibility via CATS Safety Policy Statement from the CEO to all employees and contractors to include safety requirements, responsibilities and objectives into the work plans of managers and supervisors. Managers and supervisors are responsible for developing programs to promote the safety of all employees and customers. Safety is incorporated into employee training provided by CATS Instructors.

Bus and rail operators and supervisors must be aware of conditions which may affect passenger safety and report problems so that they may be corrected. The Manager of Safety for Bus or Rail is notified of safety issues through various mechanisms described in this ASP and participates in the hazard resolution process, along with the General Manager of Safety and Security.

Safety performance is measured through the monthly tracking and corporate reporting of indicators such as passenger and transit facility occupant injuries and injury rates as reported to the FTA's National Transit Database. In addition, the Rail Hazard Tracking Log is submitted to NCDOT on a quarterly basis, and as a one-year log annually after end of the calendar year.

1.11 Safety Plan Implementation Tasks and Activities

Activities required to implement the ASP that were identified during the development of the ASP and identified in gaps are captured in Appendix I on the CATS Implementation Timeline. CATS shall provide the CATS ASP implementation plan to NCDOT quarterly or as requested.

Section 2 Safety Risk Management (SRM)

2.1 Overview

Safety Risk Management is the process for identifying hazards and analyzing, assessing, and mitigating safety risk.

Hazard identification and resolution is one of the goals of the CATS System Safety Program. This process is applicable to all levels of the organization. It is how hazards are identified and analyzed for potential impacts and severity on the transit system. It also describes how identified hazards are resolved in a manner acceptable to management.

CATS defines a hazard as a condition or set of conditions, internal or external to the system or system operation, that can cause injury, illness, or death; damage to or loss of facilities, rolling stock, or infrastructure of CATS equipment or property; or damage to the environment.

The CATS Office of Safety and Security, under the direction of the General Manager of Safety and Security, is directly responsible for the implementation of the CATS Hazard Management Process. This includes:

- developing, updating and auditing the Hazard Management Process;
- training all designated CATS employees and its contractors on the Hazard Management Process; and
- maintaining the Rail Safety and Bus Safety Hazard Registers.

2.2 Hazard Management Process

2.2.1 Hazard Identification

Methods of Hazard Identification of Day-to-Day Operations

1. Job Hazard Analysis will be conducted in Bus and Rail Operations and Maintenance as part of the implementation plan.
2. Hazards that are identified as a result of accidents/incidents
3. System and facility inspections that identify hazards or unsafe conditions
4. Safety issues or hazards identified during scheduled audits (Internal Safety Review Program, ASP Section 3.2) and unscheduled audits, as warranted by staff
5. Employee observations of unsafe conditions or behavior which can be reported verbally or through completion of a written safety report form which will be developed as part of the implementation plan.
6. Safety staff regularly reviews bulletins or advisories, SSOA inputs, and general industry trends to determine their applicability as inputs into the safety management and/or hazard analysis process
7. Operational data reports (e.g. SPEAR, ROCC/BOCC & key process indicator reports) are reviewed on an ongoing basis to identify known or potential issues that can have an impact on safe operations
8. Safety issues brought to the various safety committees
9. Customer, contractor, and employee complaints
10. Hazards identified by NCDOT SSO or FTA

2.2.2 Addressing Identified Hazards

The system to be analyzed is defined by its physical and functional characteristics, including:

- People
- Procedures
- Facilities & Equipment
- Operating Environment

CATS QA05 *Nonconformity and Corrective Action* procedure identifies the steps for addressing nonconformances which include hazardous conditions identified in section 2.2.1.

For employee identified unsafe conditions, employees are expected to address safety concerns within their control immediately. Employees are expected to report unsafe conditions and issues with procedural compliance by speaking with or e-mailing a written safety report to their supervisor or manager. Employee Handbooks describe the unusual circumstances that must be reported to their control center. If an employee feels that a safety concern is not being addressed in a timely manner, the employee is encouraged to escalate unsafe issues by speaking with or e-mailing their safety committee representative, General Manager or the Office of Safety & Security.

Identified hazards will be rated based on the Hazard Risk Assessment. As part of the implementation plan, Bus, Bus Safety, Rail, Rail Safety, Facilities, and STS will maintain their own Hazard Management Logs.

Acceptable hazards (1E, 2D, 2E, 3C-3E and 4A-4E) that are not immediately resolved will be reported to the appropriate section to address as time and resources are available. “Acceptable with Review” and “Acceptable without Review” hazards will be managed by supervisors/managers to closure and maintained on their Hazard Management Log.

Undesirable Hazardous Conditions (1D, 2C, 3A, and 3B) must be reported by e-mailing a written safety report to the General Manager, the SMS Manager and the CSO unless it is already mitigated per the Division’s Hazard Management Log. The General Manager and the SMS Manager or CSO will ensure that a risk mitigation is documented on the Risk Register and in place for any undesirable safety issues.

Unacceptable Hazardous Conditions (UHCs) (1A, 1B, 1C, 2A and 2B) must be reported within two hours by e-mailing a written safety report to the General Manager, the SMS Manager and the CSO as part of the implementation plan. The General Manager and the SMS Manager or CSO will ensure that a risk mitigation is in place for any unacceptable safety issues. Unacceptable Hazardous Conditions must be mitigated in the most expedient manner before returning to normal service. The CSO will notify the CEO immediately by phone or e-mail of any Unacceptable Hazardous Conditions and the mitigations that were put in place. When the mitigations that are put in place reduce the hazardous condition to Undesirable or better, the CSO will recommend return to normal service to the

CEO who will approve the recommendation after review. CATS shall notify NCDOT of an Unacceptable Hazardous Condition (UHC) within two hours, via email or phone, regardless of the time of day. All other hazardous conditions and on-going resolutions will be reported quarterly to NCDOT with the Hazard Management Log.

2.2.3 Methods for Continuous Hazard Identification and Targeted Campaigns

The methods used for hazard identification as mentioned above in Sections 2.2.1 and 2.2.2 are done on a continuous basis based upon inspection intervals and investigating safety complaints. Based on the hazards identified through these methods, safety-specific topics or inspections will be conducted to address issues identified from the data analysis.

2.2.4 Hazard Management Logs

As part of the implementation plan, and in order to ensure the sharing of safety data and information, Hazard Logs and Risk Registries will be available electronically in an accessible location for appropriate employees to access and review. Hazard logs and risk registries are living documents and are reviewed and updated at a minimum quarterly. As part of the ASP implementation plan, safety will appoint Safety Coordinators who will be responsible for maintaining, updating and setting up the hazard log to ensure adequacy and appropriateness of the hazard log.

The Rail Safety Office is responsible for identifying those rail issues from accident/ incident reports and SPEAR entries which are significant enough to pose an undue hazard to employees or passengers and facilitate tracking of progress toward resolving those issues. This is done by tracking all safety issues and hazards in the Rail Hazard Management Log, which tracks those items of interest in terms of the problems discovered, the desired resolution, the individual responsible for resolution, and the progress and will be included as part of the implementation plan. This log includes safety audit issues, post-accident or incident issues, individual hazard reports and those items cited by the safety committee. As items are corrected, those corrections are noted on the log and closed out as appropriate. The Office of Safety reviews these items on an ongoing basis, and when unacceptable delays are encountered in resolution the items are escalated to appropriate senior management for assistance in resolution and closure. Additionally, when Rail Operations is considering alternate materials or software instead of the Original Equipment Manufacturer (OEM) product or to change any configurations to the existing systems, it must be approved by the Rail Change Control Board per CATS ROD801 Configuration Change Control.

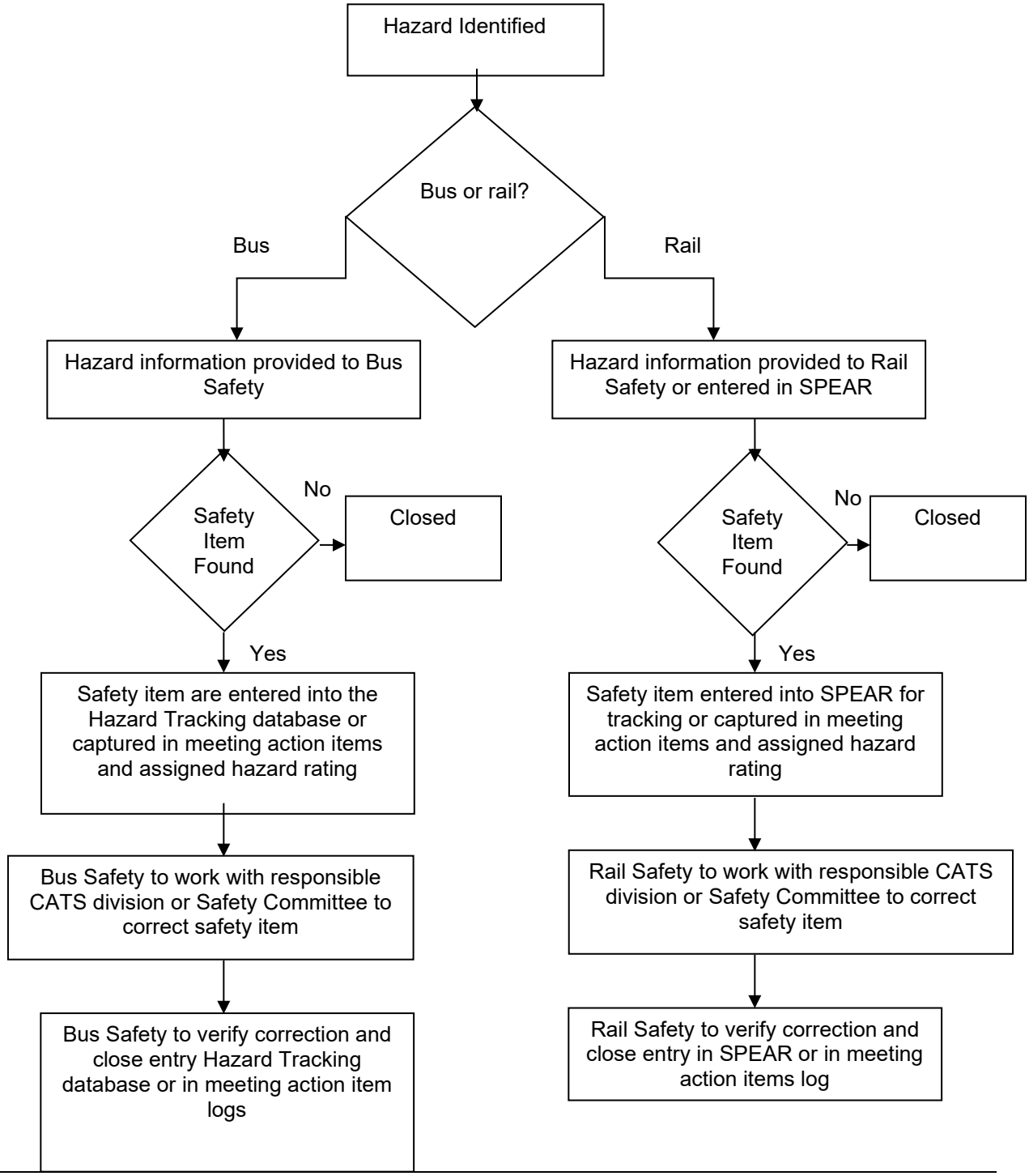
The Rail Safety Office provides quarterly updates of Hazardous Conditions to the SSOA.

The Bus Hazard Log is created from reported BOCC or supervisor generated incident/accident reports. It could also come from an operator statement that gets forwarded to Bus Safety.

As part of the implementation plan, Divisions will manage their Hazard Tracking Logs to reflect the status of identified hazards. The Hazard Tracking Logs will be managed to eliminate, reduce, or control each hazard to an acceptable level.

Identified hazards will be assigned a hazard rating. The Safety Manager and General Manager will review hazard ratings and status of the Hazard Log on a monthly basis. When an item is added by the Office of Safety, the Division Manager will be notified by e-mail. Hazard Tracking Logs will be distributed to CATS Leadership on a monthly basis. Hazard Tracking logs will be distributed to the SSC on a quarterly basis for review and discussion.

Figure 1 - Hazard Tracking Process



Utilizing the information collected in the various safety reports, the Chief Safety Officer will provide a monthly safety summary to the MTC, CATS CEO, and CATS employees. TV screens are centrally located in areas (e.g. breakrooms) to display safety information, Chief Safety Officer's monthly report, alerts, statistical information, and other safety education materials for employees who don't have access to e-mail. The CATS CEO will receive safety updates during the Senior Leadership meetings.

2.2.5 Safety Risk Register

As part of the implementation plan, the Office of Safety and Security along with Quality Assurance will create a Risk Registry that will be distributed to each division to use to track risks. The Safety Risk Registers will capture, manage, and mitigate identified Undesirable and Unacceptable Hazardous Conditions. The register will include, at a minimum, the hazardous condition, potential consequences of the hazard, safety risk assessment for each potential consequence, mitigation that is in place and the hazard rating after mitigation, monitoring activities, and responsibilities for monitoring.

A summary report of the updates and status of the Risk Register will be provided to the CEO and CATS Leadership Team on a monthly basis.

2.3 Safety Risk Assessment

2.3.1 Hazard Analysis Processes

Risk Assessment is a quantitative calculation based on largely **subjective judgments** used to determine the risk associated with each hazard and thus the urgency for implementing corrective measures to eliminate or reduce risk to a level of acceptability.

Risk Assessment is comprised of evaluating hazard severity (categorizing the hazard) and evaluating hazard probability. The factors considered in this analysis include system safety, schedule, and the impact on the public's perception of safety on the system in the community where CATS operates.

2.3.2 Safety Risk Indexing (Likelihood and Severity of Consequences)

Table 3 - Hazard Severity Categories

Severity	Category	Characteristics
Catastrophic	1	May cause death, system loss, or severe disruption of service system wide.
Critical	2	May cause severe injury, severe occupational illness, major system damage, or major system wide disruption of service.
Marginal	3	May cause minor injury, minor occupational illness, minor system damage, or minor system disruption of service.
Negligible	4	Less than minor injury, occupational illness, system damage, or less than minor system disruption of service.

Hazard severity is a subjective determination. With historical data, an objective determination applicable specifically to CATS can be derived. The determination reflects a credible mishap that could be anticipated to result from human error, procedural deficiencies, design inadequacies, component failure, or malfunction. Hazard Severity at CATS is based on the *Department of Defense Standard Practice for System Safety* (MIL-STD-882E) as follows:

Hazard Severity Categories
The categorization of hazards is consistent with risk-based criteria for severity; it reflects the principle that not all hazards pose an equal amount of risk to personal or system safety.

2.3.3 Hazard Probability

The probability of a particular event or a specific hazard occurring may be defined as a ratio of the number of times that a specific event occurs to the total number of trials in which this event may occur during the planned life expectancy of a system. Generally, hazard probability is described quantitatively in potential occurrences per units of time, miles, trips/runs or passengers carried. A hazard probability may be derived from the analysis of transit system operating experience, evaluation of CATS safety data, or from historical safety data from other passenger rail systems.

Table 4 - Hazard Probability Categories

Probability Levels Description	Level	Specific Guidance
Frequent	A	Likely to occur frequently to an individual item. Continuously experienced in the system.
Probable	B	May occur several times in the life of an item. May occur frequently in the system.
Occasional	C	Likely to occur sometime in the life of an item. May occur several times in the system.
Remote	D	Unlikely, but possible to occur in the lifetime of an item. Unlikely, but can be expected to occur at some time in the system.
Improbable	E	So unlikely to occur, it can be assumed occurrence may not be experienced. Unlikely, but possible to occur in system.
Eliminated	F	Incapable of occurrence. This level is used when potential hazards are identified and later eliminated.

2.3.4 Hazard Probability Categories

Hazard Risk Assessment

CATS has adopted a system for assessing the level of risk for each identified hazard to determine what action(s) must be taken to correct or document the hazard risk. This risk assessment system has been incorporated into the formal System Safety Analysis which enables CATS decision-makers to understand the

amount of risk involved in accepting the hazard in relation to the cost (schedule, cost, operations) to reduce the hazard to an acceptable level.

The Risk Assessment Matrix identifies the risk assessment index based upon hazard category and probability and the criteria for defining further actions based upon that index.

Table 5

MIL-STD-882E Risk Assessment Matrix				
SEVERITY / PROBABILITY	Catastrophic (1)	Critical (2)	Marginal (3)	Negligible (4)
Frequent (A)	1A	2A	3A	4A
Probable (B)	1B	2B	3B	4B
Occasional (C)	1C	2C	3C	4C
Remote (D)	1D	2D	3D	4D
Improbable (E)	1E	2E	3E	4E
Eliminated (F)	ELIMINATED			

Hazard Risk Index	Criteria by Index
	Unacceptable (Immediate Action Required)
	Undesirable (Management Decision Required)
	Acceptable with Review by Management
	Acceptable without Review
	Potential Hazard was Identified and Eliminated

Risk Assessment Matrix and Hazard Risk Index

Follow-up actions resulting from the Risk Assessment are as follows:

Unacceptable: The hazard must be mitigated in the most expedient manner possible before normal service may resume. Interim corrective action may be required to mitigate the hazard to an acceptable level while the permanent resolution is in development.

Undesirable: A hazard at this level of risk must be mitigated unless a documented decision to manage the hazard until resources are available for full mitigation is issued by executive management and forwarded to NCDOT for review and approval/disapproval.

Acceptable with review: The Office of Safety and Security must determine if the hazard is adequately controlled or mitigated as is.

Acceptable without review: The hazard does not need to be reviewed by management and does not require further mitigation or control.

The Risk Assessment Process is used to prioritize hazardous conditions and focus available resources on the most serious hazards requiring resolution.

2.3.5 Risk Tolerability Non-Consensus Procedures

In situations where there is non-consensus on Hazard Risk Assessment ratings, the Subject Matter Expert will take the lead in providing information to the SMS Manager and Operations Manager to promote resolution of non-consensus. If consensus is not reached, the CSO will make the final decision.

2.4 Safety Risk Mitigations

2.4.1 Resolving Hazardous Conditions

A number of different means are employed to resolve identified hazards. These include design changes, the installation of controls and warning devices and the implementation of special procedures or training. The order of precedence for resolving hazards is as follows based on available funding:

Design for Minimum Risk
The first priority is to eliminate hazards through engineering and design. This is applicable for facilities, rolling stock and equipment, park & rides, routes, transit stations, and product selection, etc.

Safety Devices
Hazards that cannot be eliminated or controlled through design selection shall be controlled to an acceptable level using fixed, automatic, or other protective safety design features, devices or personal protective equipment. Provisions shall be made for periodic functional checks of safety devices.

Warning Devices
When neither the design nor the safety devices can effectively eliminate or control an identified hazard, devices shall be used to detect the condition and to generate an adequate warning signal to correct the hazard or provide for personnel evacuation. Warning signals and their application shall be designed to minimize the probability of incorrect personnel reaction to the signals and shall be standardized within like types of systems.

Procedures and Instruction
Where it is impossible to eliminate or adequately control a hazard through design selection or use of safety and warning devices, procedures and training shall be used to control the hazard. Procedures may include the use of personal protective equipment. Precautionary notations on signs shall be standardized as specified by management. Safety critical tasks and activities may require certification of personnel proficiency.

CATS Business Planning Process in the CATS Quality Manual describes the budget cycle for all CATS divisions. It is the responsibility of each CATS division/section to prioritize risks based on the Hazard Management process using Hazard Ratings to help resolve identified hazards.

2.4.2 Evaluation of Current Mitigations

Whatever the decision with respect to a particular hazard, mitigations must be monitored for effectiveness and to ensure that another hazard has not been introduced. If a risk mitigation is not effective or appropriate, the safety risk control should be reviewed through the Safety Risk Management and Hazard Analysis process.

2.4.3 Risk Mitigation Implementation and Tracking

Mitigations that have been implemented are tracked in Hazard Management logs by the Division/Section and/or the Safety Risk Register. The person assigned the mitigation will be responsible for tracking and reporting on the status of the mitigation through closure.

Corrective Action Plans
Corrective Action Plans (CAPs) are required for deficiencies identified through on-site safety review, accident and hazard investigations, internal safety reviews, or other means by which a hazard may be brought to the attention of CATS. CAPs will follow the format described in Section 3.4.8.3.

2.5 Safety Data Acquisition and Analysis

2.5.1 Data Acquisition Process

The Office of Safety and Security monitors the safety performance of the various CATS operations. Accident, incident, injury, and other safety data is collected throughout the organization and analyzed to determine trends within the organization. The safety data collected is analyzed to determine if safety performance meets established safety objectives. The accident and incident data assists in identifying service areas that generate a higher percentage of accidents or potential for higher accident rates.

The safety data that is collected includes injuries to passengers, CATS personnel, and the public; hazardous equipment failures; unacceptable hazardous conditions; vandalism and security hazards; and rules and procedures violations. The Office of Safety and Security analyzes safety-related data for the purpose of implementing corrective action to assist in prevention or reoccurrence of hazards.

2.5.2 Data Reporting to Safety Function (process)

The Office of Safety and Security analyzes the data from SPEAR reports, incident investigations, safety committees, field inspections, police reports, and Risk Management. The Office of Safety and Security also uses the data acquisition and

analysis process to identify system trends and to monitor safety and security program performance. The Office of Safety and Security provides monthly safety program performance reports to executive management. As part of the implementation plan, Safety will also supply monthly updates to employees.

Currently, safety performance (NTD) reports are submitted to FTA on a monthly and annual basis. The report contains injury data regarding passengers, CATS personnel, and customer/public accidents and incidents. The Office of Safety and Security, based on FTA established guidelines, compiles safety data for the overall CATS organization. The report summarizes accidents and incidents into three categories: minor incidents, major incidents, and safety/security issues. CATS uses this report to establish safety performance goals and objectives for each coming fiscal year.

2.5.3 Access to Data

Information regarding accidents, incidents, and hazardous conditions of the various CATS divisions are obtained from several different reporting mechanisms. These include, but are not limited to the following reports:

- Accident/Injury Reports
- Incident Reports
- Daily Operations Summary
- Accident/Incident Database (Bus)
- SPEAR Database – Material Maintenance Management System (MMMS)
- Employee/Occupational Injury reports
- National Transit Database (NTD) Safety and Security reporting module
- CCTV Video
- Automatic Vehicle Locators (Bus)

2.5.4 Use of Data (Trend Analysis)

Hazard data and accident/incident data is used to identify trends. Trends are then further analyzed and/or investigated by the Office of Safety and Security to determine causal factors where possible and identify issues of increasing severity and/or probability. Interviews with personnel in the affected division(s) may also be conducted. The various Safety teams identify hazards, areas susceptible to accidents, traffic problems, and other critical factors and develop mitigations to address potential consequences of the hazards.

Section 3 Safety Assurance (SA)

3.1 SA Implementation Process

Safety Assurance involves processes within a transit agency's Safety Management System that functions to ensure the implementation and effectiveness of CATS programs. This involves monitoring key aspects of the operation for effectiveness and to ensure that no new hazards have been introduced into the system. This ongoing attention also provides for identification of new hazards as changes to the operation form, fit, or function are made.

3.2 Internal Safety Review Program

3.2.1 Overview

The purpose of internal system safety audits is to evaluate the effectiveness and safety performance of the implementation of the ASP and SMS by CATS Divisions. The Office of Safety and Security and Quality Assurance are jointly responsible for the direction of the safety reviews and audits of CATS divisions and contractors to determine performance related to the System Safety goals and objectives. The Internal Safety Audit (ISA) Team will be led by the Office of Safety and Security or Quality Assurance with support from division staff or external agencies.

All CATS divisions and contractors are subject to safety audits. The criticality of certain operations requires rigorous development of reviews and audits. These include training, maintenance, and operations activities. Both periodic and no-notice inspections are undertaken to address all aspects of the activity, including documentation, practices, and compliance with this ASP, CATS policy and other requirements. The Internal Safety Audit team reviews training, practices, and procedures to correct deficiencies identified during the conduct of audits or other safety activities, including inspections and emergency drills.

3.2.2 Purpose and Scope

The purpose of internal safety audits is to confirm all safety components are in place and assigned safety tasks and activities are being accomplished. This provides an additional means of documentation for senior management to verify how well each division is fulfilling their safety-related goals and objectives as required in the ASP.

Organizational functions subject to the safety audit process include:

- Facility inspections
- Maintenance audits/inspections
- Review of rules, standard operating procedures, special bulletins and orders
- Review of training/retraining programs
- Emergency response planning, coordination, and training
- Configuration Management
- Systems modifications (review and approval)
- Safety data analysis
- Employee safety programs

- Hazardous materials program
- CATS safety goals and objectives
- Occupational safety and health programs
- Contractor safety
- Procurement and specification engineering
- Drug and Alcohol Testing Program
- Any aspect or responsibility as outlined in this document

Pursuant to 49 CFR 673 and NCDOT SSOPS Section 4.7, the Internal Safety Audit process must evaluate the following components:

1. **Safety Management Policy § 673.23(a)**
    1. Goals and Objectives § 673.23(a)
    2. Management Accountabilities and Responsibilities § 673.23(d)
    3. Employee Reporting Program § 673.23(d)
    4. Safety Policy Dissemination § 673.11(a)(5)
    5. Reference to Emergency Management Plan (EMP) § 673.21(a)-(d)
        (a) Safety Management Policy Section§ 673.23
        (b) Safety Risk Management Section§ 673.25
        (c) Safety Assurance Section§ 673.27
        (d) Safety Promotion Section§ 673.29

2. **Safety Risk Management (SRM) Section§ 673.25(a)-(d)**
    1. SRM Process
    2. Hazard Identification
    3. Safety Risk Assessment
    4. Safety Risk Mitigations
    5. Safety Data Acquisition and Analysis

3. **Safety Assurance Section§ 673.27(c)**
    1. SA Implementation Process
    2. Safety Performance Monitoring and Measurement
    3. Internal Safety Review Program
    4. Coordination with Hazard Management Program
    5. Management of Change

4. **Safety Promotion Section§ 673.29(a)-(b)**
    1. Safety Plan Dissemination
    2. Safety Plan Review and Modification
    3. Safety Plan Implementation Tasks and Activities (including responsibilities matrix)
    4. Employee and Contractor Safety Programs (knowledge and compliance)
    5. Compliance with Local, State, and Federal Requirements
    6. Training and Certification Program
    7. Safety Communication and Outreach
    8. Environmental Management Program

3.2.3 City and CATS Divisions Subject to Internal Safety Audits (ISAs)

- Bus Operations including STS

- Rail Operations
- Facilities Management
- Safety and Security
- Quality Assurance
- Marketing and Communications
- CATS Technology
- City Procurement
- City HR
- Finance/Revenue

3.2.4 ISA Process

The General Manager of Safety and Security is responsible for the management of the Internal Safety Audit Program. All CATS divisions are required to cooperate fully with the ISA team. Executive and senior managers ensure that their divisions participate fully in the safety audit process. CATS Quality Assurance and Safety and Security will jointly conduct safety audits.

