

METRORapid University Corridor Project Virtual Public Meeting – July 25, 2022 Questions and Answers by Topic

**Note* Questions pulled directly from the virtual Q&A box during the meeting on 7/25/2022*

Bicycles

Q: Will the buses accommodate bicycles?

A: Yes, there is a bicycle-designated area inside the bus; similar to what is on the rail cars today.

Q: Will cyclists be able to bring their bikes on board?

A: Yes, there is a bicycle-designated area inside the bus; similar to what is on the rail cars today.

Q: As a follow-up to the previous question regarding bicycle usage—will bicycles be permitted on the BRT during the 8am and 5pm times? METRORail has regularly denied bicyclists from boarding trains on the METRORail Red Line (Medical Center), even during storms when occupancy was low.

A: Yes, there is a bicycle-designated area inside the bus; similar to what is on the rail carts today. It is expected that bikes will always be permitted when the METRORapid University line is in service.

Q: What will happen with the Harrisburg Hike & Bike Trail? Will the BRT cross over it?

A: The Harrisburg Hike & Bike Trail access will be maintained.

Q: How will you ensure that cyclists can travel safely along this corridor?

A: The METRORapid University service is being designed for universal accessibility for all users, whether you walk, ride or roll to the service. High comfort bike facilities are being planned for portions of the corridor in coordination with the City of Houston (COH) and the COH bike plan.

Business Impacts

Q: What assistance will be provided to the businesses which will lose easy access to their front doors along the corridors?

A: Access will be maintained, and appropriate signage will be in place for access points to businesses.

Q: How will businesses on Richmond survive?

A: We are asking for businesses to let us know of their concerns through these public engagement efforts. METRO wants to have a proactive role in speaking with business owners along the route so we can work with them moving forward.

Q: Where vehicular traffic is reduced to one lane - especially along lower Richmond - how can businesses survive and traffic congestion be avoided? Especially when one considers the frequency of stopped vehicles blocking what will be the only lane (utility vehicles, delivery vehicles, etc., etc.)?

A: We are asking for businesses to let us know of their concerns through these public engagement efforts. METRO wants to have a proactive role in speaking with business owners along the route so we can work with them moving forward.

Community Outreach

Q: Did you just say that you're moving forward? If yes, then why are you even asking for comments?

A: The Project is moving forward with the development of environmental studies and preparation of materials necessary to gain approval from the Federal Transit Administration to advance the project into the Engineering phase in September of 2023. Public engagement will be an on-going activity.

Q: What input will the neighborhoods have in the station design/graphics which the alignment extends through?

A: The METRORapid University Corridor project has an Arts-In-Transit program currently under development. As part of this program, we will have opportunities for communities along the corridor to have input into the station's art.

Q: Part 2 of my question? What more can you say about the opportunity for input and partnerships to make sure the enhancements can happen collaboratively?

A: METRO welcomes partnerships from both public and private entities. We will be reaching out for partnerships formally in late Fall 2022, after the current round of public meetings are complete, and the project team has refined the conceptual scope for the project.

Q: How do we get input on design of stops and stations?

A: The METRORapid University Corridor project has an Arts-In-Transit program currently under development. As part of this program, we will have opportunities for communities along the corridor to have input into the stations art. In addition, comments and input can always be made at our comment page at www.RideMETRO.org/University.

Q: Is this call going to walk through actionable next steps needed from community members?

A: The purpose of the METRORapid University Corridor virtual meeting was to inform the attendees of 1) what Bus Rapid Transit (BRT) is, 2) provide an overview of the 25-mile corridor, 3) provide concept level visualizations of the five segments and 4) concepts of a subset of stations and sections of each segment, 5) current station location, provide an overview of the National Environmental Policy Act (NEPA) process and 6) the timeline of the project. METRO is asking the community to please answer the survey found at www.RideMETRO.org/University. In addition, METRO would like Community Leaders to increase awareness of the proposed project in your community and direct them to the METRORapid University information and survey.

Q: When might there be another public meeting with more detailed route layout, details and illustrations?

A: This is anticipated to occur in the fall.

Q: You say you reached out to the community. How have you contacted the community to get their input?

A: Public Engagement process started in the summer of 2021. METRO conducted meetings with neighborhood, civic and community groups, management districts and Tax Increment Reinvestment Zones (TIRZs). METRO's public engagement representatives attend neighborhood meetings regularly, have contacts with neighborhood representatives and notify them of upcoming public engagement opportunities. A virtual open house has been available since December 2021 for the public to access and obtain information about the project. Two public meetings for each segment were held in July. Invitations were sent through mailers, newspaper advertisements, and notices were placed at Transit Centers.

Q: Is METRO amenable to doing a better job of constituent communication?

A: METRO is always open to suggestions for improving communication with constituents.

Q: When does the survey close online?

A: Online survey does not have a closing date at this time.

Q: Will you be responding publicly in writing to all anonymous questions?

A: Responses to all questions will be made available on the project website the week of August 8th.

Q: Where and when can we read the answers to questions that will be answered in writing? On a website? Or also personally via email? And again, when?

