



## Board Report

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### OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE JULY 18, 2019

**SUBJECT: NEXTGEN REGIONAL SERVICE CONCEPT**

**ACTION: APPROVE RECOMMENDATION**

#### **RECOMMENDATION**

CONSIDER:

- A. APPROVING the Regional Service Concept, which is the framework for restructuring Metro's bus routes and schedules for NextGen and includes:
1. Goals and objectives of the new bus network;
  2. Measures of success;
  3. Route and network design concepts based on public input and data analysis;
  4. Framework for balancing tradeoffs that consider Metro's Equity Platform; and
- B. FOLLOWING approval by all five Regional Service Councils, the Board shall then approve the final NextGen Service Plan.

#### **ISSUE**

In January 2018, Metro began the NextGen Bus Study aimed at reimagining the bus network to be more relevant, reflective of, and attractive to the diverse customer needs within Los Angeles County. This process is divided into four phases:

1. Conduct market research, travel demand analysis and existing service evaluation to identify areas of success, deficiency, and gaps within the network;
2. Establish a Regional Service Concept to guide the development of the NextGen Service Plan;
3. Develop the NextGen Service Plan, including routing, stop spacing, frequency, span of service, and coordination with municipal operators;
4. Implement the NextGen Service Plan through extensive engagement and public hearing process.

This report requests approval of a Regional Service Concept that defines the goals and objectives of the new bus network, measures of success, route and network design concepts based on public input and data analysis, and framework for balancing tradeoffs that consider Metro's Equity Platform.

## **DISCUSSION**

Given the transforming landscape of transportation and travel demand within Los Angeles County, Metro embarked on an effort in January 2018 to reimagine the bus network to be more relevant, reflective of, and attractive to the diverse customer needs within Los Angeles County. More specifically, the NextGen Bus Study aims to increase transit use within the County over the next decade by retaining current customers and attracting them to ride more often, reclaiming past customers, and recruiting new customers. In addition, the new bus network will set the foundation for future growth from transportation investments provided through Measures R and M.

The NextGen Bus Study is divided into four phases, as follows:

Phase I: Research and Analysis - This phase consisted of understanding customers and what they want in a bus system. A significant effort went into understanding overall travel patterns within LA County using cell phone location data as well as an analysis of regional TAP use across 26 transit operators. A comprehensive evaluation of the existing bus network (Attachment A), broken down by routes and segments by time of day, was conducted to understand current successes as well as deficiencies and gaps in service. Significant public engagement was conducted with customers and residents with over 10 million touchpoints throughout the County via online engagement, print advertising, pop-up sessions, 260+ stakeholder and community meetings, on-board bus canvassing, and at 20 interactive public workshops in order to validate the market research, receive comments, and to gain valuable insight into route and area specific concerns and recommendations (Attachment B).

Phase II: Regional Service Concept - Based on the research and outreach conducted in Phase I, a Regional Service Concept is now being presented to the Board for approval. This report states the goals and objectives for the bus network, measures of success, route and network design concepts based on public input and data analysis, and framework for balancing tradeoffs in consideration of Metro's Equity Platform. This service concept provides policy guidance for the redesign of the bus routes and schedules as well as how success of the NextGen Bus Study should be measured.

Phase III: NextGen Service Plan - Once the Regional Service Concept has been approved by the Board, routing and schedules will be redesigned accordingly to develop the draft NextGen Service Plan. This plan will specify route and schedule changes as well as bus stop spacing and frequencies by time of day and day of week. Also, since the County's municipal transit operators account for over 30% of the region's transit service, a significant focus of the plan will include recommendations on how to coordinate with the municipal operators to provide seamless service for customers. This phase is expected to be completed by Fall 2019 when it will be presented to the Board.

Phase IV: Implementation -Implementation of the NextGen Service Plan is expected to be spread over three service changes starting in June 2020. As with any major service change, a Title VI equity analysis will be conducted to ensure the service plan is neither disparately impacting minorities, nor disproportionately impacting low-income populations. This analysis requires a formal public hearing process which takes four months from initiation to approval by the Board appointed Regional Service Councils. Upon approval by the Service Councils, three additional months are necessary to finalize

schedules and assignments to be presented to the bus operators for bidding, per terms of the SMART Collective Bargaining Agreement. Therefore, to begin implementation of the NextGen Service Plan in June 2020, the formal public hearing and approval process must start in November 2019, otherwise implementation will be delayed until December 2020, the next scheduled service change date. Metro bus riders will be informed of these changes utilizing the various communications tools including digital media, radio and print advertising, on-board information, and other media outlets.

