Subject

Summary of Better Bus Project Network Concepts for Miami Beach

Better Bus Project

A bus system redesign is a collaborative planning effort to decide where today's bus service should go (and how frequently), starting from a clean slate. The biggest outcome of the project will be a new bus network that's more useful for more people – concentrating frequent service, building better connections, and creating a stronger network.

The Better Bus Project is being led by Transit Alliance Miami in partnership with Miami-Dade County. It is the first advocacy-led and community-driven bus system redesign in the country. The project includes the County bus system and trolley systems in the City of Miami, Miami Beach and Coral Gables.

The City of Miami Beach is a funder and supporter of the project, as adopted by the City Commission in Resolution 2019-30756.

Context

The County bus system has lost over 25 million boardings in the past five years, one of the steepest declines in ridership in the country. The growth in municipal trolley ridership only accounts for 15% of the decline[1]. When considering transit ridership, one must consider the entire system as a whole. The system is still experiencing a net loss of riders despite gains in some municipal systems.

The County currently only operates five frequent bus routes, defined as a bus arriving every 15 minutes throughout the day. Several routes are extremely circuitous, while both County and Municipal services duplicate each other.

The project is cost-neutral, and assumes the same operating budget for both systems.

More information about our existing network can be found in the Choices Report at:
www.betterbus.miami/choices

There is also a robust community engagement process for the project, that can be found at:
www.betterbus.miami/connect

[1] Better Bus Project Choices Report, p. 5

Better Bus Project

Concepts

The project has released two network concepts. These concepts aren't proposals. They are different ways of thinking about how we could design our new bus network, depending on the goals that we deem most important. These concepts were designed in collaboration with City staff.

If our goal was to increase ridership, we would provide extremely useful service (every 15 minutes or less) in the places where we have the most jobs and most people, and less service everywhere else.

If our goal was to spread out our service across the region, regardless of the ridership outcome, we would be seeking coverage. We would have less frequent routes, but our service would be spread further across the County.

The two network concepts alongside the existing network demonstrate these goals and a few other key choices as the County its residents, businesses, and leaders decide how they want to design the bus system. The key questions are

- How Much Change? Both the Coverage and Ridership Concepts would change the network significantly to increase the freedom and access people have by transit. The trade-off is that many people are used to the service as it is, and will complain if we change anything.
- Whether and how to change trolley services? Both the Coverage and Ridership Concepts assume that the City of Miami and Miami Beach would change their trolley networks to maximize job access overall. The trade-off is that Trolley routes are the result of a community-driven process and are controlled by cities, and they have different fares and vehicles. This means changing both trolleys and the county network requires more coordinating and effort on the part of everyone.
- How far apart should bus stops be? Both the Coverage and Ridership Concepts assume that bus stops should be about every 1,000 to 1,300 feet apart on most high ridership routes. This allows riders to get where they are going faster. The downside is that some people have physical limitations on walking and some places are unpleasant to walk in, especially in summer.
- Ridership or Coverage? The Coverage Concept changes the network to maximize job access, widen stop spacing, and redesign trolley services but ensures that everyone who is within ¼ of transit today is still near a stop. The Ridership Concept changes the network even more, but shifting service away from low density areas and increasing frequency in the denest and busiest places in the county.

The Existing Network spends about 70% of its resources on Ridership goals and about 30% on Coverage goals and duplication. The Coverage Concept spends about 80% of its resources on Ridership Goals and about 20% on coverage goals, as most of the duplication has been removed. The Ridership Concept spends about 90% of its resources on Ridership goals and the remaining 10% on Coverage goals. The engagement process is centered around answering the key questions above and finding out where, in

the spectrum these concepts represent, the community would like their future bus system to be ahead of designing the final network plan later this year.

In the attached network maps, routes are color-coded by frequency (see the legend in the top left), with red lines being the most frequent (a bus arriving every 15 minutes throughout the day).

Both concepts include recommendations for the Miami Beach trolley system. These recommendations are not only designed such that the system works better with County services (and vice-versa), but also optimize the trolley system itself.

Taking a Position

By Miami Beach taking a position on the network concepts, it aids County Commissioners in taking their position on the two concepts ahead of designing a final network plan.