A: Responses to the questions from the virtual meeting will be made available on the project website after August 8th.

Q: Will a complete compilation of all questions and answers, from all sessions, be available? Where and when?

A: Responses to the questions from the virtual meeting will be made available on the project website after August 8th.

Construction

Q: What infrastructure upgrades can be typically expected along the corridors? Will these be left up to the City or the TIRZs impacted by the BRT?

A: METRO will be performing work that is necessary for this METRORapid project. At a high level, this project will involve placing new pavement, sidewalks, relocation of utilities, storm sewer that meets current City of Houston standards, and traffic and street lighting as required by current METRO and City of Houston standards.

Q: Will the roads that the buses travel on be constructed properly to provide a smooth, long lasting surface? Or will these roads be constructed as typical Houston roads are - with poor base strength and very short life?

A: The METRORapid pavement will be designed for 20-year design life.

Q: How will the drainage impacts be addressed by the increased impervious area from the BRT stations, etc.? Some sections of the alignment are prone to flood such as Lockwood near LBJ Hospital.

A: Drainage design will follow Houston Public Works Infrastructure Design Manual which includes mitigation for site improvement that alters the area of impervious surface through increasing detention in underground pipes.

Q: Have there been additional thoughts on the type of project delivery, Design-Build vs Design-Bid-Build?

A: METRO is reviewing the responses received to a construction Request for Information (RFI). Following the review, and the refinement of the concept scope, METRO will determine the appropriate delivery method. Any method we use will provide for subcontracting opportunities due to the size of the project and the number of trades involved.

Q: How will the construction be contracted? For the recent light rails, it was done via design build. Will that be the same approach or will it be done via multiple construction contract opportunities?

A: METRO is reviewing the responses received to a construction Request for Information (RFI). Following the review, and the refinement of the concept scope, METRO will determine the appropriate delivery method. Any method we use will provide for subcontracting opportunities due to the size of the project and the number of trades involved.

Cost

Q: What is the estimated cost of the project and what percentage is being requested from federal funding?

A: The METRORapid University Corridor project initial estimate at this early stage of the project is in the range of \$1.5-\$1.7B. The cost will be refined and adjusted as we continue concept development over the next 9 months. METRO has indicated to the Federal Transit Administration (FTA) that we will be requesting a minimum of 60% federal match under the Capital Investment Grants (CIG).

Q: Costs and budget were missing from the presentation. Please talk about any differences at this point between the budgets presented in 2019 and what project costs are estimated to be today.

A: The METRORapid University Corridor project initial estimate at this early stage of the project is in the range of \$1.5-\$1.7B. The cost will be refined and adjusted as we continue design and development. METRO has indicated to the Federal Transit Administration (FTA) that we will be requesting a minimum of 60% federal match under the Capital Investment Grants (CIG). Project costs have increased since 2019. We are continuing to monitor the market conditions as we refine our concepts and associated cost estimates.

Drawings

Q: Are these 3D renditions to scale?

A: No, these are visualizations based on the initial concept.

Economic Impacts

Q: Definition of the geography and/or boundaries of economic impact studies.

A: The National Environmental Policy Act (NEPA) requires agencies to study the potential environmental and related social and economic of a proposed infrastructure project, both positive and negative.

Q: Will you do an economic impact study of how the route 4 overpass could affect residential housing prices?

A: The National Environmental Policy Act (NEPA) requires agencies to study the potential environmental and related social and economic of a proposed infrastructure project, both positive and negative. The positive and negative impacts related to overpasses throughout the corridor will be considered during the environmental review process.

Q: Is METRO considering any value capture programs around this corridor that would help finance this or future projects?

A: METRO is developing a broader Transit Oriented Development/Joint Development (TOD/JD) policy with the Board and issuing a Request for Information (RFI) to the industry to seek feedback and gauge interest in such value capture along this corridor and at other transit properties we own.

Q: Have you studied the impacts of the project on property values? If so, how are the impact studies defined?

A: The National Environmental Policy Act (NEPA) requires agencies to study the potential environmental and related social and economic of a proposed infrastructure project, both positive and negative.

Environmental Impacts

Q: Will air quality measurements & noise measurement conditions along the routes under construction be made available for public inspection during the entire project? Can this be posted on your website real-time or near real-time?

A: The National Environmental Policy Act (NEPA) requires agencies to study the potential environmental and related social and economic of a proposed infrastructure project, both positive and negative. Air quality and noise studies will be developed as part of the NEPA analysis. The outcome of these studies will determine what needs to be done in later project phases.

Q: On Lockwood if they build a bridge what can they do with the quality of air being released from the Cement, and Metal company to keep riders safe while using the rail?

A: The National Environmental Policy Act (NEPA) process looks at all those factors and identifies mitigation strategies if it is determined that there will be an impact from the project. Fabrication of steel and concrete girders are typically done off-site, and we do not see any impact from the fabrication process affecting the residents.

Q: How much noise will the buses generate when fully operable especially where private residences are located along the route? What noise mitigations will be in place?