As stated above, this report requests approval of a Regional Service Concept that defines the goals and objectives of the new bus network, measures of success, route and network design concepts based on public input and data analysis, and framework for balancing tradeoffs in consideration of Metro's Equity Platform.

### **Goals and Objectives**

In 2018, the Board adopted Metro Vision 2028 as the agency's strategic plan. The plan outlines five goals to guide the development of transportation in LA County. The NextGen Bus Study addresses **Goal #1: Provide high quality mobility options that enable people to spend less time traveling.** The study also encompasses two sub-goals: 1) Target infrastructure and service investments towards those with the greatest mobility needs; and 2) Invest in a world class bus system that is reliable, convenient, safe, and attractive to more users for more trips.

In addition to the strategic plan, the Board adopted Motion 38.1 (June 2018), endorsing travel speed, service frequency, and system reliability as the highest priority service design objectives for the NextGen Bus Study. Finally, regardless of the level of resources expended on the bus network, optimizing system performance should always be an objective in network design to maximize benefit to the public.

These goals and objectives are driving the development of the NextGen Service Plan, including routing, stop spacing, frequency, span of service, and coordination with municipal operators. In addition, a set of performance measures have been defined below to ensure the bus network continues to evolve consistent with the goals and objectives defined by the Board.

### **Public Engagement**

Throughout the Study, Metro conducted extensive public engagement to inform, engage, and solicit input from riders, residents, businesses, schools, community-based organizations, ADA groups, and faith communities throughout LA County to inform Metro's efforts to redesign Metro's Bus System. (See Attachment B)

Metro formed a NextGen Bus Study Working Group to help identify issues and concerns. The Working Group consists of more than 50 representatives of stakeholder groups including Metro Service Councils, community-based groups, faith communities, business associations, educational institutions, advocacy groups, and environmental organizations. Working Group members were tasked with providing input from the various constituencies they represent. This group has met six times to date and will continue to provide input and guidance throughout the Study.

This public engagement effort serves to integrate public comments into the Regional Service Concept that is being proposed in this report. The public comments are validating the market research conducted by the technical contractor and informing Metro staff on route specific recommendations that will be developing and presenting to the Board in Fall 2019 as part of the Draft Bus Service Plan.

The highlights of this countywide public engagement effort are outlined below:

- More than 13,000 people provided comments about Metro's bus system through questionnaires promoted online, administered on-board bus canvassing, and provided at many of the events noted below.
- More than 60% of participants reached were people of color representing multiple genders, age groups, zip codes, and income levels that make up the diversity of LA County.
- Over 260 community events and stakeholder briefings.
- Coordination with local Municipal Bus Operators.
- Bi-monthly updates to the five Metro Service Councils
- Bus rider engagement through 300,000 take-one brochures aboard the bus and rail system.
- More than 9 million digital engagement touchpoints
- Over 1.4 million in circulation through earned media and paid print advertising in ten different languages
- Two Telephone Town Halls were conducted with more than 3,600 participants
- 20 NextGen Public Workshops from January-March 2019

A concerted effort was made to ensure that the public engagement cumulatively reflects input that is reflective of the diversity of LA County's population.

### **Metro's Equity Platform in Action**

The most recent NextGen Working Group meeting, held May 29, 2019, focused on how the Equity Platform has been and will continue to be reflected within the bus network redesign. This meeting was titled *Metro's Equity Platform in Action Through the NextGen Bus Study*. At this meeting Metro shared how the Four Pillars of Metro's Equity Platform have been implemented at each step of the NextGen Bus Study for both the technical and communications efforts. A summary of this meeting can be found in Attachment C.

The framework for equity begins with Title VI of the Civil Rights Act of 1964 which protects minority and low-income communities from disparate and disproportionate negative impacts as a result of major transit service changes. Metro defines major service changes as any change to a route or schedule that results in a 25% change in route miles, revenue miles, or revenue hours cumulatively over three consecutive years. Once triggered, a Title VI/Environmental Justice evaluation must be presented to the Board for consideration and approval to demonstrate that it would be more of a burden to these communities if alternative service changes are implemented.

Metro's Equity Platform builds upon Title VI in two distinct ways. First, it goes beyond ethnicity and income to determine communities with the greatest mobility needs. Through market research,

surveys, and public input, other groups most reliant on transit include non-English speaking new immigrants, youth and seniors, persons without access to an automobile either by choice or necessity, persons with disabilities, and women who tend to make more transit trips than men. In addition, the NextGen Working Group concluded that transit is important to everyone, but in different ways specific to each community. For example, communities more reliant on transit need service throughout the day and week for all trip purposes, while communities who have more mobility options, may only need transit for their commute or certain discretionary trips.