Outcomes

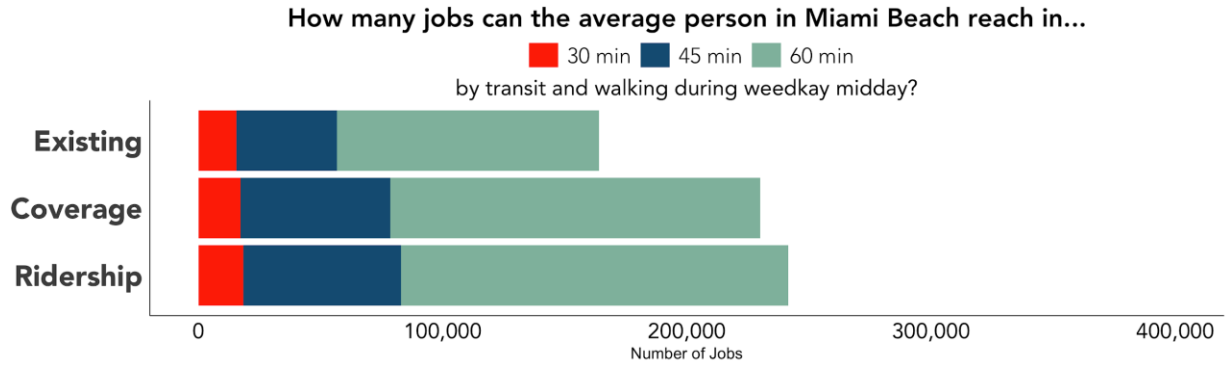
As elected officials, it is far more important to focus on the outcomes of the redesigned network rather than every new twist and run in the redesigned routes. We have measured very specific outcomes to help guide your decision and have included some below.

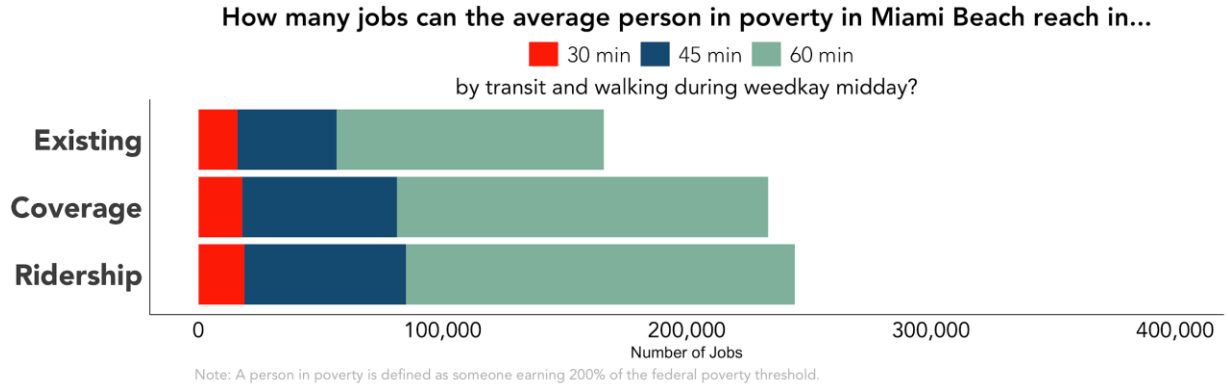
We use job access as a proxy to measure a person's access to services and opportunities. Even if someone isn't traveling to a job on transit, they are generally traveling to somewhere that has jobs (for example, the grocery store, which has employees, and therefore jobs).