A: METRO is moving towards procurement of low emission to zero emission vehicles by 2030. The vehicles that will be procured for this project are expected to be low to zero emission buses that have a very low noise profile. As part of the National Environmental Policy Act (NEPA) process, we will be conducting noise analysis along the corridor; results will be shared with the appropriate stakeholders.

Q: How exactly is running a Petro carbon-based bus an environmental plus? And by backing up traffic on roads, that adds to carbon footprint by idled engines. Also, several of these routes have undergone roadwork and other beautification efforts on esplanades. The animations suggest destruction of those efforts and rebuilding on those locations with these lanes. Isn't that wasteful?

A: METRO is moving towards procurement of low emission to zero emission vehicles by 2030. As we refine the concept design, we will look for opportunities to preserve any newly installed infrastructure along the corridor and try to repurpose it to the maximum extent practical.

Q: Will the buses be transmitting a lot of heat? If so, what plans will be put in place to help with the heat that is already so present in the summer?

A: Station design will be aimed at optimizing rider comfort, including awnings for shading. Trees for shading along the corridor will be considered where space is available on the esplanade/curb.

Q: Walking to a bus stop in the summer can be a little warm. Are there yet plans in place for trees or shade structures at or near the bus stops along this line?

A: We are identifying opportunities to be able to plant trees in the right-of-way buffers. METRO will be working with the City of Houston to identify these areas.

Q: What are the timelines for NEPA development? Specifically, the identification of environmental impacts and public input/comment on those?

A: The National Environmental Policy Act (NEPA) process is currently ongoing, which includes the public meetings held recently. We anticipate submitting a Documented Categorical Exclusion to the Federal Transit Administration (FTA) in May 2023.

Q: Regarding sustaining the current median trees throughout the project, what is the projected impact from emissions of greenhouse gasses especially with the loss of mature trees?

A: METRO has conducted a tree assessment for all the trees in the right-of-way. METRO's intent is to save as many trees as possible during the design process. METRO will develop a tree mitigation plan for any tree removals to be replaced along the corridor and in the vicinity of the project limits.

Q: What about the trees along Lockwood? Will they be removed? Will there be an overpass? We already have a dangerous situation with stalled trains and the light-rails.

A: METRO has conducted a tree assessment for all the trees in the right of way. METRO's intent is to save as many trees as possible during the design process. METRO will develop a tree mitigation plan for any tree removals to be replaced along the corridor and in the vicinity of the project limits. METRO is currently carrying an overpass for METRORapid lanes as it crosses the light rail line. METRO would like to grade separate general-purpose lanes also, but the decision to do so will require public input, project economics (since this is a competitive grant), and financial participation from other agencies.

Fleet

Q: How does this bus lane solution differ from light rail?

A: METRORapid benefits over METRORail are:

- a. Vehicles cost less to purchase and maintain, while providing equivalent passenger comfort
- b. Vehicles require less horizontal and vertical infrastructure, reducing overall project costs
- c. We can bring more METRORapid to the region for the same budget

Q: Will this be more or less reliable than the light rail or traditional buses in inclement weather?

A: Station design will be aimed at optimizing rider comfort. Including awnings for shading and inclement weather. METRORapid will be more efficient than local bus service because there are less stops and as reliable as METRORail because it will have signal priority. METRORapid buses also have a higher clearance from ground, making them more resilient in inclement weather conditions.

Q: What are the advantages of the rapid bus as opposed to another METRORail line?

A: METRORapid benefits over METRORail are:

- a. Vehicles cost less to purchase and maintain, while providing equivalent passenger comfort
- b. Vehicles require less horizontal and vertical infrastructure, reducing overall project costs
- c. We can bring more METRORapid to the region for the same budget

Q: Why are we going with BRT instead of Light Rail?

A: Bus Rapid Transit (BRT) was chosen due to the flexibility of the mode and for the estimated level of ridership. The proposed METRORapid would function like light rail in terms of frequency, capacity, speed, comfort, stations, level boarding, multiple doors to board and exit, and off-board fare payment.

Q: What is the maximum capacity of each METRORapid bus?

A: Maximum capacity of a METRORapid vehicle is estimated at 126.

Q: Buses are often nearly completely empty. Perhaps some segments are crowded. Would it make sense to have much smaller buses for the routes that are not crowded?

A: Current operations is being reviewed to ensure operation optimization

Q: How are these busses fueled? Are they or will they be in the future electric?

A: METRO is moving toward procurement of low to zero emission fleet by 2030. It is expected that there will be a mixed fleet with low-no emission buses such as electric fuel cell and CNG (Compressed Natural Gas) buses.

Q: Are these busses going to be electric and if so how will they function with such a long route?

A: METRO is moving toward procurement of low to zero emission fleet by 2030. It is expected that there will be a mixed fleet with low-no emission buses such as electric fuel cell and CNG (Compressed Natural Gas) buses.

Q: do you have an estimated wait time for buses on the line?

A: The estimated service plan at this early phase of the project is 6 minutes during peak hours; similar to the METRORail Redline. So, a range of 6 to 12 minutes is anticipated. The service plan will be refined as the project advances.