3.2.5 ISA Cycle / Schedule

Over a three-year period, key components of the ASP must be audited at least once. The CATS Internal Safety Audit Process is intended to be a continuous safety review process. As part of the implementation plan, the Office of Safety and Security and Quality Assurance will jointly develop and annually submit a comprehensive Internal Safety Audit schedule to NCDOT, detailing when it will audit the Agency Safety Plan components over the three-year period. The schedule is revised as necessary to accommodate schedules for auditors and the audited divisions. CATS QA100 Quality Audits outlines the process to be followed for ISA.

The ISA team will identify the components of the annual safety performance assessment based on SMS and conduct a safety assessment annually to verify compliance to audit schedule.

The ISA lead auditor notifies the division/organization and NCDOT a minimum of 15 days in advance of a scheduled safety audit. This notification must include the audit checklist for the sections of the ASP to be audited.

3.2.6 Integrity of Review Process

To maintain the integrity of the review process, an ISA team is used to conduct safety audits. The Office of Safety and Security does not lead audits/reviews of those functions and components for which it is directly responsible to implement. These components are audited by Quality Assurance personnel, or an independent member of the audit team. No team member shall audit a function or activity for which he/she is responsible. The lead auditors will be certified to conduct audits by accredited bodies such as the Transportation Safety Institute ASQ (American Society for Quality).

3.2.7 ISA Checklist Development Process

Audit checklists are developed in advance and submitted to NCDOT for review and approval. Checklists are prepared during the review of: the documents referenced in the ASP section; previous audits; audit findings; and corrective actions. Audit checklists are provided to the organization or division being audited and to NCDOT a minimum of 15 days in advance of the audit.

Pre-audit and post-audit conferences are held by the audit team, as appropriate, with the entity being audited. The safety audits are comprised of record reviews, interviews, field observations and inspections, and measurements to verify the accuracy of documentation and spot inspections of facilities and equipment to verify compliance with the ASP, procedures, codes, and regulations.

The following list of documents may be used to support development of the audit checklists:

- ASP, SSP, and EPCP
- Rule Book(s), bulletins, and procedures
- Standard and emergency operating procedures
- Training program documentation
- Management and/or administrative plans/procedures
- Design standards and criteria
- Accident and investigation reports
- Hazard tracking logs
- Corrective Action Plans
- Previous audit reports
- Other sources as determined by NCDOT SSO upon request

3.2.8 Audit Report

The Office of Safety and Security will provide a draft safety audit report to NCDOT SSO for approval. NCDOT SSO makes changes/ recommendations to the audit report prior to final issue of the report.

Upon completion of each audit report, the Office of Safety and Security issues a final report of the results and specifies areas of deficiency, including cause; prepares recommendations; identifies the need for Corrective Action Plans; and distributes copies of the report to CATS Chief Executive Officer, Quality Assurance Manager, Safety and Security staff, and the audited Division.

Responsible Divisions are expected to determine the cause of nonconformances and to develop corrective actions, though the audit team may make recommendations and must approve corrective actions. The results of the audit are used for positive corrective action, not as an internal regulatory process. Safety Audit coordination meetings and management briefings are held to review areas of concern or disagreement over findings and evaluate possible corrective actions. Safety and Security personnel monitor and track corrective actions with the affected divisions to ensure implementation.

Safety and Security personnel submit the CAPs (for Rail only) to the NCDOT SSO for review and approval in accordance with Section 3.4.8.3 - *Corrective Action*

Plans. Safety and Security personnel track the implementation of the NCDOT-approved CAPs through closure. Safety and Security will also provide the CAPs to the audit team after the CAPs are approved by NCDOT SSO.

3.2.9 Annual Review Report

An Annual Safety Activities Report is provided to the CEO and to the NCDOT SSO for review and approval on or before February 15th. The report includes:

- results of the internal Safety Audit Process for the calendar year in terms of the adequacy and effectiveness of the ASP and the status of subsequent findings and corrective actions,
- a summary of the Emergency Management Program,
- the internal safety audits planned for the upcoming calendar year,
- a summary of all hazards identified during the previous year and corrective actions taken to address these hazards,
- a summary of all reportable accidents/incidents,
- status of resource allocation plan for SMS implementation, and
- identification of staff designated for implementation of ASP/SMS implementation and safety oversight at CATS.

Along with the annual report, CATS must include a formal letter signed by the CEO certifying CATS is in compliance with its ASP. If the safety audit's findings indicate noncompliance with its ASP, the CEO must identify in the formal letter the nature of the noncompliance and the steps CATS will take to achieve compliance. An implementation schedule detailing when compliance will be achieved may also be provided.

3.2.10 Coordination with SSO Program

As noted above, the following aspects of the Internal Safety Audit Process are coordinated with NCDOT per the current SSOPS:

- Internal Safety Audit Cycle and Schedule
- Safety Audit Checklists
- Actual dates of each safety audit
- Each Safety Audit Report
- Corrective Action Plans
- Annual Safety Activities Report
- CEO Annual Certification

3.2.11 Corrective Action Follow-up Procedures

Findings from Safety audits will be added to the appropriate Hazard Management Log by the lead auditor per the Hazard Management Process. If applicable, a CAP will be created per Section 3.4.8.3 - *Corrective Action Plans*. Corrective action plans are reviewed monthly by the SMS manager or designee to provide oversight and direction for corrective action activities in order to resolve hazardous conditions and deficiencies. Any hazardous condition/deficiencies that are rated as Unacceptable will be reported by the Chief Safety Officer or SMS Manager to the CEO per the Hazard Management Program. The CSO will include a summary

of safety deficiencies identified during audits as part of the hazardous conditions monthly report to the CEO.

3.3 Maintenance and Inspection Program for Vehicles, Equipment, Systems, and Infrastructure

3.3.1 Facilities and Equipment Subject to Inspections

Periodic inspections are made of all CATS facilities and equipment to ensure they are maintained in a state of good repair; clean, safe, and functional to safeguard employees, visitors, and passengers.

CATS Facilities Management Plan identifies the responsibilities for facilities and equipment maintenance. Inspection schedules are included as an appendix to the Facilities Management Plan. Facilities Management performs inspections of CATS facilities (South Boulevard Light Rail Facility, South Tryon Bus Facility, and Davidson Street Bus Facility), as well as all transit centers, park and rides, bus stops, light rail stations, streetcar stops and amenities. They also contract the inspection and maintenance of facilities equipment. The Facilities Management Plan identifies the priority structure assigned to Work Orders generated from inspections. Operational/Safety Related items are priority one with a targeted response time of four hours or less. Facilities Management will immediately notify the Office of Safety and Security when an urgent safety issue is identified.

Items are inspected and maintained in accordance with the manufacturer’s recommendations, Facilities Management Plan, SOPs and CATS standards by Facilities Management staff, Bus and Rail Operations staff or contractors.

Shop equipment is maintained and serviced according to manufacturer's recommendations and the Facilities Management Plan. In certain facilities, the services of outside vendors are required for servicing specialty items such as lifts, hoists, and fire detection and suppression systems.

A member of the Office of Safety and Security staff completes a quarterly safety inspection of transit facilities and light rail stations that covers a variety of OSHA 1910 and 1926 considerations in the facility such as housekeeping, fire extinguishers and guard rails/stair-rails in place. The Office of Safety and Security forwards the inspection reports to the responsible division/sections for resolution.

Rail Car Maintenance conducts daily inspections of vehicles before releasing vehicles into revenue service. Bus Maintenance conducts an inspection of buses and reviews operator inspection cards when buses go for fueling. Any safety critical items identified will result in the vehicle being taken out of service for repair prior to release to revenue service.

Operators perform pre-trip inspections of vehicles prior to entering revenue service. Results of these inspections are documented on the pre-trip inspection card and submitted to Maintenance for follow-up and repair. Inspections are conducted to ensure that vehicles are safe, clean, reliable, and ready for revenue service. Any safety critical items identified will result in the vehicle being taken out of service for repair prior to release to revenue service.

As part of the implementation plan, CATS Transit Asset Management (TAM) Program will be establishing the direction for Asset Management Policies. The program will establish the divisional roles and responsibilities as stated in the CATS TAM Implementation Plan. The process will tie into the review of State of Good Repair and any Unacceptable or Undesirable Hazards will be addressed by following the Hazard Management Plan in the ASP. A report rating deferred maintenance items will be provided by Operations and Facilities at the monthly Safety and Security Committee (SSC).

3.3.2 Systems and Facilities Subject to Maintenance Programs

CATS ROD600 *Preventive Maintenance Requirements for Rail Systems* summarizes the maintenance and inspections performed by the Rail Maintenance of Way division. The Maintenance of Way division performs the following inspections in accordance with the Systems Maintenance Yearly Schedule and the 600-series Light Rail SOPs.

- Grade Crossings
- Signal Houses
- Track Circuits
- Switch Machines
- Traction Power Sub-Stations
- Overhead Catenary System
- Track and Roadbed
- Embedded Track Slab
- Track Drains
- Embedded Switch Machines

Light Rail vehicles are serviced and maintained in accordance with the Light Rail Fleet Management Plan and the 500-series Light Rail SOPs. Rail Car Maintenance performs equipment inspections in accordance with the Light Rail Fleet Management Plan and ROD SOPs. A Daily Inspection of each LRV is performed by Rail Car Maintenance in accordance with the Light Rail Fleet Management Plan and CATS Procedure ROD502, *LRV Daily Inspection*.

Buses are maintained in accordance with the Bus Fleet Management Plan. CATS BOD100 *Preventative Maintenance Inspection (PMI) Audits* identifies the internal audit process that ensures a high level of quality and reliability in performing preventative maintenance inspections and repairs for CATS transit buses.

3.3.3 Regular Inspections and Testing Procedures

Inspections of facility equipment are made in accordance with appropriate maintenance manuals and procedures. Inspection of equipment prior to use is captured in Rule Books and Maintenance Manuals.

3.3.4 Resolution of Review/ Inspection Findings

Each facility inspection report is sent to the Facilities Administrative Officer for generation of work orders. It identifies specific areas and targets specific recommendations for corrective action. Identified unacceptable hazards are

reported to the General Manager of Facilities and the CSO. Facilities Work Orders are tracked through completion in CityWorks. As part of the implementation plan, Facilities staff will rate identified hazards and maintain a Hazard Tracking Log.

Preventative Maintenance of Vehicle work orders are triggered by either vehicle mileage or time milestones. Maintenance inspections are scheduled and tracked through the MMMS (SPEAR). SPEAR tracks these work orders through completion. Identified unacceptable hazards will result in the vehicles being taken out of service.

3.3.5 Checklists

Facilities Management uses *CATS Facilities Inspection Checklist* (Form FMF03) and Rail Station Monthly Inspection checklist (FMF07) for regular inspections. Transit Amenities use *TAMS Daily Inspection Sheet* (FMF04) to document inspections at bus and streetcar stops.

Systems Maintenance checklists and forms are completed in accordance with the 600-series Light Rail SOPs and the Track Maintenance Plan.

The RCM Mechanic completes the LRV Daily Inspection Checklist (RODF091 S-70s and RODF093 Streetcars) and submits it to the Rail Car Maintenance Supervisor.

Bus Maintenance Technicians perform Preventative Maintenance Inspections using forms developed for each specific bus type. Shop Foremen perform safety inspection reviews on buses using Shop Foreman Safety Review Form B.

The Office of Safety and Security conducts Facility Safety Inspections using iAuditor and Station Safety and Security Inspections using Checklist (S&SF29) based on OSHA Standards. (See Appendix E for forms and iAuditor screenshot of the various facility inspection templates). These checklists are used to perform quarterly safety related inspections at facilities and stations.

A Pre-Departure Inspection is performed daily by vehicle operators and documented on the pre-trip inspection forms.

3.3.6 Coordination with Hazard Management Program

Hazards identified during safety inspections are to be resolved as close to the source as possible. Identified hazards are reported via email or phone call to the appropriate section manager to make them aware of the hazard that needs to be resolved. Issues that are note immediately resolved and result in a formal corrective action will be tracked following the Safety Corrective Action Plan process in the safety CAP log. Technicians are to repair equipment that does not meet safety requirements or take the equipment out of service/remove it from the work area as appropriate. Defective equipment must be tagged-out if it cannot be removed from the work area. Employees are to reject equipment that is not fit for use and issues must be addressed and resolved as soon as possible, with safety critical items being resolved first.

S&S Inspection reports are e-mailed to the responsible personnel for resolution and tracked through inspection logs. As part of the implementation plan, UAH/UDH hazards identified through inspection reports will be managed to closure and tracked using a centralized enterprise resource system.

3.4 Accident / Incident Notification, Reporting and Investigations

3.4.1 Overview

All CATS employees and contractors are expected to comply with CATS S&S03 *Accident/Incident Investigation and Reporting* procedure (Appendix C) and use the forms prescribed. Roles, responsibilities, and accident reporting thresholds are outlined in the procedure, including accident notification, reporting and investigation throughout the organization. The level of investigation required is dependent on the seriousness of the event. Each accident/incident is investigated by a supervisor as specified in the procedure.

3.4.2 Accident / Incident Reporting Criteria to NCDOT and FTA (Rail Only)

NCDOT State Safety Oversight Program Standard (SSOPS) requires that CATS submits reports to NCDOT and FTA regarding accidents/incidents as defined in SSOPS Section 6.1 Figure 8. Criteria are detailed in CATS S&S03 Section 8.3 *External Notifications by Safety and Security*.

3.4.3 Accident / Incident Investigation Procedures on behalf of NCDOT (Rail Only)

In general, NCDOT authorizes CATS to conduct accident investigations on its behalf, unless otherwise notified. CATS Safety personnel conducting investigations will be in compliance with the Public Transportation Safety Certification Program. (PTSCP). For all investigations conducted by CATS on behalf of NCDOT, CATS utilizes procedure CATS S&S03 *Accident/Incident Investigation and Reporting* to conduct its investigations. CATS S&S03 has been approved by NCDOT. Information collected during investigations includes, at a minimum, scene assessment, supervisory and emergency responder reports, audio/visual reports, and vehicle downloads.

CATS must submit any updates and revisions to its accident investigation procedures to NCDOT as they are completed and implemented by CATS or with the annual update of the ASP. This procedure, S&S03, is Appendix C of CATS ASP.

NCDOT may participate in the investigation process when CATS is conducting the investigation on NCDOT's behalf. The terms of participation are specified in the NCDOT SSOPS, CATS ASP and in CATS S&S03 *Accident/Incident Investigation and Reporting*. If NCDOT elects to conduct an investigation of accidents or incidents, the General Manager for Safety and Security may also conduct an independent investigation.

3.4.4 Supervisor Investigation

Bus, Light Rail, and Paratransit accidents and incidents which do not involve serious injury and/or damage usually require only an initial investigation by the supervisor responding to the scene. Rail accidents and incidents that may be investigated by supervisors only are those that **do not** meet the criteria specified in ASP Section 3.4.2. The supervisor at the scene will:

- Perform an investigation, including an on-site inspection of the accident scene
- Conduct interviews with involved personnel and witnesses as appropriate
- Review reports written by involved personnel
- Gather, collect and review physical evidence
- Complete each CATS accident / incident investigation form that applies to the event. (See CATS S&S03 *Accident/Incident Investigation and Reporting*.)
- Submit a report based on the information collected to the Manager of Safety – Bus/Rail, Office of Safety and Security. The Manager of Safety – Bus/Rail will ensure that the General Manager of Safety and Security and the City of Charlotte Risk Management Division are provided copies of all reports.

3.4.5 Safety and Security Follow-up

The CATS Office of Safety and Security reviews all accident/incident reports for potentially serious problems or conditions. All accident/incident data is collected throughout the organization and analyzed to determine trends within the operations. Additionally, when accident/incident reports and statistics show repetitive trends that result in an inability to meet or exceed the safety goal and objective, the Office, through the Manager of Safety - Bus, the Manager of Safety - Rail or Manager of Security, initiates an investigation to determine the causal factors and settle on required corrective actions, approved by the General Manager of Safety and Security.

3.4.6 Investigation Called by Chief Executive Officer

The Chief Executive Officer may bring in additional resources to support an investigation of any incident/accident occurrence conducted by the Office of Safety and Security including investigations by NCDOT or the National Transportation Safety Board (NTSB).

3.4.7 Internal Notification of Accidents and Unacceptable Hazards (from CATS S&S03)

Depending on the type of incident, the operator/employee must immediately notify the appropriate communications center and/or Safety and Security personnel. Non-revenue vehicle operators must notify their supervisor/manager if possible. CATS follows the S&S03 *Accident/Incident Investigation and Reporting* procedure when making internal notifications.

3.4.8 External Notification Procedure (Rail Only)

CATS follows the S&S03 *Accident/Incident Investigation and Reporting* procedure when making external notifications. The reportable incidents identified in S&S03 are based on the current Code of Federal Regulations (CFR) related to public

transportation and the NCDOT State Safety Oversight Program Standards (SSOPS).

3.4.8.1 At-scene Procedures

CATS S&S03 describes the roles and responsibilities of CATS personnel on the scene of an incident.

3.4.8.2 Accident / Incident Investigation Reporting, and Documentation

NCDOT (Rail Only)
Each CATS investigation conducted on behalf of NCDOT must be documented in a final report that includes a description of investigation activities, findings, identified causal factors, and a Corrective Action Plan, if applicable. Preliminary reports will be submitted within 72 hours post incident and final reports will be submitted when completed with updates provided to NCDOT every 30 days. All investigation and reporting requirements will follow current NCDOT State Safety Oversight Program Standards (SSOPS) and CATS S&S03 *Accident/Incident Investigation and Reporting* procedure.

Reports and records of accident investigations submitted to NCDOT by CATS, as well as related reports and records produced by both NCDOT and CATS, will be treated as confidential information and will not be released without concurrence by both NCDOT and CATS. All documentation related to accident investigations are kept on a secure server within CATS. Hard copy or electronic copy of documents are available upon request by authorized personnel.

National Transit Database
Accidents and Incidents for CATS are also reported to the National Transit Database (NTD) monthly.

Major Events are reported by mode separately for each event. Information includes number of fatalities, number of injuries, total estimated property damage, date, time, and address of the event. Report includes a brief synopsis of the event.

For minor events: CATS reports by mode (Bus, Commuter Bus, Light Rail, STS, Vanpool); the number of events by location (in revenue facilities, in transit vehicles, in non-revenue facilities); the number of injuries by category (customer, worker, or other); and for fires by location.

3.4.8.3 Corrective Action Plans (Rail Only)

After the occurrence of an accident and subsequent investigation, the development of recommendations, the identification of an unacceptable hazardous condition, or hazards or deficiencies identified through internal or external safety reviews/audits, the CATS Safety and Security representative will enter a Corrective Action Plan (CAP) in NCDOT's web-based software program within 30 calendar days after identification of the need for a CAP. CATS may request additional time to prepare the CAP for complex issues. Should the web-based program not operate properly, then the CAP will be submitted in the manner requested by the NCDOT SSO representative.

The Corrective Action Plan will include:

- a title that references the ASP element number, the year, and a suffix starting with "01" indicating the first item for that element and year (progressing numerically for additional CAPs for the same element and year). The alphanumeric format must be: "ASPxx-year-xx", using four digits for the year;
- the hazard or deficiency identified and investigation (if relevant to the CAP);
- reason for the noncompliance (if relevant to the CAP);
- proposed actions planned to minimize, control, correct, or eliminate the unsafe or hazardous condition, including interim action if required;
- scheduled date of completion of implementation;
- division and individual responsible for implementing the CAP;
- comments subsequently added, especially pursuant to NCDOT review and closure of the CAP.

The CAP shall be submitted to NCDOT for review and approval using the web-based system. NCDOT will enter its approval or rejection of a CAP within 15 calendar days of receiving the CAP. In the event NCDOT rejects a CAP, NCDOT will state its reasons and recommend revisions. CATS shall submit a revised CAP to NCDOT no later than 15 calendar days following the rejection. If NCDOT takes issue with CATS' proposed CAP, NCDOT and CATS must work together until NCDOT approval can be obtained. NCDOT approval is not necessary for short-term measures required to immediately mitigate hazardous conditions; however, these measures shall not replace the need for a long-term CAP. NCDOT will provide its support for such short-term measures, or outline its concerns regarding them, in its written approval or disapproval of the formal CAP.

If the NTSB investigates, CATS and NCDOT shall review the NTSB findings and recommendations to determine if a CAP is required. If a CAP is required either by the NTSB or NCDOT, CATS shall develop it.

Unacceptable Hazardous Conditions that are identified through any means, including after action reports, as containing Sensitive Security Information (SSI) will be tracked in a separate hazard log.

The CAP log generated in NCDOT's web-based software program includes entries related to:

- most probable cause;
- corrective actions for investigation reports, annual audits, three-year safety reviews, and FTA Program Audits;
- unacceptable hazardous conditions;
- hazard analysis or safety reviews performed at the request of NCDOT; and
- other related external reviews.

The status of open corrective actions are reported and reviewed on a monthly basis with Rail Operations management. All corrective actions are prioritized for implementation using the risk assessment matrix and assigned a responsible person to lead the corrective action effort and close the corrective action after resolution. NCDOT requires verification from CATS that the CAP has been

implemented either by documentation submitted by CATS, independent visual inspection by NCDOT, or both.

3.4.8.4 Coordination with State Safety Oversight Agency (Rail Only)

When an accident, incident, or condition involves post-accident inspections, examination, or testing by CATS Divisions, the Office of Safety and Security is the lead CATS office to coordinate with NCDOT. The Office of Safety and Security will evaluate the need for accident/incident reconstruction, in cooperation with the City of Charlotte Risk Management Division.

NCDOT may choose to investigate rail accidents and Unacceptable Hazardous Conditions rather than having the Office of Safety and Security perform the investigation on its behalf. CATS will fully cooperate with the NCDOT in its investigation, with the General Manager of Safety and Security serving as CATS' primary point of contact. NCDOT submits draft reports to CATS for review and feedback. CATS will notify NCDOT SSO in writing of any findings or issues in which they disagree. Additional information and clarification will be provided to NCDOT to address any disagreements. NCDOT SSO will make the final decision on findings and issues.

3.5 Management of Change

3.5.1 Procedures for Evaluating Safety Risk of Proposed Changes

3.5.1.1 Internal / External Sources of Change

Changes to the CATS systems can be identified through internal and external sources. These sources can include review of SPEAR entries, field inspections, audits, investigations, and reports from NCDOT or FTA. A list of sources of change can be found in Section 2.2.1 *Hazard Identification*.

3.5.1.2 Process for Change

CATS Management will ensure that any changes in its projects or existing services will be carried out in a planned manner. Before approving any planned changes, it will consider:

- The purpose of the changes and their potential consequences in the scope of any construction/planning of project and/or services to the public.
- The available resources.
- Review of responsibilities and authorities of people who would be impacted with these changes; and
- Safety implications or hazardous conditions.

For Rail Operations, the following process will be used to review, evaluate, and document the process of change:

- CATS established policies or procedures intended to reduce safety risk shall not be changed until formal review by CATS Safety & Security, Quality Assurance and Operations staff meet and agree on the change to ensure no

additional hazard or safety risk is introduced. The formal review will be documented using either the Hazard Analysis Form or Safety Analysis Form signed by appropriate management personnel, or by having the Rail Safety Manager co-sign the bulletin or notice indicating Safety was involved in the review and accepts the change. Review and comment by NCDOT may be required as defined in the NCDOT State Safety Oversight Program Standards (SSOPS) prior to the change taking effect. Once the changes have been approved, employees will need to be trained on the change prior to implementing the new policy or procedure.

- If the analysis documents the proposed change should be implemented, the change will be made following the *ROD304 Bulletins, Notices, General Orders and Operating Orders* and/or *ROD801 Configuration Change Control Procedure*.
- CATS established rail policies and procedures that will be affected include but not limited to the following documents:
  - Rail Rulebook
  - Rail Operations Control Center (ROCC) Manual
  - Rail SOPs
  - Rail Maintenance Handbook
  - Track Maintenance Handbook

Change is planned to ensure it is accomplished in a controlled manner and CATS Management shall ensure that the integrity of the SMS is maintained when changes to the system are planned and implemented.

3.5.1.3 Field Observations for Changed Work Environments

As part of the implementation plan, identified changes to the CATS System or mitigations that have been implemented in the field will be verified and monitored by the appropriate Division staff and Office of Safety personnel to ensure the mitigation is appropriate and effective. If it is determined that a mitigation for an Unacceptable or Undesirable hazard is ineffective, the SMS Manager or the CSO will be notified and a different mitigation will be implemented to address the issue. These changes will be managed on the Division's Hazard Management Log and the Safety Risk Register as applicable.

3.5.2 Configuration Management

3.5.2.1 Overview

Configuration Management is defined as the effective control of a facility's as-built arrangement and operation to ensure compliance with approved and/or accepted technical requirements and other governing criteria. Control of the as-built configuration of facilities, systems, equipment and vehicles begins during development of the final design and extends through construction, start-up, and operations, concluding with deactivation of the facility, system, equipment or vehicle. CATS Configuration Management includes document and record control, change control in operating systems and construction change control.

3.5.2.2 Process for Change

1. Control of Documents

CATS Quality Assurance procedure CATS QA02 *Control and Distribution of Plans, Manuals, Policies and Procedures* defines the controls needed:

- To approve documents for adequacy prior to issue
- To review and update as necessary and re-approve documents
- To ensure that changes and the current revision status of documents are identified
- To ensure that current versions of applicable documents are available at points of use
- To ensure that documents remain legible and readily identifiable
- To prevent the unintended use of obsolete documents and to apply suitable identification to them if they are retained for any purpose

Employees shall use the specified or latest revision of specifications or controlled documents to include documents of external origin.

2. Control of Records

Records are established and maintained to provide evidence of conformity to requirements, and for the effective operation of the quality management system. SMS records are maintained by the record owners identified on CATS Records Retention Schedules and shall remain legible, readily identifiable, and retrievable. CATS RIM01 *Control of Public Records* defines the controls needed for the identification, storage, protection, retrieval, retention time, and disposition of records. Record retention schedules for CATS documents maintained by CATS and by other City departments for CATS are available in CATS Record Retention Schedule, on CNet/CATS/CATS Records Management site. CATS Records Retention schedules are in compliance with NC General Statute (NCGS) Chapter 132.