Second, NextGen Bus Study aims to go above and beyond Title VI, to not only protect against negative impacts, but to further improve service for communities with the greatest mobility needs. To do this, the Four Pillars of the Equity Platform have been integrated into the NextGen Bus Study planning and public engagement process.

- I. Define and Measure - Use Title VI as a baseline for identifying communities with the greatest needs, and supplement those with market research to identify the segments of population and trips with the highest propensity for transit use. Evaluate bus network changes based on the customer focused performance metrics established within this report with particular focus on communities with the greatest mobility needs as identified above.
- II. Listen & Learn -The technical work of the NextGen Bus Study identified important information about Metro's current and potential customers. This data was validated by the robust countywide public engagement effort, including engaging customers onboard buses, outreach sessions at community events, stakeholder briefings, interactive public workshops, digital engagement and print advertising. Comments received will be incorporated into the systemwide service design as well as individual route changes.
- III. Focus & Deliver - Service design concepts (discussed below) have been established to address the recurring themes identified from the public outreach and market research, including faster and more frequent service, better reliability and accessibility to key destinations, better connectivity particularly with the municipal operators, and improved perception of security on board buses and at bus stops. These concepts, described below, will be used to redesign the routes and schedules.

In addition, a Transit Propensity Index score (Attachment D) has been developed and assigned to every Census Tract in Los Angeles County. This index score considers the various market segments likelihood to use transit, the transit orientation of the environment being served, and the travel demand within the area. Areas with high scores should be prioritized for high quality transit service.

Lastly, other customer experience enhancements such as improved security, accurate real time arrival information, cleanliness, and improved first/last mile service are critical to attracting customers to use transit.

- IV. Train & Grow - The Board adopted Transit Service Policy will be updated to reflect the Regional Service Concept as adopted by the Board, including the goals and objectives of the bus network, measures of success, route and network design concepts based on public input

and data analysis, and framework for balancing tradeoffs in consideration of Metro's Equity Platform. In addition, an annual monitoring program will be established to track the progress of achievement towards the goals and objectives, and to inform on necessary adjustments.

### **Network Development Process**

There are three key elements that are taken into consideration during the network development process to identify when and where transit can be successful.

- **Transit Propensity** - Areas where the propensity to use transit is the greatest embody three main characteristics. First, there is a significantly large population of transit market segments, including people who rely on transit for most of their travel, commuters and students who use transit for work and school trips, and discretionary riders who choose transit for some or all their trips. Second, is the intensity of travel demand to and from areas based on population and employment densities, retail and entertainment, colleges and universities, and other trip generators. For NextGen, cell phone location data is also being used to identify areas of greatest travel intensity. Finally, a pedestrian oriented street environment is also critical, including safe and well lighted pathways, sidewalks and curb-cuts, grid street network, and level topography. A full description of the Transit Propensity Index score is in Attachment D.
- **Existing Service Performance** - It is important to identify the most productive segments of the existing bus network which articulates current transit demand. These corridors and routes should be optimized through the network development process, and lessons learned should be applied to other areas with similar demand and service characteristics. Through the NextGen Bus Study process, the entire Metro bus network has been dissected into segments by time of day and day of week, and various performance metrics have been calculated for each segment to create a 360-degree view of system performance. Attachment E provides route and segment level analysis based on some of the key performance metrics.
- **Service Environment** - A transit-oriented service environment is also critical to the success of transit, including the pedestrian orientation of the streets and land use, barriers to other modes such as limited and costly parking supply, and transit supportive infrastructure including bus only lanes and transit priorities.

Once we understand where and when transit is and can be successful, the appropriate service design concepts must be matched with the specific needs of each market segment. Service design concepts have been developed to address the recurring themes identified through public engagement and market research, including:

- Faster and more frequent service;
- Better reliability and accessibility to key destinations;
- Better connectivity particularly with the municipal operators; and
- Improved perception of safety on board buses and at bus stops.

Service design concepts that will guide the route and schedule planning are summarized in Table 1

below indicating which theme each concept addresses. A detailed description of the concepts is presented in Attachment F.