Lessons Learned

Q: What key lessons learned from the Silver Line Project (Post Oak) and operation are being applied to the University Corridor Project?

A: A number of lessons learned from design development, construction, and startup have been assembled and reviewed with the project staff.

Q: What is your current ridership of the Galleria area rapid bus?

A: Silverline ridership is in the range of 20,000 per month and has just exceeded 500,000 boardings since inception.

Q: what statistics exist on BRT? Is it successful?

A: Bus Rapid Transit (BRT) is successful in different cities throughout North America and the world.

Neighborhood Connection

Q: I am particularly interested in how the stations interact with the neighborhoods. I like the improved connectivity and how this will improve transportation, but it is important to create opportunities for the stations to be seen as amenities within neighborhoods. Not just safe sidewalks AT the platforms, but safe sidewalks and safe bike access FROM the neighborhoods, as well as beautification efforts that include trees, landscaping, and public art.

A: In this next phase as the METRORapid University Project moves from concept to design, and station location is finalized, METRO is looking specifically at pedestrian and cyclist access to each of the stations. The proposed connections will be shared as part of future engagement opportunities with the public.

Property Taking

Q: What are the eminent domain implications? Why are we only limited to 3 options on the survey?

A: METRO's intent is to minimize private property impacts and acquisition by optimizing the use of the existing public right-of-way. However, METRO does expect impacts at certain intersections and corners, and mid-block, to accommodate all modes and meet American Disabilities Act (ADA) accessibility. Our concept design is currently going through an iterative process while a field survey is underway to assist in finalizing these options.

Q: In which segments do you anticipate the need for private property acquisition?

A: METRO's intent is to minimize private property impacts and acquisition by optimizing the use of the existing public right-of-way. However, METRO does expect impacts at certain intersections and corners, and mid-block, to accommodate all modes and meet American Disabilities Act (ADA) accessibility. Our concept design is currently going through an iterative process while a field survey is underway to assist in finalizing these options. If property is required, the property acquisition process will follow the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act and applicable state laws.

Q: What right of way acquisition will be necessary to do this plan?

A: METRO's intent is to minimize private property impacts and acquisition by optimizing the use of the existing public right-of-way. However, METRO will need right-of-way at some locations (primarily at signalized intersections with proposed stations along the full Project). If property is required, the property acquisition process will follow the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act and applicable state laws.

Q: Will you need to exercise eminent domain to complete these projects?

A: METRO's intent is to minimize private property impacts and acquisition by optimizing the use of the existing public right-of-way. However, METRO will need right-of-way at some locations (primarily at signalized intersections with proposed stations along the full Project). If property is required, the property acquisition process will follow the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act and applicable state laws.

Q: Do you recognize that strip acquisition destroys people's property?

A: If property is required, the property acquisition process will follow the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act and applicable state laws.

Q: If you have not considered right of way (ROW) acquisition or traffic impacts that you can share with the public when will you provide this information as concepts do not give us any information related to real impacts for adjacent businesses or motorists who travel Richmond, Lockwood, and other streets along the route?

A: Traffic studies and design work that will identify future right-of-way needs are ongoing. METRO will share details on these topics and more during future public outreach opportunities as details become available. If property is required, the property acquisition process will follow the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act and applicable state laws.

Q: at Wheeler and Alameda Rd the segment of the road between 288 and Alameda is very narrow, basically one lane. How will the segment between 288 and Alameda Rd on Wheeler be handled to accommodate the line? Will sidewalks be widened? Will private property be used to accommodate the line in that segment?

A: The public right-of-way in this area is approximately 65 feet wide. This means that two METRORapid lanes (12' each) and two general traffic lanes 11 feet each totaling to 46 feet wide allowing about 9 feet for sidewalks and setbacks on each side of the road. There may be some need for right-of-way acquisition at signalized intersection. Analysis of potential right-of-way needs is ongoing. Information will be shared with the public during future outreach opportunities.

Q: How will this project effect homes running along Ennis & wheeler?

A: METRO's intent is to minimize private property impacts and acquisition by optimizing the use of the existing public right-of-way. However, METRO will need right-of-way at some locations (primarily at signalized intersections with proposed stations along the full Project).

Ridership

Q: In regards to the University Corridor project, segment 4 at Lockwood and Harrisburg: 1) Has METRO evaluated the low ridership on the existing METRORail line at that intersection?

A: METRO is conducting ridership analysis on the proposed University Corridor and how it connects to the existing transit network. The ridership on various bus routes and rail service has fluctuated over the past two years, but the connection of METRORail and METRORapid lines will help the system be most effective.

Q: What is the anticipated ridership for this project in terms of passengers per day?

A: METRO is analyzing ridership as part of the Project Development effort underway. We will share more information as it becomes available.

Route + Station Design

Q: Has METRO considered placing the line along a street where commercial businesses are located? Wouldn't this better connect communities requiring transportation to these businesses?