3. Contract Changes

Changes to a contract can originate from various sources in the form of change notices, verbal directives, or contractor claims with merit. The procedure for contract changes is CATS P&CM04. CATS may, by written change order, make a change to the work within the general scope of the contract. The contractor may propose changes to CATS for its review and approval or disapproval. Acceptance of contractor-proposed changes is solely within CATS' discretion. Regardless of source, changes are considered to be pending until they are made a part of the Contract by a fully executed change order. The resident engineer (RE) maintains a status log of all pending changes and make periodic reports to management on actions being taken to finalize these changes. General Conditions Article entitled "Changes" dictates the Contract provisions for making changes to the Contract. In addition, CATS' Change Control Procedure must be followed. When there is conflict between the General Conditions, CATS Change Control Procedure, and the Construction Management Manual, the General Conditions takes precedence, followed by

CATS Change Control Procedure, and finally the Construction Management Manual.

4. Configuration Change Control in Light Rail Vehicles

CATS Procedure CATS ROD801 establishes the process to be followed to use alternative material instead of Original Equipment Manufacturer materials and/or make changes in the process pertaining to the repair and maintenance of light rail equipment. The procedure also establishes a Configuration Control Board to review and approve or reject requests for changes to maintenance and material parts or processes and to ensure adherence to the procedure.

5. Configuration Change Control in Buses for BOD and STS

CATS Procedure CATS BOD104 *Configuration Change Control* establishes the process to be used for change control of BOD and STS vehicles. When BOD Maintenance is contemplating a change through the Original Equipment Manufacturer, it is reviewed and approved by Change Control Managers. Change Control Managers include: the GM of Bus, Director of Maintenance, and Manager of Safety – Bus.

6. Authority for Change

The CATS Quality Manual is the authority for the following types of changes:

- Control of Records
- Control of Documents

3.5.3 Safety and Security Certifications (SSC)

CATS' safety and security certification process is used to ensure that safety concerns and hazards are adequately addressed prior to the initiation of passenger operations for new start projects and subsequent major projects to extend, rehabilitate, or modify our existing system, and to replace vehicles and equipment. Major Capital Projects are defined as $100 million or greater by the FTA, but the administrator may apply this process for Federal funded projects under $100 million. The process also applies to all other projects determined by CATS' Office of Safety and Security to be of sufficient significance to require formal safety and security certification. CATS' processes for safety and security certification are based on FTA's Handbook for Safety and Security Certification (2002) and CATS' own configuration management plans and procedures. Separate safety and security certification plans are developed for each identified project.

During the performance of hazard analyses, as part of the Safety and Security Certification Process, CATS identifies Category 1 Catastrophic and Category 2 Critical hazards. These hazards constitute the Safety Critical Items List (SCIL), a subset of the CIL, to provide visibility of these issues and to verify monitoring and control. The Office of Safety and Security updates the CIL to reflect the status of all hazards, prioritizing Category 1 and 2 hazards. The SCIL and CIL are published and managed until all hazards have been eliminated, reduced or controlled to

acceptable levels. System changes and modifications are not to be made without first being reviewed and approved by the SSRC.

A separate Safety and Security Certification Plan (SSCP) is developed for new start projects and major projects in accordance with the FTA's Handbook for Safety and Security Certification (2002).

Current SSCPs include the CityLYNX GL2 and the LYNX BLE.

CATS is a self-certifying agency except in cases where the required expertise to oversee the safety and security certification process is not available among CATS staff in the estimation of the General Manager of Safety and Security. In those cases, qualified consulting services may be retained to perform the certification according to FTA standards. Although CATS may contract out safety and security certification services, CATS maintains the responsibility to report to the FTA their acceptance and endorsement of the work performed under the safety and security certification process.

3.5.3.1 Certifiable Components

a. These components are broken down into 4 major categories:

    1. Facilities/Equipment
    2. Systems
    3. Integrated Test Requirements
    4. Operational Requirements

b. The certifiable components for a project are defined by reviewing the project design criteria manual, project management plan (PMP), and like project-related documents such as the CILs and specifications.

c. All major contractor and manufacturer audits, inspections, and tests where the safety and security of customers and/or employees, equipment, or facilities could be affected by the improper or incorrect construction or manufacture of system components. These audits, inspections, and tests cover both facilities and system components. Included are First Article Inspections, Mockup Reviews, Qualification Tests, Performance Tests, and Acceptance Tests. The integrated tests are developed to verify the integration and compatibility of equipment, facilities, and operation/maintenance procedures to function together under normal, abnormal, and emergency situations. This includes verifying the coordination, response, environmental constraints, and capabilities of CATS and outside agencies.

d. The safety and security certifiable components in each construction package are certified independently once all sub-element and sub-item submittals are received, reviewed, signed off by the appropriate construction staff, and verified. Any "Open Items" that remain in effect with operational restrictions are documented and attached to the components certificate. The restriction(s) must have been resolved (or workarounds / operating restrictions put in place) and approved by the SSRC.

e. The Project Safety and Security Certificate is prepared by the Office of Safety and Security and reviewed/approved by the SSRC once all the construction packages have safety and security certificates, transportation and maintenance personnel have been trained, emergency response personnel have been prepared to respond to emergency situations in or along the right-of-way, and safety and security system integration tests have been conducted. The overall project certificate and cover letter are presented to the CATS CEO for signature by the General Manager of Safety and Security. The certificate's signature provides a formal notification that the applicable portion of the operating system is safe and secure for revenue service. Any "Open Items" that remain in effect with operational restrictions are documented SCIL and attached to the System Safety and Security Certificate. The restriction(s) must have been resolved (or workarounds / operating restrictions put in place) and approved by the SSRC.

3.5.3.2 Hazard Resolution for Projects

The hazard resolution process can be applied throughout the five phases of the system life cycle.

Phase 1 - Planning
Phase 2 - Design
Phase 3 - Construction
Phase 4 - Operations
Phase 5 - Disposal

Identification of hazards is the responsibility of all divisions and is key to system safety. Hazards that are identified are analyzed for severity, frequency, and cost feasibility of remedial action required to eliminate or reduce the hazard to the lowest practical level. Hazard identification defines conditions and faults which have the potential for causing an accident. The CATS Office of Safety and Security verifies that mechanisms are in place for identifying and reporting hazards on the system.

Assessment of a hazard is based on the probability of occurrence and the severity of an event. Hazards with greater severity or probability to cause serious injury have a greater need for immediate resolution.

Hazard resolution is the corrective action taken in response to the hazard identification and assessment process, but time and resource restrictions may determine the level of resolution that can be accomplished. The following are actions for hazard resolution:

- Eliminate the hazard if possible.
- Install protective devices/measures to reduce the hazard.
- Provide training to educate the workforce of possible hazards.
- If the hazard cannot be eliminated, reduce exposure to it.

Hazard analysis **encompasses** a set of methodologies that first searches throughout the system for the potential to do harm. Having found such hazards, further analysis attempts to control any hazard at an acceptable level. However, to do so first requires an understanding of the causes of the hazards.

Hazard analysis **attempts** to determine the set of primary events in the hazard generation process. Upon identification of these events, CATS will seek to mitigate, control or eliminate the generation of hazards in ways that can reduce their risk to an acceptable level.

Hazard analysis also attempts to **reduce** the severity of accident events by introducing protective devices and equipment, procedures and/or forms, or system modifications that reduce the amount of human and property damage in an accident event.

The **objective** of **hazard identification and analysis** is to identify and define as many hazardous conditions as possible and enter them into the Hazard Resolution process before those conditions or associated activities cause an accident, injury, death, or other loss.

While identifying every hazard is unlikely, the historical rail and bus passenger accident experience is a reliable source of input information that aids in the identification and capturing of hazards. CATS also uses inspections and checklists to identify hazards. For potential hazards during design of projects, we do hazard analysis as described in the Preliminary Hazard Analysis and mitigated hazards are moved to the Operational Hazard Analysis for CATS projects.

CATS uses the hazard identification and analysis process in the areas of System Safety, Environmental Protection, Design, and Procurement before purchasing and accepting new equipment and modifications of existing facilities, systems, or rolling stock. When safety certification is required, CATS uses qualified consulting services to verify that new or overhauled equipment, facilities, and rolling stock meet its safety requirements.

3.5.4 Managing Safety in System Modifications

Changes and/or modifications, including non-permanent system changes or modifications made to CATS' existing systems, vehicles, facilities, and equipment that have the potential to adversely impact customer, employee, public, and/or system safety or security, but do not require safety certification (as determined by CATS' Office of Safety and Security), are subject to CATS' hazard management program. Such changes and modifications must be accomplished in a controlled manner to ensure that safety is incorporated into the project designs, plans, and procedures developed to implement the system change or modification. Such changes and modifications must also be performed in accordance with CATS plans and applicable CATS procedures such as CATS EX06 *Project Management Planning and Project Management Plans*, CATS P&CM04 Change Control Procedure or CATS ROD801 Configuration Change Control Procedure.

Any division or section initiating a change must inform the CATS Office of Safety and Security and any other affected division or section, so they may review possible impacts, including safety or security impacts, resulting from the proposed change or modification. The Office of Safety and Security may determine that safety analyses are required as part of the change/modification design process. CATS Quality Assurance has oversight responsibility for changes to policies and procedures and enforcement of review by affected divisions/sections.

Organizations providing professional services, architectural / engineering design, construction, or construction management to CATS are required to provide a Quality Assurance/Quality Control Plan (QAP) that defines the administrative and control measures appropriate for their respective scope of services.

3.5.5 Managing Safety in Procurement

CATS shall ensure that any purchased product conforms to specified purchase requirements. The type and extent of control applied to the supplier and the purchased product shall be dependent upon the effect of the purchased product.

Procurement actions are conducted in accordance with all applicable Federal, State and local laws, regulations and policies. CATS conforms to the current procurement ordinances, policies and/or procedures adopted by the Council of the City of Charlotte or the Charlotte City Manager.

The City Council has full budget and signature authority for all contracts. The authority to sign contracts for normal operations, supplies, and service contracts has been delegated to the City Manager or his/her designee, the Department Director or his/her designees, or the Chief Procurement Officer, based on the total dollar amount of the contract.

The Chief Procurement Officer has primary responsibility for procurement and contract administration, including issuing and compliance, with CATS Procurement Policies and Procedures.

CATS Procurement Manual details the requirements for all important activities, such as preparation of purchase orders, contracts for services, bid lists, vendor quality requirements, and contract file maintenance.

CATS CEO, project managers, and other key personnel have primary responsibilities, contributor/support responsibilities, or approval authority for specified aspects of the procurement function based on the scope of the contract. Responsibilities are identified in the Procurement Manual.

Large procurements need to be planned during the budget preparation cycle to ensure specifications and contract awards are not driven by budget. All procurements must have an accurate detailed estimate prior to solicitation.

Large projects (over $100,000) require a Project Management Plan (PMP) that will identify project team members including the Office of Safety and Security. The Procurement Service Request (PSR) identifies whether a PMP is required. The Office of Safety and Security identifies the level of safety certification for the project in the PMP. Safety and security design criteria and standards are integrated into all project designs, unless determined otherwise by the General Manager of Safety and Security.

Planning for procurement and contracts entails considering safety, as well as technical, business, and management requirements in controlling acquisition from inception to completion.

The purchasing process begins with the preparation of a specification and PSR that is then submitted to City Procurement. For hazardous materials, safety items, personal protective equipment, safety products/systems, and service contracts, the Office of Safety and Security will review and approve the PSR prior to the processing of the purchase order.

City Procurement works in conjunction with all CATS divisions and applicable City of Charlotte Departments and utilizes existing city contracts for all purchasing contracts. When purchasing personal protective equipment (PPE) for employees, controlling chemicals and other hazards in the workplace, mandating safety requirements in specific contracts, and requiring compliance from specific vendors with CATS safety requirements, the Office of Safety and Security is consulted and reserves the right of approval.

Those specifying requirements for purchased products and services are responsible for ensuring that products and services meet requirements specified in the procurement information. When products or services are received that do not meet requirements, employees are expected to work with Procurement to arrange a return or adjustment as appropriate. CATS QA works with Procurement and key suppliers to ensure that suppliers have the capability to meet specified requirements.

The Rail Operations Warranty and Parts Manual addresses the visual inspection of parts prior to placing in inventory. Bus Warranty and Parts also performs a receiving inspection of incoming material.

CATS currently utilizes the SPEAR Maintenance and Material Management System (MMMS) to effectively track all parts procurement, work orders, vendor technical bulletins, recall notices, and end user defect comments. Currently, the SPEAR MMMS keeps an active log of this information, which is retained for configuration management purposes.

The Office of Safety and Security has identified requirements to include in contract documents for contractors working on CATS property.

Section 4 Safety Promotion

4.1 Safety Plan Dissemination

Reference Section 1.8 on Safety Plan and Policy Dissemination.

4.2 Safety Plan Review and Modification

The Agency Safety Plan is a living document because CATS is an evolving transit system. The ASP therefore requires an annual compliance review. Each CATS Division and the Safety and Security Committee (SSC) will review the ASP annually and submit draft changes for consideration for incorporation in the revised ASP. Safety and Security staff shall complete their reviews for the previous calendar year and submit to the SSC for approval. The SMS Manager will ensure compliance with all ASP/SSOPS standards prior to submitting the ASP to the CSO and CEO for approval. The CEO will certify annually that the ASP meets all required standards. The Office of Safety and Security will submit the certification letter and revised ASP (if applicable) to the NCDOT point of contact by February 15th. In the event that CATS determines no update is necessary for that year, CATS' Office of Safety and Security must prepare and submit by March 1st formal correspondence notifying NCDOT of its determination.

The annual update of the ASP addresses the following:

- Change in service defined as system expansion, extended service, or change in the operation plan;
- Change in service equipment, facilities, or vehicles;
- Change in management or organizational change and reassignment of functional responsibilities which affect operations and/or safety;
- Change in safety polices, goals or objectives;
- Changes in regulatory requirements;
- Occurrence of a significant event or incident that warrants possible revision of the ASP; or
- Audit results, on-site reviews, or changing trends in incident/accident data.

All revisions to the ASP are made in accordance with procedure CATS QA02 *Control and Distribution of Plans, Manuals, Policies and Procedures*.

The General Manager of Safety and Security shall ensure that all changes and updates to the ASP are communicated to the North Carolina Department of Transportation, the designated State Safety Oversight agency for CATS. The finalized ASP, whenever the ASP is revised, is submitted with the signature of the CEO and the resolution of the ASP approval by the MTC.

The EPCP shall also be reviewed annually.

4.3 Safety Plan Implementation Tasks & Activities (including responsibilities matrix)

Appendix I contains the Gaps for Implementation of ASP and will include responsibilities.

4.4 Employee and Contractor Safety Programs (knowledge and compliance)

North Carolina has a fully approved State Occupational Safety and Health Plan under the United States Department of Labor, Occupational Safety and Health Administration (OSHA) 1910 Occupational Safety and Health Standards. The North Carolina Department of Labor (NCDOL) exercises jurisdiction over the occupational safety and health of all private and public-sector employers and employees within the State. Therefore, CATS employees are protected by the regulations issued by the North Carolina Department of Labor, Occupational Safety and Health Division. NCDOL adopted the Federal OSHA regulations and has issued a limited number of state-specific standards.

Safety information on approved methods and procedures are included in manuals, handbooks, and other documentation developed for the training and qualification of operating and maintenance personnel. Identification of protective devices and emergency equipment are included in the training documentation and instruction. In addition, safety posters and notices are used, as appropriate, to enhance safety awareness during all phases of system operations. Safety concerns are incorporated in briefings given to personnel prior to their working with equipment or facilities. Each operating division has a specific training protocol for refresher training as well as new employee orientation.

Safety Awards Programs are used to encourage both individual and group participation in the CATS Safety Program. Examples of employee recognition programs are: National Safety Council Safe Driver Award Pins, periodic group recognitions, and safety plaques. Other incentives and bonus programs may be periodically used to specifically recognize the safety achievement of employees in the various divisions

4.5 Compliance with Local, State, and Federal Requirements

4.5.1 Working on or Near Rail Transit Controlled Property

All CATS employees and contractors working on or near CATS Right-of-Way are provided mandatory Roadway Worker Protection Program (RWPP) Training by the Office of Safety and Security or other trainer with the approval of the Office of Safety and Security. Training is valid for one year from date of RWPP training. Personnel who successfully complete the Roadway Worker Protection training are issued a certification card valid for one year from the date of training. The card shall be carried by personnel when working in the rail system.

The RWPP applies to all roadway workers involved in the Right-of-Way of the CATS LYNX Blue Line and CityLYNX Gold Line. The purpose of this safety program is to aid in the prevention of accidents and injuries while working within CATS' Right-of-Way. These rules serve as a minimum safety standard based upon the following documents, as adapted for the conditions of CATS operations:

- 49 CFR 214 Railroad Workplace Safety
- APTA RT-OP-S-010-04 Standard for Contractor's Responsibility for Right of Way Safety
- APTA RT-S-OP-004-03 Standard for Work Zone Safety
- APTA RT-S-OP-016-11 Roadway Worker Protection Program Requirements

The safety of roadway workers is a top priority of CATS. Contractors and CATS employees must communicate and coordinate movements along the Right-of-Way with the ROCC in order to provide for the safety of roadway workers. Accordingly, all roadway workers must follow the applicable procedures outlined in this program.

To ensure compliance with the CATS Roadway Worker Protection Program, the Office of Safety & Security will conduct periodic onsite inspections of approved work crews to verify the following:

- Job Safety Briefings
- RWPP Cards
- PPE
- Proper flagging
- Other items as needed

If any on-site violation of rules or procedures is observed, the violation will immediately be brought into compliance. If no immediate remedy is available, work crew members may be asked to leave the approved work zone until such time as the work zone is brought back into compliance.

4.5.2 Compliance with Required Safety Programs

The CATS Office of Safety and Security has the responsibility for ensuring that all applicable OSHA standards are properly implemented and the applicable training and associated Personal Protective Equipment (PPE) are provided by the responsible office. CATS tracks OSHA training for the various City positions using MySucess software. Transit Management of Charlotte (TMC) tracks OSHA training for maintenance personnel in SPEAR and Palocity for bus operators and administrative employees. Each individual operating/maintenance section has the responsibility for enforcing employee compliance to the implemented OSHA standards.

The rulebooks published and distributed by CATS include: The Rail Rule Book, the Rail Maintenance Handbook, the Bus Operations Control Center Standard Operations Procedures and Reference Guide and the Bus Maintenance Procedures. Training is provided on the rulebooks and procedures during operations and maintenance training courses.

4.5.2.1 Review of Rules and Procedures

Policies, plans, rulebooks referenced above, and procedures are reviewed periodically to verify they meet the needs of the transit system in normal and emergency conditions. Prior to any changes occurs, the Management of Change process in Section 3.5.1.2 will be followed.

The Quality Assurance section coordinates additions to or deletions from these documents which impact the safe operation of the system with the CATS Office of Safety and Security and respective Division staff and other affected divisions/sections for approval prior to implementation. CATS QA02 *Control of Plans, Manuals, Policies, and Procedures* stipulates control and distribution,

including the three-year review process. The length of time needed for the review may vary based on the document being reviewed but the individual reviews should not exceed 30 days. CATS QA08 *Procedure Change Request Process* gives employees two ways to submit a procedure change request. The Rail section managers may issue a bulletin per CATS ROD304 *Bulletins, Notices, General Orders and Operating Orders* when an immediate revision is required to an operating rule or procedure. CATS safety committees, accident /incidents and audit reviews are also opportunities for rules reviews.

4.5.2.2 Process for Rules Compliance

Bus Operations conducts operational checks as part of their Standards of Excellence Program. Rule compliance checks are tracked and reported monthly to CATS Management. The Bus Safety staff conduct operator training and do accident refresher training. The Bus Safety staff perform safety audits if there is a general complaint about safety habits.

Rail Supervisors conduct ride checks of each rail operator at a minimum of three ride checks per month (Form RODF063), 15 ride checks totaled each month per supervisor.

Each STS Supervisor conducts field road observations quarterly using the Supervisor's Field Observation Report (Form STSF03).

Maintenance supervisors evaluate compliance with maintenance rules on an ongoing basis along with work completion and performance assessments. MOW conducts a minimum of three evaluations per quarter using the CATS Light Rail System Evaluation Form (RODF600). Rail Car Maintenance (RCM) conducts and documents monthly assessments of RCM employees.

Ride checks, safety audits, and field observations provide an opportunity for retraining to compliance to specific rules.

4.5.2.3 Compliance Techniques – Operations and Maintenance Personnel

Compliance techniques include observation of work activities and tasks and questioning employees about their knowledge of the respective rulebooks and handbooks. During initial training, employees are tested on their knowledge of applicable rules and procedures through written examinations.

4.5.2.4 Compliance Techniques – Supervisory Personnel

Rail
The Office of Safety and Security reviews a sample of Rail Operator ride check and observation forms and Maintenance proficiency check forms on an annual basis to evaluate the effectiveness of compliance methods utilized by supervisory personnel. The ride checks and field observations assess employees' knowledge of rules and procedures and validate the success of CATS' employee training programs.

As part of the implementation plan, recommendations for enhancement of the compliance methods are submitted to Division managers by the Office of Safety and Security for appropriate action.

Bus
Bus Superintendents review Supervisor Ride checks to ensure they are being completed annually.

STS
Ride checks are reviewed by the STS Operations Manager.

4.5.2.5 Documentation

Safety and Security periodically audits the proficiency check forms for completeness and identification of hazards. Identified hazards will be tracked in the Hazard Tracking Log. Unacceptable and Undesirable Hazardous Conditions will be reported per the Hazard Management Process.

4.5.3 Compliance with Drug and Alcohol Programs

CATS is certified as a drug-free workplace and complies with all provisions of the U.S. Department of Transportation, Federal Transit Administration, 49 CFR Part 655 Prevention of Alcohol Misuse in Transit Operations and 49 CFR Part 40 Procedures for Transportation Workplace Drug and Alcohol Testing Programs.

The FTA posts the latest Drug and Alcohol Regulations, Rules, and Notices at: http://transit-safety.volpe.dot.gov/DrugAndAlcohol/Regulations/Regulations/default.aspx

State Laws Covering Testing:
North Carolina Division of Motor Vehicle – Commercial Driver License Reporting In compliance with North Carolina G.S. 20-37.19 the employer is required to report all positive DOT drug or alcohol tests required under 49 C.F.R. Part 382 or 49 C.F.R. Part 655. Such reporting to the Division of Motor Vehicles must occur with five days from notification to the City or Transit Management of Charlotte of the confirmed positive test by the Medical Review Officer or the confirmed positive alcohol test by the Breath Alcohol Technician. Reporting shall be completed using the required forms (CDL-8 & CDL-9) from the NC-DMV.

South Carolina Department of Motor Vehicle – Commercial Driver License Reporting The South Carolina CDL Drug Testing Act requires the employer to report all positive DOT required drug or alcohol test, refusals to provide such tests (as defined in 49 CFR part 40) or any adulterated, diluted or substituted test. Such reporting to the Department of Motor Vehicles must occur by Transit Management of Charlotte within three days of receipt of notification from the Medical Review Officer, Specimen Collector, or Breath Alcohol Technician. Reporting shall be completed using the required form (CDL-18) from the SC-DMV.

City Human Resources, along with the Managers of Rail Operation, STS, Safety and Security, and CATS Human Resources Section are responsible for administering City Policy HR4 Drug and Alcohol-Free Workplace. The Managers of the Bus Operations Division and Transit Management of Charlotte Human

Resources are responsible for administering the Transit Management of Charlotte, Inc. Substance Abuse Policy.

Drug and alcohol testing is required under the following circumstances:

- Pre-employment screening
- Placement or return of an existing employee in a safety-sensitive position after being out of the random pool (City Policy: drug test only 90 or more days) (TMC Policy: drug and alcohol test, 30 or more days)
- Reasonable suspicion that an employee has used a prohibited drug or misused alcohol
- Post-accident screening following certain types of accidents
- Random testing for safety-sensitive personnel
- Return to duty following completion of drug/alcohol rehabilitation program
- Follow-up testing for employees who have sought and completed a treatment program

Employees who have gone for FTA post-accident drug and alcohol testing will not return to work in a safety-sensitive position until CATS receives a report of negative results.

USDOT (FTA) safety-sensitive employees will be drug tested prior to returning to work after 90 days.

Under the City's authority, a non-USDOT pre-employment/pre-transfer drug test will also be performed any time an employee's status changes from an inactive status in a safety-sensitive position to an active status in a safety-sensitive position. All safety-sensitive employees who have not performed a safety-sensitive function for 90 or more consecutive calendar days, regardless of the reasons, and have been out of the random pool during that time will also be required to undergo drug testing.

Under TMC Company Authority, any employee who has been absent from duty or on leave for a period of thirty- (30) consecutive calendar days or more or is a person who has been given the opportunity to receive professional assistance through voluntary admission or has had a violation that is not covered under DOT regulation but is covered under TMC authority. Employees in these circumstances will be subject to a non-federal drug or alcohol test before being permitted to return to work. This test is not required by DOT/FTA regulations but is required by TMC under Company Authority. A verified positive non-federal drug or alcohol test will result in termination of employment with TMC but is NOT a DOT violation.

Under the FTA drug testing regulations for employees in safety-sensitive positions, laboratory tests on urine specimens are conducted for five types of drugs or their metabolites. These drugs are:

- Marijuana
- Cocaine
- Phencyclidine (PCP)
- Amphetamines including ecstasy (e.g. racemic amphetamine, dextroamphetamine, and methamphetamine)
- Opiates (e.g. heroin, morphine, codeine)

The use of medical marijuana or legalized marijuana from another state is considered a violation of City Policy HR4.

Employees in safety-sensitive positions, and supervisors of those employees, are required to attend special training sessions on the subject of prohibited drug use, alcohol misuse, and CATS drug and alcohol testing requirements.

CATS provides assistance to City employees with personal or related problems that could affect job performance through the Employee Assistance Program as described in City Policy HR2.

On-site contractors working in safety-sensitive positions on CATS property or ROW must have a drug and alcohol policy that is in compliance with DOT guidelines. The following contracted services report to FTA:

- BOD: Tire Service (also included in the random pool for BOD)
- Company Police

4.5.4 Compliance with Contractor Safety Program

CATS requires a safe working environment for construction projects and workers. Per the FTA Project and Construction Management Guidelines, the Office of Safety and Security reviews the contractor's safety plan and concurs with or approves its compliance with this plan. CATS conducts periodic audits of contractors to assess their adherence to their construction safety plan. Any contractor employee found to be working in the operating rail system without a valid Contractor ROW safety card issued by CATS will be considered a trespasser and Police will be notified to take appropriate action. At a minimum, the contractor employee will be determined to be unqualified to work on a CATS contract and will be removed from the work site.