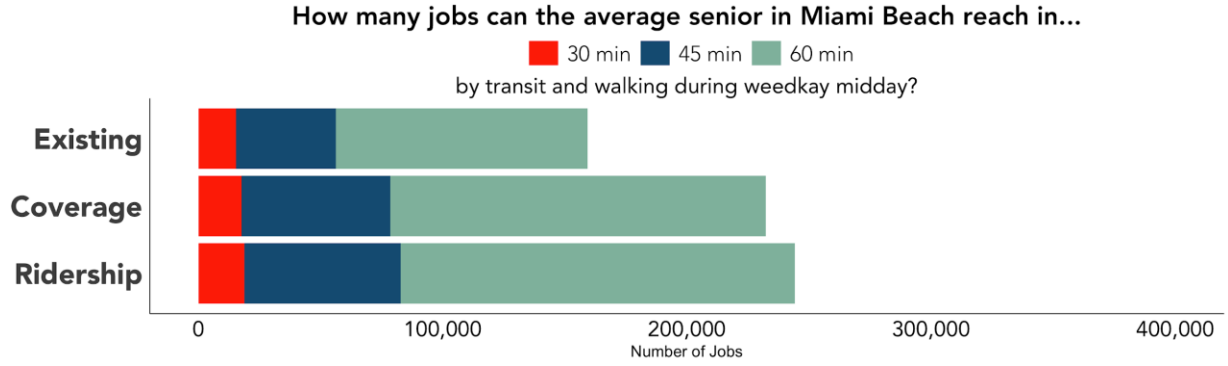
The outcomes for the average resident in Miami-Dade County are:

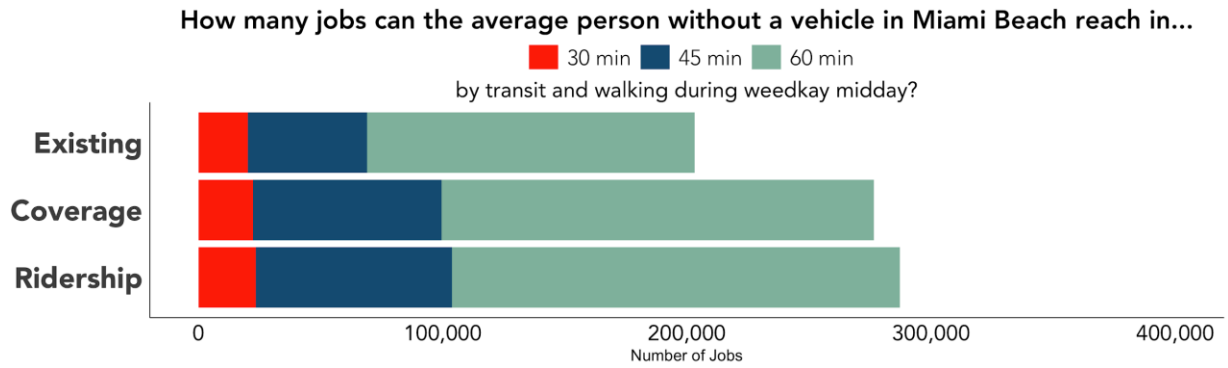
- The Coverage Concept:
    - Increases by 33% the number of jobs reachable by transit in 45 minutes for the average resident.
    - Increases the number of jobs that the average person in poverty could reach in an hour by 32,000, a 28% increase.
    - Increases the percent of residents near high frequency service from 10% to 18%
    - Maintains the overall number of people near any transit service at the current level of about 60%.
- The Ridership Concept:
    - Increases by 51% the number of jobs reachable by transit in 45 minutes for the average resident.
    - Increases the number of jobs that the average person in poverty could reach in an hour by 50,000, a 44% increase.
    - Increases the percent of residents near high frequency service from 10% to 28%
    - Reduces the percent of people near any transit service from 60% to 48%.

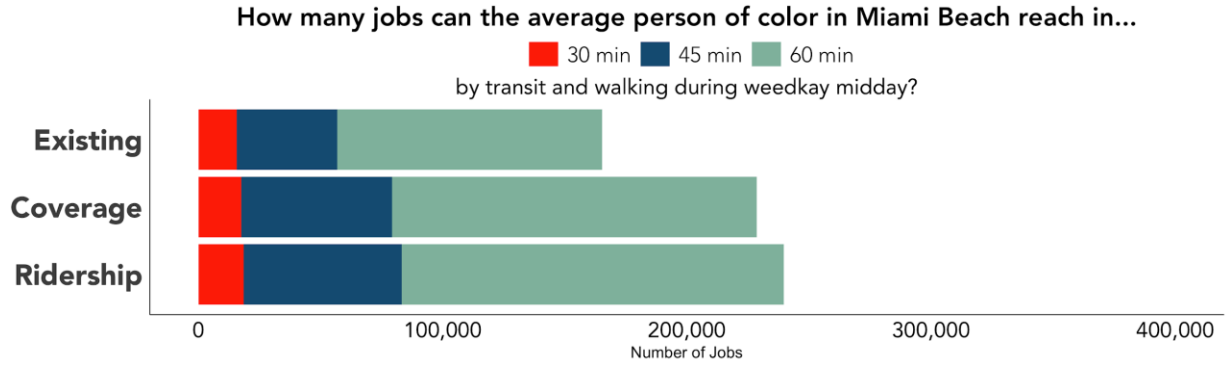
Meanwhile, the charts below shows how job access outcome changes between the concepts for the average resident in Miami Beach – though these charts also portray how much more accessible the jobs in Miami Beach are accessible to the wider region.