A: This route is proposed to run through a variety of neighborhoods across Houston. Not only will it serve neighborhoods and businesses along the line, but it will serve to connect riders to intersecting routes and services.

Q: Are future connections to the airports planned as part of the overall plan? If not, why not?

A: The METRONext plan is a long range 20-year plan and implementation of specific projects within this timeframe will be based on public input and funding availability.

Q: Does the University Line go to Hobby airport?

A: As part of the Moving Forward Plan, METRO is proposing two light rail options to Hobby Airport: extensions of the Green Line and Purple Line, providing a one seat ride from Downtown. The University line will not directly connect to Hobby Airport but will allow transfers to the Green and Purple Lines that will ultimately be extended to Hobby Airport as part of the implementation of the METRONext Plan.

Q: Why has METRO delayed looking at rail links to IAH and Hobby? That is highly desired by many citizens, should have been done years ago, and will ultimately increase support for METRO.

A: As part of the Moving Forward Plan, METRO is proposing two METRORail options to Hobby Airport: extensions of the Green Line and Purple Line, providing a one seat ride from Downtown. METRO is also proposing METRORapid service to IAH that will utilize space within IH 45. The METRONext plan is a long range 20-year plan and implementation of specific projects within this timeframe will be based on public input and funding availability.

Q: What is the status of METRO considering alternative routes that would better serve the local community?

A: METRO is evaluating alternatives that serve passengers and connect destinations the most effectively. METRO is willing to examine specific concerns you wish to address.

Q: Where the line intersects with the Light Rail & Silver Line, will it share a station with these services, or will there be a notable walk between them like there currently is at Central Station along the light rail?

A: Station location and design is still being finalized but the goal is that any connecting service is to have small transfer times.

Q: Will you ever connect to 1960/Woodlands, Cypress/Spring?

A: METRO currently operates multiple local bus and Regional Express routes along the IH 45 North corridor to FM 1960 and the Spring area. The Woodlands is outside METRO's service area but has its own commuter bus service. The METRONext Transit plan includes increased regional express and METRORapid service using the proposed two-way Managed/Express lanes TxDOT is designing in the IH 45 North corridor. The plan also includes METRORapid connecting to Bush Intercontinental Airport. METRO also has commuter routes along the US 290 corridor to a future Fairfield Park and Ride.

Q: West of Edloe how many traffic lanes will be closed on Richmond during construction? both directions?

A: Construction sequencing has not been determined at this time.

Q: Is there a potential for the corridors to change? i.e. segment 5 originally was routed down Emancipation to Wheeler now it shows Blodgett as being one of the main thoroughfares.

A: METRO continues to evaluate input from the public and stakeholders such as the City of Houston and may adjust the alignment to mitigate potential negative environmental impacts.

Q: Why not have this rapid transit on Scott street instead of Lockwood since it's already an industrial/business area?

A: Other METRONext Project is already underway on Scott. Route 54-Scott is part of the BOOST program which is looking at Bus Service Optimization which is to enhance existing service.

Q: Will the proposed BRT alignments impact TxDOT's proposed realignment of IH-45/IH-69, or cause further delay in the freeway improvements?

A: We are coordinating with TxDOT to minimize impacts at the Wheeler Transit Center (TC) from the proposed IH-45/IH-69 realignment.

Q: Are any alternatives to overpasses being considered in Segment 4?

A: METRO will consider looking at alternatives after we assess the public input we receive from the public. The overpasses proposed in Segment 4 of the METRORapid University Corridor are primarily at existing freight rail crossings, two of which are parts of large rail yards with multiple tracks. METRORapid is envisioned to operate much like the existing METRORail lines, which cannot cross freight rail at-grade. METRO is proposing to elevate the METRORapid line over the freight rail, as well as the METRORail Green Line on Harrisburg for two primary reasons: safety and efficiency. Grade-separating METRORapid from the existing rail lines prevents the potential for accidents between high-capacity transit services and freight trains. It also prevents the METRORapid service from getting caught at rail crossings, which cause delay and disrupt service.

Q: Are any alternative routes being considered for the Lockwood overpass portion through Eastwood? Such as Scott? As you have heard from many residents already, our community feels strongly that this overpass will be catastrophic to our neighborhood and our residents.

A: METRO will consider looking at alternatives after we assess the public input we receive from the public. The overpasses proposed in Segment 4 of the METRORapid University Corridor are primarily at existing freight rail crossings, two of which are parts of large rail yards with multiple tracks. METRORapid is envisioned to operate much like the existing METRORail lines, which cannot cross freight rail at-grade. METRO is proposing to elevate the METRORapid line over the freight rail, as well as the METRORail Green Line on Harrisburg for two primary reasons: safety and efficiency. Grade-separating METRORapid from the existing rail lines prevents the potential for accidents between high-capacity transit services and freight trains. It also prevents the METRORapid service from getting caught at rail crossings, which cause delay and disrupt service.