Workers on the project are required to follow OSHA 1926 Safety and Health Regulations for Construction safe work practices and comply with applicable safety, health, and fire loss prevention standards, and conduct their personal work activities in a manner which does not place themselves, other employees, or the public in a hazardous position. If a safety issue is identified by a CATS contractor on a CATS project, the contractor must immediately contact the designated CATS safety representative for the project.

It is CATS' responsibility to require that no project be so urgent that safety precautions are by-passed. The prevention of personal injury and property losses must always be part of the work task and in the mind of the manager, supervisor and employee.

4.6 Training and Certification Program

4.6.1 Overview

Instruction in safe methods of operations and safety procedures is included in rulebooks, manuals, handbooks, and other documentation developed for the

training and qualification of operations and maintenance personnel. Training systems have been developed by each department, which include in-house classroom training, field training, on-the-job training and testing. Each department is responsible for establishing safety training requirements for its employees. Bus and Rail Instructors are responsible for providing new and revised safety training programs to the office of Safety and Security for review.

As part of the implementation plan, a comprehensive program for review activities that identify where new safety training is needed, where current safety training must be revised and updated, and refresher training needs to be added to the current training requirements for employees and contractors. The program will also include updating job descriptions and training requirements for front line employees, managers and supervisors and senior managers.

4.6.2 Classification of employees / contractors directly responsible for safety

The Office of Safety and Security, in conjunction with other divisions, provides all employees with training in the areas of basic safety, the ASP, applicable OSHA regulations, ergonomics, and defensive driving, if applicable. In addition to the standard safety training provided by, or in conjunction with, the safety staff, safety awareness is maintained by special training presentations such as: bulletins; newsletters; and at work training to instruct employees on methods to prevent traffic, passenger, and employee accidents. Periodic training classes are held throughout the year to refresh or present new topics of concern to employees.

4.6.3 Certification and Training Requirements

All employees and contractors play a role in safety at CATS. All employees will be required to attend initial SMS training in person while annual refresher training will be conducted either in person or online. CATS Safety and Security staff will work with the Training Department to develop the training materials. The Training Department will be responsible for maintaining the training records.

SMS training and a SMS pocket card will be provided to all new hire employees as part of their orientation training. Safety & Security staff will provide the SMS training and CATS Training will maintain and manage the training materials and maintain training records.

<u>Bus</u>
The Office of Safety and Security oversees and coordinates operational safety and defensive driver training for Bus Operations. The Bus Operator Training Program is a comprehensive training program that includes classroom and road/route training prior to qualification. The bus training program includes components such as defensive driving techniques, vehicle familiarization, rules of the road, and road training.

A CDL permit is required to start the bus training program. The Office of Safety and Security is a third-party examiner for the CDL. Operators who have two (2) preventable accidents are required to complete accident retraining. Operators who are out of work for 30 days or more must pass a Ride Check (S&SF15 *Training &*

Development Sheet) from Safety and Security. The North Carolina Department of Motor Vehicles automatically notifies CATS of bus operators whose licenses are suspended. Bus Operations uses S&SF42 *Trainee Mentor Evaluation* form to track employee mentor training and evaluation.

Refresher Training: The Office of Safety and Security conducts two-hour refresher training as operators are available.

As part of the implementation plan, SMS training will be incorporated in the RWP training provided to contractors.

STS

The Office of Safety and Security conducts STS Operator training. It is a four-week new hire training that consists of classroom instruction and vehicle operator training coordinated through STS Operations. A third-party DMV examiner conducts road tests and training for new licensees. Operators who are out of work for 30 days or more must pass a Ride Check conducted by Safety and Security.

Refresher Training for STS Drivers: The Office of Safety and Security is conducting two-hour refresher training as operators are available.

Rail

Employees will receive initial SMS training in person and then annually either in person or online. Contractors will receive annual SMS training as part of their Roadway Worker Protection Program (RWPP) training. Contractors working on the safety and security components of CATS projects will be required to meet the FTA Safety Certification and recertification training as outlined in 49 CFR 672 and the CATS ASP.

The Rail/Streetcar Operator training program is a comprehensive two-phase program which includes both classroom and practical instruction. Specific information about the training program for Rail Operators can be found in the *Rail Operator Training Manual* and *ROD308 Rail Operations Training Procedure*.

Requalification Training

All Rail Operators shall attend requalification training at a minimum of every two years. The Rail Instructor will do requalification with a limited number of Operators at a time to minimize manpower disruptions. These training programs are reviewed by Rail Operations Management and the Office of Safety and Security and are subject to review via the Internal Safety Audit Process.

ROCC Controller Training

The ROCC Controller training curriculum is a comprehensive training program requiring completion of the Rail Operator training program followed by two weeks classroom and ten weeks practical instruction. The training requirements for ROCC Controllers can be found in the ROCC Controller New Hire Training Curriculum.

ROCC Requalification Training

All Rail Controllers must complete requalification training at a minimum of every two (2) years. The Chief Rail Controller administers requalification training which

consists of written and practical examinations. These training programs are reviewed by Rail Operations Management and the Office of Safety and Security and are subject to review via the Internal Safety Audit Process.

ROCC Refresher Training

ROCC Controllers who are out of work for 30 days or more are required to complete refresher training. This training is administered by the Rail Training Instructor or the Chief Controller depending upon the content that will be reviewed. ROCC Controllers who are out of work for more than 90 days must complete requalification testing. These training programs are reviewed by Rail Operations Managers and the Office of Safety and Security and are subject to review via the Internal Safety Audit Process.

Maintenance Training

Rail Maintenance employees are provided training in accordance with the Rail Maintenance Handbook.

Bus Maintenance employees are provided training in accordance with an annual training plan prepared by the training team.

49 CFR 672 Safety Training

CATS Office of Safety and Security General Manager, Managers and Coordinators for rail and bus have been designated as being directly responsible for the safety oversight of a rail fixed guideway and bus public transportation systems and must comply with this regulation. Those employees required to meet this regulation must complete the following minimum training requirements within three years of their hire date.

Required Training:

- One-hour course on SMS Awareness – e-learning delivery (all required participants)
- Two-hour courses on Safety Assurance – e-learning delivery (all required participants)
- Twenty hours on SMS Principles for Transit (all required participants)
- Transportation Safety Institute (TSI) Courses:
  - Rail System Safety (36 hours)
  - Effectively Managing Transit Emergencies (32 hours)
  - Rail Incident Investigation (36 hours)

Safety refresher training shall be completed every two years after completing the initial requirements. The refresher training must include, at a minimum, one hour of safety oversight training.

As part of the implementation plan, CATS will develop a process to ensure employees are provided training on implemented changes that impact their duties and responsibilities.

4.6.4 Hours of Service

4.6.4.1 Bus

Per the Union Contract, requirements for maximum hours of operation of a CATS Bus (Maximum driving time for passenger-carrying vehicles) are as follows:

- Shall not drive more than ten hours following eight or nine consecutive hours off duty depending on position (Regular vs. Extra Board).
- Shall not drive any period after being on-duty for 15 hours following eight consecutive hours off.

4.6.4.2 Rail

Rail Operations personnel include management, administration, supervisors, train operators, maintenance of way and rail car maintenance employees. Other than administrative staff, all other Rail Operations staff are considered to be safety-sensitive positions. Work schedules will meet Hours of Service requirements. The Rail Rulebook, Section 2.43 describes the work hours of Rail Operations safety-sensitive employees.

Rail Operations Employees

- No more than 16 hours per day for unanticipated events with no more than 12 hours of work in the aggregate.
- Must have 10 hours of time off between shifts.
- No more than 60 hours per week.

Work Week

- Train operators are not allowed to work more than six days in a row without a full day off (24 hours)
- Other Rail Operations employees are not allowed to work more than seven days in a row without a full day off (24 hours)

After working a 60-hour work week, the employee must be off 12 hours between shifts. All Employees that work a 60-hour work week will then have two consecutive off days following the 60-hour work week.

Transportation supervisors may extend hours of service up to a maximum of 16 hours per day for unanticipated events with no more than 12 hours of work in the aggregate, only with the permission of the Transportation Manager and upon e-mail notification to the Manager of Safety – Rail. These extended hours are in compliance with APTA RT-S-OP-15-09 Standard for Train Operator Hours of Service Requirements and NCDOT State Safety Oversight Program Standards Revision 5 Section 10 Hours of Service Policy Requirements. Employees will be excused from extended hours if they report that they are fatigued when requested to work beyond 12 hours in a shift.

Extended Hours During Emergency Conditions

During emergency conditions, the GM of Operations and Manager of Rail Safety have the authority to jointly temporarily suspend hours of service requirements in order to provide critical transportation services.

Violations of this section will be captured in the Hazard Management Log and NCDOT will be notified as noted in the current SSOPS. Rail Operations Administrative staff will review timesheets weekly to verify compliance with Hours or Service and number of days consecutively worked. Rail Operations Managers and Supervisors will review and develop work schedules that follows this sections requirements. If a violation is noted, Rail Safety will be notified by email of the

violation, who will notify NCDOT. Rail Operations will follow ROD301 Performance Code Policy as appropriate for violations of this section.

The Office of Safety and Security shall notify NCDOT of any violation of the RTA's HOS policy within 72 hours following the RTA's confirmation of a violation. Notifications to NCDOT shall be made via email. The notification will include the following information:

- The employee's identification number
- The employee's work title
- The type of violation
- The schedule of work and rest for the period of 72 hours prior to the infraction
- A description of the circumstances which resulted in the violation.

An hours of service violation log will be submitted to NCDOT on a quarterly basis.

4.6.4.3 Contractors

Contractors working on the CATS Right of Way (ROW) are considered safety-sensitive employees. Contractors are required to follow their employers' hours of service and work schedule policies, in addition, their employees are required to meet the following requirements while working on CATS property.

- Work no more than 12 hours per day
- Must have 10 hours of time off between shifts
- Work no more than 60 hours per week
- Employees are not allowed to work more than seven days in a row

4.6.5 Recordkeeping

The Office of Safety and Security, in collaboration with Rail Operations and Bus Operations, maintains a record of all operations, maintenance, and OSHA-required safety training provided to employees and contractor employees, including a list of the required training for each position. The training records for employees is kept in the City of Charlotte MySucess program that tracks all CATS employee training. Contractor training records are kept on sign-in sheets that are scanned into a file on a secure network and also entered into a database maintained by the Office of Safety and Security.

Timekeeping records managed through their time-record software programs will be maintained for a minimum of three years.

4.7 Safety Communication and Outreach

Safety Committees

Safety Committees are required to serve as the basic forum to review safety issues and hazards, hazard reports, safety inspections reports, accident investigations, and corrective actions. The Safety Committee representatives communicate safety concerns from their work areas to the Safety Committee, and report back to their workgroups. Safety Committee meeting minutes are available to all employees.

Safety Messages
For employees, TV screens are centrally located in areas (e.g. breakrooms) to display safety information, Chief Safety Officer's monthly report, alerts, statistical information, and other safety education materials. Operations employees are informed of hazards in their workspace through tool talks, bulletins and informal shop meetings on an as needed basis.

Marketing collateral materials will be used to raise safety awareness throughout the facilities, which may include, but is not limited to, brochures, posters, email blasts and newsletters to best accommodate every division's best communication practices.

For the public, per the Marketing and Communications Plan, Marketing and Communications provides safety marketing materials to its key audiences, including, but not limited to, the business community, the education community, the nonprofit community, drivers, riders and community leaders, during public outreach events, such as safety blitzes and transportation fairs. Marketing and Communications also utilizes social media and online videos to educate the public, along with opt-in riders' alerts that include email and SMS messaging. CATS also post alerts on the See Say App.

In 2020, CATS Marketing developed SMS and safety materials including pocket cards for all employees and safety messages and posters for the public. Posters regarding agency policy, safety roles and responsibilities and how to report safety concerns are maintained around the facilities.

CATS Safety & Security coordinates with CATS Marketing to review and update SMS marketing materials and safety messages to the public on an annual basis. CATS Marketing will produce and replace updated materials as needed.

Safety Quarterly Messages
The Safety Department publishes quarterly safety messages to be posted throughout all facilities. This is a communication tool that use to enhance health and safety awareness among employees.

Safety Suggestion Boxes
Safety Suggestion Boxes are a tool that allows employees to share their safety ideas and concerns. Any safety-related comments and concerns received from Safety Suggestion Boxes are discussed and addressed at the Safety Committee Meeting.

Employee Recognition Program
CATS established the Employee Recognition Program to promote safety performance, build morale, and focus attention on achieving the agency's safety goals.

4.7.1 Procedures Used to Communicate Safety (external stakeholders and general public)

Per the Marketing and Communications Plan, CATS Marketing and Communications will continue to provide safety marketing materials to its key audiences, including, but not limited to, the business community, education community, nonprofit community, drivers, riders, and community leaders, during public outreach events, such as safety-marketing blitzes and transportation fairs. Marketing and Communications also utilizes social media and online videos to educate the public, along with opt-in riders' alerts that include email and SMS messaging. Marketing and

Communications will create marketing collateral that explains proper safety procedures to be displayed in highly visible areas for the public. Methods of communication may include, but are not limited to posting inside vehicles, social media, and audio announcements. CATS will also use email and newsletters to communicate with key stakeholders. CATS will continue its partnership with Operation Lifesaver, Inc. and will perform safety presentations for community members and professional drivers' groups, among others.

CATS Public Relations Team will communicate with media to inform them of necessary safety procedures. Public Relations will leverage the media to distribute key safety messages to customers.

4.7.2 Communication and Follow-up on Reported Safety Concerns

Customers may report unsafe conditions anonymously through the See Say application on their smart device. Reported incidents are tracked through the Office of Safety and Security. As part of the implementation plan, a procedure will be developed to address the See Say app as a safety reporting tool, and Marketing and Communications will leverage marketing signage, social media and video to communicate with the public and key stakeholders about this service.

Customers can report unsafe conditions by calling the Customer Service Call Center at 704-336-RIDE or emailing telltransit@charlottenc.gov. (See CATS CSVS04 *Customer Insights Tracking Process.*)

As part of the implementation plan, the Office of Safety and Security will work with CATS Marketing/Communications to develop printed and electronic summary reports that provide feedback to employees on safety concerns submitted to the various safety committees. Employees who report safety concerns to management will receive a response from their supervisor or manager on how the concern was addressed.

4.8 Environmental Management Program

CATS is fully aware of the importance of employee chemical safety programs and the duty to comply with legally mandated hazardous materials rules and regulations. To this end, CATS has implemented a materials acceptance/rejection program to monitor and control chemicals which are brought on to CATS property and are used by employees.

CATS S&S05 *Hazard Communication Program* is in compliance with Title 29 Code of Federal Regulations Part 1910.1200, Hazard Communication Program. CATS' Hazard Communication program covers the procurement, receipt, storage, and disposal of hazardous materials. It also documents the maintenance of Safety Data Sheet (SDS) binders and employee training. Hazardous waste/chemical safety inspections are included in the responsibilities for safety inspections. CATS has contracted for the services of a properly licensed hazardous waste contractor for removal of hazardous materials. When necessary, consultants may be hired for special projects such as indoor air quality, chemical vapor and particulate sampling.

The Office of Safety and Security reserves the right to reject a product if it is deemed too hazardous for employee use or CATS is unable to provide adequate safeguards or protection.

The SDS review/request procedure, which requires SDS review and approval of the Office of Safety and Security, is included in CATS S&S05 *Hazard Communication Program*. Section 2.8 of the CATS Rail Maintenance Handbook addresses the requirements of Safety Data Sheets for chemicals and hazardous materials used in CATS rail facilities and on CATS property. These programs are the responsibility of the using division and the Office of Safety and Security. Program effectiveness is reviewed via the Internal Safety Audit Process.

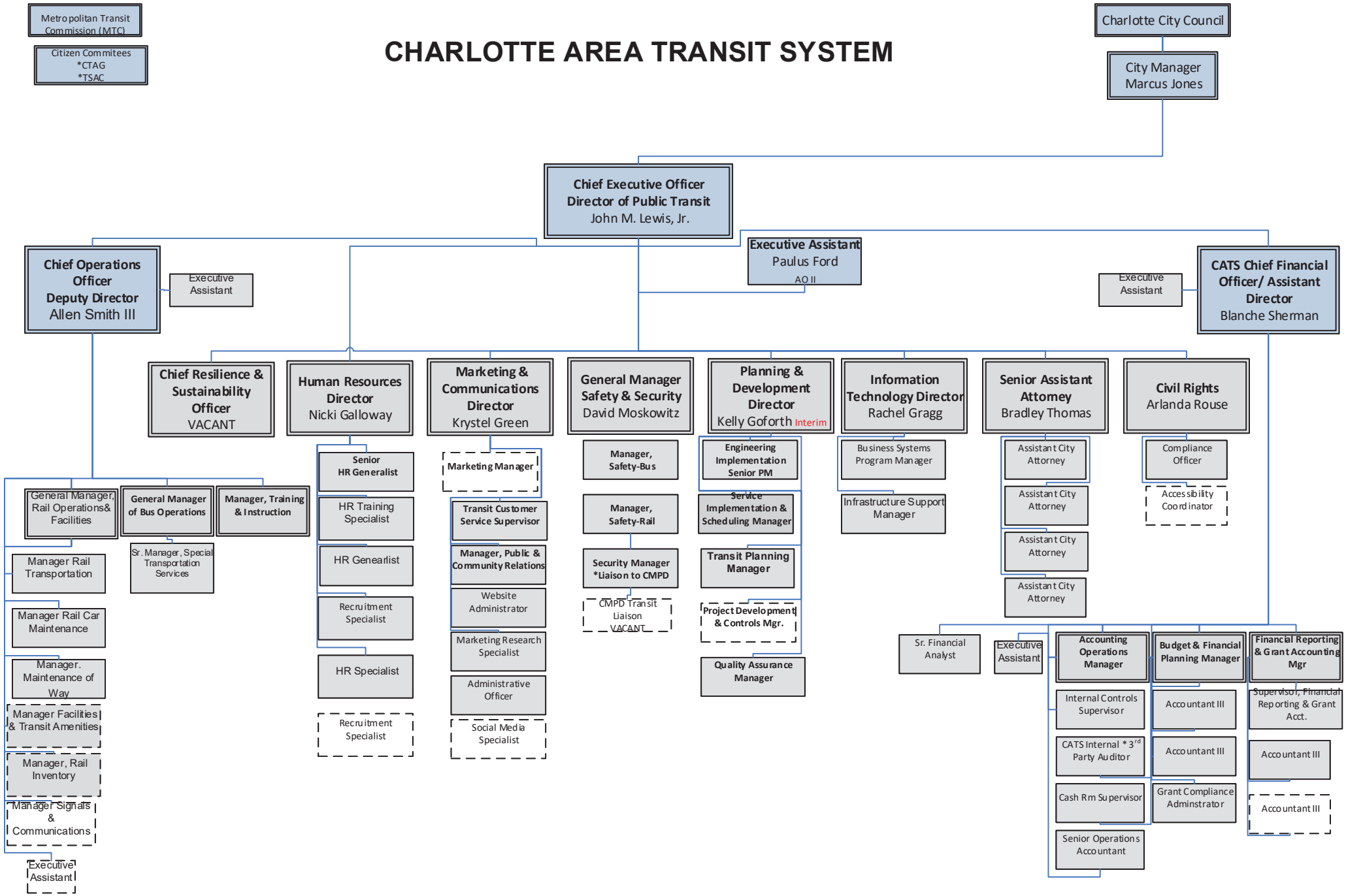
Training on hazardous chemicals will be provided whenever new hazards are introduced into the work environment or whenever hazardous chemicals will affect specialized procedures. Chemical training will provide information on specific hazards and measures that can be taken to control or minimize the hazards. Control measures can include engineering controls, substitution, or personal protective equipment.

All new procurements for a chemical, substance, or compound are sent to the Office of Safety and Security for review before being brought onto CATS property. Each CATS division is responsible for ensuring that materials that come onto CATS property are properly labeled and packaged. The Office of Safety is responsible for the following occupational safety and health activities related to hazardous materials:

- Reviewing the Safety Data Sheet (SDS) database
- Providing technical advice and expertise
- Responding to exposure concerns and incidents
- Performing reviews and audits of agency practices
- Recommending Personal Protective Equipment
- Reviewing and approving new procurements of hazardous materials
- Overseeing and auditing performance on various hazardous materials programs.

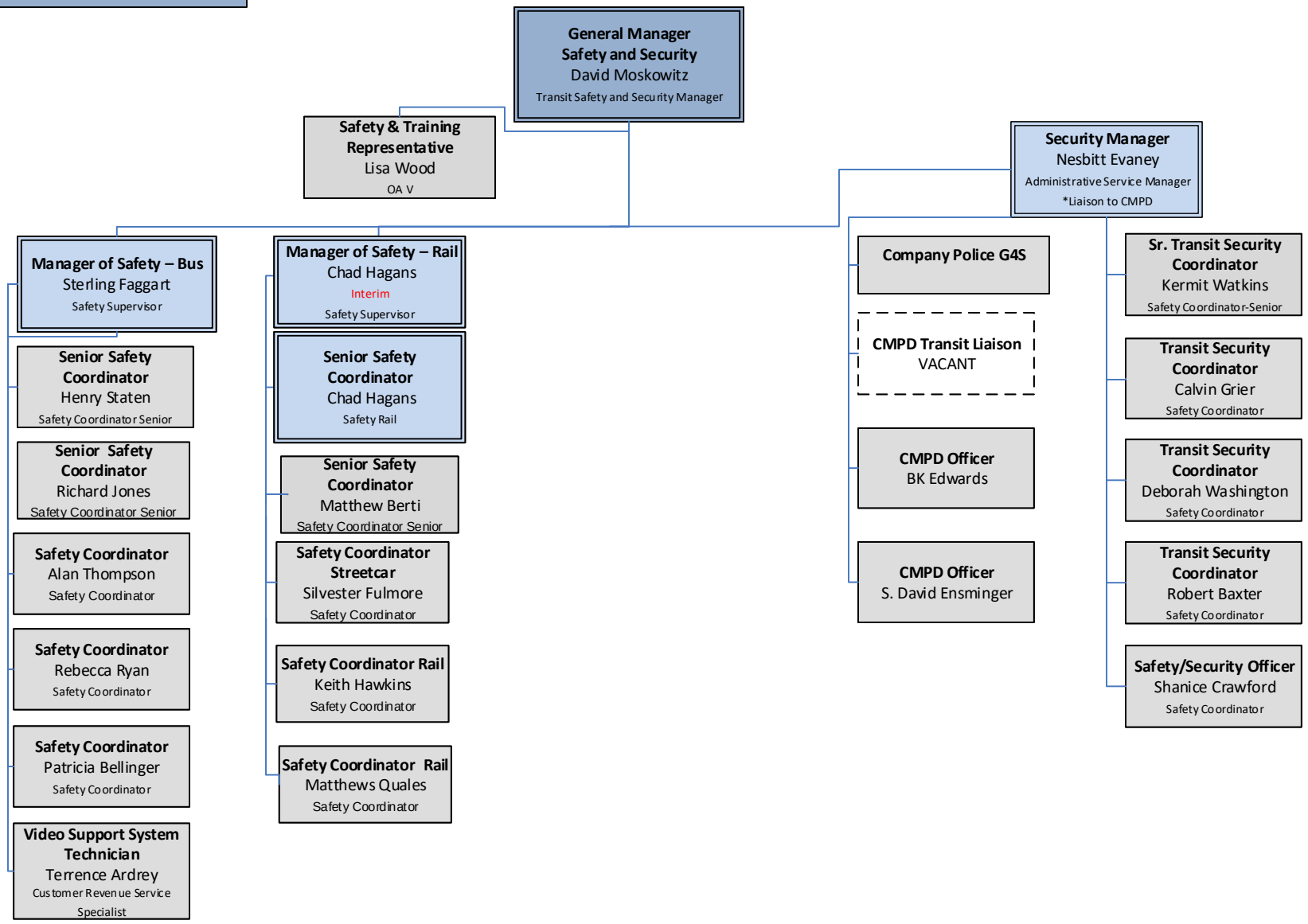
APPENDIX A
Organization Charts

CHARLOTTE AREA TRANSIT SYSTEM



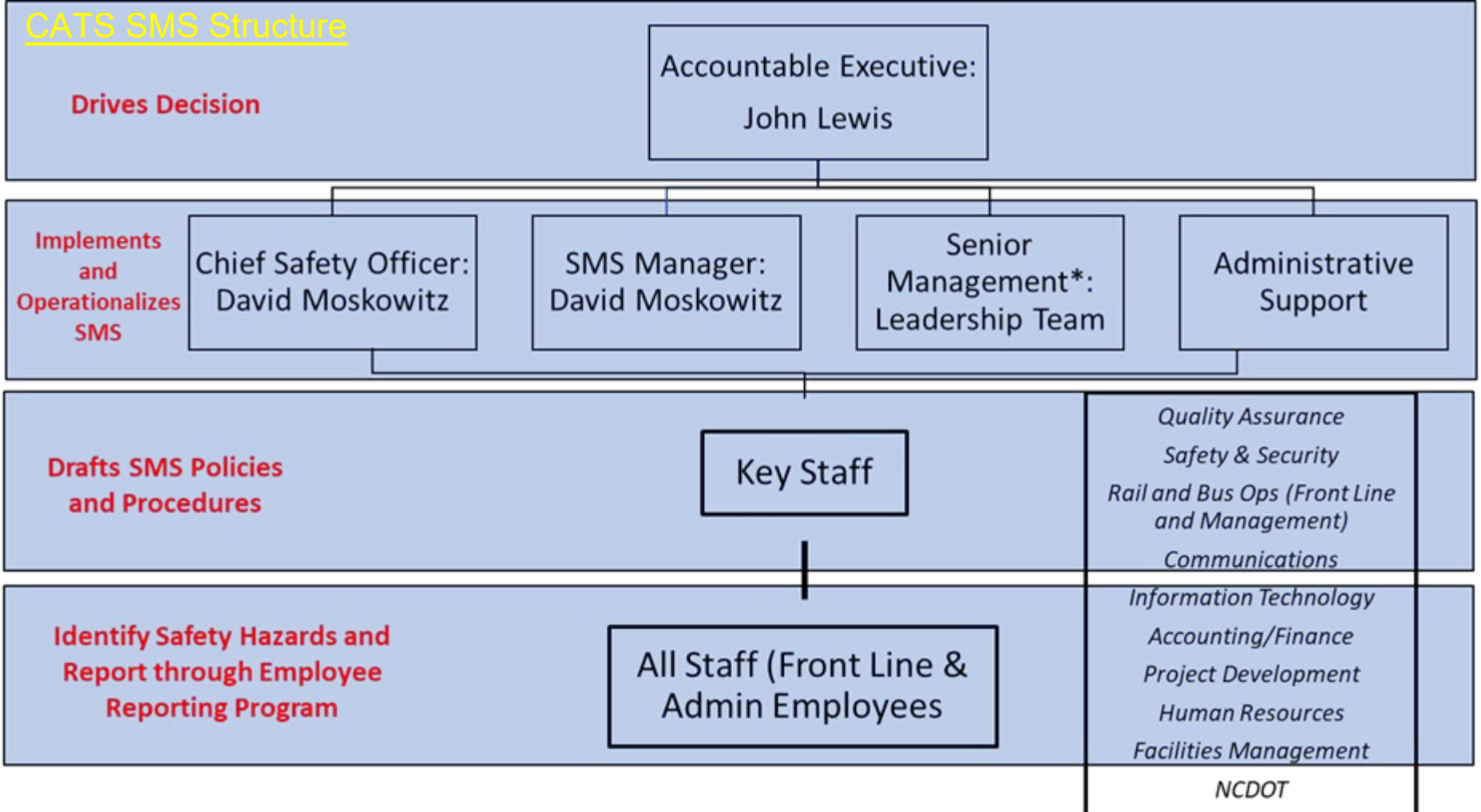
*CTAG – Citizen Transit Advisory Group
*TSAC – Transit Services Advisory Committee

Safety and Security



* Individuals holding an interim position will be found twice, once in the interim roles and again in their hired position budgeted

July 2021.