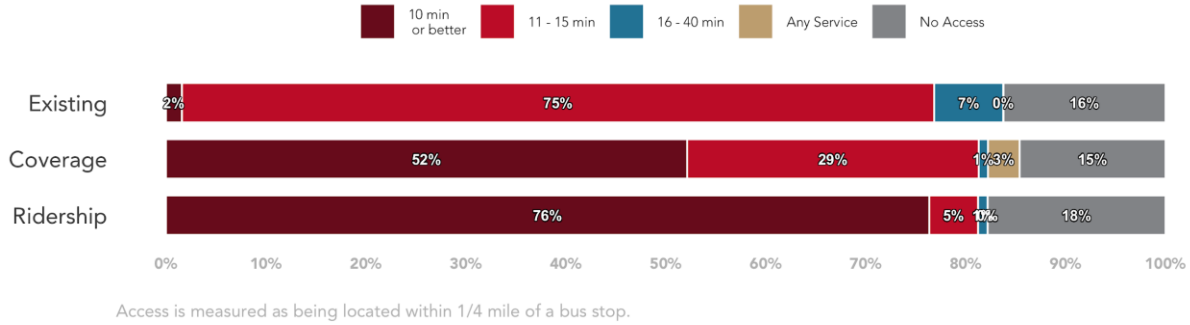




Note: A person of color is based on Census categories of race and ethnicity and includes anyone who identifies as Non-White or Hispanic.

Access to Transit - Weekday

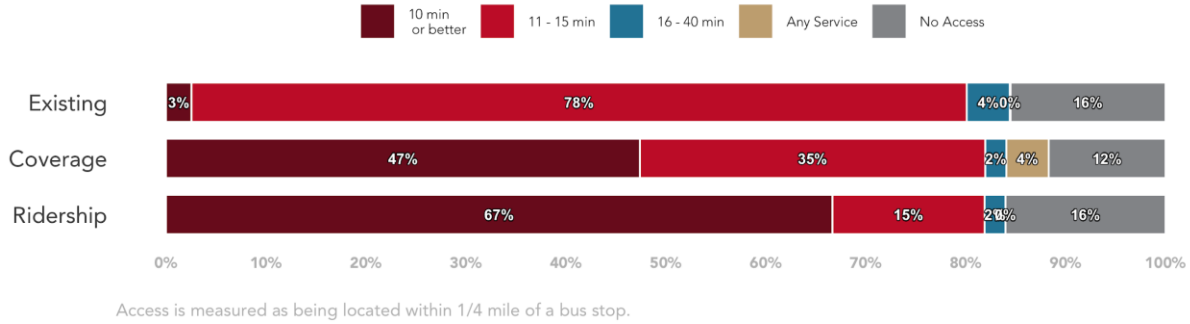
What percentage of Jobs in Miami Beach are near a bus route?



Access is measured as being located within 1/4 mile of a bus stop.