Q: Is the overpass of the rail road on Lockwood only for the METRO Next buses - this is on route 4

A: The overpasses proposed in Segments 4 and 5 of the METRORapid University Corridor are at existing freight rail crossings, two of which are parts of large rail yards with multiple tracks. METRORapid University is envisioned to operate much like the existing METRORail lines, which cannot cross freight rail at-grade. METRO is proposing to elevate the METRORapid line over the freight rail and METRORail Green Line on Harrisburg, and over the freight rail at Clinton and Bennington for two primary reasons: safety and efficiency.

Q: If an overpass is necessary on Lockwood, why not look at another route? Scott street?

A: The overpasses proposed in Segments 4 and 5 of the METRORapid University Corridor are at existing freight rail crossings, two of which are parts of large rail yards with multiple tracks. METRORapid University is envisioned to operate much like the existing METRORail lines, which cannot cross freight rail at-grade. METRO is proposing to elevate the METRORapid line over the freight rail and METRORail Green Line on Harrisburg, and over the freight rail at Clinton and Bennington for two primary reasons: safety and efficiency.

Q: So the Richmond portion will be one lane only each way for all other vehicles, including trucks?

A: Yes

Q: How will the traffic be rerouted off Richmond, where the road is being reduced to 1 lane in each direction to accommodate the BRT?

A: The METRORapid University Line is proposed to operate along Richmond Avenue from Edloe Street to the Wheeler Transit Center at Main Street. This portion of Richmond Avenue will still be open to vehicle traffic. Through traffic may take adjacent routes.

Q: Why don't you consider an elevated section where you don't need to reduce lanes on streets that are already congested with 20,000-30,000 vpd? There is no way one lane can accommodate this volume of traffic.

A: The University METRORapid is planned to be at-grade throughout the majority of the corridor. Having an at-grade service, rather than elevated, facilitates enhanced access for all types of users, whether they will be walking, biking or rolling to use University METRORapid. Currently, METRO is evaluating traffic impacts in coordination with the City of Houston. Further information will be shared at future public engagement opportunities.

Q: Does METRO have approval from the City of Houston to eliminate a lane along lower Richmond Avenue?

A: Currently, METRO is evaluating traffic impacts in coordination with the City of Houston.

Q: Has the use of the existing US 59/69 center lanes been seriously studied as an alternative to lower Richmond Ave?

A: This route was designed to run through a variety of neighborhoods across Houston and will provide universally accessible service to multiple residential, business and education centers. Not only will it serve neighborhoods and businesses along the line, but it will serve to connect riders to intersecting routes and services. There will be numerous connections to other transit modes, such as METRORail and local bus, other transit centers and Park and Rides, as well as major activity centers such as universities and employment centers. Designing the route to run along a freeway would miss many of these types of important connections.

Q: How many stations will there be in the lower Richmond segment? It appears there will be only three at most - replacing many existing stops, thus making it much less convenient for those who must walk long distances to the stop.

A: As the project is still in design, station locations are still being identified. Station spacing was designed to optimize the University METRORapid service and make it rapid and reliable. However, enhancements to sidewalks, bike paths, and intersections will be constructed as a part of the project to create good access to stations from surrounding neighborhoods for those walking, riding or rolling.

Q: How will the 25 Bus route on Richmond be adjusted to interface with the University Line?

A: METRO is still working on the current service integration to guarantee optimal service for both routes

Q: Are any alternatives to removing the treed esplanade in segments 4 and 5 being considered?

A: At this time in the design, METRO has not determined specific locations where trees might need to be removed. However, a tree assessment has been completed of all the trees along the corridor. A tree mitigation plan, as required by City Ordinance, will be developed for this project.

Q: Was the route alignment for Segment 3 near TSU and UH shown in this presentation the most up to date alignment? I have seen other alignments in this portion of the route.

A: The route shown for Segment 3 during the recent public meetings is the current planned alignment. The alignment was changed from the Representative Alignment shown in late 2021 based on feedback from segment stakeholders and in coordination with the City of Houston.

Q: Why are you (yet again!) letting some residents and businesses on Richmond west of Edloe drive the alignment of this line??? It makes no sense whatsoever to have to switch over to Westpark at Edloe since that takes it further away from the Uptown area, and thus further away from potential riders! Very few people are going to get on and off anywhere along Westpark.

A: METRO owns the property along Westpark, which is the alignment for Segment 1, reducing projects costs, while providing access points to riders.

Q: The Newcastle/Westpark intersection is currently 5 lanes wide. Based on the animation, You have 5 lanes of traffic, a turn lane the station itself.... the equivalent of 8 lanes wide. Oh, and you've eliminated the bike lanes. How exactly do you plan on widening that chokepoint? /// Also, the east side of Westpark and I-610 is a frequent accident side with many left turners not stopping, won't this make that intersection worse?

A: The Project plans to maintain the existing number of lanes (2 lanes in each direction plus turn lanes at signalized intersections) by widening to the south.

Q: When will concepts for the intersection of this line with the Main St Red Line at Wheeler Station be available to the public?

A: The current plan for this intersection has the METRORapid University Project crossing the METRORail Red Line at grade through the intersection. However, conversations with stakeholders and coordination with TxDOT on the Wheeler Transit Center and station design continue and will be shared with the public at future engagement opportunities.