*Includes Executive leaders, from all agency functions or departments, that support revenue service operations.

APPENDIX B
CATS EX03 Safety Policy

Subject/Title:
Safety Policy

Procedure No:
CATS EX03

Previous Revision:
October 1, 2019

Revised Date:
February 24, 2020

John Lewis
Chief Executive Officer and Director of Public Transit

The Charlotte Area Transit System (CATS) was organized with the mission to provide safe, secure, reliable and effective rail, bus and paratransit transportation services to our customers. Accordingly, safety is a primary concern that affects all levels of CATS activities including operations, maintenance, and administrative functions of the organization.

All employees and contractors of CATS are expected to conduct their duties safely, aimed at preventing, controlling and minimizing undesired events, such as customer or employee injury, equipment or property damage, or degradation to system safety in any CATS function. Employees and customers are CATS' most important assets, and their safety and security are among CATS' greatest responsibilities.

While the minimizing of unsafe conditions and the prevention of accidents in CATS' transportation system and facilities are the responsibility of each employee, they are first and foremost the responsibility of CATS Management. A safety reporting program will be established as a viable tool for employees to voice their safety concerns. No disciplinary action will be taken against any employee who communicates a safety concern through the CATS safety reporting program unless such disclosure indicates the following: an illegal act, gross misconduct and/or negligence, or a deliberate or willful disregard of CATS rules, policies, and procedures.

CATS Management is committed to developing a Safety Management System (SMS) and will develop programs to promote the safety and security of all employees and customers. We are fully committed to providing a safe work environment and safe vehicles, systems, and facilities. To that end, CATS' General Manager of Safety and Security is empowered and authorized to administer a comprehensive, integrated Agency Safety Plan.

CATS will distribute this Safety Management Policy Statement to each employee and will review it with employees during employee safety meetings and toolbox talks with supervisors. CATS commitment to developing our SMS is supported by the following safety objectives:

- **Support** the implementation of an effective SMS by providing appropriate resources to support an organizational culture that fosters safe operational policies, encourages effective safety reporting and communication, and actively manages safety with the same attention to results as that given to the other management systems of CATS.
- **Integrate** the management of safety as an explicit responsibility of CATS managers and employees.
- **Clearly define** for all managers, employees and contractors their accountabilities and responsibilities for the delivery of safe transit services and the performance of our safety management system.
- **Establish and operate** a safety reporting program as a fundamental tool in support of CATS hazard identification and safety risk evaluation activities to eliminate or mitigate

the safety risks of the consequences of hazards resulting from our operations or activities to a point that is as low as reasonably practical.

- **Comply** with and, wherever possible, exceed any applicable legislative and regulatory requirements and standards.
- **Ensure** that sufficiently trained and skilled personnel are available and assigned to implement CATS safety management processes and activities.
- **Ensure** that all staff are formally provided with adequate and appropriate safety management information, are competent in safety management system activities, and are assigned only safety related tasks commensurate with their skills.
- **Establish and measure** our safety performance against realistic safety performance indicators and safety performance targets.
- **Continually improve** our safety performance through management processes that ensure relevant safety action is taken in a timely fashion and is effective when carried out.
- **Ensure** contracted services are ordered and delivered in compliance with our safety performance standards.

Summary of Changes:

Third paragraph: Added: “A safety reporting program will be established as a viable tool for employees to voice their safety concerns. No disciplinary action will be taken against any employee who communicates a safety concern through the CATS safety reporting program unless such disclosure indicates the following: an illegal act, gross misconduct and/or negligence, or a deliberate or willful disregard of CATS rules, policies, and procedures.”

Fourth paragraph: First sentence reworded to add reference to Safety Management System (SMS).

Fifth paragraph: Added paragraph. Replaced, “Our Management Safety Commitment is to:”

List of safety objectives: Reworded first bullet point to add reference to SMS. Removed fifth bullet point and included the text in third paragraph, per change described above.

APPENDIX C
CATS S&S03 Accident/ Incident Investigation & Reporting

Subject/Title:
Accident/Incident Investigation and Reporting

Procedure No:
CATS S&S03

Previous Revision:
August 3, 2021

Revised Date:
August 31, 2021

John Lewis
Chief Executive Officer and Director of Public Transit

1.0 PURPOSE AND SCOPE

This document establishes the procedures for notification and investigation of accidents/incidents involving vehicles and property owned by the City of Charlotte (City) / Charlotte Area Transit System (CATS). This includes how personnel initially report, respond to, and investigate accidents. The procedures established herein are to be adhered to by employees in all Divisions within CATS and Transit Management of Charlotte (TMOC), as well as contracted carriers and service providers.

The procedures herein apply to any accident in which a person or persons are injured or property damage is incurred as a result of a vehicle collision involving any City-owned vehicle or any other vehicle operated by a CATS employee or agent of CATS while engaged in City business. This includes accidents/incidents involving the general public either in vehicular accidents, passenger accidents, or accidents occurring on City property. This procedure applies to all City / CATS-owned vehicles including fixed rail vehicles.

It is intended that this procedure complies with City Policies and the accident and incident notification and reporting requirements of the North Carolina Department of Transportation (NCDOT) State Safety Oversight Program Standard for Rail Fixed Guideway Systems (SSOPS) Section 6. CATS may conduct an investigation on behalf of NCDOT pursuant to Section 7 of the NCDOT SSOPS.

2.0 REFERENCES

NCDOT State Safety Oversight Program Standard for Rail Fixed Guideway Systems
CATS Emergency Preparedness and Continuity Plan
CATS Crisis Communication Plan
CATS System Safety Program Plan
City Policy MFS 8 Vehicle Accident Reporting Procedures
City Policy MFS 10 Critical Incident Review Procedures
City Policy HR 4 Maintenance of a Drug and Alcohol-Free Workplace
TMOC Alcohol and Drug Policy
City Policy HR 23 Employee Injury/Illness Reporting and Managed Return to Work
CATS MR01 Media Protocol
CATS S&S06 Suspicious/Dangerous (HOT) Object on a Vehicle or CATS Property
CATS S&S08 Reporting Hazardous Materials Spills
Spill Prevention Control and Countermeasure Plans

3.0 RESPONSIBILITY

Employees in all Divisions within CATS and TMOC, as well as contracted carriers and service providers, are to cooperate and share information on investigations of accidents to ensure that causes and contributing factors can be identified and remedial action taken.

4.0 DEFINITIONS

Accident any safety or security event that involves any of the following:

- loss of life; a report of a serious injury to a person; a collision involving a
- transit vehicle; a runaway train; an evacuation for life safety reasons; or any
- derailment of a transit vehicle, at any location, at any time, whatever the cause.

City of Charlotte Critical Incident Review Board – The convening body given authority by the City Manager and comprised of designated City employees and external experts to review all critical incidents as defined in City Policy MFS 10.

Critical Incident – Any incident or occurrence including, but not limited to: death or significant bodily harm requiring hospitalization; extensive property damage that could exceed $50,000; threats of legal involvement/action; or an unusual event that falls outside the scope of the Department's routine incident response. (Per City Policy MFS 10).

Event – An accident, incident or occurrence, including human factors and property damage.

Fatality – For purposes of Federal Transit Administration (FTA) statistical reporting on transportation safety, a fatality is considered a death due to injuries in a transportation crash, accident, or incident that occurs within 30 days of that occurrence.

Incident – A personal injury that is not a serious injury; one or more injuries requiring medical transport; or damage to facilities, equipment, rolling stock, or infrastructure that disrupts the operations of a transit agency. An incident must be reported to FTA's National Transit Database (NTD) in accordance with the thresholds for reporting.

Incident Commander – The City's representative at the scene of a collision/incident who has the authority and responsibility for managing and coordinating all emergency response actions. This responsibility can transfer depending on how the situation at the scene unfolds.

Injury – Includes harm to passengers, operator, and others directly involved in an accident.

Liaison, CATS – The first CATS employee on the scene of a collision/incident, who controls and directs CATS activities at the scene, and who supports the on-scene Incident Commander and leads the CATS collision/incident investigation. This responsibility can transfer depending on how the situation at the scene unfolds. **CATS Safety and Security (S&S)** will assume this role upon arrival on scene.

MFS Management and Financial Services – A department of the City of Charlotte Management & Financial Services include Finance, Fleet Management, Internal Audit, Risk Management and Strategy & Budget.

Major Incident – An incident that meets or exceeds $25,000 in property damage and/or an injury that requires an overnight stay at the hospital.

Minor Incident – An incident that results in property damage of less than $25,000 and no injury that requires an overnight hospital stay.

Occurrence – An event without any personal injury in which any damage to facilities, equipment, rolling stock, or infrastructure does not disrupt the operations of a rail transit agency.

Post-Accident Review Committee – Committee led by S&S to conduct an additional review of initial investigation of major and critical incidents, review cause, and identify mitigation/corrective action(s).

Property – Vehicles, equipment, or other physical objects that are owned by the City or others that were involved in an accident.

Serious Injury – Life-threatening or incapacitating injury requiring emergency medical attention.

5.0 GOALS/OBJECTIVES

The goals/objectives of CATS' accident investigation response and reporting procedures are listed below:

1. Ensure life safety.
2. Stabilize the incident.
3. Preserve property.
4. To determine the probable cause and contributing factors of the accident:
   - Equipment failure
   - Personnel action(s)
   - Hazardous condition(s)
   - Procedural defect
   - Actions of other people
5. To identify and implement corrective action as soon as possible.
6. To provide concise, accurate, appropriate, and timely information.

6.0 HAZARD MANAGEMENT

During accident/incident investigations, CATS anticipates hazards will be identified. To better assess, rate, track, and resolve or mitigate these hazards, the hazard management process in the Agency Safety Plan (ASP) will be utilized.

7.0 PREPARATION FOR ACCIDENT/INCIDENT

CATS Incident Response Team members are prepared to address emergencies on the scene. Incident responders will carry equipment and forms required on the scene. Safety & Security Incident Response Equipment (S&SF41) and Tools of Investigation (S&SF05 ROD and STS) are captured in Appendix A.

8.0 PROCEDURES

8.1 Notification Procedures for Any Accident, Injury, Property Damage, or Crime

For any incident, the operator/employee must immediately notify the appropriate communications center and/or CATS S&S personnel. Non-revenue vehicle operators should also notify their supervisor/manager as soon as possible.

Type of Incident	Includes	Contact
Bus	CATS fixed route, TMOC, Contracted Services	Bus Operations Control Center **(704) 336-4042; (704) 432-3761**
Rail	Light Rail Vehicle (LRV) (including Streetcar)	Rail Operations Control Center **(704) 432-5040; (704) 432-7622**
STS	STS	STS Dispatch **(704) 336-4591; (704) 336-2637**
Vanpool	Vanpool drivers	911 and notify Vanpool Coordinator **(980) 722-3396**
Other CATS Divisions	City cars, personal vehicle operated on City business	911 and Supervisor/Manager
	Criminal activity Firearms, potential terrorist activity, dangerous (HOT) object	911 and CATS Police Communications **(704) 432-8273**

The caller states their involvement in the incident and provides the following information (as applicable):

1. Bus – Bus Number and if asked provide payroll number
   Rail – Train number and call number
   Non-Revenue – Name and Division/Section
2. Route information
3. Location
4. Direction of travel
5. Number of persons injured and/or requiring medical assistance
6. Extent of damage to the transit vehicle/Towing required
7. Any other assistance that may be required
8. Any known property damages.

Bus Operations Control Center fills out Transit Master Incident Notification Report and emails to BOD Notify – Minor Accidents.

Rail Operations Control Center logs incident into SPEAR.

STS completes form S&SF01 Accident Notification Report.

Vanpool Coordinator requests police report from police department with local jurisdiction.

Each control center/dispatch office has call chains for call chain events. After gathering the information from the operator and other parties, the respective communications center or manager forwards the information to the designated personnel and contacts the following agencies and City personnel (at a minimum):

1. Call “911” to notify emergency personnel (and Company Police for Rail incidents).
2. Call “911” for security specific issues (and notify Company Police and CATS S&S).
3. Notify appropriate manager.

The above notification shall be completed within **fifteen (15) minutes** of the communications center or supervisor/manager being informed of the accident.

Additional notifications may be made, including:

1. Division or on-duty manager
2. Additional operations managers (Rail Car Maintenance, Bus Maintenance, Rail Systems, STS Dispatch, Facilities Management, etc.)
3. Other support services (e.g., towing company) if necessary. Equipment Management: **(704) 336-2722** (business hours 6:00 a.m. - 10:00 p.m.); after hours: **(980) 721-4676** or **(980) 721-4664**
4. Dellinger Wrecker Service – **(704) 588-3875**

If the respective control center/dispatch office cannot reach an individual who must respond to the scene, the control center/dispatch office will contact the alternate(s) for the individual.

All individuals who are in the designated notification process (call chain) shall appoint one alternate in the event they cannot be reached by one of the control centers/dispatch offices. Contact information is updated regularly and is maintained by the control centers/dispatch offices.

8.2 Internal Notifications by Safety & Security

In any accident, incident, property damage, or crime resulting in a fatality, serious injury or major property damage, S&S is responsible for the following:

1. Ensure notification is made to CATS Media Relations at **(980) 722-0311**. All media relations/ communications shall be coordinated by the CATS Public

Information office, in accordance with the provisions of the Crisis Communications Plan.

2. Notify the General Manager of S&S via cell phone.
3. Notify Risk Management at **(704) 336-3301** (business hours) **(704) 634-2053** (after hours). Risk Management may arrange a response.
4. The General Manager of S&S will notify the CATS Chief Executive Officer (CEO).
5. Notify other internal CATS divisions as appropriate. Notify Rail and STS for evacuation of the Charlotte Transportation Center.

8.3 External Notifications by Safety and Security

S&S will notify the external agencies below based on criteria provided by the corresponding agencies and/or specified in the referenced CFRs or SSOPS. The record of the notification(s) will be captured in follow-up emails sent to these agencies.

1. <u>Rail</u> - Notify NCDOT and FTA within two (2) hours by phone or e-mail for rail safety accidents including:

(1) **Loss of Life**: Refers to a fatality (death) occurring at the scene or confirmed within 30 days following an accident that occurs on a transit property or is related to transit operations or maintenance.
Excludes deaths resulting from illness or other natural causes and criminal homicides that are not related to collisions with a rail transit vehicle;

(2) **Serious Injury to a Person**: Refers to any injury which occurs on a transit property or is related to transit operations or maintenance and includes at least one of the following:
1. Requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received;
2. Results in a fracture of any bone (except simple fractures of fingers, toes, or nose);
3. Causes severe hemorrhages, nerve, muscle, or tendon damage involving any internal organ; or
4. Involves second-degree or third-degree burns, or any burns affecting more than five percent of the body surface.

Note: RTA safety personnel are not expected to undergo medical training to determine whether an injury meets the definition of “serious injury” and thus should make a determination based on available information at the time that the classification is made. Some injuries may not be apparent until the person undergoes a medical examination, at which point notification to SSO may be upgraded.

Excludes serious injuries resulting from illness or other natural causes and criminal assaults that are not related to collisions with a rail transit vehicle;

(1) **Collision Involving a Rail Transit Vehicle**: Refers to an accident involving a collision (contact) of a rail transit vehicle, regardless of whether that collision occurs at a grade crossing, and with:
- Another rail transit vehicle
- A non-transit vehicle
- An object
- A person(s) (including suicide/attempted suicide)

Note: Includes collisions occurring on mainlines and in yards.

(2) **Runaway Train**: Refers to a train which is no longer under the control of an operator, regardless of whether the operator is physically on the vehicle at the time.

(3) **Evacuation for Life Safety Reasons**: Refers to a situation that occurs when persons depart from transit vehicles or facilities for life safety reasons (imminent danger), including self-evacuation.

Imminent danger may include situations such as fires, presence of smoke or noxious fumes, hazardous material spills, vehicle fuel leaks, weapon fired on a vehicle, electrical hazards, bomb threats, suspicious items, or other hazard(s) that constitutes a real potential danger to any person.

Includes evacuations of vehicles or facilities for events occurring on adjacent non-transit properties (i.e. bomb threat, gas leak, or fire) that causes a transit agency to evacuate a nearby rail transit vehicle or facility for life safety reason(s).

Excludes evacuations that are not for a life safety reason, such as an evacuation of a train into the right-of-way or onto adjacent track; or customer self-evacuation or transfer of passengers to rescue vehicles or alternate means of transportation due to obstructions, loss of power, mechanical breakdown and system failures, or damage.

Excludes use of rescue train for passengers who are not in imminent danger.

(4) **Derailment**: A non-collision event that occurs when a train or other rail vehicle unintentionally comes off its rail, causing it to no longer be properly guided on the railway.

(5) **Substantial Damage**: Refers to damage to transit or non-transit property including vehicles, facilities, equipment, rolling stock, or infrastructure that disrupts the operations of the rail transit agency and adversely affects the structural strength, performance, or operating characteristics of the property, requiring towing, rescue, on-site maintenance, or immediate removal prior to safe operation.

Note: The requirement of towing refers to disabling damage to a non-transit vehicle that requires the vehicle to be towed.

Excludes damage that is limited to cracked windows, dents/bends or small puncture holes in the body, broken lights or mirrors; or removal from service for minor repair or maintenance, testing, or video and event recorder download;

(6) **Federal Railroad Administration (FRA) notifications**: Anytime an RTA must notify the FRA of an accident as defined by 49 CFR 225.5 (e.g. shared use of the general railroad system trackage or corridors), the RTA must also notify the SSOA and FTA of the accident within the same time frame established by the FRA.

SSO Program Manager: Timothy P. Abbott
- Cell phone: **(919) 218-6880**
- E-mail address: tpabbott@ncdot.gov

SSO Program Manager Alternate: Jahmal Pullen, PE
- Cell phone: **(919) 423-8143**
- E-mail address: jmpullen@ncdot.gov

A manager within S&S shall notify NCDOT of an unacceptable hazard within 24 hours (or the next business day) of the categorization of the hazard as an unacceptable hazard.

FTA Transportation Operations Center (TOC)
- Cell phone: **(202) 366-1863**
- E-mail address: TOC-01@dot.gov

2. <u>Rail</u> - NCDOT Unacceptable Hazardous Condition (UHC) Reportable Events within two (2) hours (non-FTA reportable):

(1) A revenue vehicle opening doors on the wrong side away from the platform or opening vehicle doors when the railcar doors are off the platform;
(2) Stop/Red Signal Overrun (verified Vital System Report) includes any instance in which a train operator passes a red signal, or passes an employee on the right of way who is communicating to the train operator not to move any farther;
(3) Near miss contact of a rail transit vehicle with any authorized track-side personnel including roadway worker, contractors, or other authorized personnel;
(4) Pantograph and OCS damage (Catenary line pulled down or pantograph entanglement);
(5) Violation of Stop and Proceed Order as initiated by the Rail Operations Control Center (ROCC) or other RTA personnel, passing a dark signal, or passing a flashing Grade Crossing Indicator (GCI).

3. <u>Rail</u> - National Transportation Safety Board (NTSB)

A manager within S&S will notify the NTSB via the National Response Center at **(800) 424-0201** at the earliest practicable time after the occurrence of any one of the following railroad accidents per 49 CFR Part 840.3 Notification of railroad accidents:

(a) No later than two-hours after an accident that results in:
  (1) A passenger or employee fatality or serious injury to two or more crewmembers or passengers requiring admission to a hospital.
  (2) The evacuation of a passenger train due to life safety events.
  (3) Damage to a container resulting in release of hazardous materials or involving evacuation of the general public.
  (4) A fatality at a grade crossing.

(b) No later than four hours after an accident that does not involve any of the circumstances enumerated in paragraph (a) of this section but that results in one of the following:
  (1) Damage (based on a preliminary gross estimate) of $150,000 or more for repairs, or the current replacement cost, to railroad and non-railroad property.
  (2) Damage of $25,000 or more to a passenger train and railroad and non-railroad property.

(c) Accidents involving joint operations must be reported by the railroad that controls the track and directs the movement of trains where the accident has occurred.

(d) In the event the NTSB "Go Team" responds to investigate the incident, command and control will transfer to the team at the conclusion of rescue operations. The Office of Safety & Security is responsible to support the Go Team and protect the scene so the team can conduct their investigation.

4. Transportation Security Administration (TSA)

Safety and Security will notify the local office of TSA at **(704) 916-6281** and Department of Homeland Security (DHS) by calling the Freedom Center at **(866) 615-5150** and reporting potential threats or significant security concerns within one-hour of notification to S&S of the incident.

Potential threats or significant security concerns encompass incidents, suspicious activities, and threat information including, but not limited to, the following (CFR 1580.203 subpart c):

(1) Interference with the train or transit vehicle crew.
(2) Bomb threats, specific and non-specific.
(3) Reports or discovery of suspicious items that result in the disruption of rail operations.
(4) Suspicious activity occurring onboard a transit vehicle or inside the facility of a rail transit system that results in a disruption of rail operations.

(5) Suspicious activity observed at or around transit vehicles, facilities, or infrastructure used in the operation of the rail transit system.
(6) Discharge, discovery, or seizure of a firearm or other deadly weapon on a transit vehicle or in a station, facility, or storage yard, or other location used in the operation of the rail transit system.
(7) Indications of tampering with rail transit vehicles.
(8) Information relating to the possible surveillance of a rail transit vehicle or facility, storage yard, or other location used in the operation of the rail transit system.
(9) Correspondence received by the rail transit system indicating a potential threat to rail transportation.
(10) Other incidents involving breaches of the security of the rail transit system operations or facilities.

Information reported should include as available and applicable (from CFR 1580.203 subpart d):
(1) The name of the rail transit system and contact information, including a telephone number or e-mail address.
(2) The affected station, or other facility.
(3) Identifying information on the affected rail transit vehicle including train number, transit line, and route, as applicable.
(4) Origination and termination locations for the affected rail transit vehicle, including transit line and route.
(5) Current location of the rail transit vehicle.
(6) Description of the threat, incident, or activity.
(7) The names and other available biographical data of individuals involved in the threat, incident or activity.
(8) The source of any threat information.

5. S&S will report **spills per CATS S&S08 *Reporting Hazardous Materials Spills*** or the appropriate *Spill Prevention and Countermeasure Plan*.

6. For events on Freight Rail (as specified in e-Rail Rail Security Awareness Training), report all suspicious activity, Gate Failures or Incidents to:
- CSX Public Safety Coordination Center: **1 (800) 232-0144**
- Norfolk Southern Police Communications Center: **1 (800) 453-2530**

8.4 External Notifications by Risk Management

CATS Employees: Risk Management is responsible for contacting North Carolina Occupational Safety and Health Administration (OSHA) for any event resulting in a fatality or the hospitalization of three or more employees per City Policy HR23. Beginning January 1, 2015, OSHA will require the following to be reported:
- Work related fatality – within 8 hours
- Any work-related in-patient hospital admission (regardless of number of employees), any amputation, or any loss of an eye within 24 hours.

TMOC Employees: BOD – HR will follow the same guidelines as City Risk Management for notification for all TMOC employees.

8.5 On-Scene Activities and Responsibilities

Responsibility for and command of the incident depends on the circumstances of the accident. This order shall be as follows:

Primary Incident Commander
The Fire Department Commanding Officer: rescue, firefighting, mass casualty, or hazardous materials incidents.

Local Police Jurisdiction: accident investigation, traffic control or scene clearance/transfer to CATS.

The first CATS representative on-scene will serve as CATS Liaison until such time as command is transferred appropriately. The CATS Incident Commander will serve as liaison to other responding agencies as needed. Command should be transferred to CATS S&S personnel upon their arrival unless current IC and S&S determine this is not necessary. If it is decided that command will not be transferred to S&S personnel, the S&S personnel on scene will serve as Safety Officer.

Ranking CATS Operations personnel, until relieved by a CATS S&S representative for incidents where only internal CATS Department is responding; not requiring emergency response agencies.

Bus Employee Responsibilities

Bus Operator:
- Assess the situation, check on passengers and occupants of other vehicles involved for injuries that require medical attention.
- Call the BOCC and provide information outlined in section 8.1.
- Pass out patron information cards and ensure they are collected once completed.

Supervisor:
- Assume control of the incident for CATS and act as CATS' Liaison or Incident Commander (IC) (ICS Unified Command)
- Notify the BOCC if additional medical attention is needed and coordinate towing if required. (Must remain at scene until all vehicles are cleared)
- Establish detour if route is blocked.
- Support Bus Safety & Security if on-scene response is required.
- Collect accident/incident information.
- Coordinate tripper bus for passenger transport.

Maintenance Staff:
- Provide towing if required.

- Support Bus Safety & Security if requested to brake test vehicle, hold out of service until investigation is complete.
- Provide estimate of repairs to Risk Management.