Access to Transit - Weekday

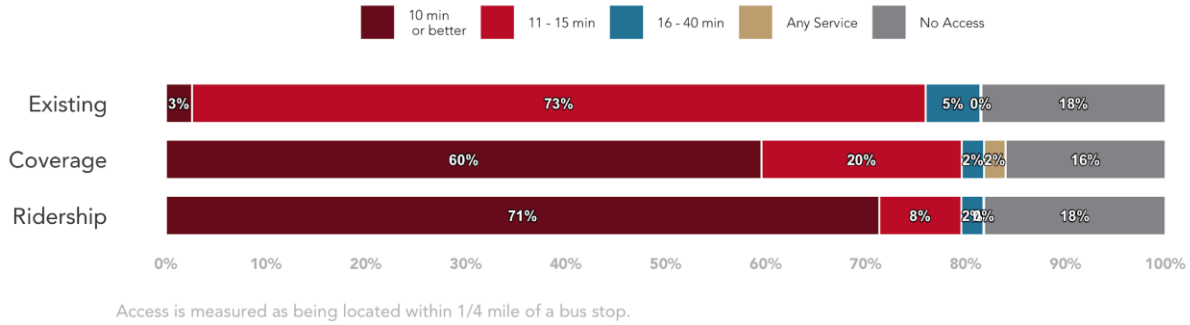
What percentage of residents in Miami Beach are near a bus route?



Access is measured as being located within 1/4 mile of a bus stop.

Access to Transit - Weekday

What percentage of seniors in Miami Beach are near a bus route?



Access is measured as being located within 1/4 mile of a bus stop.

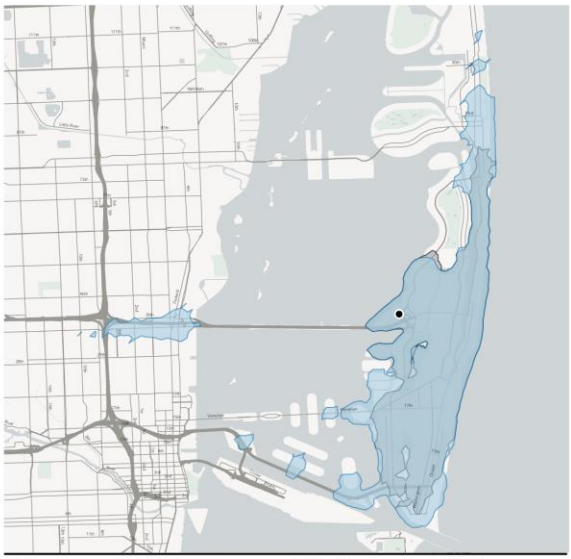
The isochrones on the following pages visualize the physical changes in freedom between the existing network and the two concepts. The legend in the top right will help you understand them, and the specific changes in access outcomes are listed below each visualization.

Better Bus Project

How far can I travel in 45 minutes from
Mt. Sinai Hospital
at noon?