Q: How is the majority target client base being identified, along with their desired loading points and their destinations?

A: Connections to other transit modes (METRORail, METRORapid, Local buses, facilities (Transit Centers and Park and Rides) and activity centers such as universities, employment centers and areas with high density

Q: Why METRO doesn't invest in security/ officers and Cameras on the platforms??

A: All stations will have lighting and Closed-Circuit Television (CCTV) cameras that are monitored by personnel at the Operations Control Center.

Q: How does METRO plan to prevent drivers from using the BRT lines?

A: Safety measures will be put into place including proper signage, striping, raised curbs, and barriers.

Q: Riders getting off at the stations have to walk to a major intersection and cross in front of traffic. As a walker it is very dangerous to cross at a light with traffic turning right left and many make U-turns. How can you make this safer?

A: Locating platforms in the center is safer for pedestrians than locating stations on the outside of the street. Passengers only need to cross one or two lanes of traffic moving in the same direction at a time. Additionally, the platforms are designed with a pedestrian refuge island so people crossing the street can cross half of the street at a time. This is safer for the elderly or other citizens with mobility challenges.

Safety

Q: Will this new METRO service provide safety for the public? What safety measures will be put in place?

A: All stations will have lighting and Closed-Circuit Television (CCTV) cameras. There are multitude of safety features to be included at each station such as:

- a. There will be accessible sidewalks and (American Disabilities Act) ADA ramps along the entire corridor.
- b. METRO is working with the City of Houston (COH) to identify safe bike and pedestrian crossings and treatments for the crossings along the corridor
- c. METRO is also looking at High Injury Network to see what roadway modifications could improve safety

Q: How will we be able to have officers on all platforms with this new line, We have crime already on our line with very little to no officer presence.

A: As we expand services, we will also be expanding police presence on new lines. METRO will develop a plan to provide coverage on the new line. We will share details of with the public in future meetings.

Q: METRO does not provide enough security on the Altic Platform or the Harrisburg Rail line. So how is METRO going to deliver safety on the East End?

A: As we expand services, we will also be expanding police presence on new lines. METRO will develop a plan to provide coverage on the new line. We will share details of with the public in future meetings.

Q: What will be done to protect the elderly and disabled riders from being preyed upon by criminals who may ride this service?

A: As we expand services, we will also be expanding police presence on new lines. METRO will develop a plan to provide coverage on the new line. We will share details of with the public in future meetings.

Q: Why METRO doesn't invest in security/ officers and Cameras on the platforms??

A: There are cameras installed on all METRO buses.

Q: What about METRO police? Will there be more presence of officers?

A: METRO will develop a plan to provide coverage on the new line. We will share details of with the public in future meetings.

Segments

Q: Will survey results, other than this mass communication session, be categorized by segment? This can be helpful when we speak within our community during future sessions.

A: Yes, we held the in-person events by segment and collected feedback from attendees by segment. The online survey is asking participants their zip code to help determine segment.

Q: Will the University Corridor Project be completed by segment and opened accordingly or must it be completed in its entirety before opening?

A: METRO intends to open the entire line and not in segments.

Q: Will the construction of the various segments proceed all at the same time? Or, will the construction be staggered and if so, in what order?

A: It is early to know exactly, but it is expected that construction will occur all along the corridor starting with utility relocations and followed by construction of streetscape elements and stations.

Sidewalks

Q: are sidewalks and draining ditches on side streets going to be updated ex: Lockwood/brady. or will updates only going to be made to Lockwood

A: The project alignment and planned improvements are on Lockwood. However, as we progress further on the design, there may be a need to improve some side streets to tie-in to the improvements on Lockwood.

Q: When it rains, how will we ensure riders don't get splashed by the buses while waiting? Will adjacent sidewalks be built to improve the pedestrian experience?

A: METRO's design approach includes sloping the pavement, so water drains away from the METRORapid stations. The stations are also "center" stations, located 14" above the roadway, located in the middle of the road. The gutters that collect storm runoff are on the outside edge of the road. This will greatly reduce the likelihood of getting splashed while waiting for the METRORapid bus.

Technology

Q: Will crossing signing be designed to accommodate senior citizens who may need more time to cross to access the transit/bus stops. Current signal time appears to only last 30 seconds.

A: METRO is working with the City of Houston on traffic signal timing, which will also include safe pedestrian crossings to the University METRORapid service. The corridor and access to this service is intended to accommodate users of all abilities, but if there are areas of particular concern, please communicate that to METRO through METRO's public comment system <https://crm.rideMETRO.org/>

Q: Will the BRT have pre-emptive at the signalized intersections?

A: The bus has equipment that communicates with the traffic signal. The bus will "call" to hold the light green a little longer for the bus for example. The transit signal priority time for each signal will be coordinated with the City of Houston (COH) and take into account all of the existing traffic. It is more of a priority rather than preemption.