Rail Employee Responsibilities

Rail Operator:
- Report incident to the ROCC
- Check on passengers and vehicle
- Provide information to first responders and act as CATS' representative
- Transfer command to supervisor on scene

Supervisor:
- Accept command of the incident for CATS and act as CATS' Liaison or Incident Commander (IC) (ICS Unified Command)
- Transfer command to and support Rail Safety staff once command is transferred
- Begin collecting accident/incident information
- Work with other staff to ensure it is safe to move the train and return to normal operations

Rail Safety Staff:
- Accept command of the incident for CATS and act as CATS' Liaison or Incident Commander (IC) (ICS Unified Command)
- Serve as primary Incident Commander once first responders have turned over incident to CATS
- Work with CATS personnel to ensure it is safe to move the train and return to normal operations

Rail Car Maintenance:
- Inspect the vehicle for damages
- Verifies that the vehicle is safe to be on and/or around it
- Ensures that the pantograph has been lowered and/or circuit breakers turned off if damages compromise the safety of others or cause environmental hazards (i.e. hydraulic oil leaks)
- Verify it is safe to move back to a yard for further inspection and repair if needed

Maintenance of Way:
- Inspect for electrical hazards from the OCS and will notify if the area is unsafe to enter
- Inspect track and switches
- Inspect signals and gates
- Inspect other railroad infrastructure to ensure there is no damage to equipment and safe to move train back to shop
- Verify it is safe to operate trains in the affected area prior to returning to normal service

In the event the National Transportation Safety Board (NTSB) Go Team responds to the incident, command and control will transfer to the team at the conclusion of rescue operations. The Office of Safety & Security is responsible to support the Go Team and protect the scene so the team can conduct their investigation.

See CATS Emergency Preparedness and Continuity Plan for detail on setting up a command center.

8.5.1 Protection of the Accident Scene

Before emergency responders arrive on scene, operators and field/street supervisors should take steps to prevent further injury and damage by:

1. Securing the scene with vehicles, tape, etc.
2. Moving passengers and others to a safe place.
3. Closing off CATS vehicles to prevent people from entering. This effort is to prevent fraudulent claims or contamination of any forensic evidence.

Ensure that evidence and the physical circumstances at the scene are preserved as much as possible.

Access to the scene should be controlled. Only fire, police, MEDIC personnel, and authorized City personnel shall be allowed access to the scene.

The ranking Operations person protects the accident scene until a CATS S&S representative responds. The responding personnel from S&S will assist in protecting the scene and CATS property with help from local law enforcement.

8.5.2 Immediate Actions to be Taken

The operator, CATS supervisor, TMOC supervisor, or first responding personnel to the accident scene for all accidents is responsible for:

1. Protecting and assisting the injured.

2. Ensuring sufficient resources are en route (i.e., Fire, Rescue, Police, Towing Company).

3. Securing the accident scene.

4. The following procedure will be followed for any accident involving a serious injury or major property damage per City Policy MFS08:

    a. Immediately, while the vehicles are still at the accident scene, contact Risk Management with details of the accident. Risk Management will provide additional direction if the vehicles have been removed from the accident scene.
    b. Avoid starting the vehicle or turning on the vehicle's ignition switch. Valuable information can be lost from the onboard computer if this occurs.
    c. If directed by Risk Management, make arrangements with Equipment Management for secure movement and storage of the City owned vehicle.

5. The law enforcement agency investigating an accident outside of Mecklenburg County may require that the City vehicle be towed to a local facility. In this case, Equipment Management will make arrangements to have the vehicle transported to a City facility.

6. Arranging for transportation of vehicle operator for drug/alcohol testing, if the criteria level is met under the City's/CATS' or TMOC's drug/alcohol program and the operator is not hospitalized.

7. Collect information needed to submit a "Vehicle Accident Report." See forms in Appendix A.

8. An "On the Job Injury Report" (https://claims.ci.charlotte.nc.us) must be completed for any City employee who is injured. An employee with a serious injury should be transported by Emergency Medical Services (EMS) to the nearest emergency care facility. Employees requesting treatment for minor injuries that do not require EMS should be transported to the nearest Concentra Care facility. Trips to the emergency room should be avoided for a minor injury provided an Urgent Care facility is open. A copy of the Treatment Referral Form must be completed and provided to the urgent care facility. The Treatment Referral Form and maps for facility locations can be found at the Risk Management reporting website http://riskmgmtonline.ci.charlotte.nc.us/helper/helperOTJIR.html.

9. TMOC employees will follow TMOC procedures for treating injured employees and will use TMOC forms for on-the-job injuries.

8.5.3 Collection of Information

Collection of appropriate information shall be the responsibility of the CATS supervisor, TMOC supervisor, or S&S staff at the discretion of an S&S manager. Risk Management has the discretion of collecting the information for any accident involving a fatality, serious injury, or major property damage.

1. Note the passengers on vehicle, take photographs of the accident scene, appropriate rails and switches (Rail Operations only), and vehicle(s) involved unless a fatality has occurred. Avoid taking photographs of seriously injured passengers. For fatality incident/accident, secure scene and hold for Charlotte-Mecklenburg Police Major Crash Unit and CATS Safety & Security.

2. Gather names of injured parties and witnesses, including non-passengers. Have patrons complete *Accident/Incident Patron Information Card* S&SF06 for Bus, or *Passenger Status Card* RODF032 Rail if applicable.

3. Mark final resting spots of vehicles involved in the accident/incident.

4. Complete *Incident and Accident Report – Supervisors* RODF040 for Rail.

5. Establish initial damage assessment of CATS property, other property, and total property damage.

6. For STS only: Checklist S&SF03 details the actions to be taken during the initial investigation.

7. Collect video from bus or rail vehicle and provide video to Charlotte-Mecklenburg Police Department. CATS MR01 *Media Protocol* will be followed for release of any video to the public.

8. For Rail only, Light Rail Vehicle downloads.

8.6 Isolation of CATS Vehicles

If it has been determined that the vehicle needs to be isolated, the vehicle will be secured at a CATS facility.

CATS S&S shall ensure a Vehicle Isolation Form S&SF07 is affixed to the vehicle with the date, name, and department of person responsible for isolating the vehicle. CATS S&S will control access to the vehicle.

S&S may authorize access to the vehicles following a consultation with the Risk Management Representative. When accessing the vehicles, the Access Section of the Vehicle Isolation Form must be completed indicating the name, date, department or agency, and reason for accessing the vehicle.

The Risk Management Claims Manager, in conjunction with S&S must approve access for any testing involving the vehicle or the removal or repair of any component. Access will be coordinated with S&S.

If an NTSB Go Team responds to the incident, CATS vehicles involved in the accident cannot be moved or removed from the scene until authorized by the NTSB team and S&S.

8.7 Vehicle Release

Vehicles will be released from an incident scene once it is determined the vehicle is safe to operate or be towed by vehicle maintenance personnel and cleared by a Supervisor or Safety and Security Staff.

Bus Operations

- Minor incidents – Bus supervisor confirms minor damage to bus and safe to release the bus to return to service or back to a bus maintenance facility
- Major incidents – Safety & Security staff confirms with Bus Maintenance staff the bus is safe to operate back to a maintenance facility or must be towed and will release the vehicle from the scene.
- Safety & Security staff will either isolate the vehicle or release the bus to bus maintenance for further inspection and repair.

Rail Operations

- Minor incidents – Rail supervisor confirms minor damage to train and safe to operate train. If Rail Safety staff is more than 10 minutes away from the scene and there are no injuries on the train or the ROW, the Rail Supervisor calls the on-call Rail Safety number to receive verbal release of the train back to a rail yard where safety staff will continue their investigation.
- Major incidents - Safety & Security staff confirms with Rail Car Maintenance staff the train is safe to operate back to a maintenance facility or must be towed and Maintenance of Way staff confirmed track, signals and systems are safe to operate on at which point safety staff will release the train from the incident scene.
- Safety & Security staff will either isolate the vehicle or release it to rail car maintenance for further inspection and repair.

Isolated Vehicles

Any isolated vehicle shall not be repaired or returned to revenue service until the Vehicle Isolation Form has been signed indicating S&S has given written authorization that vehicle may be released. Prior to release, S&S will check with the respective parties involved in the accident investigation to confirm that they have completed their examination of the involved vehicle.

Upon completion of all repairs and testing, CATS or TMOC Maintenance Director issues a written report to S&S on each accident resulting in the vehicle being isolated. The report confirms that the vehicle is safe and may return to service.

The Vehicle Isolation Form is kept in the accident file in the Office of Safety & Security after completing the written authorization releasing the vehicle.

If the vehicle involved is beyond repair (a total loss), then Maintenance must notify the CATS Chief Financial Officer for a determination on future disposition of the asset, including the need to notify the FTA.

8.8 Accident Investigation Documents and Reviews

This section describes the review and documentation required for an accident or incident. Additional actions may be required depending upon the severity of the incident as defined in Section 4.

8.8.1 Drug/Alcohol Test Results

When an accident meets the drug/alcohol test criteria as defined in City Policy HR 4 *Maintenance of a Drug and Alcohol-Free Workplace* for City employees or the *Alcohol and Drug Policy* for TMOC employees, test results are reported to the Drug and Alcohol Program Manager. All post-accident testing is performed immediately. Results of a negative drug test are generally known within 48 hours. Positive drug test results may not be known for 72 hours. Alcohol results are known immediately after testing and are provided verbally to the transporting supervisor.

In the event an employee is incapable of giving consent due to serious injury or death, post-accident testing cannot be performed by CATS or TMOC per FTA regulations. Testing may be performed by the applicable law enforcement agency. CATS S&S Manager, TMOC staff, or Risk Management may request results from that agency.

8.8.2 Accident/Incident Investigation Report Format

For each accident/incident and unacceptable hazardous condition as defined through the hazard resolution matrix, CATS will prepare and submit the appropriate accident/incident investigation forms and supporting documents and, if necessary, a corrective action plan including a corrective action implementation schedule. The investigation report should include, but is not limited to, the information listed below:

- *Physical Characteristics of the Scene*. Physical characteristics include, but are not limited to, a description of vehicle measurements, vehicle conditions, posted speed limits, damage to other vehicles or properties, extent of injuries/fatalities to personnel, passengers, or pedestrians, and/or location of landmarks. Photographs of the scene may also be taken depending upon the severity of the accident/incident.

- *Interview Findings*. Interviews may be conducted with CATS personnel, passengers, witnesses, emergency responders, etc., depending on the extent of the accident/incident. Typical questions asked during an

interview may include asking for a description of what was witnessed, the sequence of events, what may have contributed to the accident/incident, or where the individual was located during the time of the accident/incident.

- *Sequence of Events*. The sequence of events will define the time and date of the accident/incident, when emergency responders arrived at the scene, when applicable Federal, State, and local agencies were notified, when vehicles, equipment, or victims were removed from the scene and where they were taken, other notable events, and/or what time the accident/incident scene was released and normal revenue operations began.

- *Probable Cause(s) and Contributing Factors*. The probable cause will describe the most likely cause of the accident/incident as well as the contributing factors to the accident/incident such as fatigue, weather conditions at the time of accident/incident, or rule or procedure violation.

- *Conclusion*. The conclusion should be a brief summary of the preceding information with a final classification of the accident/incident as being preventable or unpreventable.

- *Recommendations and Corrective Actions*. Based on the investigation findings, recommendations and corrective actions should be developed and assigned to the most applicable and responsible party for implementation. If necessary, a formal corrective action plan may be developed.

- *Document Control Number*. A document control number must be assigned to all accident/incident investigation reports so that corrective actions that are developed as a result of the accident/ incident can be tracked through completion.

8.8.3 Distribution of Accident/Incident Reports

CATS shall forward a copy of the report file, which includes all statements, forms, and accident/incident reports to Risk Management.

For major and critical incidents, reports will be forwarded within 48 hours after the accident or by 5:00 p.m. Tuesday if the accident occurred Friday night, Saturday, or Sunday.

Rail Operations: For accidents, incidents, property damage, or crimes resulting in a fatality, serious injury, major property damage, or unacceptable hazardous conditions (as defined through the hazard resolution matrix), a preliminary incident report prepared by CATS shall be submitted to NCDOT SSO within 72 hours of the accident or identification of the unacceptable hazardous condition.

The final investigation report shall be submitted to NCDOT within 30 days following the completion of the investigation. Until the investigation is completed, CATS shall prepare and submit monthly status investigation reports to NCDOT. The status investigation reports shall include, at a minimum:

- Minutes of any meeting held by CATS' ad hoc reportable event investigation committee or contractor.
- Disclosure of any immediate corrective actions CATS has planned or completed.
- Principal issues or items currently being evaluated.
- Overall progress and status of the investigation.
- NCDOT Vehicle Accident Report DMV 349 will be submitted if available. Otherwise, note, "NCDOT Vehicle Accident report not available" in report.

At any time during an investigation, CATS shall be prepared to provide a full briefing, to NCDOT, on the known circumstances of the event, the status of CATS or NTSB investigation(s), and investigation activities.

8.8.4 Risk Management Investigation

Risk Management is responsible for managing any claim against the City. Risk Management may elect to retain the services of outside experts, such as forensic engineers, to assist with the investigation. Information concerning the investigation may be shared with the CATS S&S Manager(s).

8.8.5 Equipment Review and Report

The responsible division shall review vehicles involved in accidents/ incidents. If the vehicle is isolated, the review will not be conducted until the vehicle is released unless otherwise requested by Risk Management.

The following should be submitted to S&S and Risk Management:

1. A comprehensive damage assessment and cost estimate for repairs.
2. A preliminary determination as to whether any component failed and thereby contributed to the accident. This does not apply to a vehicle in isolation.

For any vehicle held in isolation, all inspections and determinations of component failure will be coordinated between Risk Management and S&S.

8.8.6 Supervisor's Accident Investigation Report

The supervisors shall complete their reports by the end of their shift.

Bus, STS: and Vanpool Post-*Accident Questionnaire* (form S&SF11) and *Accident/Incident Summary* (form S&SF09)

Rail: *Incident and Accident Report – Supervisors* (form RODF040)

The supervisor's accident investigation reports, including Employee Accident Report (form S&SF08), pre-trip inspection cards, and Patron Information Card shall be submitted to S&S by the end of the next business day.

8.8.7 Operator's Accident Report

The Employee Accident Report (S&SF08) shall be completed by the operator(s) involved in the accident by the end of the employee's shift or run, unless the employee is hospitalized. This report is turned in to S&S and reviewed for clarity and completeness. S&S keeps the original and forwards a copy to Risk Management.

In the event the operator is seriously injured, unconscious, or hospitalized, this report will be completed by the supervisor on duty pending the employee's return to work.

For Vanpool, drivers complete the Risk Management Vehicle Accident Reporting form.

8.8.8 Operator's Statement

The operator completes a written statement (included in S&SF08) by the end of his or her shift. All recorded statements are the responsibility of Risk Management.

8.8.9 External Reports

Depending on the circumstances and/or severity of the accident, external reports may be required. Copies of all external reports are sent to Risk Management. External reports may include, but are not limited to:

- Coroner's Reports
- Emergency Medical Services Reports
- Fire Department Reports
- Hospital Records
- Municipal Police Reports
- Original Equipment Manufacturer's Reports

Activities involving accident reconstruction or other professional experts are performed at the request and direction of Risk Management.

8.8.10 Safety and Security Regulatory Reports

The General Manager of S&S is responsible for meeting the reporting requirements of NCDOT, FTA and the NTSB. Copies of reports required by these agencies will be provided to Risk Management.

All CATS and TMOC employees are expected to cooperate fully with CATS S&S in the accident investigation.

8.8.11 Claims Management

Interaction with any party involved in a claim against the City is the responsibility of Risk Management. This includes insurance carriers and legal counsel. Risk Management is the only entity authorized to discuss settlement of these claims.

8.8.12 Post-Accident Review Committee for Major and Critical accidents

As called for by the Manager of Safety (Rail or Bus), a Post-Accident Review Committee led by CATS S&S and comprised of Safety, Operations, and other Departments as required may be assembled and a meeting may be called. Subsequent meetings may be convened to share information concerning remedial measures. For critical incidents, the same post-accident review may be conducted.

8.8.13 Critical Incident Review (per City Policy MFS 10)

Risk Management, in collaboration and consultation with CATS CEO, City Manager's Office, and City Legal staff, will determine whether the *City of Charlotte Critical Incident Review Board* will convene.

If it is determined that the *City of Charlotte Critical Incident Review Board* will convene, Risk Management will notify all Board Members and schedule and facilitate the Board meeting. The Board will present a mitigation plan and conduct follow-up activities as described in City Policy MFS 10.

9.0 CORRECTIVE ACTION PLAN (NCDOT- RAIL ONLY)

After the occurrence of a rail accident, incident, property damage, or crime resulting in a fatality, serious injury or major property damage, or the discovery of an unacceptable hazardous condition as defined through the hazard resolution matrix, CATS will submit a corrective action plan (CAP) to the NCDOT when applicable. See the CATS ASP for further instructions on CAPs.

10.0 REPORT ACCEPTANCE AND APPROVAL

Accident/Incident report acceptance and approval is the responsibility of the CATS General Manager of S&S. Coordination and review of Accident/Incident reports will be

afforded CATS Operations prior to acceptance and approval. Final approved reports will be officially transmitted from the CATS General Manager of S&S to NCDOT.

11.0 SAFETY AND SECURITY COMMITTEE ("SSC")

The Safety and Security Committee ("SSC") will identify opportunities to reduce safety and security risks through design, technology, and changes in procedures and processes. The committee will:

1. Look at trends in major and critical preventable accidents.
2. Review probable causes and contributing factors, establish conclusions, and give recommendations and corrective actions.
3. Identify and assign owners for additional improvements to reduce preventable accidents.
4. Prioritize improvements and provide estimated costs. Assign champions for funded items and track successes.

The committee is chaired by the General Manager of S&S. Members will include representatives from Bus, Rail, or STS Operations (depending on type of incident), Development, S&S, Technology, Facilities Management, Quality Assurance, and CMPD. Additionally, members of the Post-Accident Review Committee described in Section 7.8.1 may contribute to the SSC.

12.0 RECORDS REQUIRED

Forms identified in this procedure along with other pertinent records and photographs collected as part of the investigation will be forwarded to Risk Management. Copies will be maintained by S&S per the CATS records retention schedule.

Risk Management and the City's legal staff will determine the official distribution and/or release of any accident reports.

Summary of Changes

5.0 Updated item 4 to include consistent references to "probable cause" and "contributing factors."

8.8.3 In Rail Operations section, updated second paragraph to clarify role of NCDOT.

Appendix A
Accident/Incident Investigation Forms

CATS FORMS

Accident Notification Report (STS)..... S&SF01
Incident and Accident Report – Supervisors (Rail) RODF040
Patron Information Card (Bus and STS)..... S&SF06
Passenger Status Card (Rail S-70) RODF032
Accident/Incident Investigation Documentation Checklist (STS)..... S&SF03
Tools of Investigation (checklist) (STS) ..... S&SF05-STS
Tools of Investigation (checklist) (ROD) ..... S&SF05-ROD
Vehicle Isolation Form..... S&SF07
Employee Accident Report..... S&SF08
Accident/Incident Summary (Bus and STS) ..... S&SF09
Post-Accident Questionnaire (Bus and STS)..... S&SF11
Infraction Record Entry – STS..... S&SF36
Emergency Response Equipment..... S&SF41

RISK MANAGEMENT FORMS

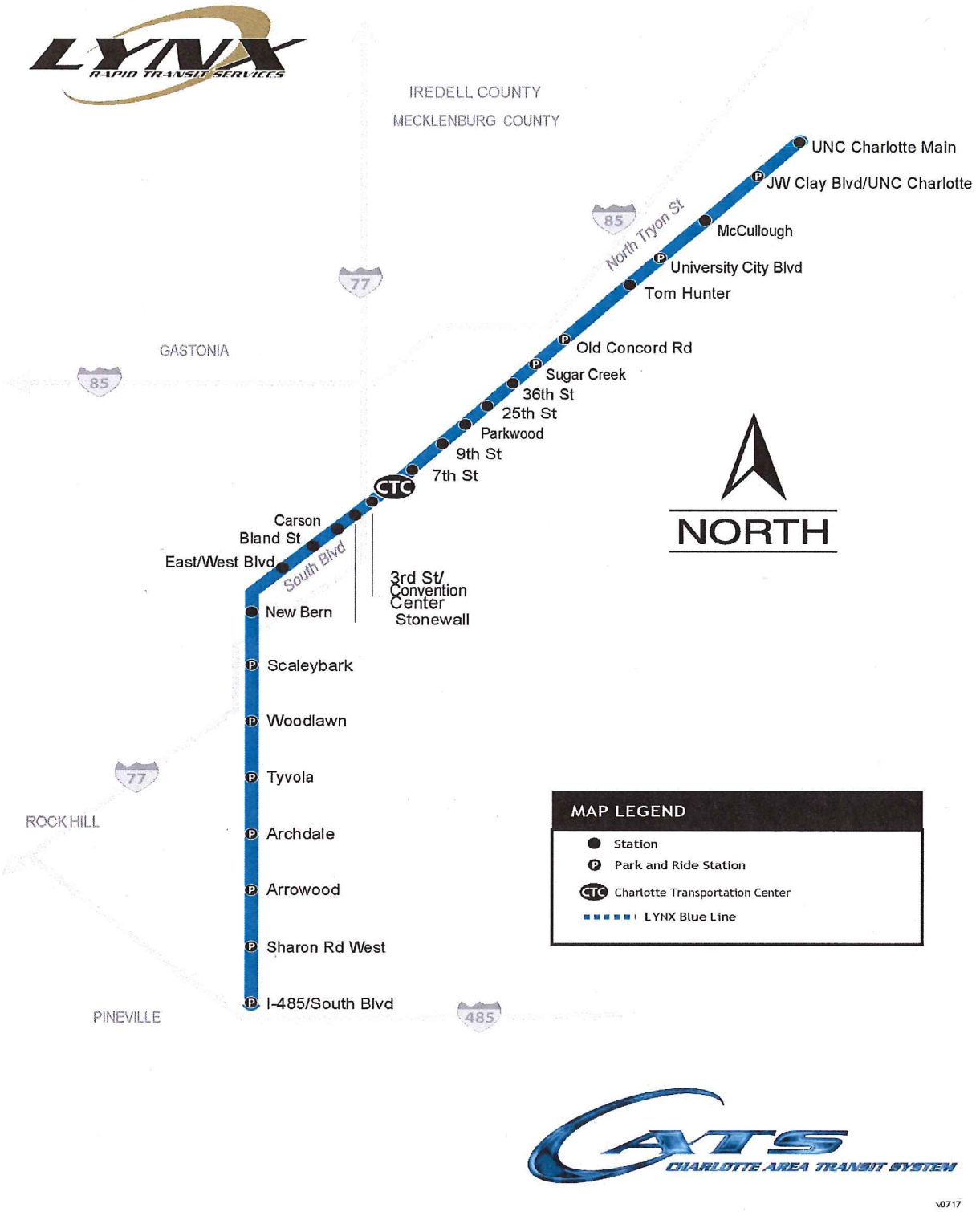
https://claims.ci.charlotte.nc.us
On the Job Injury Report
Vehicle Accident Reporting Form (Vanpool Drivers and Non-operations divisions)
General Liability Reporting Form
Property Loss Reporting Form

City Forms available on CNet/Human Resources/Drug and Alcohol Testing
City of Charlotte Post Accident Testing Checklist..... PDER-6
Appointment Form and Authorization for Drug and/or Alcohol Test..... PDER-2