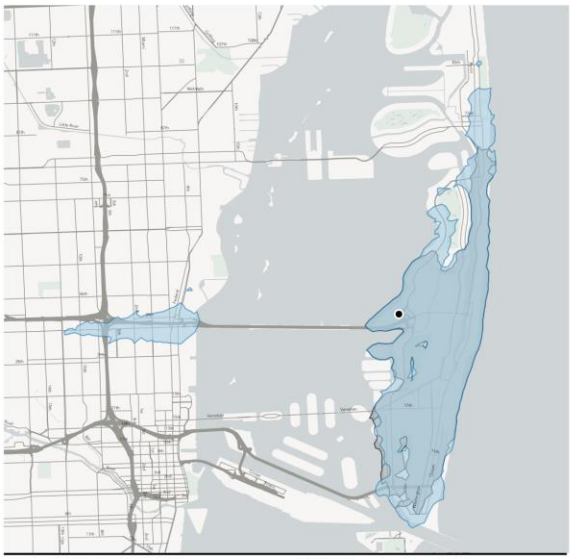


Ridership Concept



Change in jobs reachable	+7,880	+20%
Change in residents reachable	+16,185	+35%

Coverage Concept



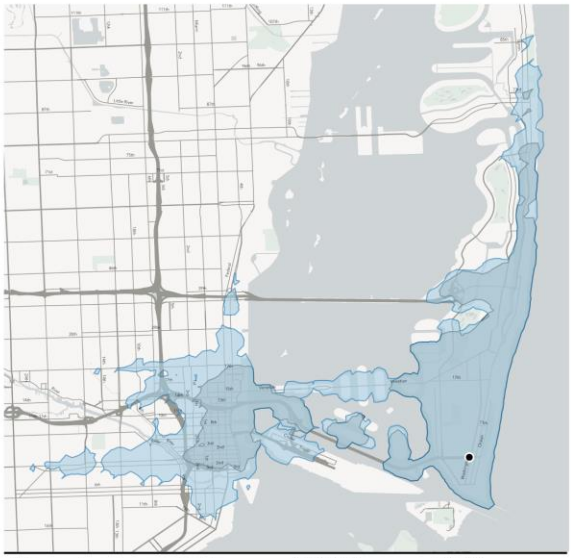
Change in jobs reachable	+6,440	+15%
Change in residents reachable	+12,455	+25%

Better Bus Project

How far can I travel in 45 minutes from
South Beach - Washington and 5th St
at noon?

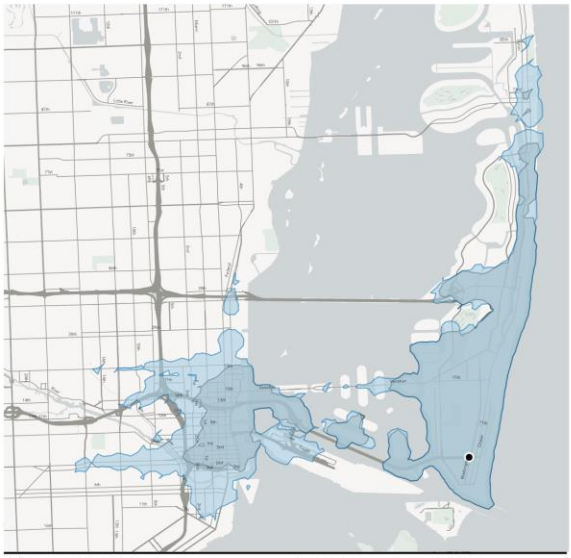


Ridership Concept



Change in jobs reachable	+84,015	+70%
Change in residents reachable	+54,630	+90%

Coverage Concept



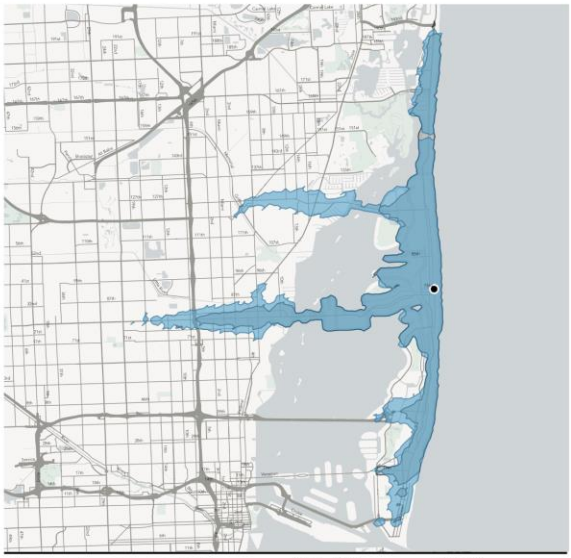
Change in jobs reachable	+80,550	+65%
Change in residents reachable	+43,720	+70%

Better Bus Project

How far can I travel in 45 minutes from
North Beach Bandshell
at noon?

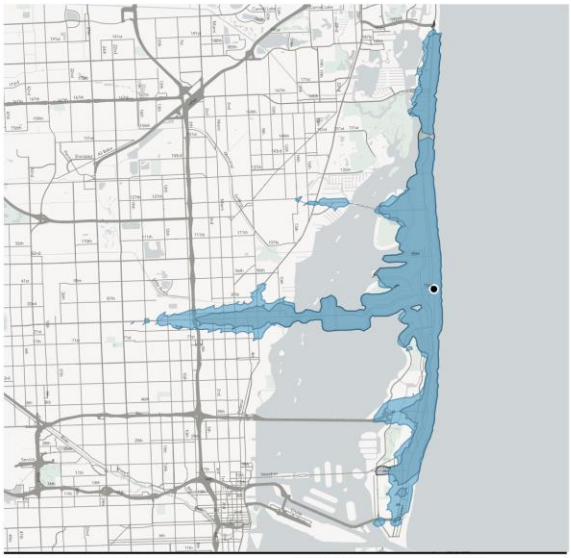


Ridership Concept



Change in jobs reachable	+16,110	+55%
Change in residents reachable	+34,695	+45%

Coverage Concept



Change in jobs reachable	+9,845	+35%
Change in residents reachable	+24,360	+30%

Recommendation

Based on the outcomes for Miami Beach, we recommend the City Commission adopt a resolution that:

- Endorse changes to the City's Trolley Network that maximize overall access to jobs and opportunities for City and County residents, and endorse one of the two concepts.
- Recommend to the County Commission that the county-wide network should be closer to the preferred concept.
- Endorses a recommendation of stop spacing for county bus routes of one stop about every 1,000 to 1,300 feet and about every 2-3 blocks for trolley routes in the City (900-1,200 feet).

Additional Information

A network redesign involves comprehensive change in the effort to create consistent route design across similarly situated places. Therefore, changes to particular places, corridors, and routes are far easier to track by looking at the attached maps.

There are widespread changes throughout the County that have a dramatic impact on the regional connectivity for Miami Beach. These are easy to ascertain from the two maps, but some highlights are:

- Simplification of many route patterns into fewer, but more frequent and simpler routes that get people where they are going faster.
    - In both concepts Routes S and 120 are consolidated into a more frequent Route 120, which would come every 7.5 minutes. The stopping pattern for Route 120 would be about every ¼ mile, slightly farther apart than Route S, but closer together than Route 120. Riders would benefit because waits would be shorter, saving them time. Riders would also have consistently spaced trips from downtown to the Beach. Today Routes S and 120 are timed to leave Government Center at the same time, so that there is no benefit from the combined frequency of the two separate routes.
        - For this structure to work the Collins Trolley (MB3 on the maps) would run as a local service, while the County buses would have wider stop spacing, allowing both services to provide a unique role rather than run on top of each other and provide the same service. In the Coverage Concept, the Collins Trolley is every 15 minutes. In the Ridership Concept it is every 10 minutes because the Mid-Beach Trolley is replaced (as described below).
    - The South Beach Trolley (MB 4 on the maps) would be slightly shorter, simpler, and more frequent. In Coverage it would run every 12 minutes and in Ridership it would be every 10 minutes. The current route is only every 20 minutes, and an average person could walk a trip that is nearly half the length of the route in the time it would take for the next bus to arrive. With more frequent service, it would be more useful for many more trips.

- Increasingly frequent service to Miami Beach across the main connectors to and from the mainland with a simpler, more frequent route structure on the Beach, expanding the reach of both residents and workers
    - In both concepts, there is more frequent service from Miami Beach to the mainland along the following corridors:
        - From South Beach via MacArthur Causeway, Omni Terminal and 20th Street to the Airport via Route 20 every 15 minutes. By providing a more frequent connection across the mainland along 20th Street to and from the Beach, this route would provide quick connections to all the north-south routes on the mainland for easier access to South Beach. In Coverage this route would end at the Lincoln Road Terminal. In Ridership it would continue north to Mt. Sinai Hospital, taking over for the Mid-Beach Trolley (MB2 on the maps).
        - From Mid-Beach via the Julia Tuttle Causeway and 36th Street to Airport or Doral, every 15 minutes. This would partially or fully replace Routes J and 150. By providing a more frequent connection across the mainland along 36th Street to the Beach, this route would provide quick connections to all the north-south routes on the mainland for easier access to and from Mid-Beach.
        - Route 101 provides all-day service across the Venetian Causeway from Omni Terminal to Lincoln Road Terminal with service to Belle Isle and with a connection to the Publix on the Bay. In the Coverage Concept, this service is every 30 minutes and in the Ridership Concept it is every 20 minutes. This route help provide service for a section of the South Beach Loop that is shortened and simplified.
        - Route 79 provides a connection to and from North Beach via 79th Street to and from the mainland and key Metrorail stations, ending at Hialeah Metrorail Station. This replaces Route L with a similar 15-minute route in both Concepts. The major difference is that Route 79 would end at Collins at 71st, requiring a transfer to reach points south where Route L goes today. However, this change would be mitigated because Routes 36 and 20 would have more frequent connections (as described above) and the revised Route 120 would be more frequent.
        - Route 119 would provide a connection to and from North Beach (with connections to the North Beach Trolley and Route 120 at 88th Street) via the Broad Causeway to and from the mainland and Miami-Dade College North Campus. This replaces Route G with a similar 30-minute route in Coverage, but in Ridership this is a high frequency route running every 15 minutes.
- In the Coverage Concept, Route 115 would remain, and run all day, at an hourly frequency.
- In both concepts, the North Beach Trolley remains unchanged with 15 minute service in its current loop pattern.