**Table 1  
Service Design Concepts**

	Faster service	Frequent service throughout the day	More reliable service	Better network connectivity	Accessibility to key destinations	Improved security
Routing to Reflect Current Travel Patterns and Transit Propensity				X	X	X
Standardize Frequencies by Service Tiers	X	X				
Subarea Transit Hubs				X		X
Shorter Route Lengths			X			
Hybrid Local/Rapid Stop Spacing	X		X			
Municipal Operator Coordination				X	X	
Microtransit and Other On-Demand		X			X	
Transit Supportive Infrastructure	X		X			X

**Measuring Success**

Providing high quality mobility options that enable people to spend less time traveling on the transit network requires that we are available when and where our customers want to travel, we are competitive enough to have them try us over other options, and we are attractive enough to ensure they return for the same trip and ideally for more trips. Therefore, our recommended measures of success are aimed at evaluating the bus network within these three stages of Find, Try, and Rely. These customer focused measures help to balance our traditional metrics of productivity and efficiency (e.g. ridership, boardings per hour, subsidy per boarding).

Several of these measures (italicized below) will be used to evaluate the network through the lens of equity.

**Find - How well do people understand how effectively transit can serve their needs? Is the system easy to understand & use?** Proposed measures include:

- Services and information is Readily Available
  - Percentage of trip ends within ¼ mile of transit stop
  - Trip planner, app, and website usage rates
  - *Percent of public considering transit (survey-based)*
- The Bus System is Easy to Understand and Use
  - Percentage of out of direction travel
  - Percentage of route miles with all-day frequent service (<15 min headways)
  - *Percent of public understand how to use system (survey-based)*

**Try - How can we encourage customers to try the regional transit system? (Metro and Municipal Bus Operators)** Proposed measures include:

- Bus Goes Where/When Customers Want
  - *Percentage of trips compatible with transit by time of day and day of week*
  - *Number of jobs and activity centers accessible within a 15 minute and 30 minute transit ride*
  - Number of unique transit users
- Bus system is Competitive
  - *Door-to-door travel times*
  - *Competitiveness of transit time to drive time*
  - System-wide boardings
- Coverage is Adequate
  - *Population within ¼-mile of transit stops by frequency of service*
- Transit Journeys are Simple
  - Average number of transfers
  - Percent of trips that are one-seat rides

**Rely - How can we provide services that customers can rely on for their travel needs?** Proposed measures include:

- Bus System is Effective and Productive



- *Competitive transit paths for short, evening, midday, and weekend trips*
- Number of frequent riders
- Boardings by time of day and day of week
- Boardings per revenue hours and miles
- Cost per passenger mile
  
- Buses are Reliable
  - Headway regularity on frequent routes
  - On-time performance
  - Real time arrival accuracy
  
- Customers are Satisfied
  - Rides per week for frequent and infrequent users
  - *Percentage of customers satisfied with Metro services (survey-based)*

## **FINANCIAL IMPACT**

Adoption of the NextGen Regional Service Concept would have positive impacts to the agency by establishing policy guidance for redesigning the Metro bus network based on robust outreach and analytical rigor. In addition, the Regional Service Concept establishes measures of success based on the user's perspective to ensure that bus service better matches their needs.

### **Impact to Budget**

The NextGen Bus Study is currently funded in the FY20 Budget.

## **IMPLEMENTATION OF STRATEGIC PLAN GOALS**

Recommendation supports strategic plan goal #1: Provide high quality mobility options that enable people to spend less time traveling.

## **NEXT STEPS**

With approval of the NextGen Regional Service Concepts, staff will continue to redesign the Metro bus network and develop the NextGen Service Plan for NextGen Working Group, Board, Service Council, and the public's consideration. This plan is expected to be completed with new lines and schedules by Fall 2019. Staff will continue to coordinate with municipal operators throughout the plan development and will conduct significant stakeholder and public engagement prior to the public hearing process for implementation starting June 2020.

## **ATTACHMENTS**

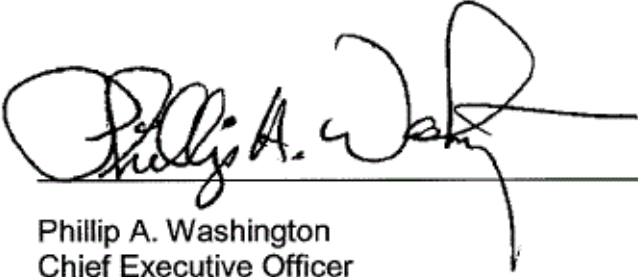
Attachment A - Existing Service Evaluation

Attachment B - NextGen Public Engagement Summary

Attachment C - NextGen Working Group Meeting Summary - Equity Platform In Action  
Attachment D - Transit Propensity Score  
Attachment E - Route and Segment Performance  
Attachment F - Service Design Concepts

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