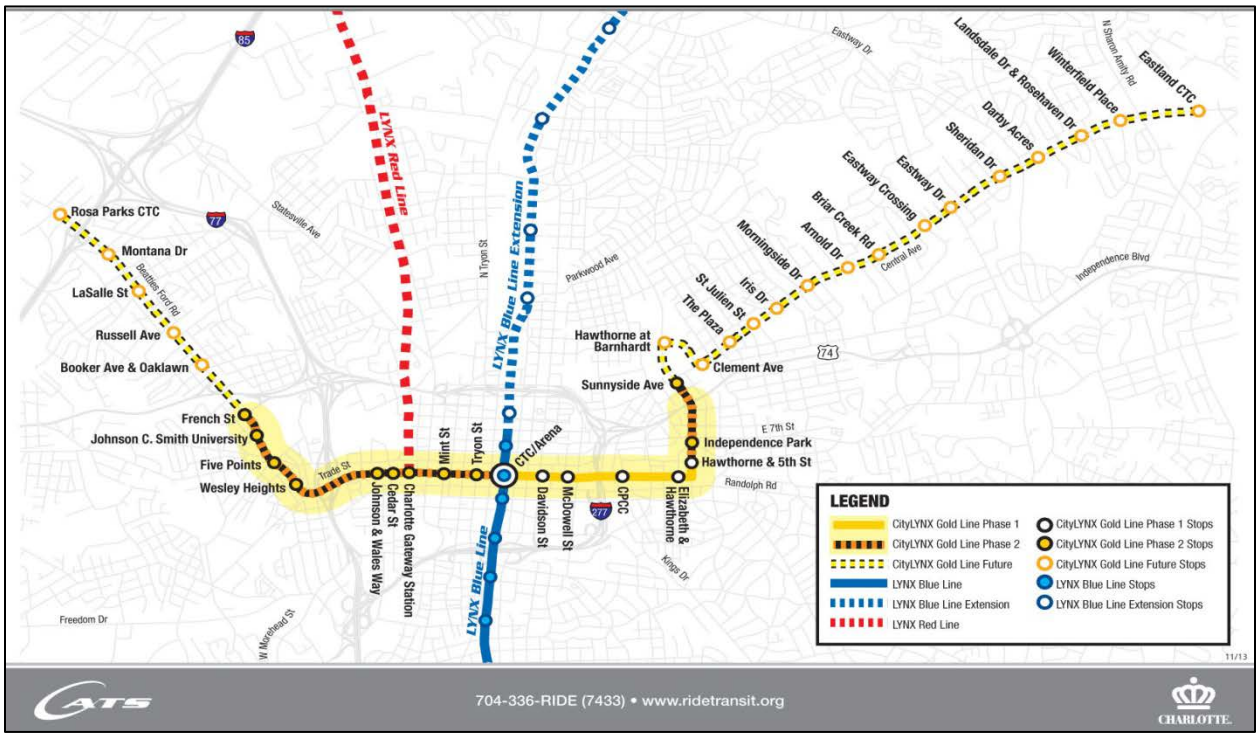
TMOC FORMS

Drug and Alcohol Authorization..... N/A

APPENDIX D
System Maps

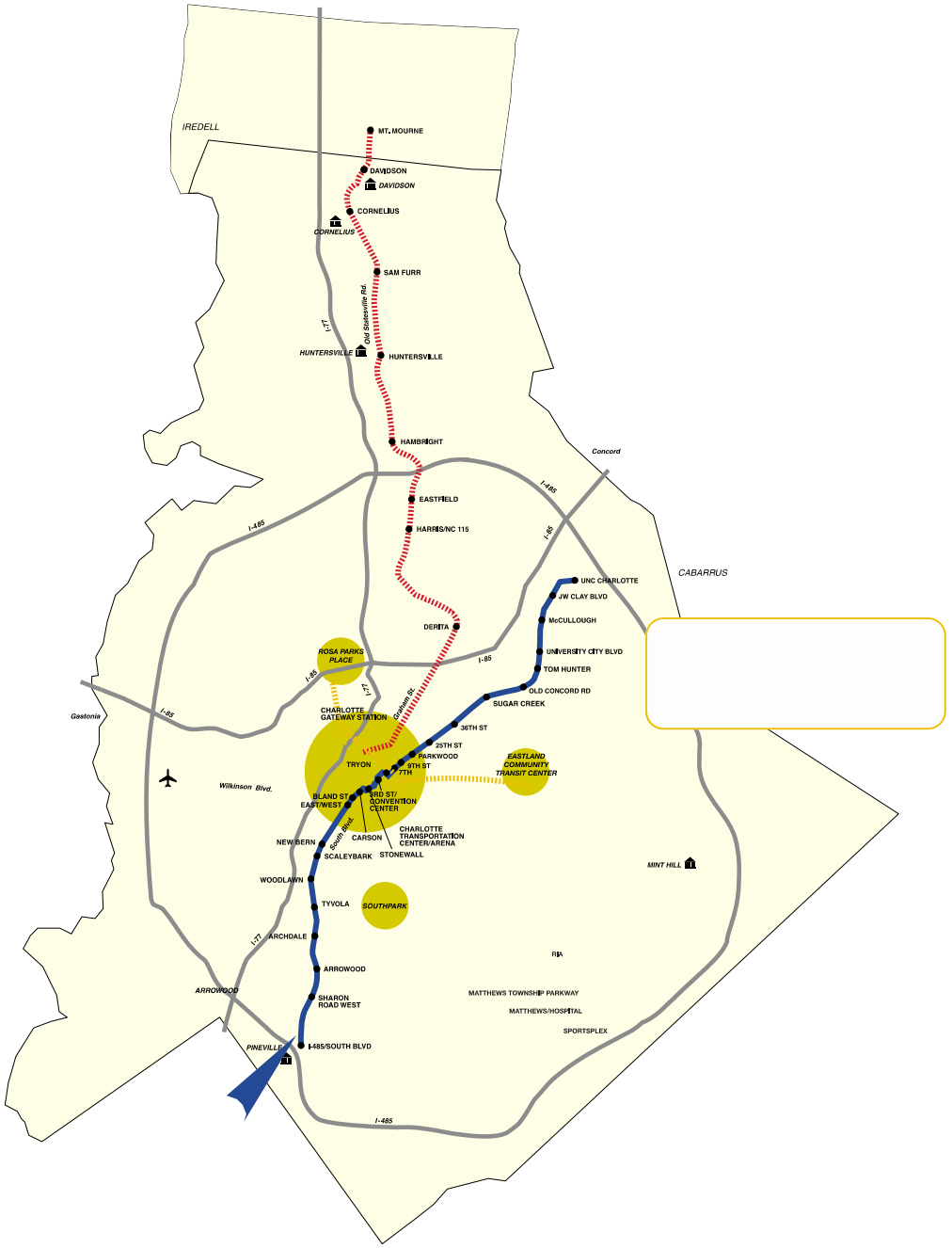

LYNX
RAPID TRANSIT SERVICES
IREDELL COUNTY
MECKLENBURG COUNTY
GASTONIA
ROCK HILL
PINEVILLE
85
77
485
North Tryon St
South Blvd
UNC Charlotte Main
JW Clay Blvd/UNC Charlotte
McCullough
University City Blvd
Tom Hunter
Old Concord Rd
Sugar Creek
36th St
25th St
Parkwood
9th St
7th St
CTC
Carson
Bland St
East/West Blvd
3rd St/
Convention
Center
Stonewall
New Bern
Scaleybark
Woodlawn
Tyvola
Archdale
Arrowood
Sharon Rd West
I-485/South Blvd
NORTH
MAP LEGEND
Station
Park and Ride Station
Charlotte Transportation Center
LYNX Blue Line
CATS
CHARLOTTE AREA TRANSIT SYSTEM
v0717

CityLYNX Gold Line Route Map



2030 System Plan Map

LYNX SYSTEM MAP



04/18

APPENDIX E
Forms

Office of Safety & Security (Bus Operations)
Training & Development Sheet

Employee Information			
Employee Name		Date	
ID Number		CDL Exp Date	
Medical Card Exp Date		Seniority Date	

Safety History Last 36th Months		
Date	Incident Type	Preventability ID
		Preventable ☐ Non-Preventable ☐
		Preventable ☐ Non-Preventable ☐
		Preventable ☐ Non-Preventable ☐
		Preventable ☐ Non-Preventable ☐
		Preventable ☐ Non-Preventable ☐

Class Room Training (Check Box If Covered)				
Interview	☐	Video: The 5 keys to safety	☐	Comment
MCI	☐	Other: Reference Comment	☐	
Defensive Driving	☐	Video: Out of Harms Way	☐	
Defensive Driving Test	☐	Video: The Critical Point	☐	
Pre-Trip	☐	Video: Searching for Safety	☐	
Post-Trip	☐	Video: Driving the 5 Keys	☐	
ADA Refresh	☐	Bus Start	☐	
Fare Box	☐	Bus Securement	☐	
Radio	☐	Security Refresh	☐	

Employee Signature

Platform and General Training			
Review Area	Good	Needs Attention	Comment
Uniform	☐	☐	
Name Tag	☐	☐	
Shoes	☐	☐	
Safety Vest	☐	☐	

Bus Stops			
Signal 150 ft before Stop	☐	☐	
4 Way Flashers 50 Feet Before Stop	☐	☐	
Bus Is Parallel to the Curb	☐	☐	
6" to 12" from			

Curb	☐	☐	

Training & Development Sheet Page 2 of 3

Speed and Space Cushion			
Review Area	**Good**	**Needs Attention**	**Comment**
Obey Speed Limits	☐	☐	
Speed Safe For Conditions	☐	☐	
Smooth Braking	☐	☐	
Maintained Good Space Cushion	☐	☐	

Lane Change			
Use Direction Signal	☐	☐	
Scan Mirror	☐	☐	
Proper Clearance	☐	☐	

Turns			
5 MPH or Less While Turing	☐	☐	
Scans Mirrors	☐	☐	
Use Direction Signals	☐	☐	
Proper Position	☐	☐	
Proper Steering Technique	☐	☐	
Aware of Right Of Way	☐	☐	

Intersection Operation			
Aware of Stale Green Lights	☐	☐	
Scan Intersection on Approach	☐	☐	
Covers Brake	☐	☐	
Observes Space Cushion When Stopped	☐	☐	
Scans Area While Stopped	☐	☐	
Wait 3 Seconds To Proceed	☐	☐	
Brake/Accelerate	☐	☐	

Smoothly			

Training & Development Sheet Page 3 of 3

Safety			
Review Area	**Good**	**Needs Attention**	**Comment**
Pre-Trip	☐	☐	
HeadSign	☐	☐	
Lot Speed	☐	☐	
Adjust Interior Mirror	☐	☐	
Adjust Exterior Mirror	☐	☐	
Seat Belt Use	☐	☐	
Hand Position	☐	☐	
Knows and Explains The Five Keys To "Smith System"			
Aim HIgh In Steering	☐	☐	
Get The Big Picture	☐	☐	
Keep Your Eyes Moving	☐	☐	
Leave Yourself An Out	☐	☐	
Make Sure They See You	☐	☐	

Employee Signature: _____ Date:_____

Safety Officer Signature: _____Date: _____

Class Room Time: Platform Time:

Charlotte Area Transit System
Trainee Evaluation

This evaluation is a confidential document. Please fill out completely and return to Dispatch.

DATE		**RUN NUMBER**	
MENTOR NAME		**MENTOR PAYROLL #**	
TRAINEE NAME		**TRAINEE PAYROLL #**	

RUNS TOTAL PLATFORM TIME: _____ (Found on Run Assignment Sheet)

TRAINEE DRIVE TIME ON RUN

Start Time		End Time		Platform Time	
Start Time		End Time		Platform Time	
Start Time		End Time		Platform Time	
Start Time		End Time		Platform Time	
				TOTAL PLATFORM TIME	

MENTORS DRIVE TIME ON RUN – IF TOOK OVER THE BUS FOR A PERIOD OF TIME

Start Time		End Time		Platform Time	
Start Time		End Time		Platform Time	
Start Time		End Time		Platform Time	
Start Time		End Time		Platform Time	
				TOTAL PLATFORM TIME	

TRAINEE SKILLS AND OPERATING PERFORMANCE:

E =EXCELLENT	G = GOOD	F = FAIR Comment Needed	P = POOR Unable to perform the task after repeated instructions. Needs additional work outside of mentor training

**If safety issue is noted during mentor training, notify the BOCC immediately for assistance.

CRITERIA	E	G	F	P	COMMENT
Appearance					
Vehicle Inspection					
AVL Log On					
Head Sign Usage					
Paddle Knowledge					
Fares and Transfer					
Courtesy					
Right Turn					
Left Turn					

Smoothness: Stops & Start					
Intersection Awareness					
General Awareness					
Pulling into Curbs					
Use of Signals					
Use of Four-Way Flashers					
Use of Mirrors					
Use of Hands					
Use of Feet					
Use of Wheelchair Lift					
Use of Kneeler					
Use of Interior Lights					
Radio Procedures					
Defensive Driving Skills					
Seatbelt Use					
Pedestrian Awareness					
Post Trip Inspection					

Overall General Comments: _____

Mentor Signature: _____

Superintendent Signature: _____ **Date:** _____
(Or Designee)

Manager of Safety Signature: _____ **Date:** _____
(Or Designee)

CATS/Special Transportation Service

Supervisor's Field Observation Report
Equipment Operator Job Performance

OPERATOR _____ Day_____Date_____

DTB_____ VEH TYPE_____ LIFT _____ RAMP_____

Did Vehicle Complete Route YES_____ NO_____

Ride with Operator _____ Trail Check _____ Spot Check _____ Problem in Field _____

Vehicle Towed Yes or No

Location_____ Weather Conditions (Specify) _____

Time Supervisor Left Office _____ Time Observation Began _____

Time Supervisor Returned to Office _____ Time Observation Ended _____

5 = Outstanding **4** = Exceeded Expectations **3** = Average **2** = Below Average **1** = Needs Improvement
N/A = Not Applicable *__V__ = Violation **C** = Could Not Observe
*Performance ratings of 1, 2, or V must have corrective action documened at the bottom of this form.

OPERATOR READINESS

Y N Clipboard
Y N Timepiece
Y N Manifest
Y N Name Tag
Y N Map Book
Y N Out Of Uniform
Y N Valid Drivers License

PASSENGER ASSISTANCE

Passenger Type:
___ Physical Disability
___ Cognitive Disability
___ Elderly/Frail
___ Visual Impairment
___ Ambulatory
___ Other _____

Aid Type:
___ Walker
___ Wheelchair Electric
___ Wheelchair Manual
___ 3-Wheeler (Scooter)
___ Cane
___ Crutches
___ Other _____

Was vehicle secured when driver was out of sight Y N

SAFETY

___ Pre-Trip Inspection
___ Appropriate Speed for Conditions
___ Mirrors
___ Following Distance
___ Stopping Distance
___ Turn Signals/Emergency Signals
___ Lane Changes
___ Railroad Crossings
___ Stopping at Safe Locations
___ Early Braking
___ Parking Brake
___ Clean Vehicle
Y N Seat Belt On

Wheelchair Securement Used:
____ Q-Straint
____ Blue Straps Used

How Many Strap Sets Accounted For_____
Number of Straps Found In The Floor_____

Wheelchair Securement Time:

____ Load _____ ____ UnLoad _____
____ Load _____ ____ Unload _____
____ Load _____ ____ Unload _____
____ Load _____ ____ Unload _____

OPERATIONS

___ Expedient Route
___ Route Management
___ MDC
___ Two - Way Radio
___ Ticket Control
___ Additional Stops/Insertions

Five Keys To Safety
1. Aim High In Steering
2. Get The Big Picture
3. Keep Your Eyes Moving
4. Leave Yourself An Out
5. Make Sure They See You

Receiving/Alighting

___ Passenger Courtesy
___ (On/Off) Vehicle Ramp
___ (On/Off) Lift Platform
___ Assistance From/To Door
___ (On/Off) Down Hill Side
___ W/C Brakes
___ W/C Securement
___ Seating/Seat Belts
___ Steps-Home/Destination
___ Ramp-Home/Destination

List Passengers:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Comments:_____

_____

_____

_____

_____

_____

_____

Overall Rating (1 to 5 with 5 being the best):_____

_____/_____ _____/_____
Labor Crew Chief Date Operations Manager Date

_____/_____ _____/_____
Division Manager Date Equipment Operator Date

CHARLOTTE AREA TRANSIT SYSTEM
RAIL OPERATIONS

Rail Operator Ride Check Form

Operator Name: _____ Radio #: _____

Date: _____ Start Time: _____ End Time: _____

Start Location: _____ End Location: _____

Alignment (check one): ____Blue Line ____Gold Line

Purpose of this ride check:

☐ Periodic efficiency ride-along ☐ Re-training following infraction

☐ Requalification ☐ Return to work following extended absence

☐ Other (explain) _____

_____

Rate each observed behavior on a scale of 1 to 5, with 5 being excellent and 1 being unacceptable, needs retraining. Any re-training needs must be presented to operations manager and/or instructor supervisor. Write in N/A for not applicable or not checked.

_____ Possesses all required items (Operating Orders, radio, Rule Book, etc.)

_____ Knows the rule of the day

_____ Uses proper radio protocol; reports all appropriate situations that could affect operations

_____ In possession of accurate watch which indicates seconds

_____ Always checks both sides of train via cameras, mirrors on streetcar prior to closing doors and departing station

_____ Operates on time according to schedule

_____ Smooth station stops and accelerations

_____ ADA station announcements made if necessary

_____ Makes proper Streetcar Station/ADA announcements

_____ Cell phone and unauthorized electronic equipment OFF and out of sight

_____ ROD425 *Switching Streetcar Operating Cabs* compliance

_____ Performs proper interior train/streetcar inspections at terminal stations

_____ Makes all appropriate customer service announcements

_____ Operates to appropriate station berthing marker

_____ Proper use of horn and bell/gong or whistle

_____ Proper TWC code set

_____ Proper use of opticom/ommiter

Rail Operator Ride Check Form

_____ Uses Door Close button to close doors

_____ Observes and follows all signals

_____ Sounds horn and slows to 10 mph when workers are on ROW

_____ Operates at speeds no greater than 5mph in curves and obeys speed limits on streetcar alignment.

_____ Uses appropriate station approach speeds during normal and inclement weather

_____ Wearing proper uniform (including shoes) and uniform is clean and neat

_____ Scans grade crossings properly to ensure GCI is illuminated and gates are down

_____ Monitor signal cabinet indications

_____ Good defensive operating techniques and is always prepared to stop

_____ Good observation techniques and constantly scans ahead/all directions on streetcar (not "tunnel vision")

_____ In seat and ready to depart terminal stations one minute prior to departure time.

_____Notifies ROCC when departing Streetcar Terminals

_____ Operates safely and is in compliance with the Rail Rule Book and all rail SOPs

Supervisor's Observations:

_____

_____

_____

Suggested Areas for Improvement:

_____

_____

_____

Overall Rating: _____ (Use the same 1 – 5 scale)

Supervisor Name: _____

Supervisor Signature: _____

Operator Comments:

_____

Rail Operator Ride Check Form

_____

_____

_____

_____

Operator Signature: _____

Submit completed form to Instructor Supervisor.

Instructor Supervisor: Submit form to Manager, Rail Transportation. Form will be maintained in employee's training file.

Manager, Rail Transportation - Signature: _____

STATION SAFETY INSPECTION CHECKLIST

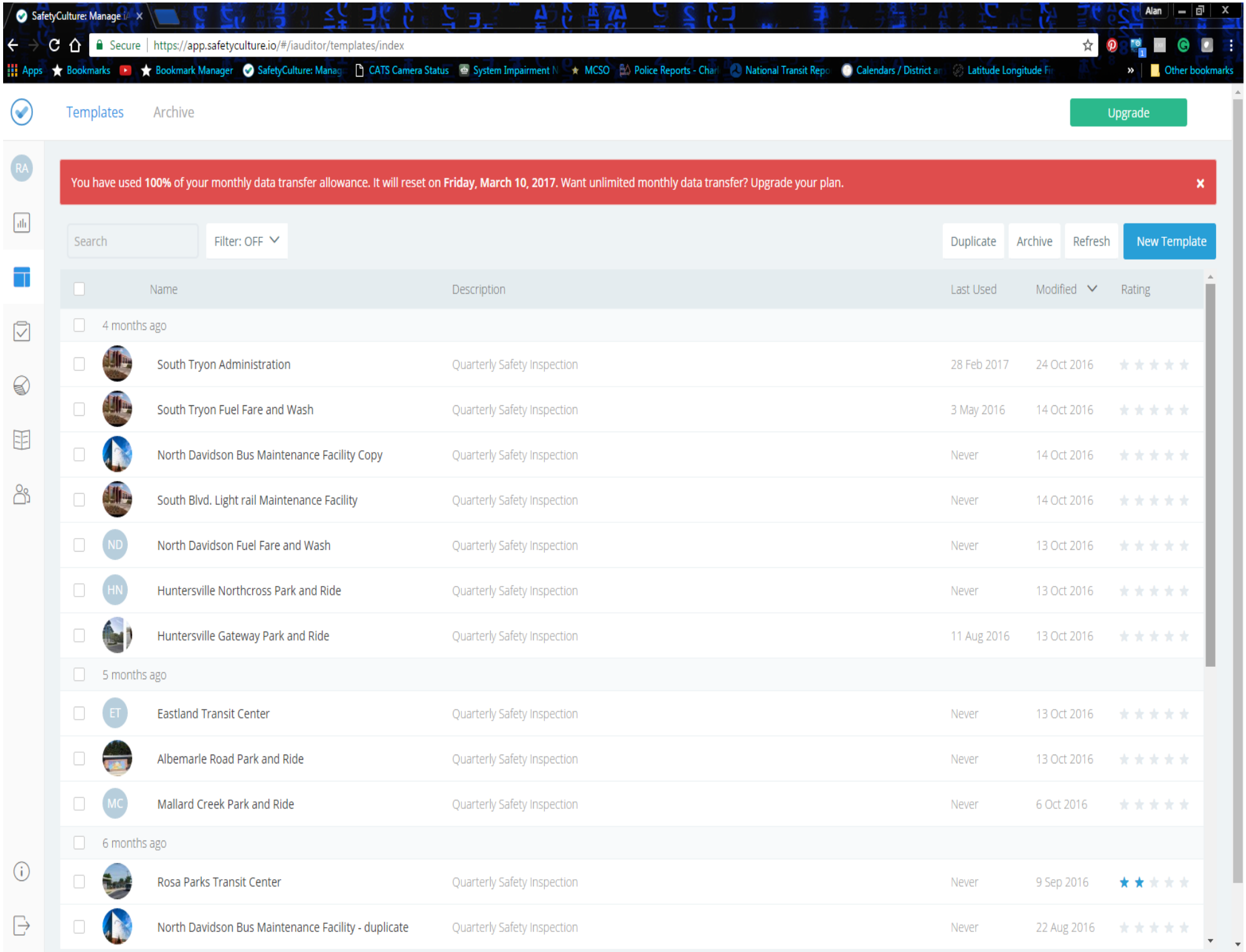
Station _____ **Inspection Date:**_____

Inspector:_____

Safety & Security Items	Pass		Fail		Comments
	TI	T2	T1	T2	
1. ADA					
• Ramps free of hazards					
• Platform tactile edging in place					
• Pedestrian crossings (clearly marked)					
• Adequate color contrast (30/70%) between platform surface and tactile edging					
2. Lighting system					
• Identify outages					
3. PA system					
• Operable					
4. Fencing/railing					
• Secured					
• Hand rails present and secured at stairs (if 4 or more steps are present)					
5. Benches					
• Secured					
6. Vegetation issues (over-growth, line of sight issues)					
7. Low clearance issues (head strike hazards for small children)					
8. Trash receptacles					
• Secured to platform					
• Lid secured to main receptacle					
9. Exposed conduit (if present, is it covered to restrict public access to it)					
10. Station canopy					
• Secured					
• Vertical clearance (head strike hazards for adults)					
11. Pedestrian bridges					
• Skid resistant surfaces, stairs, landings, walkways					

Station Safety Inspection Checklist

Safety & Security Items	Pass		Fail		Comments
	TI	T2	T1	T2	
• Railing on stairs					
12. Elevators					
• Signage (in case of fire, do not use elevator)					
• Sensitive door edge operational					
13. Park and Ride lots					
• Lighting system					
- Identify outages					
• Perimeter fencing					
• ADA requirements, (tactile warning strips)					
14. Wind screens					
• Secured to station					
• No sharp edges					
15. Exposed wiring and cabling					
16. Metal fabrication					
• No sharp edges					
17. Tripping hazards present (station platform, ramps, steps, sidewalks)					
18. Electrical outlets					
• Exposed circuits					
19. Slip resistant surface					
• Stairs					
• Walkways					
• Ramps					
• Landings					
• Other walking surfaces					
20. Other					
•					
•					


SafetyCulture: Manage
Alan
Secure
https://app.safetyculture.io/#/iauditor/templates/index
Apps
Bookmarks
Bookmark Manager
SafetyCulture: Manag
CATS Camera Status
System Impairment
MCSO
Police Reports - Char
National Transit Repo
Calendars / District ar
Latitude Longitude Fi
Other bookmarks
Templates
Archive
Upgrade
RA
You have used 100% of your monthly data transfer allowance. It will reset on Friday, March 10, 2017. Want unlimited monthly data transfer? Upgrade your plan.
Search
Filter: OFF
Duplicate
Archive
Refresh
New Template
Name
Description
Last Used
Modified
Rating
4 months ago
South Tryon Administration
Quarterly Safety Inspection
28 Feb 2017
24 Oct 2016
South Tryon Fuel Fare and Wash
Quarterly Safety Inspection
3 May 2016
14 Oct 2016
North Davidson Bus Maintenance Facility Copy
Quarterly Safety Inspection
Never
14 Oct 2016
South Blvd. Light rail Maintenance Facility
Quarterly Safety Inspection
Never
14 Oct 2016
ND
North Davidson Fuel Fare and Wash
Quarterly Safety Inspection
Never
13 Oct 2016
HN
Huntersville Northcross Park and Ride
Quarterly Safety Inspection
Never
13 Oct 2016
Huntersville Gateway Park and Ride
Quarterly Safety Inspection
11 Aug 2016
13 Oct 2016
5 months ago
ET
Eastland Transit Center
Quarterly Safety Inspection
Never
13 Oct 2016
Albemarle Road Park and Ride
Quarterly Safety Inspection
Never
13 Oct 2016
MC
Mallard Creek Park and Ride
Quarterly Safety Inspection
Never
6 Oct 2016
6 months ago
Rosa Parks Transit Center
Quarterly Safety Inspection
Never
9 Sep 2016
North Davidson Bus Maintenance Facility - duplicate
Quarterly Safety Inspection
Never
22 Aug 2016

APPENDIX F
MTC Resolution Approval of ASP

Expected October 2021

APPENDIX G
Reference
Documents Index

Reference Documents Index

Bus Operations Control Center Standard Operations Procedures and Reference Guide

Bus Operations Division Procedures Manual

- CATS BOD100 *Preventative Maintenance Inspection (PMI) Audits*
- CATS BOD104 *Configuration Change Control*

CATS Marketing and Communications Plan

City Policy HR4 Drug and Alcohol-Free Workplace

Rail Maintenance Handbook

Rail Rule Book

Rail Standard Operating Procedures Manual

- CATS ROD304 Bulletins, Notices, General Orders and Operating Orders
- CATS ROD600, *Preventive Maintenance Requirements for Rail MOW*
- ROD600-series SOPs
- CATS ROD801 Configuration Change Control

CATS Policy and Procedure Manual

- CATS CSVS04 *Customer Insights Tracking Process*
- CATS EX03 Safety Policy
- CATS P&CM04 Change Control Procedure
- CATS QA01 *Control of Public Records*
- CATS QA02, *Control and Distribution of Plans, Manuals, Policies and Procedures*
- CATS QA05 *Nonconformity and Corrective Action*
- CATS QA08 *Procedure Change Request Process*
- CATS S&S03 Accident/Incident Investigation and Reporting
- CATS S&S05 *Hazard Communication Program*

CATS Procurement Manual

CATS Quality Manual

Safety and Security Certification Plan - BLE

Safety and Security Certification Plan - CityLYNX GL2

Transit Management of Charlotte, Inc. Substance Abuse Policy

External References

National Public Transportation Safety Plan, January 2017

North Carolina State Safety Oversight Program Standards (SSOPS)

North Carolina G.S. 20-37.19 reporting positive DOT drug or alcohol tests under 49 CFR Part 382 or Part 655.