Why replace Route 150? Currently, Route 150 runs about every 20 minutes from the Airport to South Beach via I-195. There are no stops on the mainland except at the Miami Airport Station (also called Miami Intermodal Center). This pattern limits the market for workers and others to get to and from the Beach because it misses all the possible connections with the Metrorail Green Line and from north-south bus lines on the major avenues (NW 27th, 22nd, 17th, 12th, 7th, and 2nd and NE 2nd and Biscayne). The airport to the Beach market isn't large enough to create a high productivity bus route: the current route languishes in the bottom half of route productivity with about 17 riders per hour of service. Both concepts create high frequency connections from the airport to the Beach, via 20th Street in both Concepts. Plus, the Coverage Concept includes a connection via 36th Street on Route 36A, every 30 minutes. This provides a bus connection that serves multiple markets at the same time: people going to/from the airport, workers going to/from the Beach, and many other possible trips. Routes that serve multiple markets and multiple purposes are the foundation of high productivity transit.

What about Routes M and C? Both Routes M and C largely duplicate other routes in today's network. Their frequency is relatively low, and therefore relatively few people use them. Today's Route M gets about 12 riders per hour and Route C gets about 7 riders per hour. In the Coverage Concept, trips made by these routes today can be accomplished with connections between more frequent routes.

For Route C, the longest trip today would be replaced as follows:

- In Coverage to/from Mt. Sinai to South Pointe Drive: Mid Beach Trolley (MB2) to South Beach Trolley (MB4). The frequency of this connection is every 20 minutes on the Mid Beach Trolley and every 12 minutes on the South Beach Trolley. The average wait in total would therefore be 16 minutes for this trip, compared to 15 minutes today.
- In Ridership to/from Mt. Sinai to South Point Drive: Route 20 to South Beach Trolley (MB4). The frequency of this connection is every 15 minutes for Route 20 and every 10 minutes on the South Beach Trolley. The average wait in total would therefore be 11.5 minutes for this trip, compared to 15 minutes today. For trips to and from Alton Road, Route 20 would provide a one-seat ride.

Route M runs about every hour today, which means the average wait for the route is about 30 minutes. The longest trip today would be replaced as follows:

- In Coverage to/from Mt. Sinai area to Civic Center Station area hospitals:
    - One option would be Route 36 to Allapattah Metrorail Station to Civic Center Station. This would be an every 15 minute bus route to every 7.5 minute rail for a total average wait of about 11 minutes.
    - Another option would be Mid Beach Trolley (MB2) to Route 20 to 20th Street and 12th Avenue NW. This would be an every 20 minute bus to an every 15 minute bus, for a total average wait of about 18 minutes.

    - Another option would be Route 20 to Route 101 to City of Miami Trolley Allapattah Trolley (M1 on the map). This would be an every 20 minute bus, to an every 30 minute bus, to an every 15 minute bus for a total average wait of about 33 minutes.
- In Ridership to/from Mt. Sinai area to Civic Center Station area hospitals:
    - There would be a one-seat ride option on Route 20 directly to 20th Street and 12th Avenue NW. This would be an every 15 minute bus so the average wait would be 7.5 minutes.
    - Another option would be on Route 20 to Omni Terminal then transferring to the City of Miami Allapattah Trolley (M1 on the map). This would be an every 15 minute bus, to an every 15 minute bus with an average wait of 15 minutes total.
    - Another option would be Route 36 to Allapattah Metrorail Station to Civic Center Station. This would be an every 15 minute bus route to every 7.5 minute rail for a total average wait of about 11 minutes.