Q: Will this line have traffic priority at intersections? The current Silver Line was promoted with traffic priority but currently it doesn't seem to be the case and as a result it is much slower

A: Yes, the system will have priority at most intersections. The transit signal priority time for each signal will be coordinated with the City of Houston. We are working on improving the traffic signal priority along the METRORapid Silver Line route.

Third Party Coordination

Q: If stalled trains are the concern, why not work with Union Pacific as opposed to negatively impacting residents?

A: Coordination with Union Pacific Railroad (UPRR) is constant and continuous, but our project team is taking measures to improve safety and reliability by grade separating over UPRR.

Travel Time

Q: What is the estimated duration of this line from end to end?

A: We are still modeling the alignment run time but at this time the end to end run time is in the range of 70-75 minutes. This is an early estimate time, and it will continue to be refined. A key point to note is the line is not designed to move riders from Westchase to Tidwell. The line is designed to move riders to many destinations along the corridor and it connects to multiple local bus routes, the three METRORail lines and the existing METRORapid Silver Line.

Transit Oriented Development

Q: How is METRO thinking about TOD opportunities associated with the line including affordable housing?

A: METRO is developing a broader Transit Oriented Development/Joint Development (TOD/JD) policy with the Board. Equitable housing will be one of the goals we are considering.

Q: In the context of TOD and Community Mobility Centers, have you considered the development and implementation of Value Capture Policy(s) to support community development?

A: METRO is developing a broader Transit Oriented Development/Joint Development (TOD/JD) policy with the Board. Equitable housing will be one of the goals we are considering.

Traffic

Q: The animations include elevated segments to pass over rail and other roads... when METRORail was proposed initially, raised tracks were planned for various chokepoints to avoid illegal left turners from bashing into trains. When funding gets tight, will these be the first features to be eliminated, causing further chokepoints, conflicts, and accidents.

A: The majority of the proposed route will be at-grade; however, several overpasses are being proposed over rail or water and we expect these configurations to remain unchanged.

Q: What traffic studies have been done to show the impact of changing lane configurations from two thru lanes and one left turn lane to only one lane to accomplish all of those three lane movements?

A: Traffic studies are ongoing. The current plan for lane configuration would reallocate one traffic lane to the METRORapid Project. If there are currently 2 traffic lanes and a left turn lane at a signalized intersection now, there would be one lane and the left turn lane for traffic and one lane for METRORapid service.

Q: What is the consideration for increased car traffic on several of these segments that are going from 2 lanes each direction to now 1 lane in each direction - i.e. the segment shown between Shepherd and Montrose? This section has fairly heavy car traffic and congestion now, especially at peak commuting times - seems like reducing to one lane would make this considerably worse.

A: Traffic studies are ongoing. The current plan for lane configuration would reallocate one traffic lane to the METRORapid University Project. METRO is working with the City of Houston to increase person throughput on existing roads, advance Vision Zero safety initiatives and create a better pedestrian environment. Current analyses shows that more people can be moved in one lane on METRORapid than could be if the lane were used for general traffic. Additionally, lane reduction or road diets have been shown to improve safety for all users of the public right of way.

Q: How does METRO explain the negative traffic impact on Ennis? Why is Blackshear ES not depicted on the 3D street view animation?

A: METRO is analyzing the traffic impact on Ennis Street. We will share the analysis with the public in subsequent meetings. Currently, we do not anticipate any impact to the right of way at Blackshear elementary.

Q: has anyone studied how much vehicle traffic will be impeded on the Richmond segment by virtue of one lane only in each direction?

A: Traffic studies are being completed to assess the proposed configuration. These traffic studies will be reviewed and discussed with the City of Houston for concurrence.

Q: Consuming 2 lanes on Westpark, Edloe, and Richmond at the I-69 crossover seems like a traffic disaster. Does traffic measurement and analysis support such a reduction in lanes? Seems that you'll need a miracle for that to work, thank goodness Lakewood is right next door to pray for one.

A: Traffic studies are being completed to assess the proposed configuration. These traffic studies are being reviewed and discussed with the City of Houston for concurrence. The Project will not reduce lanes on Westpark Drive.

Q: In Section 4, you have shown a grade-separated crossing going over Harrisburg and the nearby railroad. However this ONLY serves the Bus. With this area being a massive chokepoint for traffic how can normal traffic piggyback on this G-S Xing?

A: METRO is seeking a competitive grant for the project. Grade separations being considered are only for METRORapid lanes; we would need partnerships with local agencies to add general purpose lanes into the grade separation.

Q: Will there be a "level of service" traffic impact analysis of intersections on the alignment and associated key intersections in the impacted roadway network?

A: Traffic studies are being completed to assess the proposed configuration. These traffic studies will be reviewed and discussed with the City of Houston for concurrence. Traffic studies will include a level of service analysis.

Other

Q: Traffic lights are timed to minimize METRO train delays. Often the lights block automobile traffic well in advance of the train arrival and well after the train has passed. Can the lights be timed better to minimize automobile traffic delays?

A: We are constantly looking for ways to increase efficiency without negatively affecting safety. We are coordinating with the City of Houston to improve current METRORail operations.