FTA's Handbook for Safety and Security Certification (2002)

FTA posts the latest Drug and Alcohol Regulations, Rules, and Notices at: http://transit-safety.volpe.dot.gov/DrugAndAlcohol/Regulations/Regulations/default.aspx

49 U.S.C. Chapter 53

49 U.S.C.5309 discretionary construction program

49 U.S.C. 5329(d)

49 CFR Part 40 Procedures for Transportation Workplace Drug and Alcohol Testing Programs

49 CFR Part 655 Prevention of Alcohol Misuse in Transit Operations

49 CFR 672 Safety Training

49 CFR Part 673 Public Transit Agency Safety Plans

49CFR Part 674 and the SSOPS

MIL-STD-882E DEPARTMENT OF DEFENSE STANDARD PRACTICE SYSTEM SAFETY

APPENDIX H
Safety Annual Targets and Results

Fatalities (Goal: 0 per 100k mi)

Mode	2017 Incidents	2017 Rate	2018 Incidents	2018 Rate	2019 Incidents	2019 Rate	2020 Incidents	2020 Rate	2021* Incidents	2021* Rate
Bus	0	0.00	0	0.00	0	0.00	2	0.02	1	0.02
STS	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Rail	2	0.39	1	0.10	1	0.09	0	0.00	1	0.23

Preventable Safety Events (Goal: 0.5 per 100k mi)

Mode	2017 Incidents	2017 Rate	2018 Incidents	2018 Rate	2019 Incidents	2019 Rate	2020 Incidents	2020 Rate	2021* Incidents	2021* Rate
Bus	56	0.41	42	0.31	41	0.30	22	0.19	18	0.28
STS	12	0.44	13	0.47	1	0.04	0	0.00	0	0.00
Rail	4	0.78	11	1.06	15	1.17	7	0.75	3	0.70

Reportable Injuries (Goal: 0.80 per 100k mi)

Mode	2017 Incidents	2017 Rate	2018 Incidents	2018 Rate	2019 Incidents	2019 Rate	2020 Incidents	2020 Rate	2021* Incidents	2021* Rate
Bus	198	1.44	113	0.84	55	0.40	43	0.38	64	0.99
STS	24	0.88	16	0.58	6	0.22	6	0.32	8	0.65
Rail	16	3.13	22	2.13	17	1.45	10	1.07	6	1.40

System Reliability

Mode	2017 Mean Distance in VRM between major mechanical failures	2018 Mean Distance in VRM between major mechanical failures	2019 Mean Distance in VRM between major mechanical failures	2020 Mean Distance in VRM between major mechanical failures	2021* Mean Distance in VRM between major mechanical failures
Bus	14,398	14,365	15,117	16,196	14,830
STS	925,336	33,486	92,128	106,149	1,223,702
Rail	3,626	3,803	4,680	5,643	3,707

(Goals: Bus: <1 per 15k mi; STS: <1 per 60k mi; Rail: <1 per 3k mi)

*Through July 2021

APPENDIX I
Gaps for Implementation of ASP

Identified Gaps and Actions for Implementation of the ASP

#	These gaps are in no particular order. CATS will address the gaps and develop timelines to implement open action items.	ImplementationPlan Section
1	As part of the implementation process, reported safety concerns will be tracked in the appropriate hazard tracking format per the Hazard Management section of this ASP.	7e
2	For employee reported safety concerns, where contact information is provided, the recipient of the safety concern is responsible to follow-up with the employee.	7e
3	CATS Safety and Security is being inserted in the Employee Hotline process. Action items: • Set up an e-mail to receive CATS Hotline Safety issues. John Lewis will notify the City Hotline Administrator of the CATS e-mail. • Train Employees on the purpose and use of City Hot Line as part of the anonymous employee safety reporting process.	Detailed in 2021 ASP, Section 1.7 CLOSED
4	Train CATS employees on the ASP and CATS Safety Policy.	1,2
	• Need to develop plan to educate current and new employees on the new ASP and what their roles and responsibilities are related to the ASP.	1c, 2c
5	Conduct Job Hazard Analysis in Bus and Rail Operations and Maintenance.	Next Phases
6	For employee identified unsafe conditions, employees are expected to address safety concerns within their control immediately. Employees are expected to report unsafe conditions and issues with procedural compliance by speaking with or e-mailing a written safety report to their supervisor or manager. Develop a form for Employee observations of unsafe conditions or behavior.	9
	• Need to develop form for Employee observations of unsafe conditions or behavior.	9b
	• Educate employees on reporting using the form.	9d
	• Work with communications to develop a summary format of incidents and actions taken.	9f
	• Need process to loop back to Individuals filing safety concerns and provide their contact information.	9f
7	Update CATS QA05 to include addition of Hazard ratings to identified nonconformances and following ASP for tracking hazardous conditions.	Removed in 2021 ASP, identified hazards and associated ratings are already captured in hazard management logs as stated in section 2.2.2 and

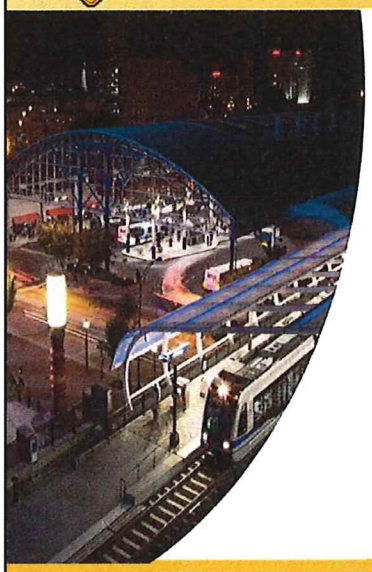
		3.2.11 of the ASP. CLOSED
8	Identified Hazards will be rated based on the Hazard Risk Assessment. As part of the implementation plan, Bus, Bus Safety, Rail, Rail Safety, Facilities and STS will maintain their own Hazard Management Logs to include problems discovered, the desired resolution, the individual responsible for resolution, and the status through closure.	7e
9	Long term: Develop a centralized system that all hazards and safety issues can be placed so we can have a complete picture from the agency standpoint on what safety issues we are dealing with, how are they mitigated and what is being done to address the issues. Still need to decide how to capture the information from various sources and bring it into one location.	Next Phases
10	Unacceptable Hazardous Conditions (UHCs)(1A, 1B, 1C, 2A and 2B) must be reported within two hours by e-mailing a written safety report to the General Manager, the SMS Manager and the CSO as part of the implementation plan. • Include in the ASP training • Include as part of the ASP internal audit process	Detailed in 2021 ASP, Section 2.2.2 CLOSED Included in ASP training and scheduled to be audited in 2022
11	Based on the hazards identified (section 2.2.1 and 2.2.2), safety specific topics or inspections will be conducted to address issues identified from the data analysis.	Next Phases
12	To ensure the sharing of safety data and information, Hazard Logs and Risk Registries will be available electronically in an accessible location for appropriate employees to access and review.	15
13	Safety issues and hazards will be tracked in Hazard Management Logs, to include problems discovered, the desired resolution, the individual responsible for resolution, and the status through closure.	Detailed in 2021 ASP, Section 2.2.4 CLOSED
14	The Hazard Tracking Logs will be managed to eliminate, reduce or control each hazard to an acceptable level. Identified hazards will be assigned hazard rating. The Safety Manager and General Manager will review hazard ratings and status of the Hazard Logs monthly. When an item is added by the Office of Safety, the General Manager will be notified by e-mail. Hazard Tracking Logs will be distributed to CATS Leadership monthly. Hazard Tracking logs will be distributed to the SSC on a quarterly basis for review and discussion. • Process to capture hazards identified during proficiency checks GAP Task Amended in 2021 ASP: Hazard Tracking Logs will be distributed to CATS Leadership monthly. A safety summary will be distributed to the SSC and MTC for review and discussion.	10d
15	Utilizing the information collected in the various safety reports, a safety summary will be provided monthly to the executive management and	Detailed in 2021 ASP, Section 2.2.4

	MTC by the Chief Safety Officer. The CATS CEO will receive updates during the Senior Leadership meetings. • Develop a monthly safety report format and begin reporting by August 2020 • Develop format for reporting to senior management.	CLOSED
16	Rail Safety and Bus Safety will develop Risk Registers to capture, manage, and mitigate identified Undesirable and Unacceptable Hazardous Conditions. • Approve Risk Register and distribute to divisions	11c Detailed in 2021 ASP Section 2.2.5
17	Corrective action plans that have been developed, shall be verified, and monitored to ensure that unexpected hazards have not developed as part of the implementation plan.	Next Phases
18	The Office of Safety and Security will provide monthly safety program performance reports to executive management and employees.	9f
19	The Office of Safety and Security and Quality Assurance will jointly develop and annually submit a comprehensive Internal Safety Audit schedule to NCDOT, detailing when they will audit the agency safety plan components over the three-year period.	Detailed in 2021 ASP, Section 3.2.5 Annual audit schedule for July 2020 through Dec 2022 was sent to NCDOT SSO in 2020 Updates to schedule are sent to SSO as necessary.
20	The Internal Safety Audit team will identify the components of the annual safety performance assessment based on SMS and conduct a safety assessment annually.	Detailed in 2021 ASP, Section 3.2.5
21	Lead auditors will be certified to conduct audits by the Transportation Safety Institute or ASQ (American Society for Quality).	Detailed in 2021 ASP, Section 3.2.6
22	Findings from Safety audits will be added to the appropriate Hazard Management Log by the lead auditor per the Hazard Management Process. If applicable, a CAP will be created per Section 3.4.4.3 Corrective Action Plans. Any hazardous condition/deficiencies that are rated as Unacceptable will be reported by the Chief Safety Officer or SMS Manager to the CEO per the Hazard Management program. The CSO will include a summary of safety deficiencies identified during audits as part of the hazardous conditions monthly report to the CEO.	Detailed in 2021 ASP, Section 3.2.11 CLOSED
23	Identified changes to the CATS System or mitigations that have been implemented in the field will be verified and monitored by the appropriate Division staff and Office of Safety personnel to ensure the mitigation is appropriate and effective. If it is determined that a mitigation for an Unacceptable or Undesirable hazard is ineffective, the SMS Manager or the CSO will be notified, and a different mitigation will be implemented to	Next Phases

	address the issue. These changes will be managed on the Division's Hazard Management Log and the Safety Risk Registry as applicable.	
24	Recommendations for enhancement of the compliance methods are submitted to Division managers by the Office of Safety and Security for appropriate action.	Next Phases
25	CATS employees who are designated personnel who are directly responsible for the safety oversight of a rail fixed guideway public transportation systems are required to complete safety refresher training every two (2) years after completing the initial requirements. The refresher training must include, at a minimum, one (1) hour of safety oversight training.	Detailed in 2021 ASP, Section 4.6.3 CLOSED
26	CATS will develop a process to ensure employees are provided training on implemented changes that impact their duties and responsibilities.	Next Phases
27	Prepare marketing materials to raise safety awareness throughout the facilities, which may include, but is not limited to, brochures, posters, email blasts and newsletters to best accommodate every division's best communication practices.	Detailed in 2021 ASP, Section 4.7 CLOSED
28	CATS Marketing and Communications will create marketing collateral that explains proper safety procedures to be displayed in highly visible areas for the public, which may include, but is not limited to inside vehicles, social media and audio announcements. CATS will also use email and newsletters to communicate with key stakeholders.	Detailed in 2021 ASP, Section 4.7.1 CLOSED
29	A procedure will be developed to address the See Say app as a safety reporting tool, and Marketing and Communications will leverage marketing signage, social media and video to communicate with the public and key stakeholders about this service.	1,2
30	Training • Action: create job action sheets for each position. (Item 31 describes how this will be accomplished in more detail)	Detailed in 2020 ASP, Section 4.6.1
31	A comprehensive program for review activities that identify where new safety training is needed, where current safety training must be revised and updated, and refresher training needs to be added to the current training requirements for employees and contractors. The program will also include updating job descriptions and training requirements for front line employees, managers and supervisors and senior managers.	Next Phases
32	CATS Transit Asset Management (TAM) Program will be establishing the direction for Asset Management Policies. The program will establish the divisional roles and responsibilities as stated in the CATS TAM Implementation Plan. The process will tie into the review of State of Good Repair and any Unacceptable or Undesirable Hazards will be	Added for 2021 ASP Implementation Plan Update Next Phases

	addressed by following the Hazard Management Plan in the ASP. A report rating deferred maintenance items will be provided by Operations and Facilities at the monthly Safety and Security Committee (SSC).	
33	As part of the implementation plan, the Office of Safety and Security will hire Safety Coordinators to work with CATS to implement various programs/activities such as hazard management processes, data collection, analysis, and reporting.	Added for 2021 ASP Implementation Plan Update 13
34	As part of the ASP implementation plan, safety will appoint Safety Coordinators who will be responsible for maintaining, updating, and setting up the hazard log to ensure adequacy and appropriateness of the hazard log.	Added for 2021 ASP Implementation Plan Update 13
35	SMS training will be incorporated in the RWP training provided to contractors.	Added for 2021 ASP Implementation Plan Update Next Phases
36	City IT begins the process to identify and procure a data system to meet the needs of SMS implementation.	Added for 2021 ASP Implementation Plan Update 14
37	UAH/UDH hazards identified through inspection reports will be managed to closure and tracked using a centralized enterprise resource system.	Added for 2021 ASP Implementation Plan Update 14
38	The Office of Safety and Security will work with CATS Marketing/Communications to develop printed and electronic summary reports that provide feedback to employees on safety concerns submitted to the various safety committees. Employees who report safety concerns to management will receive a response from their supervisor or manager on how the issue was resolved.	Added for 2021 ASP Implementation Plan Update Next Phase

SAFETY MANAGEMENT SYSTEM



MTC Presentation:
Charlotte Area Transit System Agency Safety Plan (ASP) Version 1 Revisions

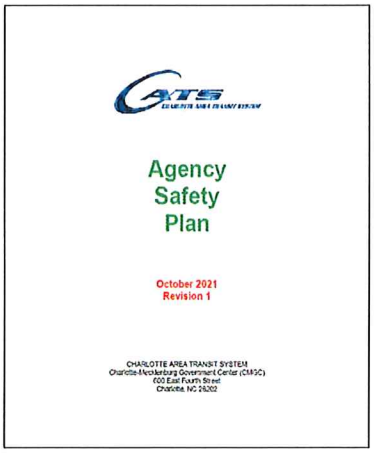
Safety is for Everyone, Everyday! 1

1

SAFETY MANAGEMENT SYSTEM

ASP Approval Summary

- July 19, 2018, FTA published 49 CFR Part 673, entitled Public Transportation Agency Safety Plan (PTASP)
  - Transit Agencies required to develop Agency Safety Plan
- April 22, 2020, MTC Approves CATS Agency Safety Plan
- June 3, 2020, NCDOT approves CATS Agency Safety Plan
- **October 27, 2021, requesting MTC approval of CATS Agency Safety Plan, Revision 1**



Safety is for Everyone, Everyday! 2

2

SAFETY MANAGEMENT SYSTEM

Substantive Changes by Section: Clarified or Updated

- **Definition Additions and Clarifications**
- **Safety Management Policy**
  - Definition of Safety Goals
  - Description of Gold Line
  - Safety Staff Roles in Supporting ASP Implementation Clarification
  - Method of Reporting Safety Issues Added
- **Safety Risk Management**
  - Description and Use of Hazard Management Logs Clarification
  - Description of the Safety Risk Register
- **Safety Assurance**
  - Audit Process
  - Update CATS Annual Reporting Requirements to NCDOT
  - Corrective Action Plan Review
  - Transit Management Asset (TAM) Program
  - Management of Change
- **Safety Promotion**
  - Certification and Training
  - Description of Safety Risk Register
  - Hours of Service
  - Employee Feedback

3

SAFETY MANAGEMENT SYSTEM

Questions

4

METROPOLITAN TRANSIT COMMISSION
ACTION ITEM
STAFF SUMMARY

SUBJECT: November & December Meeting Schedule DATE: October 27, 2021

1.0 **PURPOSE/SCOPE**: This action will establish the Metropolitan Transit Commission's November and December 2021; meeting schedule.

2.0 **BACKGROUND**: The MTC typically considers rescheduling the November meeting as it is historically scheduled the day before Thanksgiving. Also, as the MTC looks at the meeting adjustment, as it normally must take into consideration the time of the CRTPO meeting as well.

Also, the MTC typically considers canceling the December meeting to support family activities and vacations, during the Christmas Holiday season.

3.0 **PROCUREMENT BACKGROUND**: N/A

4.0 **POLICY IMPACT**: N/A

5.0 **ECONOMIC IMPACT**: N/A

6.0 **ALTERNATIVES**: N/A

7.0 **RECOMMENDATIONS**: MTC has the following options:

- Option 1: Reschedule the Wednesday, November 24, 2021 meeting to meet on Wednesday, November 17, 2021 from 5pm-6pm.
- Option 2: Hold the November meeting as originally scheduled**.**
- Option 3: Cancel December 2021 MTC meeting
- Option 4: Hold the December meeting as originally scheduled.

8.0 **ATTACHMENT**: N/A

SUBMITTED AND RECOMMENDED BY:

John M. Lewis, Jr.
Chief Executive Officer, Charlotte Area Transit System
Director of Public Transit, City of Charlotte

Metropolitan Transit Commission

Charlotte Area Transit System Ridership Report

Sep-21

Mode / Service	Sep-21	Sep-20	Percent Increase/Decrease	YTD FY 2022	YTD FY 2021	Percent Increase/Decrease	Avg Daily Ridership per Month WeekDay	Saturday	Sunday
Local									
BOD Local	456,958	476,991	**-4.2 %**	1,425,981	1,448,717	**-1.6 %**	17,154	12,838	9,083
Subtotal	**456,958**	**476,991**	**-4.2 %**	**1,425,981**	**1,448,717**	**-1.6 %**	**17,154**	**12,838**	**9,083**
Local Express									
Harrisburg Road Express	702	384	**82.8 %**	1,622	1,000	**62.2 %**	33	-	-
Northcross Express	528	226	**133.6 %**	1,073	719	**49.2 %**	25	-	-
Idlewild Road Express	536	353	**51.8 %**	1,217	1,069	**13.8 %**	26	-	-
Independence Blvd Express	714	126	**466.7 %**	1,510	396	**281.3 %**	34	-	-
Lawyers Road Express	428	304	**40.8 %**	1,088	1,050	**3.6 %**	20	-	-
Northlake Express	471	195	**141.5 %**	1,183	697	**69.7 %**	22	-	-
North Mecklenburg Express	1,117	226	**394.2 %**	2,441	635	**284.4 %**	53	-	-
Huntersville Express	1,192	386	**208.8 %**	2,376	1,030	**130.7 %**	57	-	-
Rea Road Express	707	300	**135.7 %**	1,423	890	**59.9 %**	34	-	-
Huntersville Greenhouse Express	104	166	**-37.3 %**	325	464	**-30.0 %**	5	-	-
Subtotal	**6,499**	**2,666**	**143.8 %**	**14,258**	**7,950**	**79.3 %**	**309**	**-**	
Regional Express									
Gastonia Express	670	579	**15.7 %**	1,844	1,786	**3.2 %**	32	-	-
Rock Hill Express	406	232	**75.0 %**	1,002	706	**41.9 %**	19	-	-
Union County Express	435	268	**62.3 %**	956	802	**19.2 %**	21	-	-
Subtotal	**1,511**	**1,079**	**40.0 %**	**3,802**	**3,294**	**15.4 %**	**72**	**-**	
Community Circulator									
Neighborhood Shuttles	10,933	14,376	**-23.9 %**	37,821	44,620	**-15.2 %**	402	444	148
Eastland Neighborhood Shuttle	7,248	8,769	**-17.3 %**	22,526	26,826	**-16.0 %**	249	236	216
Pineville-Matthews Road	1,008	1,451	**-30.5 %**	3,932	4,286	**-8.3 %**	40	44	-
Village Rider	3,119	3,875	**-19.5 %**	10,136	11,687	**-13.3 %**	120	83	57
Subtotal	**22,308**	**28,471**	**-21.6 %**	**74,415**	**87,419**	**-14.9 %**	**811**	**807**	**421**
Human Services Transportation									
Special Transportation Services	14,418	11,494	**25.4 %**	42,700	33,519	**27.4 %**	611	239	124
DSS	3,143	792	**296.8 %**	6,566	946	**594.1 %**	138	58	2
Subtotal	**17,561**	**12,286**	**51.8 %**	**49,266**	**34,465**	**42.9 %**	**749**	**297**	**126**
Rideshare Services									
Vanpool	3,128	3,522	**-11.2 %**	9,112	10,866	**-16.1 %**	149	-	-
Subtotal	**3,128**	**3,522**	**-11.2 %**	**9,112**	**10,866**	**-16.1 %**	**149**	**-**	
Rail									
LYNX Blue Line	316,374	204,832	**54.5 %**	860,100	639,924	**34.4 %**	10,131	13,579	9,859

Metropolitan Transit Commission

Charlotte Area Transit System Ridership Report

Sep-21

Mode / Service	Sep-21	Sep-20	Percent Increase/Decrease	YTD FY 2022	YTD FY 2021	Percent Increase/Decrease	Avg Daily Ridership per Month WeekDay	Saturday	Sunday
CityLynx Gold Line	36,564	-	**n/a**	39,130	-	**n/a**	1,230	1,469	970
Subtotal	**352,938**	**204,832**	**72.3 %**	**899,230**	**639,924**	**40.5 %**	**11,361**	**15,048**	**10,829**
Total	**860,903**	**729,847**	**18.0%**	**2,476,064**	**2,232,635**	**10.9 %**	**30,605**	**28,990**	**20,459**

September | CATS Sales Tax Report FY2022

July Receipts

Sales Tax Collections and Distribution – July 2021

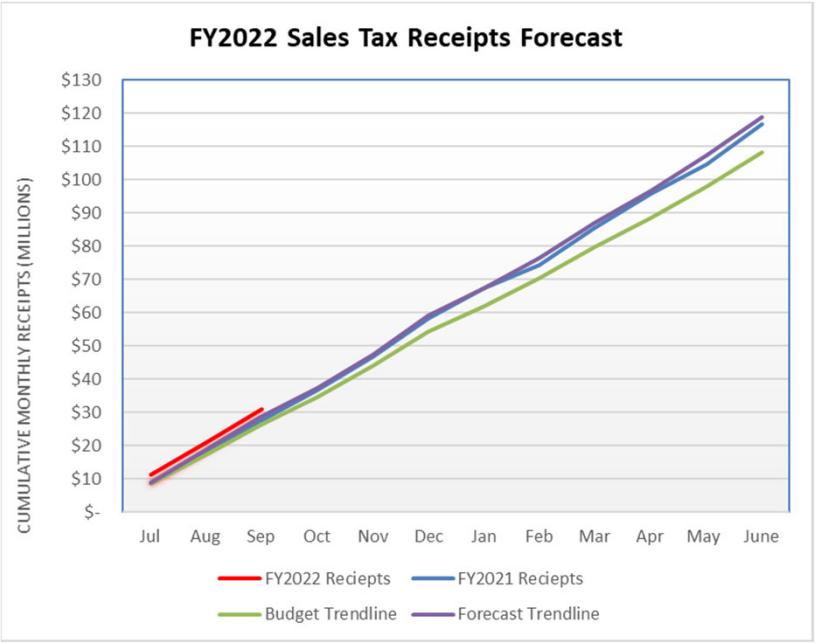
- The July 2021 receipts of $11,298,388 were $3,026,071 (36.6%) above budget target for the month
- The July 2021 receipts were $2,215,912 (24.4%) above forecast for the month.
- The July 2021 receipts were $2,376,914 (26.6%) above July of 2021

Sales Tax Budget Data

- FY2022 sales tax budget is $108,235,200
- The FY22 model forecasts year-end receipts of $120,304,467 which is $12,069,267 (11.15%) above the FY22 budget target of $108,235,200
- FY2021 actual sales tax was $116,669,192

Local Government Sales and Use Tax Distribution

- Source: North Carolina Department of Revenue Sales & Use Distribution Report for the month July 30th, 2021
- Published by NC Secretary of Revenue on 10/12/2021 with actual receipts through July 2021
- CATS sales tax report only includes Mecklenburg County Article 43 sales tax



FY2022 Budget Sales Tax Receipts (Actuals and Forecasts)

Jurisdiction		Population	% of Total	Jul 21 Actuals	Aug 21 Forecasts	Sep 21 Forecasts	Oct 21 Forecasts	Nov 21 Forecasts	Dec 21 Forecasts	Jan 22 Forecasts	Feb 22 Forecasts	Mar 22 Forecasts	April 22 Forecasts	May 22 Forecasts	Jun 22 Forecasts	Total
Charlotte	40.59%	863,985	40.4%	$ 4,585,539	$ 3,976,753	$ 4,032,710	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 12,595,002
Cornelius	1.46%	32,144	1.5%	164,887	142,997	145,009	-	-	-	-	-	-	-	-	-	452,893
Davidson	0.61%	13,261	0.6%	69,208	60,020	60,864	-	-	-	-	-	-	-	-	-	190,091
Huntersville	2.76%	62,528	2.9%	311,511	270,154	273,955	-	-	-	-	-	-	-	-	-	855,619
Matthews	1.51%	31,071	1.5%	170,086	147,505	149,581	-	-	-	-	-	-	-	-	-	467,173
Mint Hill	1.29%	27,692	1.3%	146,293	126,871	128,656	-	-	-	-	-	-	-	-	-	401,819
Pineville	0.43%	9,533	0.4%	48,882	42,392	42,989	-	-	-	-	-	-	-	-	-	134,263
Meck. County	51.35%	1,099,845	51.4%	5,801,983	5,031,699	5,102,501	-	-	-	-	-	-	-	-	-	15,936,183
Total	**100.00%**	**2,140,059**	**100.0%**	**$ 11,298,388**	**$ 9,798,390**	**$ 9,936,265**										**$ 31,033,043**

FY2022 Budget Sales Tax Comparison Year over Year

Year-over-Year Comparison *(FY22-FY21)*	16.7%	0.1%	14.6%												-71.1%
FY22 Budget Target	$ 8,479,780	$ 9,053,661	$ 9,001,133	$ 8,076,718	$ 9,319,809	$ 10,570,984	$ 7,547,377	$ 8,322,267	$ 9,596,200	$ 8,752,853	$ 9,128,597	$ 10,385,820	**$ 108,235,200**
% of FY22 Budget Achieved	10.7%	19.9%	29.3%												29.3%

YTD Budget	**$ 26,534,574**
Variance	**$ 4,498,469**

Prior Year Sales Tax Receipts: FY2018 – FY2021

Fiscal Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Total
FY2021	$ 8,921,474	$ 9,466,946	$ 9,245,058	$ 9,317,741	$ 9,964,913	$ 11,402,907	$ 9,134,772	$ 6,785,996	$ 11,253,531	$ 10,287,447	$ 8,942,957	$ 11,945,450	**$ 116,669,192**
FY2020	$ 9,683,570	$ 9,787,973	$ 8,671,558	$ 9,890,136	$ 9,858,570	$ 9,800,116	$ 8,278,036	$ 8,606,547	$ 8,735,473	$ 7,635,380	$ 6,997,727	$ 9,833,896	**$ 107,778,982**
FY2019	$ 7,708,503	$ 9,621,386	$ 9,103,726	$ 8,067,019	$ 9,425,129	$ 8,906,774	$ 8,195,787	$ 7,918,012	$ 10,155,891	$ 9,880,419	$ 9,435,500	$ 9,117,052	**$ 107,535,197**
FY2018	$ 8,147,197	$ 8,436,960	$ 8,784,051	$ 7,883,713	$ 8,884,437	$ 9,324,267	$ 6,897,695	$ 7,842,800	$ 9,303,951	$ 8,539,748	$ 9,277,676	$ 9,699,263	**$ 103,021,757**